USER MANUAL
FOR *SESAME* SOFTWARE

Version 2.61

www.ateq.com

Reference : UM-SesameF-U

REVISION OF THE SESAME USER MANUAL

Due to continuing improvements, the information contained in this user manual, the features and design of this device are subject to be changed without prior notice.

Edition/Revision	Reference	Date	Chapters updated
First edition	UM-SesameC-U	44/2006	First standard edition (the previous versions was for special systems).
Second edition	UM-SesameF-U	39/2011	All chapters. Software evolution to the version 2.61 (F indices to be the same as the French version)

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Chapter 1
INTRODUCTION

1. GENERAL DESCRIPTION

ATEQ produce customized control systems for customer applications which require several tests to be performed in succession. A system consists of various measurement devices controlled by a computer, which enables centralized dialogues. The software installed, which was developed by **ATEQ** to manage these systems, is called ***SESAME***.

It enables use of the network of devices present in the system, configuration of these monitoring assemblies and their adaptation for various specific applications.

The test station is therefore configured with all the data necessary for execution of an application defined by the customer (*devices used, tests to be performed, parts to be tested, allocation of access rights...*).

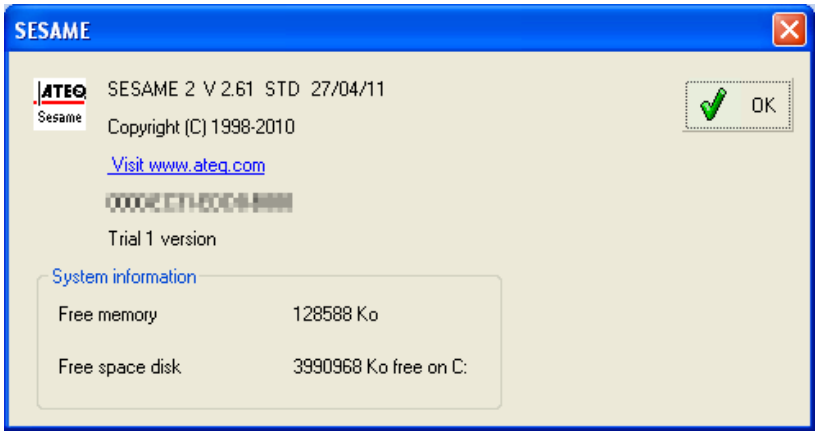
Because **SESAME** represents the system in the form of a directory tree, simply by clicking the mouse you can:

- obtain information on the composition of the system (*devices used, parameters used, links,...*),
- manage the data bases relating to :
    - device configurations,
    - configuration of test sequences,
    - allocation of test sequences according to parts to be tested.
- Control access rights to prevent unauthorized users from accessing the program.

SESAME's display is like a map which you can use to find your way round the system. It is designed so that you can work easily and rapidly. It is similar to *WINDOWS Explorer*, which makes it simple to use.

The program version installed on the computer can be checked under the: **"?/About *SESAME*"** menu.

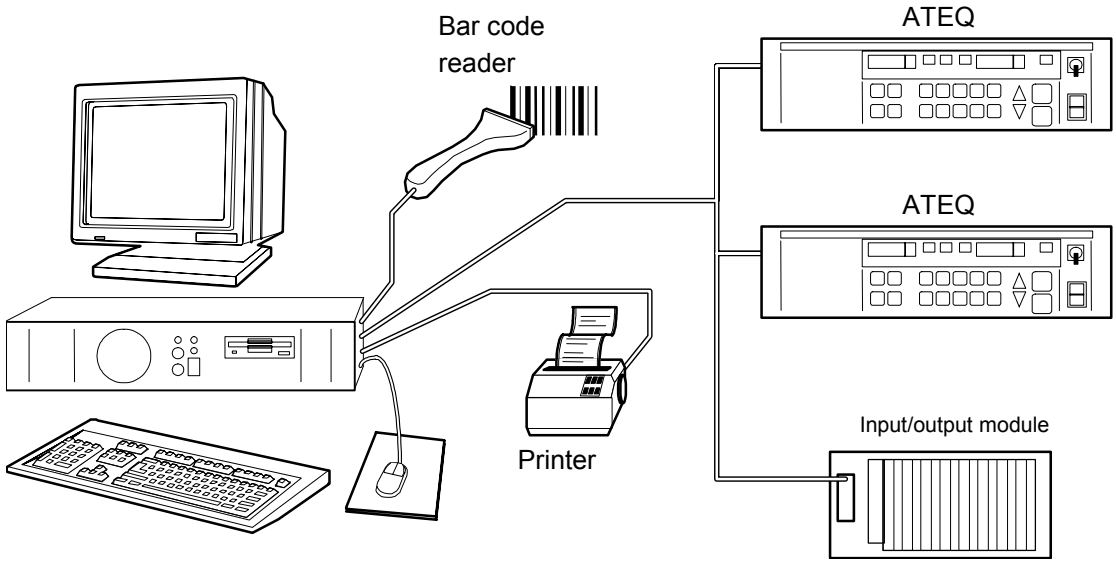
The following window appears:



2. DESCRIPTION OF THE TEST STATION

The test station consists of a group of devices controlled by a PC, for which the minimum configuration required is as follows:

- Operating system : WINDOWS 2000 / XP / Vista / Seven.
- Processor : Pentium 3 minimum.
- RAM : 512 Mb minimum.
- Available disk space : 50 Mb (*excluding archiving*), 1 Gb (*with archiving*).
- Graphics card : VGA.
- Screen : 14".
- Mouse : only essential for working in data bases (*not necessary in test mode*).
- Communication ports : Parallel, RS 485, RS232.



The devices are connected:

- on the parallel port ⇨ *Printer.*
- on the RS485 port **in a network** ⇨ *ATEQ* devices *,and input/output modules.*

The program supports the following dialogues between the PC and the devices:

- ***JBUS*** protocol *(optional on ATEQ devices, requires an RS 485 card*).

3. INSTALLATION OF THE PROGRAM

Your test system is delivered with the **SESAME** program installed on your computer.

A set of diskettes containing the program is supplied in case it is necessary to re-install the software.

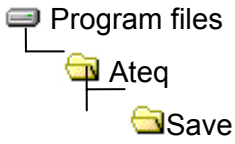
***Warning*:**

> ***The user is only authorized to use the SESAME program on a single computer.***
>
> ***He is, however, authorized to make a backup copy. But any other copies, particularly for distribution to third parties, are prohibited.***
>
> ***Loan, renting out or any modifications of the program are also prohibited.***

Reinstallation of SESAME on your computer may overwrite all the configurations already present relating to your test system. We therefore advise you only to re-install the software if this is absolutely necessary.

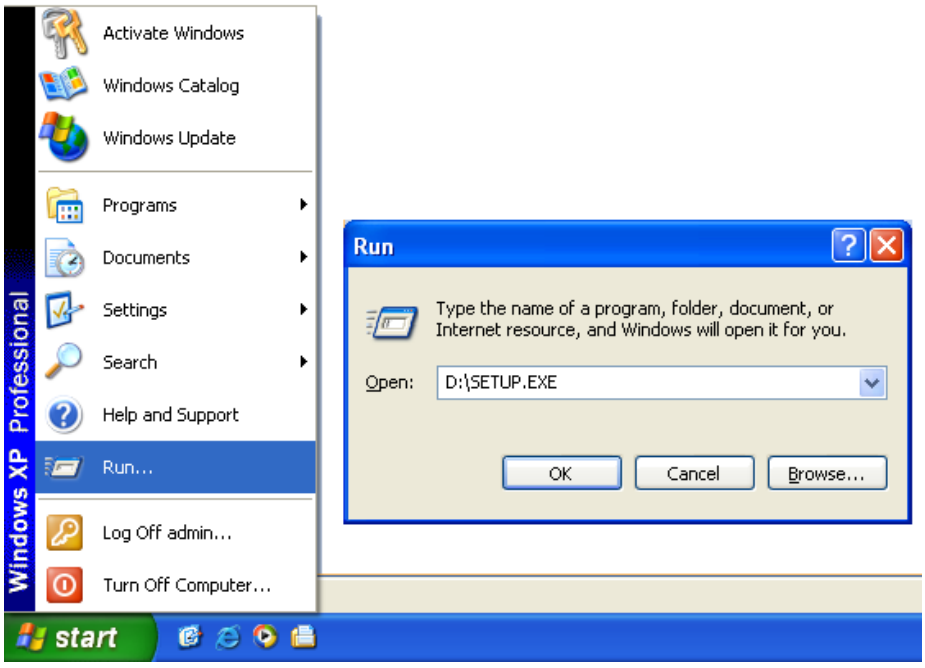
We also advise that in order to avoid this problem you back up the application and its configurations on floppy disk:

- Save is the directory to back up:

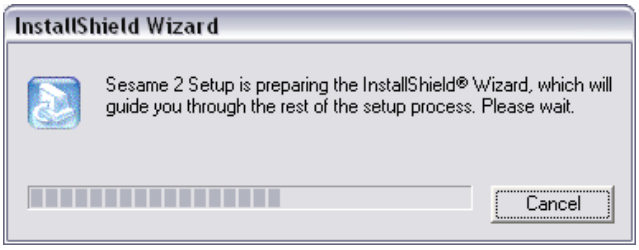


Installation of **SESAME**:

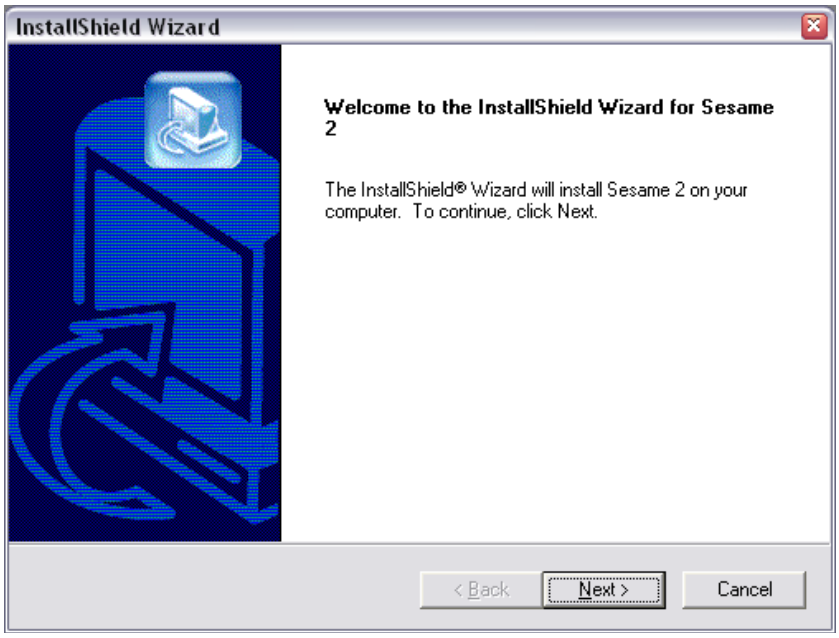
- Close all applications which are running.
- Insert the disk into the appropriate drive in the computer.
- Clique on the START button then on RUN.
- In the OPEN box, type in **D:\SETUP.EXE** (*if necessary, replace **D** by another drive letter*). Then enter. (You can also find the item required by clicking on SEARCH).



- The installation starts, at every time it can be stopped.



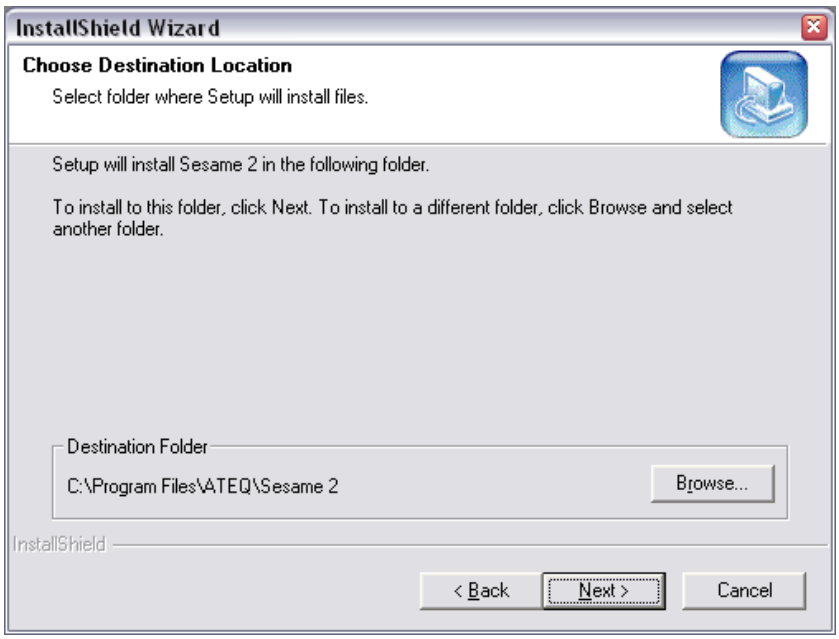
- Installation software prompt you for installing **SESAME 2** software on your computer,



- Continue by pressing "**Next >**" the following window appears:

- Type the user name, company name and the ***SESAME*** serial number (the input values doesn't impact the software installation). Continue by pressing "**Next >**"

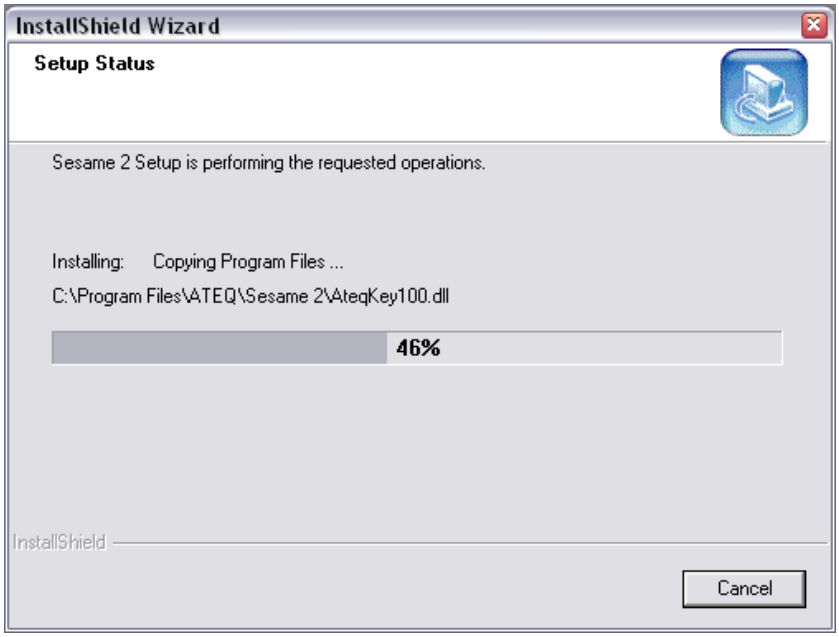
- The following window appears.



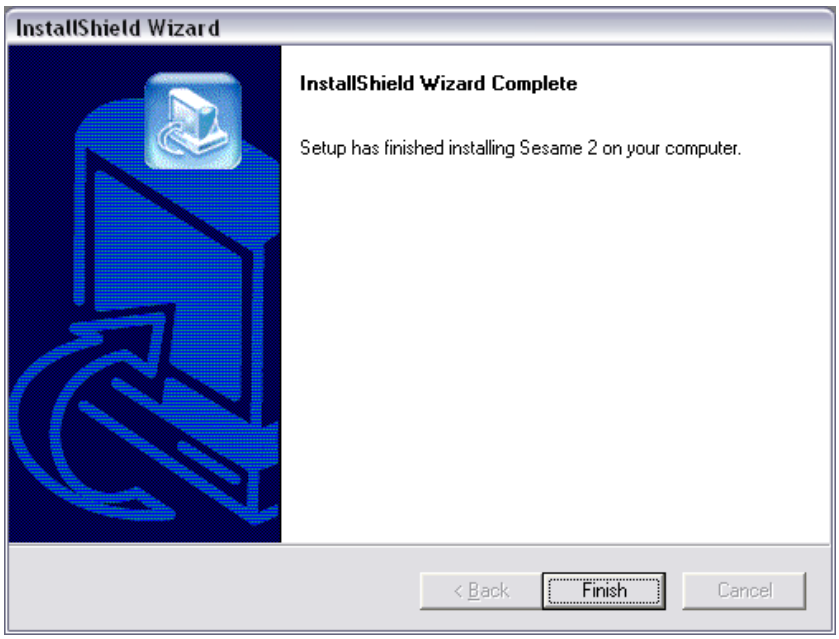
- If you are agree with the destination default folder (recommended), click on **Next >** else on **Browse** to select another folder.

***Note**: the default destination folder requires no change.*

- The installation starts.



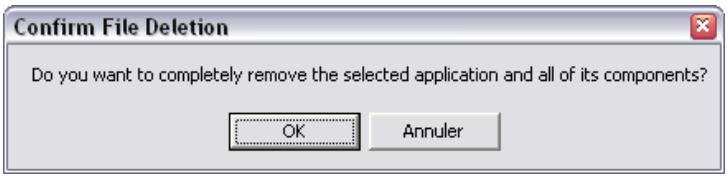
- When it's complete (100 %) the following window appears.



- It is to confirm for a complete and successful installation, click on "**Finish**" to exit.

The ***SESAME*** software is available and can run.

- In the case of an installation of a previous version of the ***SESAME*** software on your computer, the following window appears:

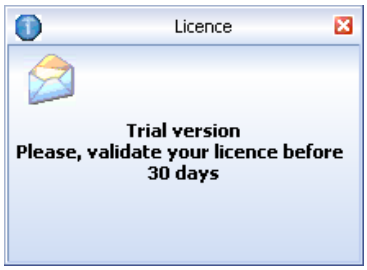


- It prompt you to confirm the complete uninstalling of the previous version (recommended), click on "**OK**".

4. LICENSE

When ***SESAME*** is installed on one computer for the first time, you obtain a trial version for 30 days.

During the trial version, the opposite message is regularly appearing on the left bottom of the screen, to remind to validate the version.



When the trial version is over, 30 days trial and 15 more days and if the license is not validated, the software won't save the data, Graphs, and all files are not created (DFD, DFX, DFQ, TXT and CSV).

To use indefinitely ***SESAME***, you have to acquire a license number.

This license will be delivered as a key, which is a 16 alphanumeric characters code.

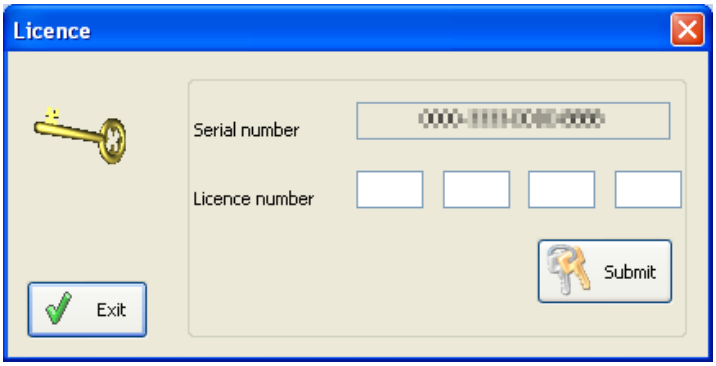
This key is only available on the computer which is installed ***SESAME***, in case of uninstall from the first computer to install it on second one; you have to get a new key.

To get the key, click on the "**Validate the SESAME license**".

The "**License**" window appears.

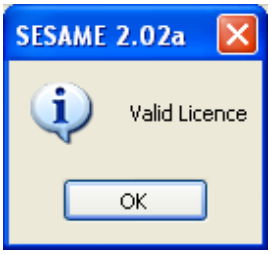
Tell to **ATEQ**, society the serial number displayed in the "**Serial number**" field.

ATEQ will return you the associated license number to copy in the "**License number**" field.

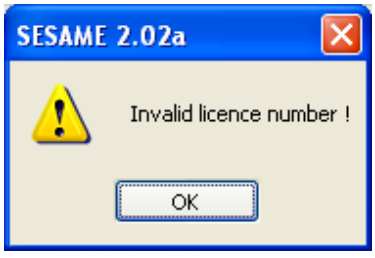


Then press the 

key, the definitive use is validated, the "**Validated License**" message appears.



In case of wrong capture of the serial number or if the number doesn't correspond to the computer, the "**Invalide license number!**" message is displayed.



5. FILES USED BY *SESAME*

5.1. THE .DLL FILES

ATEQ folder:

- AteqD2Pu.dll
- AteqD500.dll
- AteqD500Riche.dll
- AteqDll500.dll
- AteqDll.dll
- AteqE260.dll
- AteqERD.dll
- AteqF2P.dll
- AteqF3_329.dll
- AteqF420P.dll
- AteqF500.dll
- AteqFAlpha.dll
- AteqG2p222.dll
- AteqG500.dll
- AteqGP.dll
- AteqP321.dll
- AteqSonde.dll
- AteqVar.dll
- AteqVarTP.dll
- CodeBarr.dll
- Ep2p.dll
- ithea100.dll
- ithea.dll
- JFA_CF.dll
- KeyProtect.dll
- MD800MD9.dll
- Spiro2.dll
- Spiro.dll
- SPrinter.dll
- Stas11.dll.
- AteqEF2.dll.
- AteqEF3.dll.

System32 folder:

- MFC42.dll.
- MSVCRT.dll.

5.2. THE .OCX FILES

- VoyantRond.ocx
- ProgressBar.ocx
- MSFLXGRD.ocx

Chapter 2
LEARNING THE BASICS

This chapter explains the design of the display and operation of **SESAME** and describes the basic procedures necessary to begin working.

1. STARTING UP AND EXITING SESAME

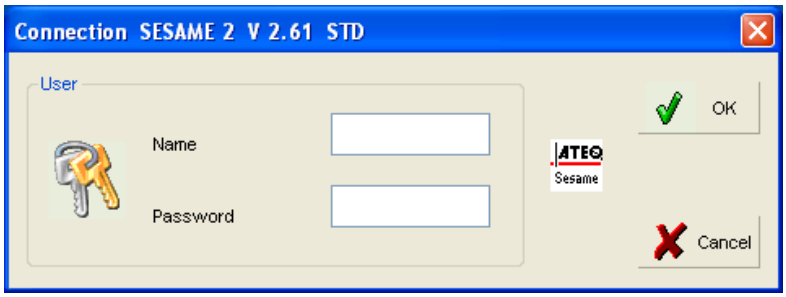
This section explains how to log on, start and exit **SESAME**.

1.1. TO LOG ON TO SESAME

To run the program (*SESAME.EXE*) you need to identify yourself by entering your user name and the password. This procedure identifies the authorized user and helps to ensure security.

When **SESAME** starts up and the CONNEXION dialogue box is displayed, type in:

- **the user name,**
- **the password**.



The user name was defined when the system administrator created the user account or when **SESAME** was installed.

The password is a security measure and prevents unauthorized users from accessing the program.

1.2. TO EXIT SESAME AND RETURN TO WINDOWS

*Before shutting down or restarting your computer, always make sure that you have exited **SESAME** and WINDOWS. This will ensure that your work is saved on your hard disk.*

There are three possible ways to exit **SESAME**:

- Press the keys Alt + F4 together.
- In the PROJECT menu, click on EXIT.
- Click on the ⊠ button located in the top right hand corner of the window.

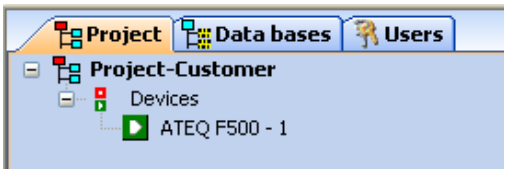
The program will ask you "do you want to exit *WINDOWS?*":

- To close down the system ⇨ confirm by pressing *YES*.
- To continue working in *WINDOWS* ⇨ choose *NO*.

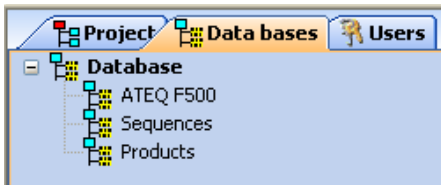
2. VIEWING THE CONTENTS OF THE SYSTEM

The ***SESAME*** software is a tool to control or modify the test system configuration with a representation of tabs.

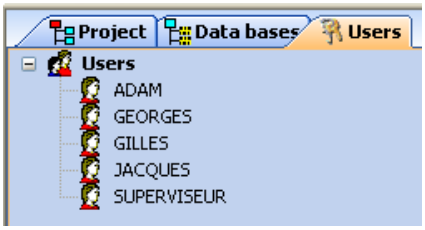
"Project" tab:



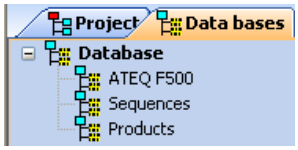
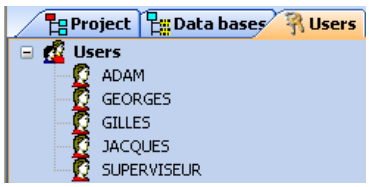
"Data bases" tab:



"User" tab:

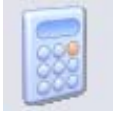


Following the user level, different icons are displayed in the tree, including:

PROJECT icon *DEVICES icon*	This icon shows the current subject, the customer name and the installed devices list. Click on to display the menu. Click on the handle ⊞, on the left of the icon, to scroll the tree and display the devices available in the network.	
DATA BASES icon	This function allows to manage the data bases including: • the devices configuration, • the sequences configuration, • the products. Click on the handle ⊞ to display all the data bases.	
USERS icon	The security related to the use of this software is managed through this function. The administrator can create and manage the user's rights.	

Presentation of the icons bar:

Warning: some functions are available or not following the user level.

Project		**New project (Ctrl+N)**: to create a new complete project (function only for the **ATEQ** supervisor).
		**Open a project (Ctrl+O)**: to open an existing project.
		**Save the project (Ctrl+S)**: to save the new project or its modifications.
Edition		**Item Properties (Ctrl+P)**: to edit the properties of the selected item.
		**Delete an item (Del)**: to delete the selected item.
		**Copy an item (Ctrl+D)**: to make a copy of the selected item.
		**Print the current item**: to print the sequence or the product selected on the default printer.
		**About**: to display the window about the ***SESAME*** software.
Cycle		**Software options**: to display the windows for the configuration and the use of the ***SESAME*** software and the work station. See chapter 6 "System options".
		**Run the test**: to go to the control menu and run the test cycles.
		**See the products counters**: to display the counters window.

3. INTERFACE

The program can be used either with the mouse or with keyboard in test mode. However **it is essential to use a mouse when configuring the system.** When a mouse is connected to the computer, no other device can be used on the same RS232 serial port.

This section explains how to use the mouse or the keyboard to perform actions rapidly.

3.1. USING THE MOUSE

***Note**: the mouse is fitted with at least two buttons (right button / left button).*

3.1.1. Moving through the levels of the directory tree

The key to navigating through the tree is to use the ⊞ and ⊟ signs to the left of the icons in the directory tree.

To expand the tree further, click on the ⊞.

If a more general view is required, close a branch by clicking on the ⊟.

3.1.2. Carry out tasks

If you click with the right mouse button on any element in the directory tree a task menu will be displayed listing the actions which may be carried out for this item.

Select the task to be activated

3.2. USING THE KEYBOARD

The keyboard is used in the same way as it is for *WINDOWS Explorer.* The program has the same set of shortcut keys as Windows Explorer and these are listed in the appendix.

3.2.1. Moving through the levels of the directory tree

It is possible to expand all the branches of the tree one after another using a certain icon. To highlight this icon, press the * on the numeric keypad.

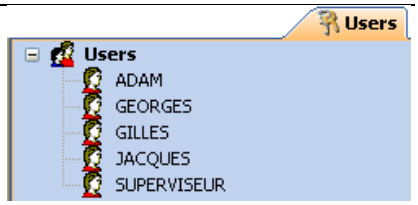
To expand only one branch, press + on the numeric keypad.

To close a branch, press - on the same keypad.

3.2.2. Carry out tasks

The Alt key displays a drop-down menu which lists the various actions which can be performed. Just select the task you want to be activated.

Chapter 3
MANAGEMENT OF USER ACCOUNTS



1. USERS LEVEL MANAGEMENT

When you start the program it will ask for your identification. This is for security and prevents unauthorised users from accessing the program.

Actions which can be performed within the directory tree depend on the users' rights. These rights are determined by the level to which the user account belongs. This level defines a set of rights and permissions for the users which are members of it.

The various levels in the hierarchy are as follows:

- **Supervisor**:

This level can only be accessed with the **ATEQ** password.

When the project is created, **ATEQ** designs the composition of the system and the links between the various devices in accordance with the customer's requirements. It is the only body entitled to do so.

ATEQ reserves the right to have access to all the system resources.

- **Administrator**:

  The administrator accounts are used by the persons who control users' rights and configure the system:

  - configuration of measurement devices,
  - creation of test sequences,
  - allocation of test sequences according to the parts to be tested.

  They are also able to initiate tests and carry out maintenance on the devices.

- **Level 1 and 2 user**:

  For the moment there is no difference between these two levels.

  Unlike the administrator, the users can not configure the system. They are only authorised to perform tests on parts, and to carry out maintenance on the devices.

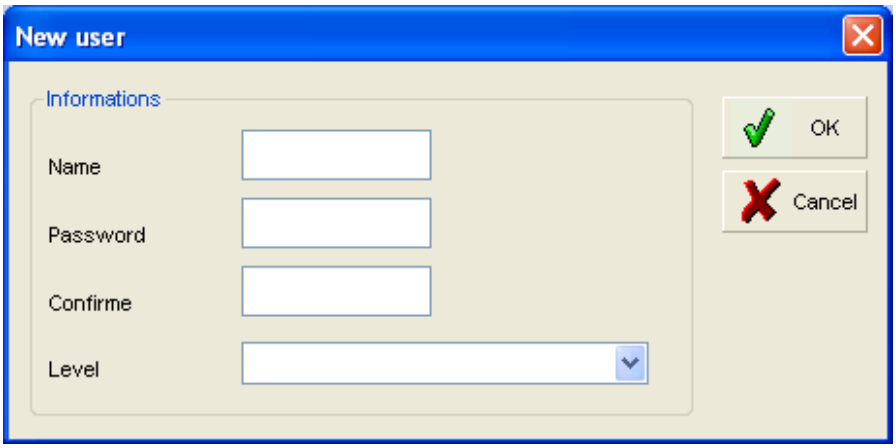
- **Level 3 user**:

  The same functions as level 1 and 2 users, with the difference that the program is started directly in test mode.

2. CREATION OF A NEW ACCOUNT

A system administrator can authorise a third person to use the program:

- Go to the Users icon and position the mouse on it;
- Call up the task menu (*right click on the mouse*), and select ADD. The following window will appear:



- Enter:
    - the **name** of the new user (*max. 20 alphanumeric characters*),
    - his **password (***max. 20 alphanumeric characters*),
    - his **password** again **to verify and confirm the entry**,
    - his **user level (***administrator or user*).

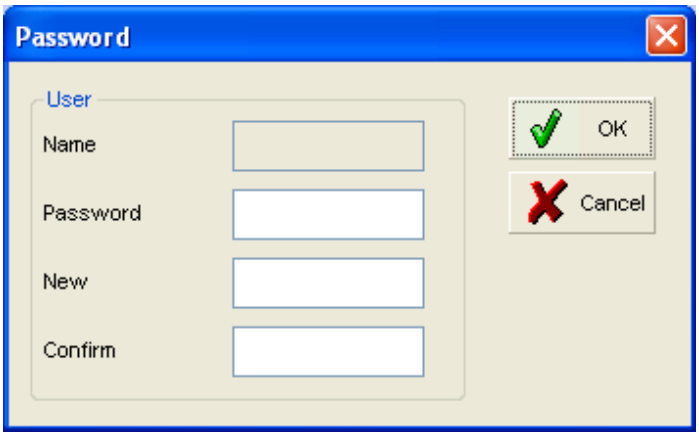
Note*: we advise that when each new user receives his account he should modify his access code so that it is personal to him and confidential.*

3. MODIFICATION OF ACCESS CODE

Users at any level can modify their personal password which limits access to the program:

Note: *we strongly advise that you follow this procedure after allocation of a new account by a system administrator.*

- Position the mouse on the icon representing the user code;
- Click on it. The following window appears:



- Enter:
    - the **old** password,
    - the **new** password (*max. 20 alphanumeric characters*),
    - the **new** password again to **verify and confirm the entry**.

4. DELETION OF AN ACCOUNT

The system administrator can delete one or more accounts (*either administrator or user accounts*):

- Position the mouse on the icon representing the account to be deleted,
- Bring up the task menu and select DELETE, or press Del..
- The program will prompt you to confirm the deletion on the record. Confirm.

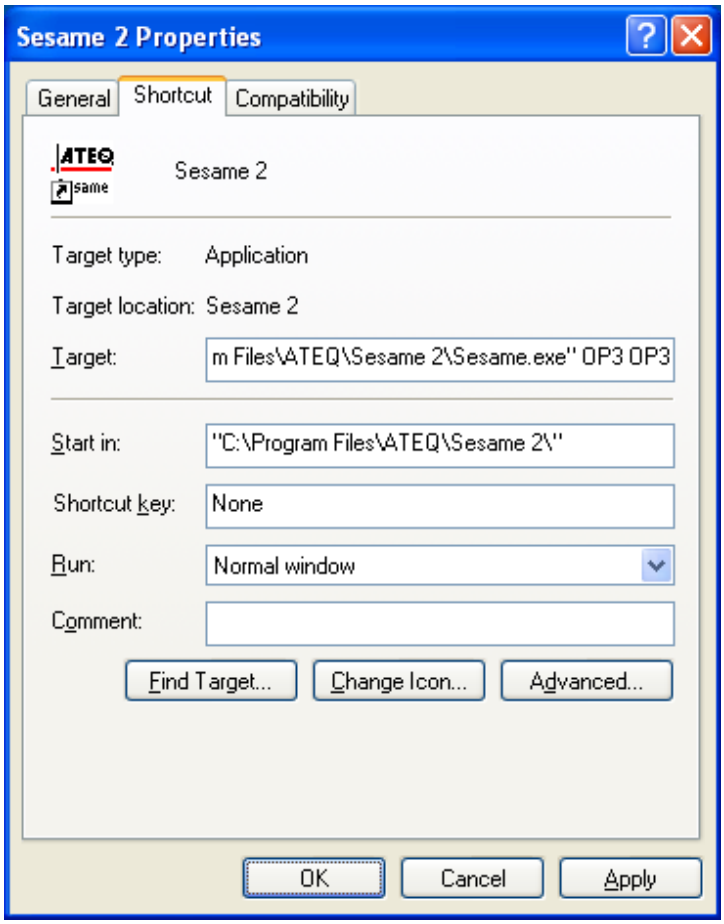
Note: *all deletions are final and irreversible. To re-establish an account you will have to create a new user account.*

5. AUTOMATIC CONNECTION

The stating of ***SESAME*** with an operator connection and his password can be automatic from the Windows desktop.

For that, in the ***SESAME*** shortcut properties, you must add in the "**Target**" field the operator name and his password.

In the following example, the operator name is "**OP3**", and the password is "**OP3**", the whole separated by spaces.

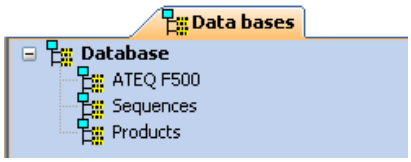


In this example the syntax is:

"C:\Program Files\ATEQ\Sesame2\SESAME.exe" OP3 OP3.

***Note**: this option is functioning for the whole accounts created in the **SESAME** software.*

Chapter 4
DATA BASES



1. MANAGEMENT OF DATA BASES

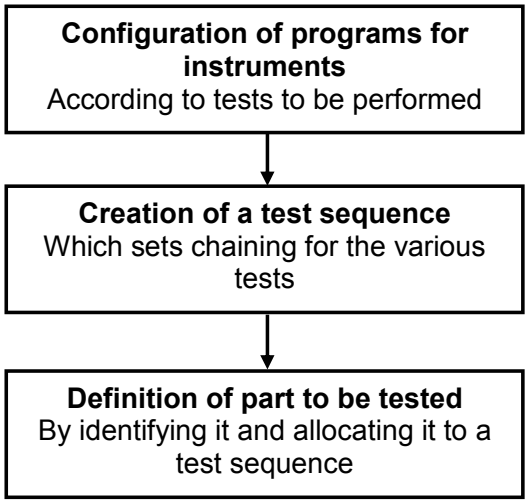
***Note**: management of data bases is reserved for program administrators.*

However ATEQ reserve the right to have access to all the system facilities.

Before running a test cycle, it is essential to perform the following actions:

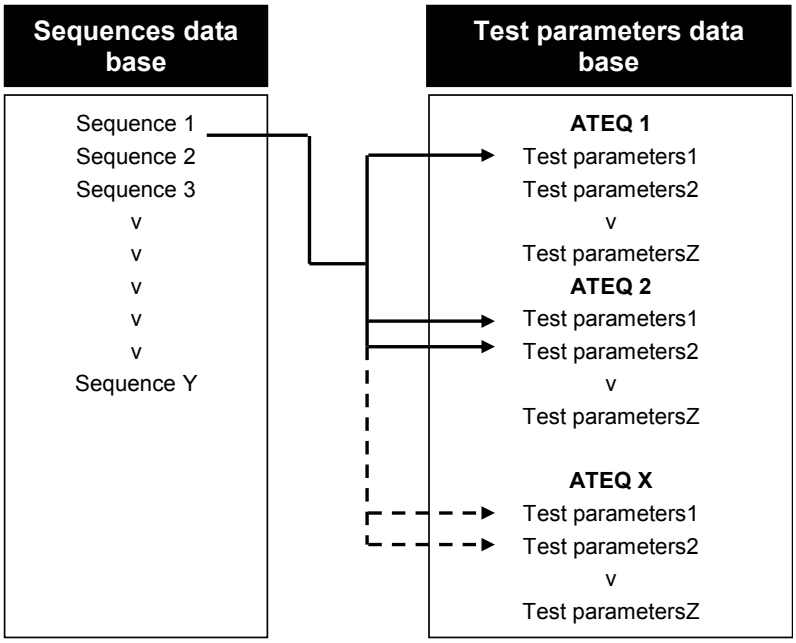
In order to do this, **SESAME** enables management of the various data bases relating to:

- setting parameters for the devices,
- configuration of test sequences,
- allocation of these sequences according to the parts to be tested.

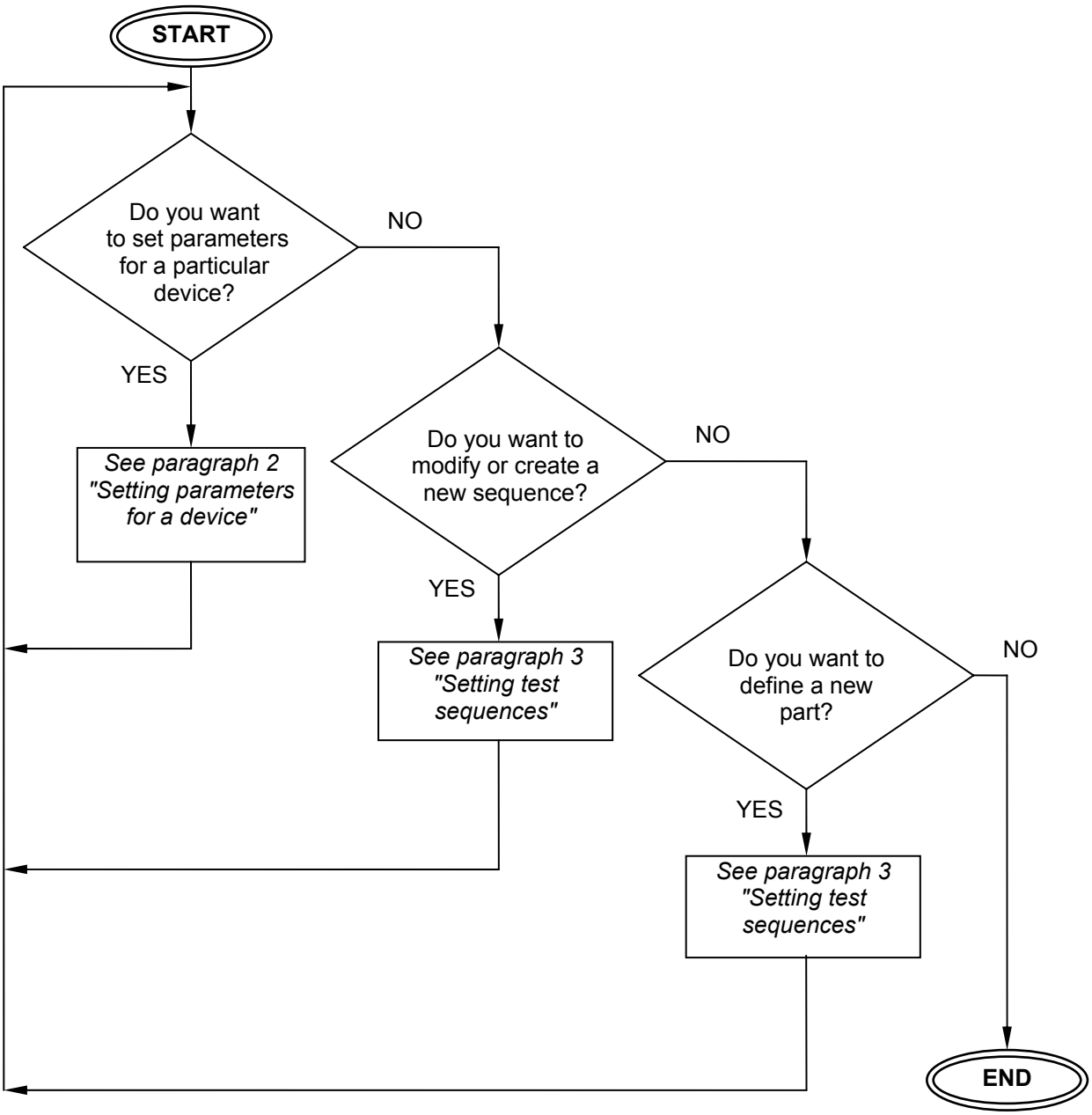


These bases are then used to sequence the test cycles and parts to be tested in order.

Several parts can therefore be associated with the same test sequence..



This chapter gives the whole procedure for setting up a test cycle using the following path:



2. SETTING PARAMETERS FOR A DEVICE

Each device can be used to perform one or more tests.

To carry out a test you need to set parameters for the device which will carry out this test.

This section shows you how to configure and allocate a name to a set of parameters for a device which is to be used for a test.

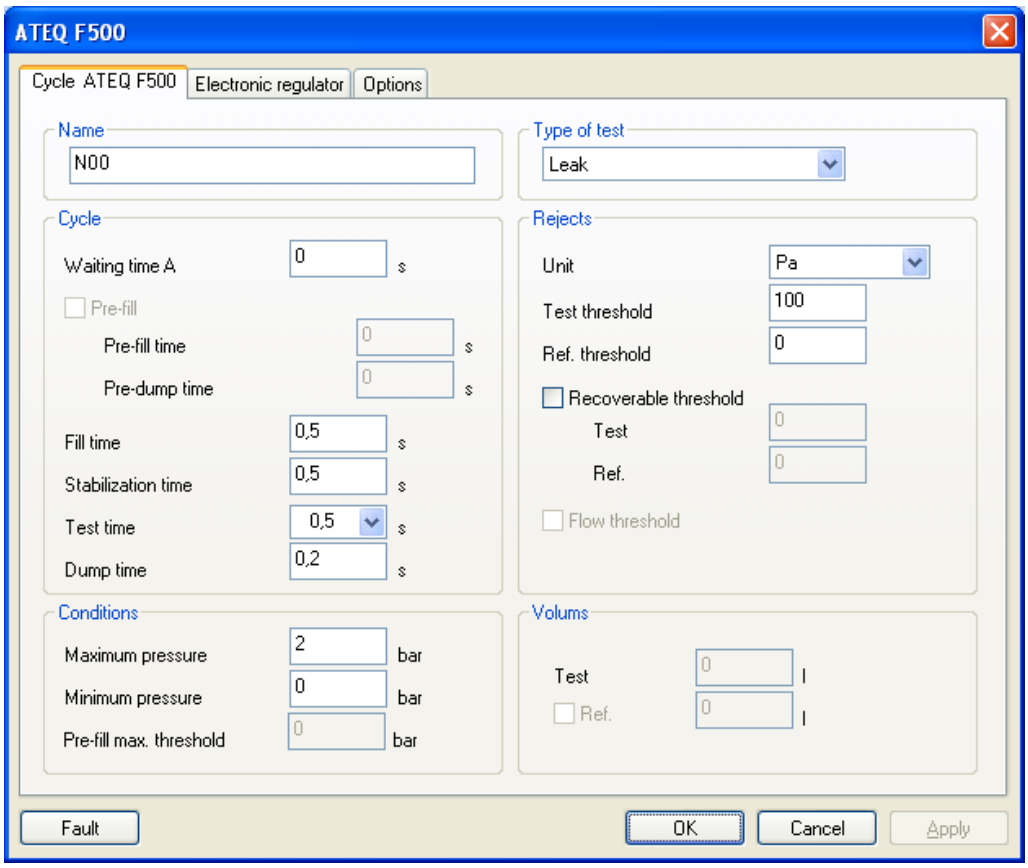
***Note**: the devices represented below can be managed by **SESAME**, they are not inevitably installed in the bench, that depends on the configuration and the functions of the bench.*

If some windows below are still in French language, it's because they won't be translated following the non use of their devices out of France.

2.1. 5TH SERIES DEVICES

2.1.1. Setting parameters for the ATEQ F500

2.1.1. 1) "Cycle" tab



This windows use to specify:

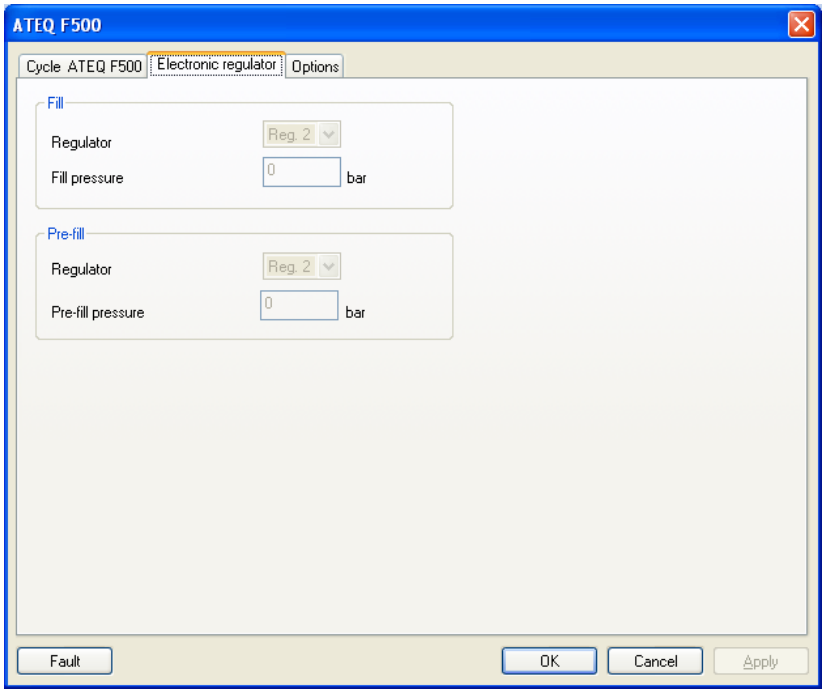
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type,** *(leak test, blockage or desensitized),*
- **the waiting time** *(in seconds),*
- **the pre-fill time** (*if validated in seconds*),
- **the pre-dump time** (*if validated in seconds*),
- **the fill time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the dump time** (*in seconds*),
- **the reject unit,**
- **the test and reference reject thresholds** (*in cm3/min*),
- **the test and reference reject recovery thresholds** (*in cm3/min*),
- **the minimum and maximum limits of pressures** (*in MPa / bar etc…*),
- **the maximum threshold for the pre-fill** (*if validated in MPa / bar etc…*), appears if a flow reject unit is selected),
- **the test and reference volumes** (*in liters*),

For further information *see the **ATEQ F500** manual.*

2.1.1. 2) "Electronic regulator" tab

This tab allows configuring pressure, filling and pre-filling instructions for the electronic regulator.

For further information *see the **ATEQ F500** manual.*



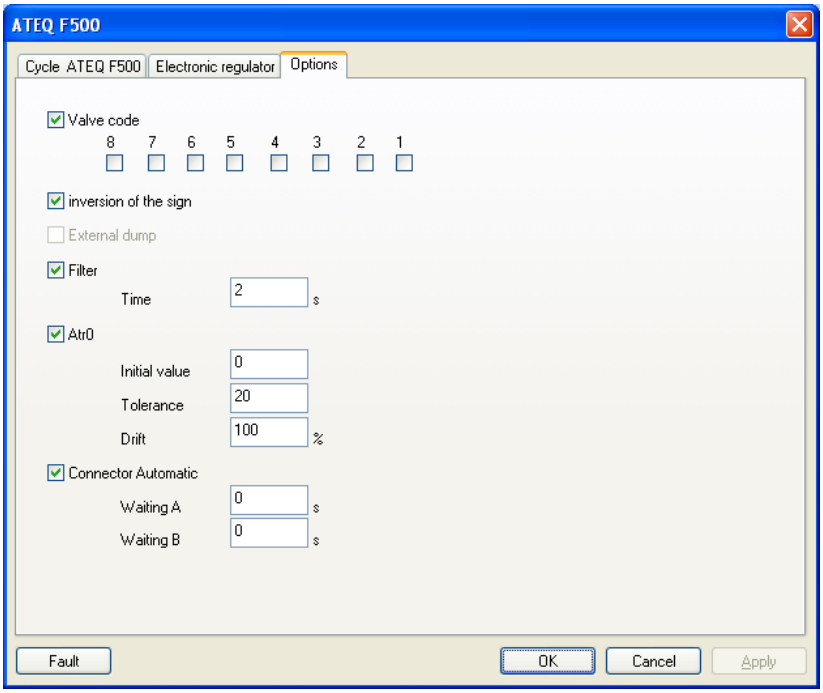
2.1.1. 3) "Options" tab

This tab allows validating the hoped functions in the F500 instrument cycle.

These functions are the following ones, that it is advisable to validate according to the choice of the operator

Valves codes internal and external validation.

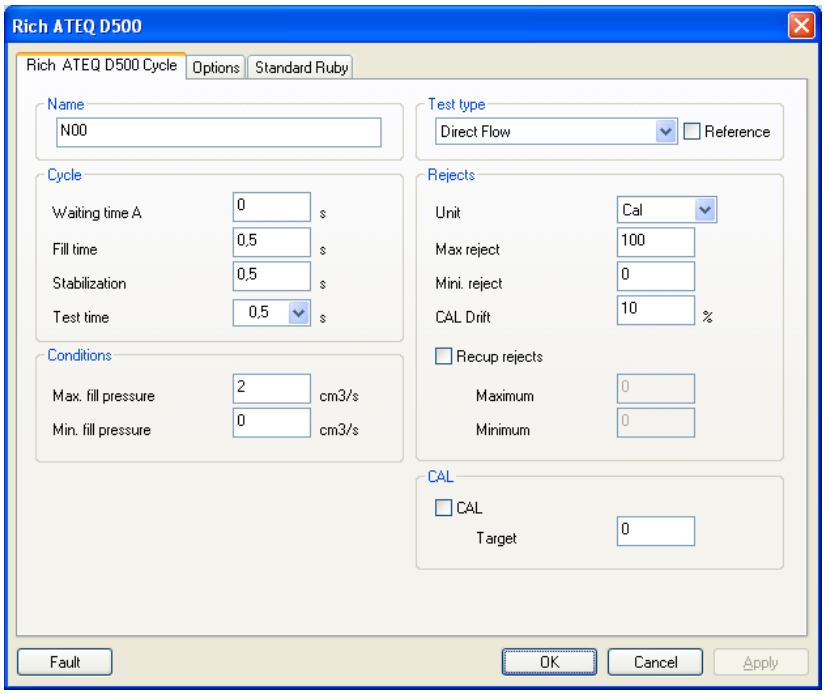
For further information *see the **ATEQ F500** manual.*



2.1.2. Setting parameters for the ATEQ D500 and D500 "High precision"

2.1.2. 1) "Cycle" tab

The configuration windows for the D500 and the D500 "high precision" are almost identical, differences will be mentioned below.



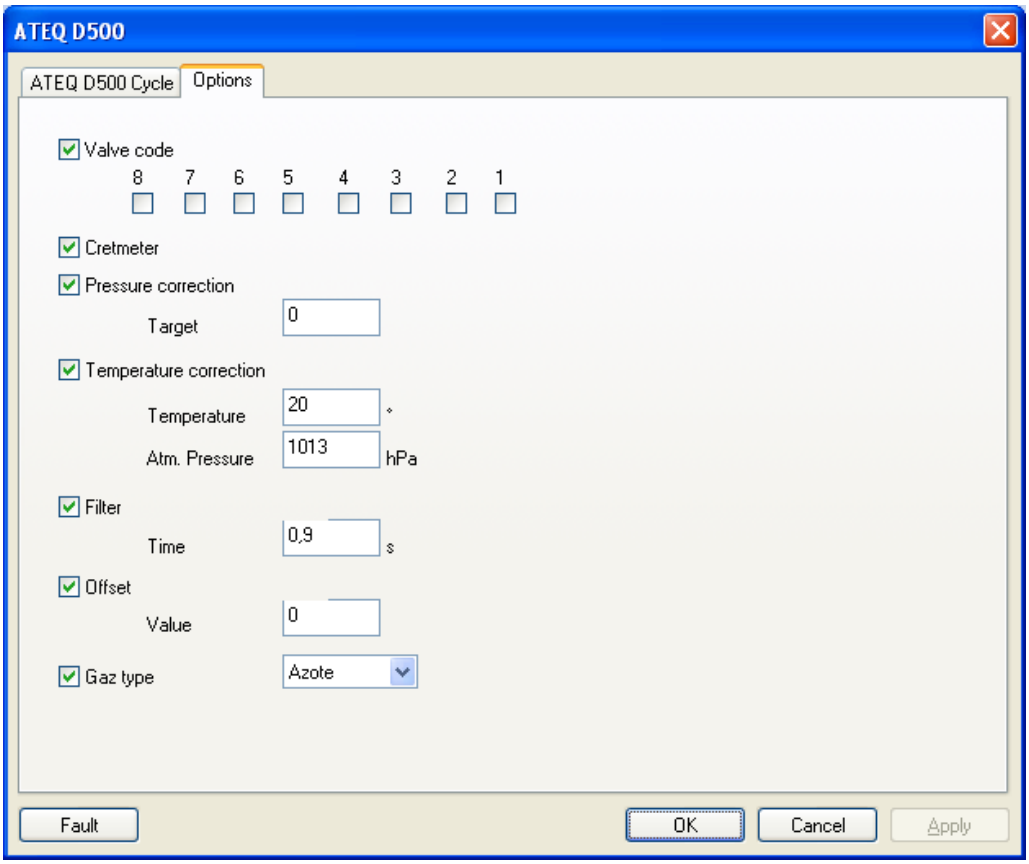
This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type** *(direct or indirect flow, recovery or reference flow following version),*
- **the "reference" validation** *("high precision" version),*
- **the waiting time A** *(in seconds),*
- **the fill time** *(in seconds),*
- **the stabilization time** *(in seconds),*
- **the test time** (*in seconds*),
- **the test conditions,** maximum and minimum fill pressures and the fill instruction following version *(configurable unit)*,
- **the reject unit,**
- **the minimum and maximum reject thresholds**,
- **the CAL drift** (en %),
- **the recovery reject thresholds for the test and for the reference** if validated *(in cm^3/min),*
- **the CAL** if validated (*instruction*),.

For further information *see the ATEQ D5 manual.*

2.1.3. "Options" tab

This tab allows validating the hoped functions in the D500 instrument cycle.



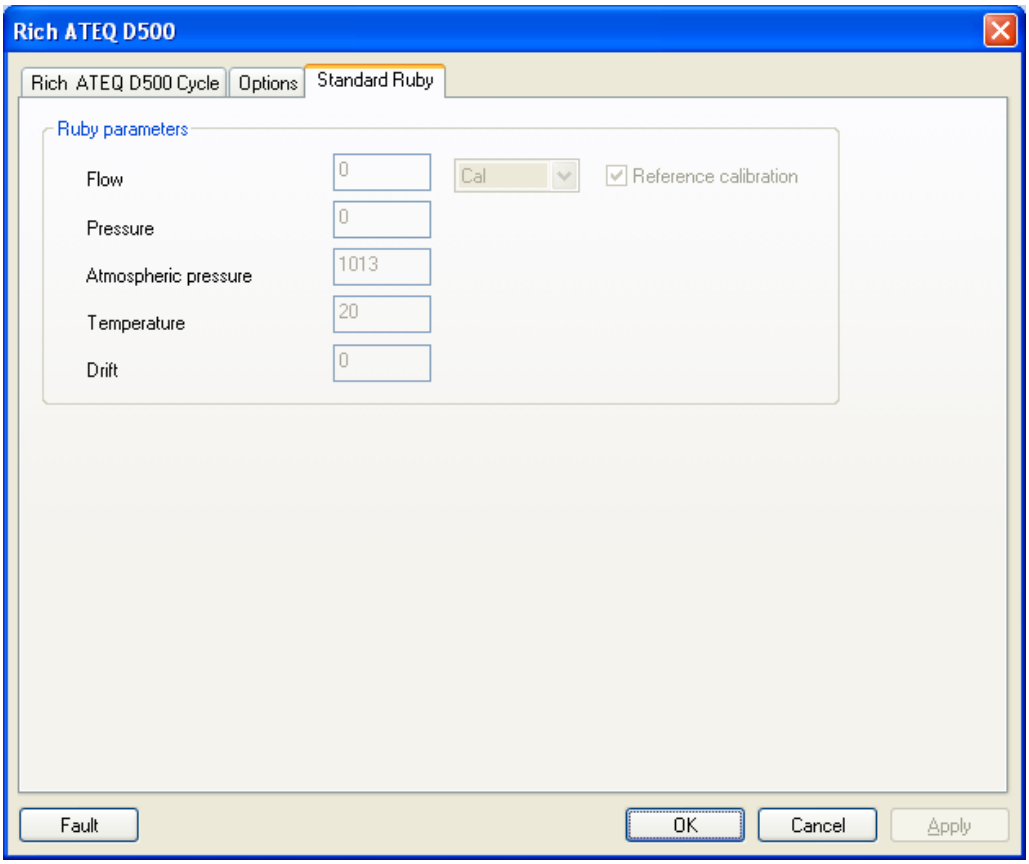
These functions are the following ones, which it is advisable to validate according to the choice of the operator

- the **valves codes** internal and external validation.
- the **peak level** function,
- the **pressure correction** with the instruction,
- the **temperature correction** with the temperature and atmospheric pressure instructions,
- the **filtering** function,
- the "**Offset**" function,
- the **gas type** validation function to select the used gas for the tests if different from the air *(nitrogen, natural gas, butane, propane or G110)*.

For further information *see the **ATEQ D500** manual.*

2.1.3. 1) "Master jet" tab ("High Precision" option)

This tab allows configuring the master jet parameters which will be the reference during the test cycles.

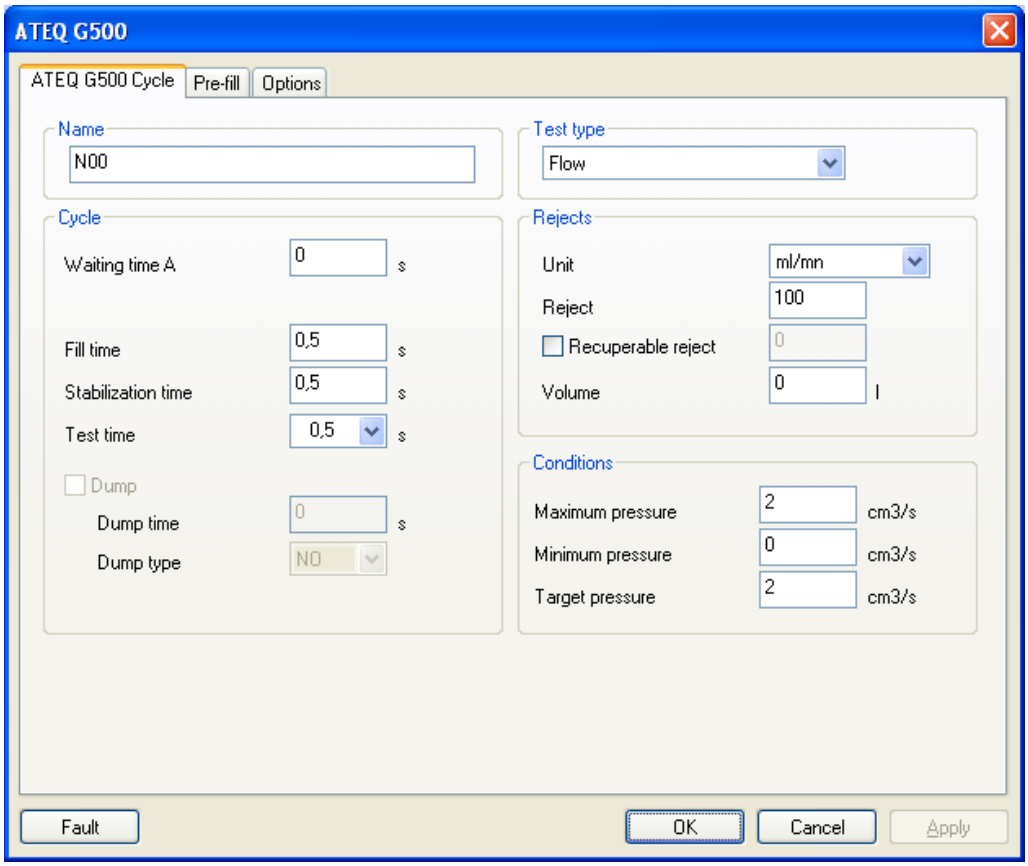


These parameters are the following ones: flow, pressure, atmospheric pressure, temperature and drift.

For further information on these options *see the **ATEQ D5** manual, "test with reference" option.*

2.1.4. Setting parameters for the ATEQ G500

2.1.4. 1) "Cycle" tab



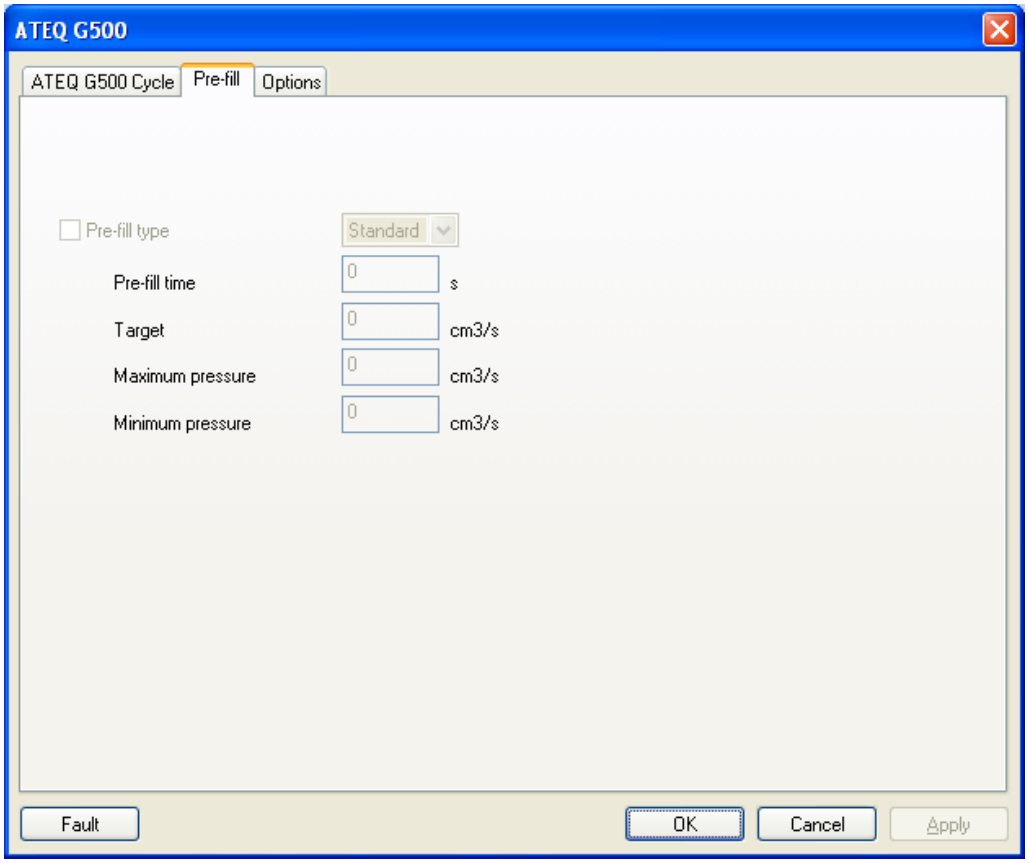
This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type** *(flow),*
- **the waiting time A** *(in seconds),*
- **the fill time** *(in seconds),*
- **the stabilization time** *(in seconds),*
- **the test time** (*in seconds*),
- **the dump parameters** if validate, time *(in seconds)* and type *(normally open or normally close),*
- **the reject unit,**
- **the minimum and maximum reject thresholds.** (*tests parameters*),
- **the recovery threshold** (*if validated*),
- **the test part volume** *(in liters),*
- **the maximum and minimum fill pressures** (*configurable unit)*,
- **the pressure instruction,**

For further information *see the **ATEQ G5** manual.*

2.1.4. 2) "Pre fill" tab

This tab is to configure the pre fill if the device is fitted with this option.

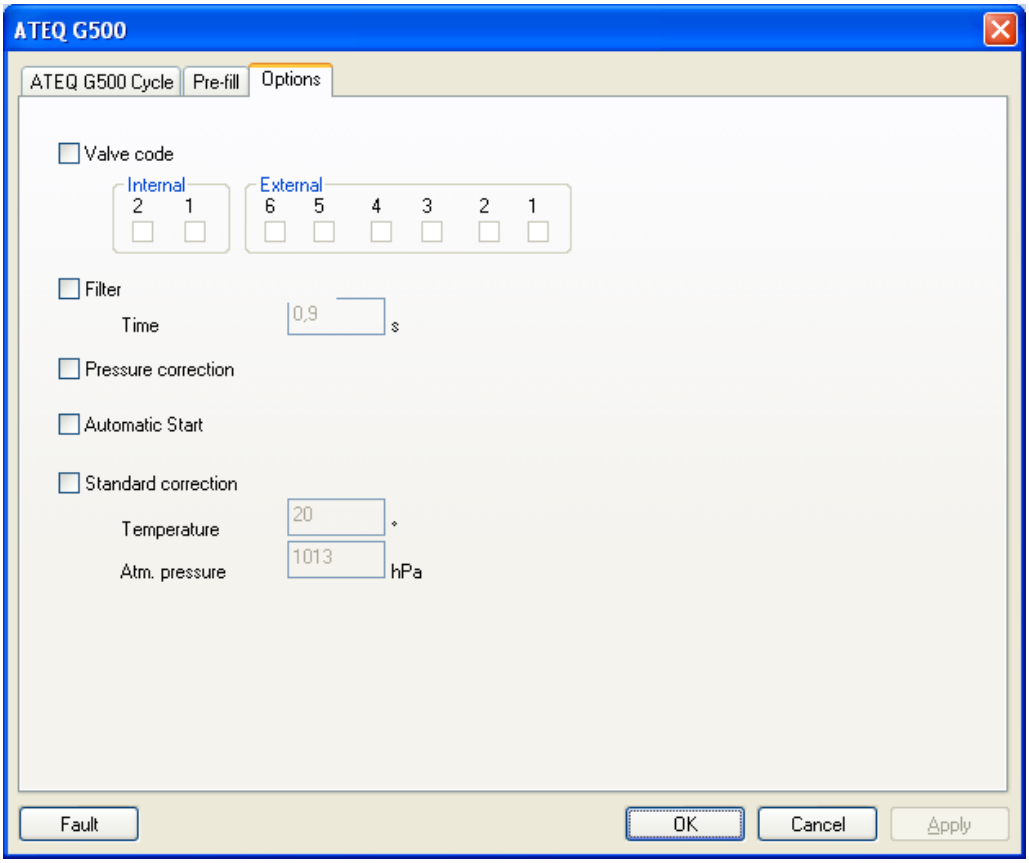


This windows use to specify:

- **the pre-fill time** (*in seconds*),
- **the instruction** (*en cm^3/s.*),
- **the minimum and maximum pressures,**

2.1.4. 3) "Options" tab

This tab is to validate the hoped functions and configure them in the test cycle.



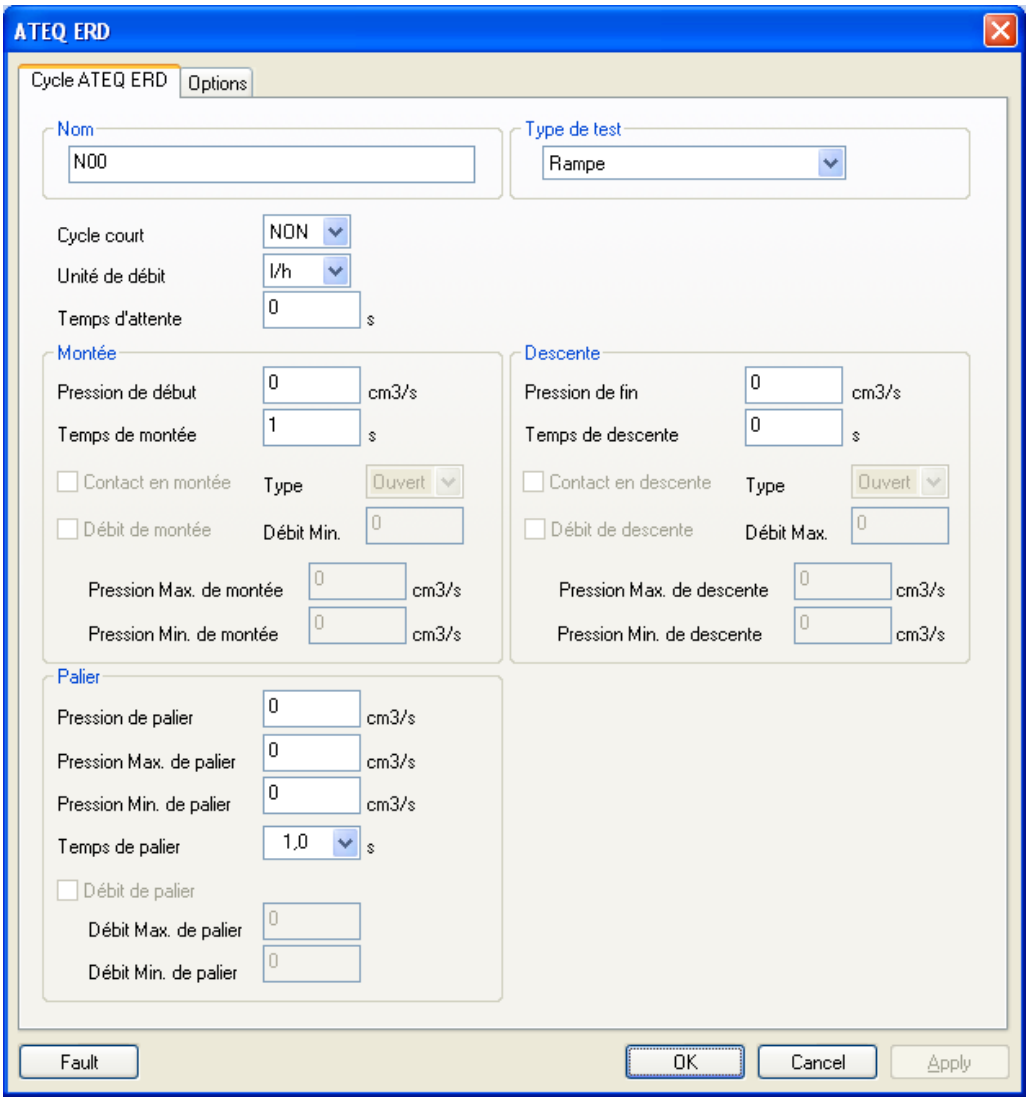
These functions are the following ones, which must be validated according to the choice of the user:

- internals and externals "**Valve code**" function validation,
- "**Filtering**" function validation with the filtering time instruction,
- "**Pressure correction**" function validation,
- "**Automatic start** " function validation,
- "**Temperature correction**" function validation with the temperature instruction *(Celsius)* and atmospheric pressure *(en hPa)*,

For further information *see the **ATEQ G5** manual.*

2.1.5. Setting parameters for the ATEQ ERD5

2.1.5. 1) "Cycle" tab



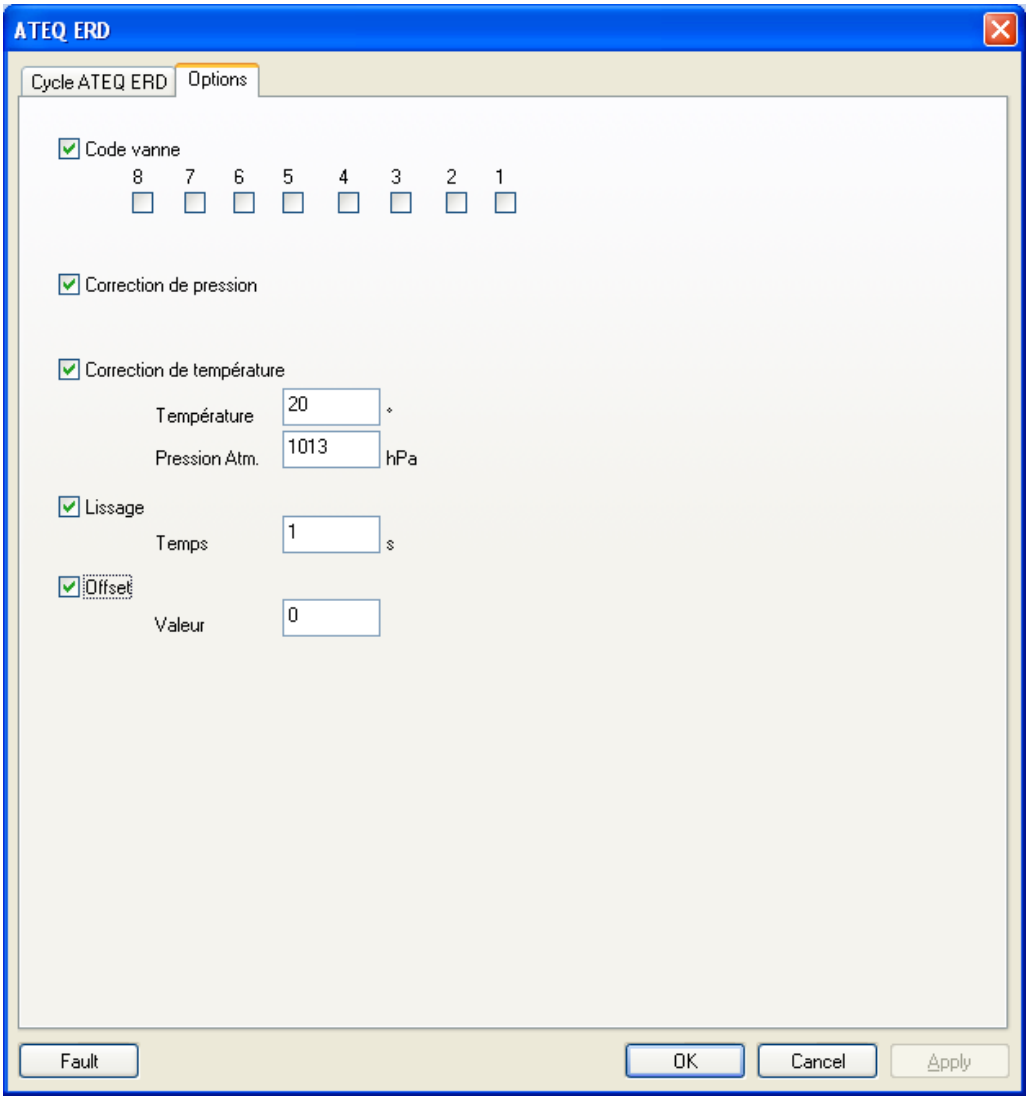
This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type** *(rampe),*
- **short cycle** validation,
- **the flow unit**,
- **the waiting time A** *(in seconds),*
- **the rise parameters** *(configurable unit)*,
- **the drop parameters** *(configurable unit)*,
- **the step parameters** *(configurable unit)*,

For further information *see the **ATEQ ERD5** manual.*

2.1.5. 2) "Options" tab

This tab is to validate the hoped functions and configure them in the test cycle.



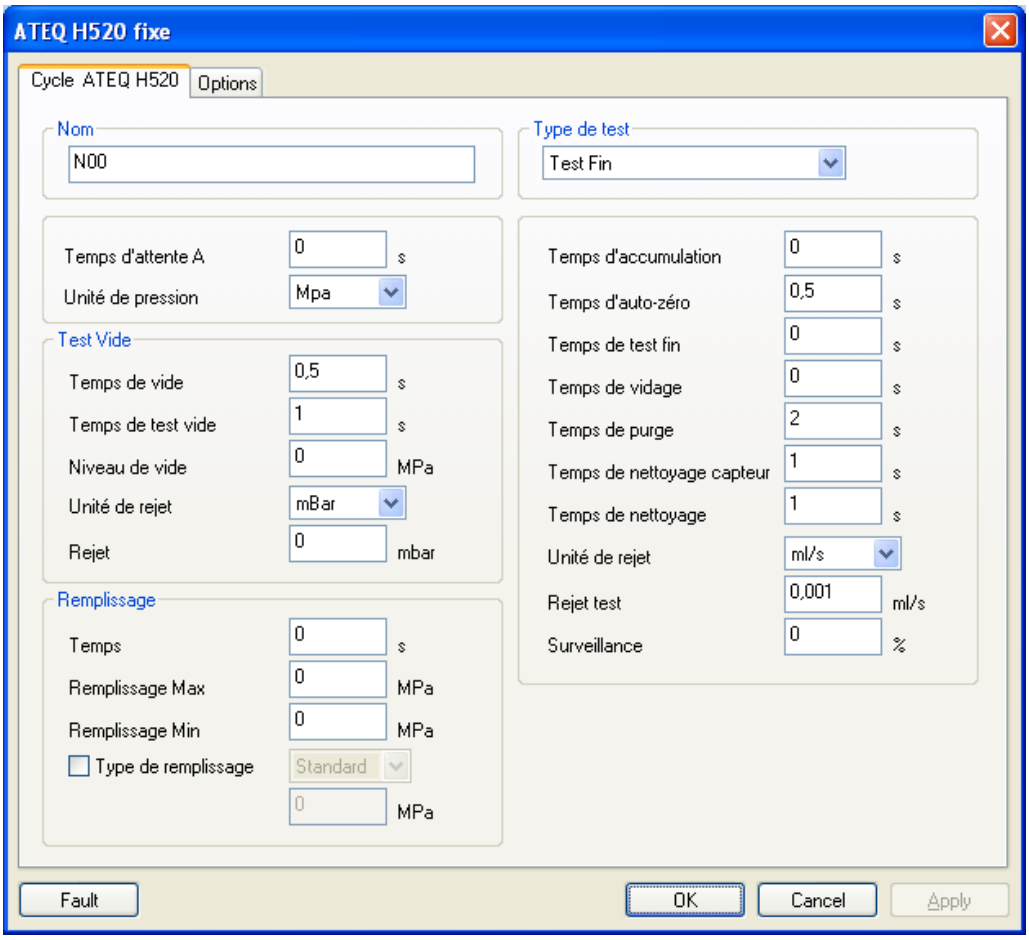
These functions are the following ones, which must be validated according to the choice of the user:

- internals and externals "**Valve code**" function validation,
- "**Pressure correction**" function validation,
- "**Temperature correction**" function validation with the temperature instruction *(Celsius)* and atmospheric pressure *(en hPa)*,
- "**Filtering**" function validation with the filtering time instruction,
- "**Offset**" function validation with its correction value,

For further information *see the **ATEQ ERD5** manual.*

2.1.6. Setting parameters for the ATEQ H520 fixed

2.1.6. 1) "Cycle" tab



This windows use to specify:

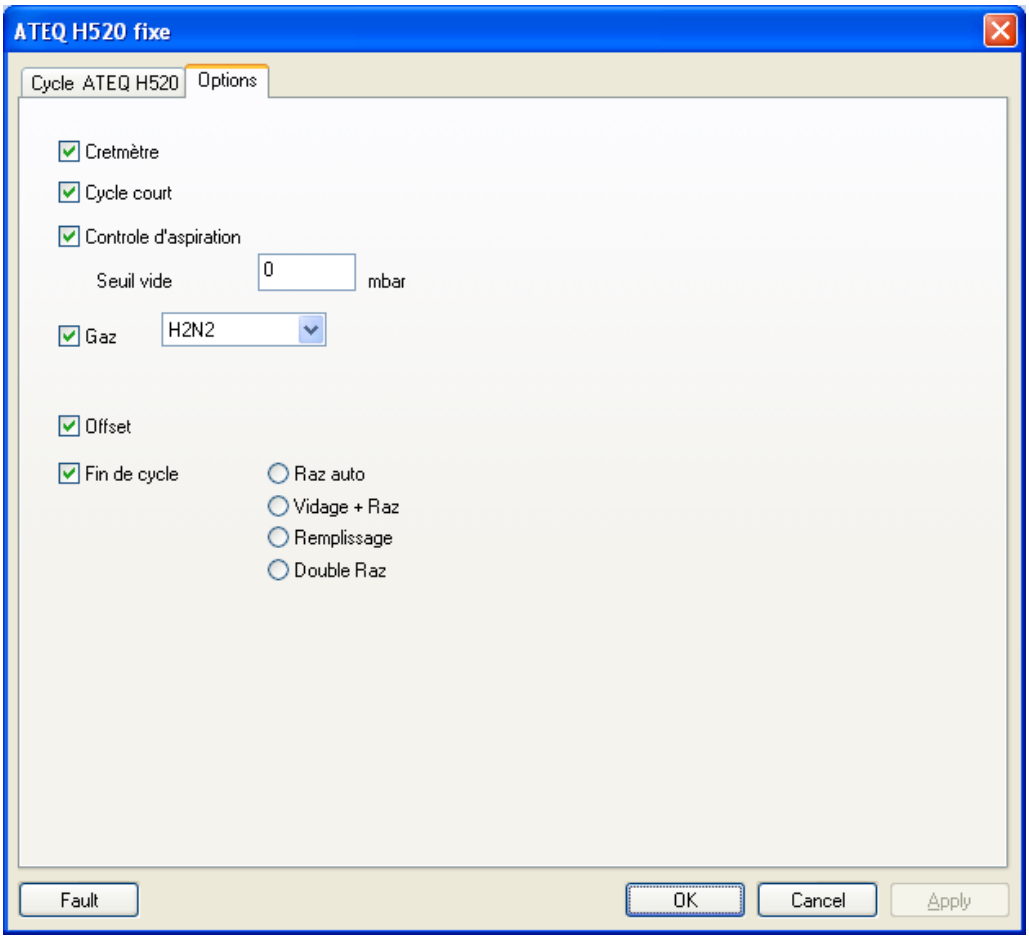
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type** *(Fine test or external probe),*
- **the waiting time A** *(in seconds),*
- **the vacuum time** (*in seconds*),
- **the vacuum level** (*in MPa*),
- **the reject unit** for the vacuum step *(pressure unit)*,
- **the fill time** (*in seconds*),
- **the minimum and maximum limits of pressures** (*in MPa / bar etc…*),
- **the fill type** *(standard or instruction)*,
- **the accumulation** *(in seconds),*
- **the auto-zero time** *(in seconds),*
- **the fine test time** *(in seconds),*
- **the dump time** (*in seconds*),
- **the purge time** (*in seconds*),
- **the sensor cleaning time** (*in seconds*),

- **the cleaning time** (*in seconds*),
- **the reject unit** for the fine test *(pressure unit)*,
- **the test reject thresholds** (*in flow unit or ppm*),
- **the watchdog parameter** (*in percent*),

For further information *see the **ATEQ H520** manual.*

2.1.6. 2) "Options" tab

This tab is to validate the hoped functions and configure them in the test cycle.



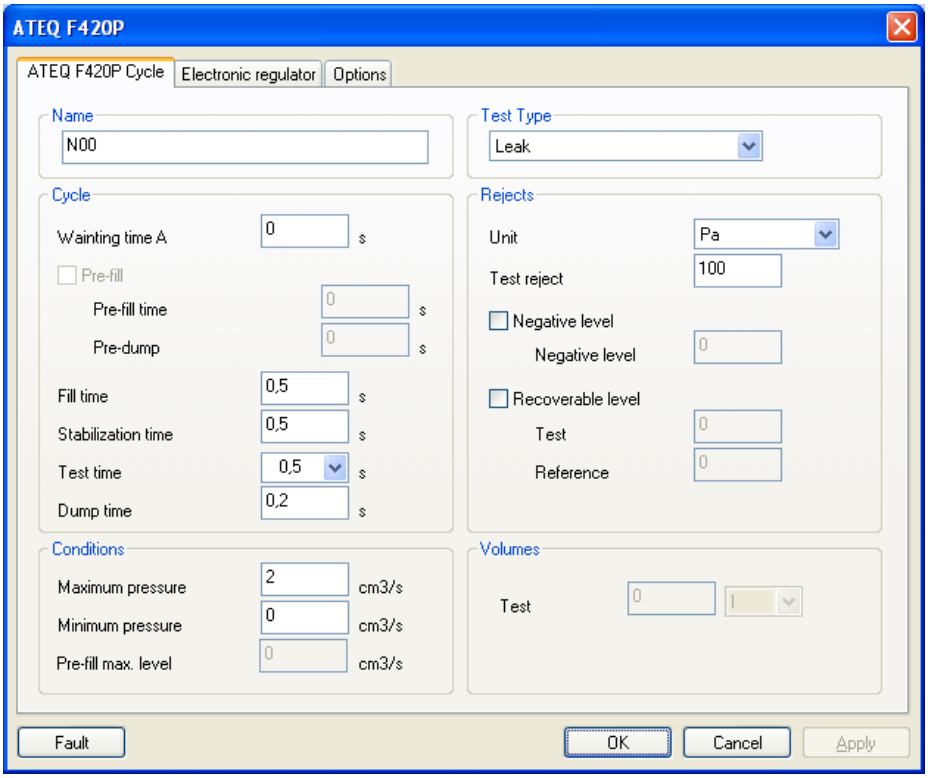
These functions are the following ones, which must be validated according to the choice of the user:

- the **peak level** function,
- **short cycle** validation,
- "**Vacuum control**" function validation to check the vacuum, this parameter comes with its **Vacuum threshold** *(in mbar)*,
- the **gas type** validation function to select the used gas for the tests if different from the air *(H2N2, R134A, Helium, user gas)*.
- the "**Offset**" function,
- the "**End of cycle**" function, with the choice of the end of cycle type.

For further information *see the **ATEQ H520** manual.*

2.1.7. Setting parameters for the ATEQ F420P

2.1.7. 1) "Cycle" tab



This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type,** *(leak test, blockage or desensitized),*
- **the waiting time** *(in seconds),*
- **the pre-fill time** if validated *(in seconds*),
- **the pre-dump time** if validated *(in seconds*),
- **the fill time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the dump time** (*in seconds*),
- **the reject unit,**
- **the test and reference reject thresholds**,
- **the negative threshold** if validated,
- **the test and reference reject recovery thresholds** if validated,
- **the minimum and maximum limits of pressures** *(configurable unit)*,
- **the maximum threshold for the pre-fill** if validated (*in MPa / bar etc…*), appears if a flow reject unit is selected),
- **the test and reference volumes** (*in liters*),

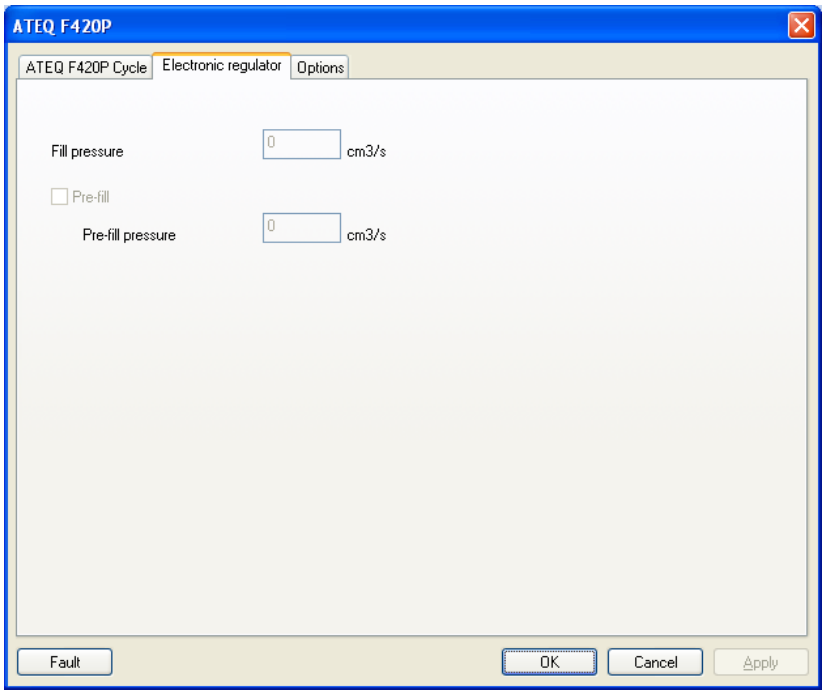
For further information *see the **ATEQ F420P** manual.*

2.1.7. 2) "Electronic regulator" tab

Electronic regulator adjust if fitted. The electronic regulator is an option.

This tab allows configuring the pressures instructions for the fil land pre-fill steps.

For further information see the **ATEQ F420P** manual.

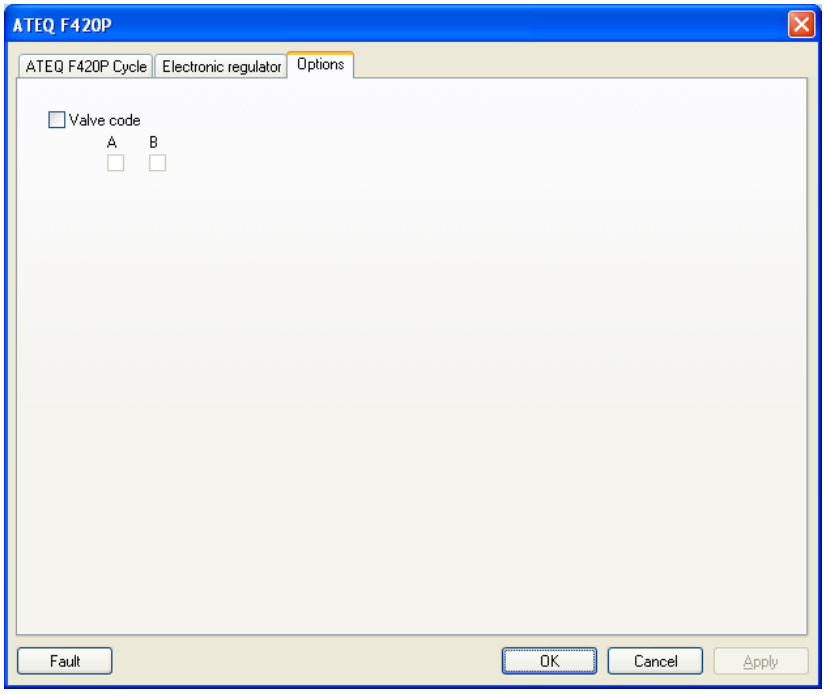


2.1.7. 3) "Options" tab

This tab is to validate the hoped functions and configure them in the test cycle.

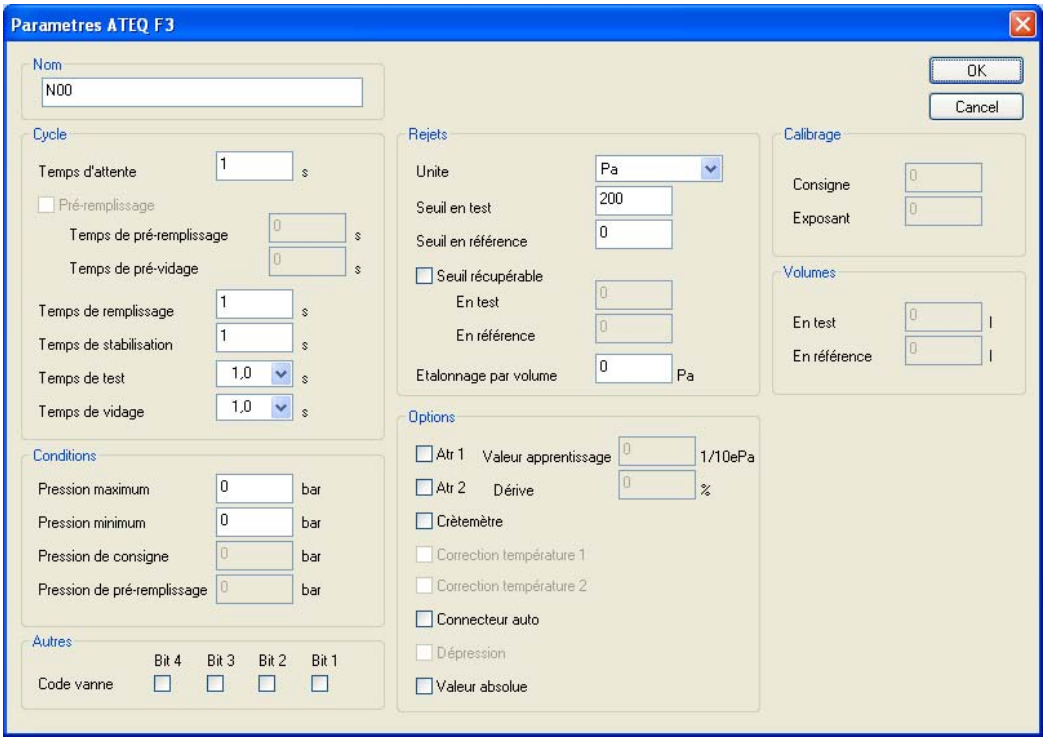
This function is the following ones, that must be validated according to the choice of the user:

- A and B "**Valve code**" function validation.



2.2. 3RD SERIES DEVICES

2.2.1. Setting parameters for the ATEQ F3

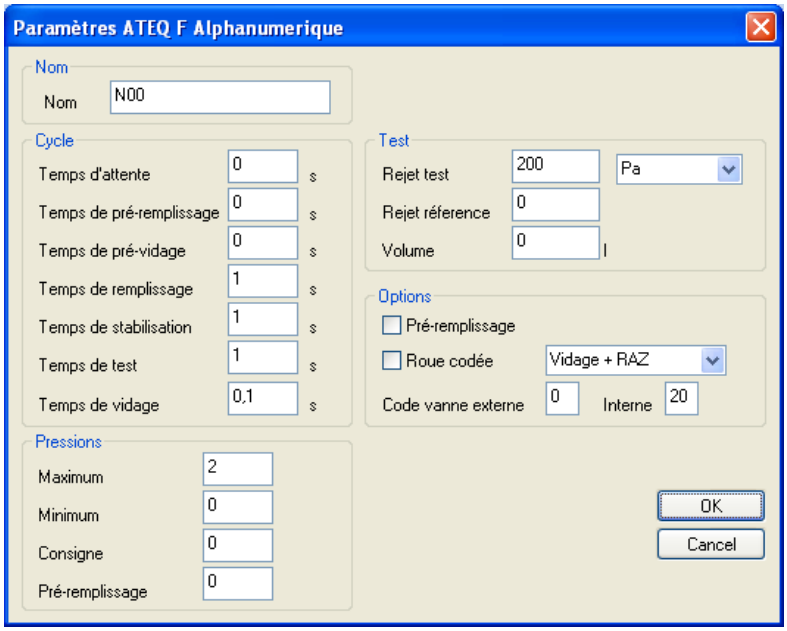


This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the waiting time** *(in seconds),*
- **the pre-fill time** if validated *(in seconds*),
- **the pre-dump time** if validated *(in seconds*),
- **the fill time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the dump time** (*in seconds*),
- **the minimum and maximum limits of pressures** *(configurable unit)*,
- **the pressure instruction**,
- **the pre fill instruction**,
- **the test and reference reject thresholds**,
- **the reject unit,**
- **the test and reference reject recovery thresholds** if validated,
- **the test and reference volumes** (*in liters*),
- **the different options validation** *(ATR, coded wheel, valves codes external and internal, etc.).*
- **the calibration instruction**,

For further information *see the **ATEQ F3** manual.*

2.2.2. Setting parameters for the ATEQ F Alphanumeric



This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the waiting time** *(in seconds),*
- **the pre-fill time** if validated *(in seconds*),
- **the pre-dump time** if validated *(in seconds*),
- **the fill time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the dump time** (*in seconds*),
- **the minimum and maximum limits of pressures** *(configurable unit)*,
- **the pressure instruction**,
- **the pre fill instruction**,
- **the test and reference reject thresholds**,
- **the reject unit,**
- **the test and reference reject recovery thresholds** if validated,
- **the test and reference volumes** (*in liters*),
- **the different options validation** *(ATR, coded wheel, valves codes external and internal, etc.).*
- **the calibration instruction**,

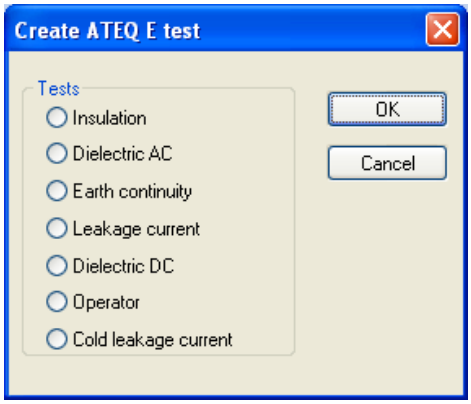
For further information *see the **ATEQ Falpha** manual.*

2.2.3. Setting parameters for the ATEQ E

This instrument is able to do the following tests:

- **Insulation resistance**.
- **Dielectric rigidity**.
- **Earth continuation**.
- **Leakage current** hot or cold.

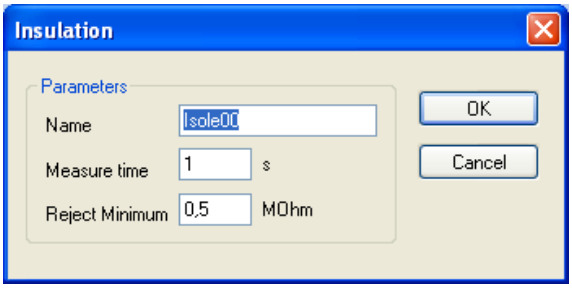
For further information *see the **ATEQ E**.*



2.2.4. Insulation resistance measurement

This windows use to specify:

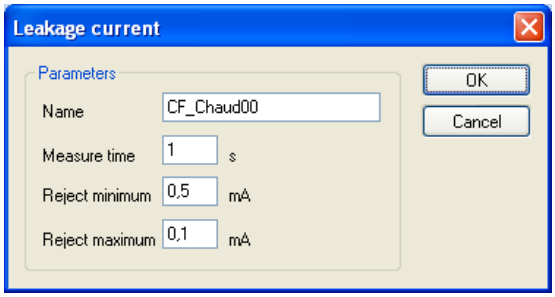
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the minimum reject threshold** *(in MΩ)*.



2.2.5. Hot leakage current

This windows use to specify:

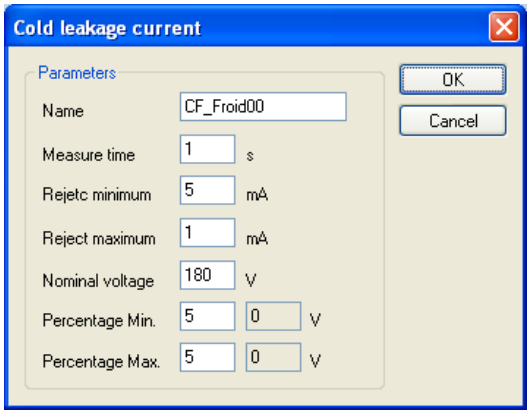
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the minimum and maximum rejects threshold** *(in mA)*.



2.2.6. Cold leakage current

This windows use to specify:

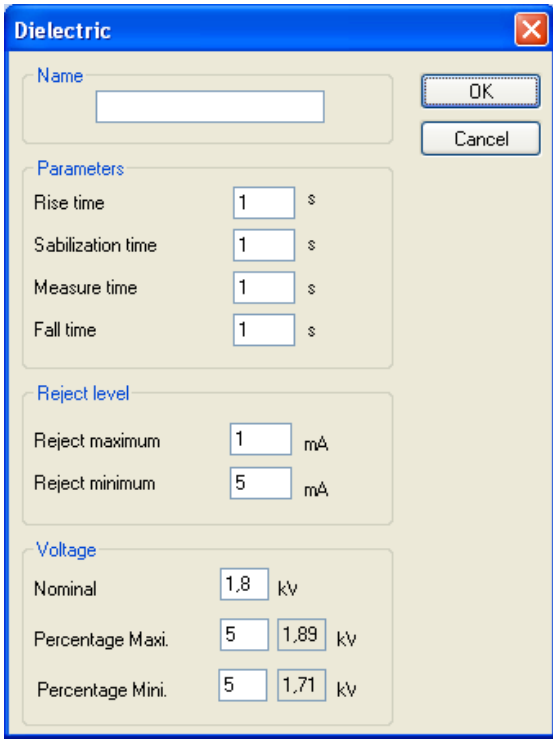
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the minimum and maximum rejects threshold** *(in mA)*.
- **the nominal test voltage** (*in V).*
- **the minimum and maximum test voltage** *(in % compared the nominal test voltage).*



2.2.7. Dielectric rigidity AC or DC test

This windows use to specify:

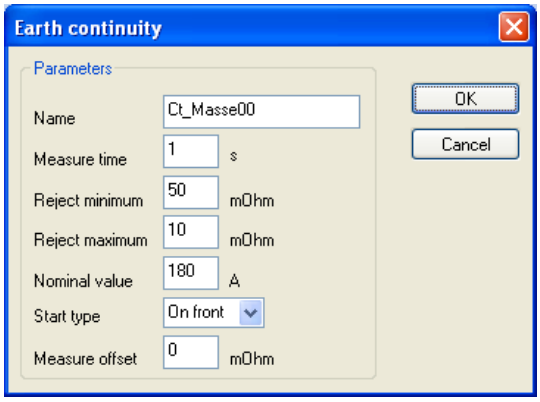
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the times** (*in seconds*) of the different cycle steps,
- **the rising time**,
- **the stabilization time**,
- **the test time**,
- **the drop time**.
- **the minimum and maximum reject thresholds** (*in mA*),
- **the nominal test voltage** (*in kV*),
- **the minimum and maximum test voltage** *(in % compared to the nominal test voltage).*



2.2.8. Earth continuity

This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the minimum reject threshold** *(in mΩ)*.
- **the test current intensity** (*in A*),



- **the start type** (on rising edge or on state).

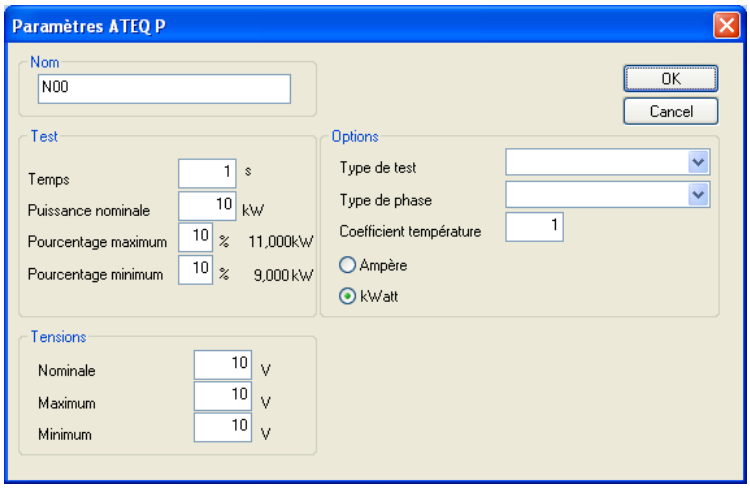
✓ **<u>On rising edge (On front)</u>**: the measurement will be carried out from a "*pulse*" made by the operator (*generally used with a test probe*).

✓ **<u>On state (On level)</u>**: the measurement will be carried out upon the start of the test (*generally used with grips or PLC*).

2.2.9. Setting parameters for the ATEQ P

This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the nominal power value** (following the specified unit in the options - A or kW),



- **the minimum and maximum power values** (*in % compared to the nominal power*),
- **the nominal test voltage** (*in Volt*),
- **the minimum and maximum test voltage** (*in Volt*),
- **test type** (by default, the tests are single phase type),
- **the phase** type (by default, the tests are on the phase 1),
- **the temperature correction coefficient value** (*in %*),
- **the unit to use** to express the nominal power (*in A or kW*).

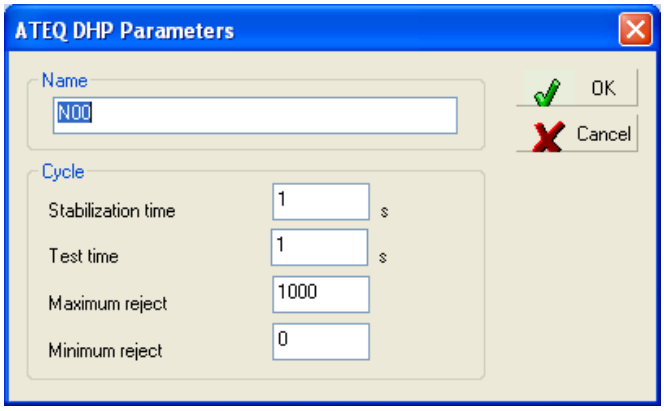
For further information *see the **ATEQ P** manual.*

2.2.10. Setting parameters for the ATEQ DHP

The **ATEQ DHP** is a specific device of **D** type of the 3rd series, which is fitted with an interface for Modbus communication.

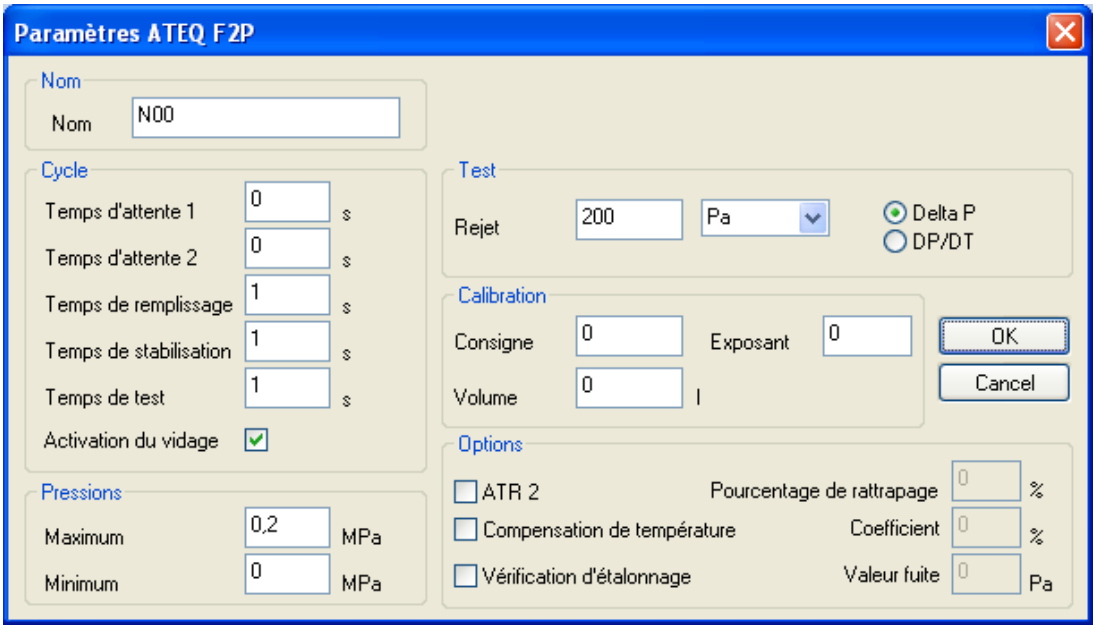
This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the minimum and maximum limits of pressures** *(configurable unit)*.



2.3. 2P SERIES DEVICES

2.3.1. Setting parameters for the ATEQ F2P



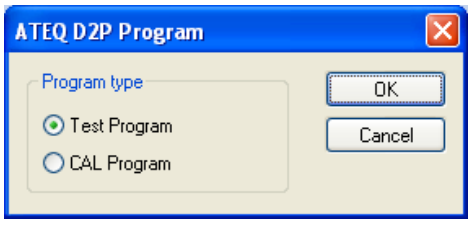
This windows use to specify:

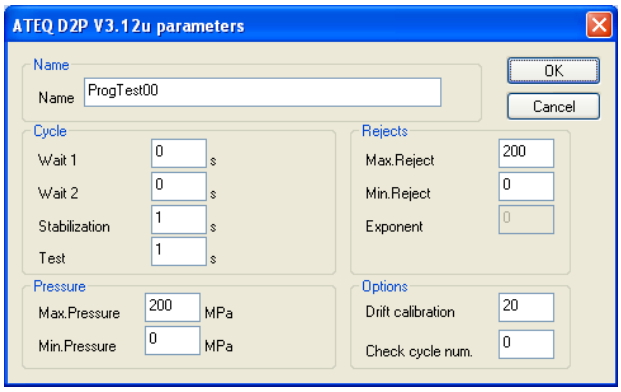
- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the waiting time 1** *(in seconds),*
- **the waiting time 2** *(in seconds),*
- **the fill time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the dump activation**,
- **the minimum and maximum pressure limits** (*in MPa)*,
- **the test and reference reject thresholds** (with a delta Pressure, or a delta Pressure on time),
- **the calibration instructions** (*instruction and volume),*
- **the different options validation** (ATR2, temperature compensation, calibration check)**.**

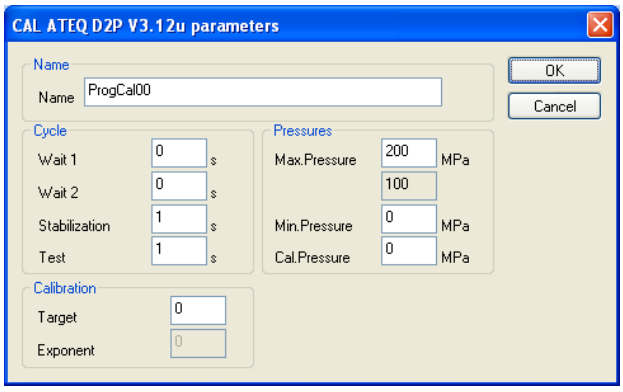
For further information *see the **ATEQ F2P** manual.*

2.3.2. Setting parameters for the ATEQ D2P

The program ask which parameters have to be modified, tests parameters or CAL parameters, (ATEQ calibration).





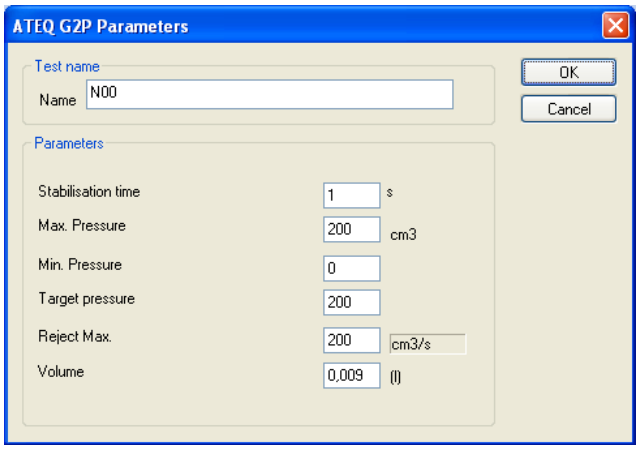


This windows use to specify:

- **the name of the set of test parameters** *(max. 20 alphanumeric characters)*,
- **the waiting time 1** *(in seconds)*,
- **the waiting time 2** *(in seconds)*,
- **the stabilization time** *(in seconds)*,
- **the duration of the test** *(in seconds)*,
- **the minimum and maximum reject limits.** *(tests parameters)*,
- **minimum and maximum limits of the pressures** *(in MPa)*,
- **options, drift calibration and the number of cycle between to check up** *(tests parameters)*,
- **the target and the exponent calibration** *(calibration parameters)*.

For further information *see the **ATEQ D2P** manual.*

2.3.3. Setting parameters for the ATEQ G2P



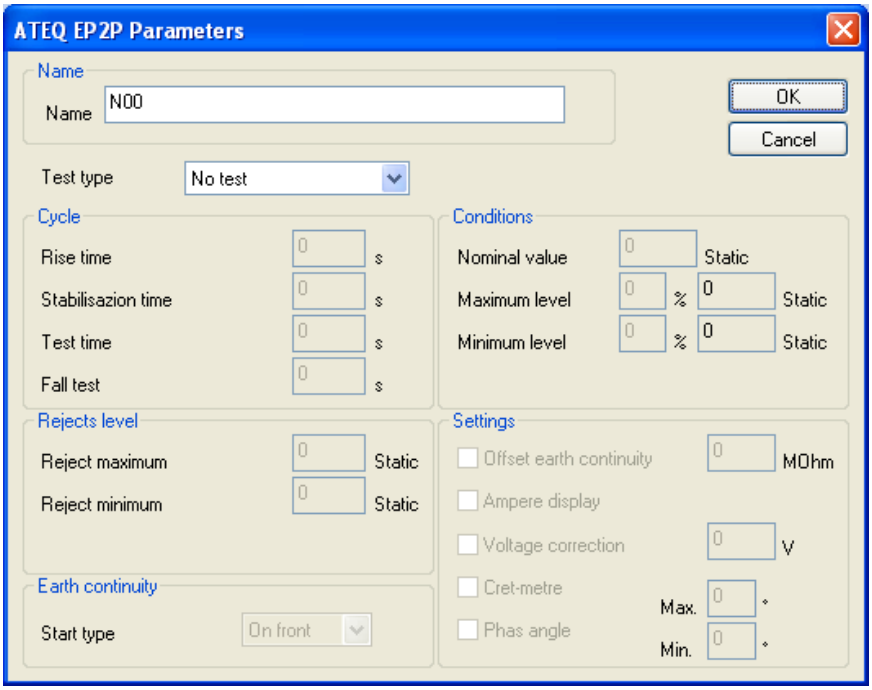
This windows use to specify :

- **the name of the set of test parameters** *(max. 20 alphanumeric characters)*,
- **the stabilization time** *(in seconds)*,
- **minimum and maximum limits of the pressures** *(in MPa)*,
- **the target pressure** *(in bar)*,
- **the minimum and maximum reject limits.** *(tests parameters)*,
- **the volume of the component** *(in liter)*.

For further information *see the **ATEQ G2P** manual.*

2.3.4. Setting parameters for the ATEQ EP2P

This windows use to specify:



- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test type,** choice among: no test, insulation resistance, dielectric rigidity AC, earth continuity, leakage current, dielectric rigidity DC, power, operator, resistance,
- **the rising time** (*in seconds*),
- **the stabilization time** *(in seconds),*
- **the test time** *(in seconds),*
- **the drop time** (*in seconds*),
- **the minimum and maximum reject threshold** (*in mA*),
- **the start type for the earth continuity** (*choice in the list pulse or state),*
- **the nominal voltage value** (*in V*),
- **the minimum and maximum threshold** (*in percent),*
- **the different options** (offset EC, display, voltage correction, peak hold, dephasing angle),

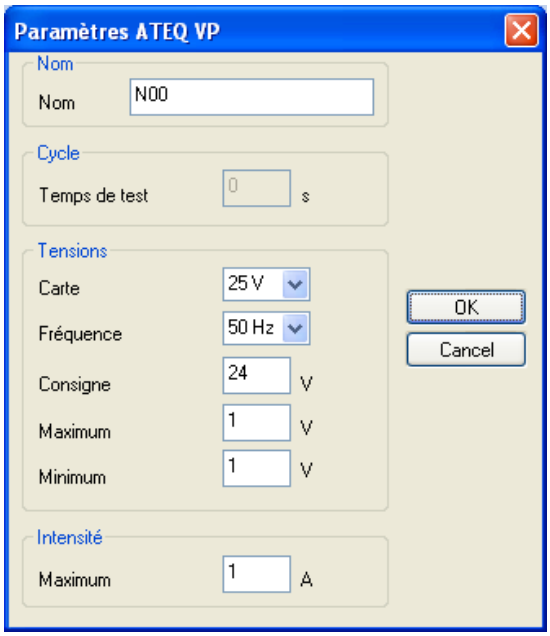
For further information *see the **ATEQ EP2P** manual.*

2.4. OTHERS DEVICES

2.4.1. Setting parameters for the ATEQ VAR

This windows use to specify:

- **the name of the set of test parameters** *(max. 20 alphanumeric characters)*,
- **the board voltage** (*25 V or 250 V).*
- **the frequency** *(50 Hz or 60 Hz)*.
- **the voltage instruction with the minimum and the maximum** (*in V).*
- **the intensity** (*in A).*

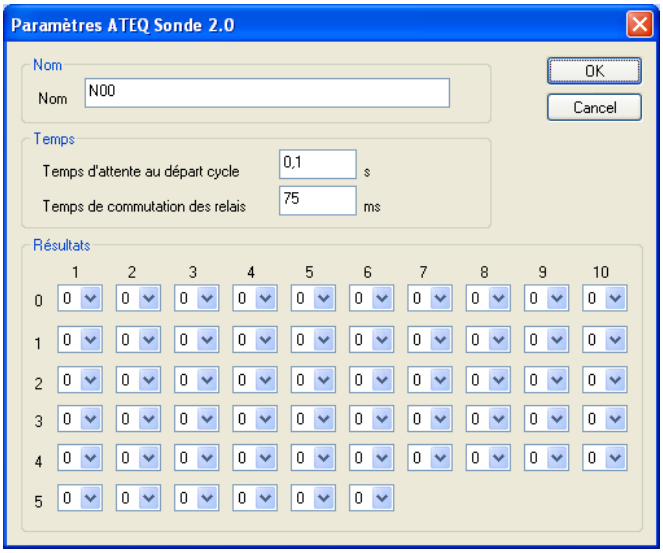


2.4.2. Setting parameters for the probe rack

L'**ATEQ PROBE** is a measurement device of the contacts for the detection of each phase:

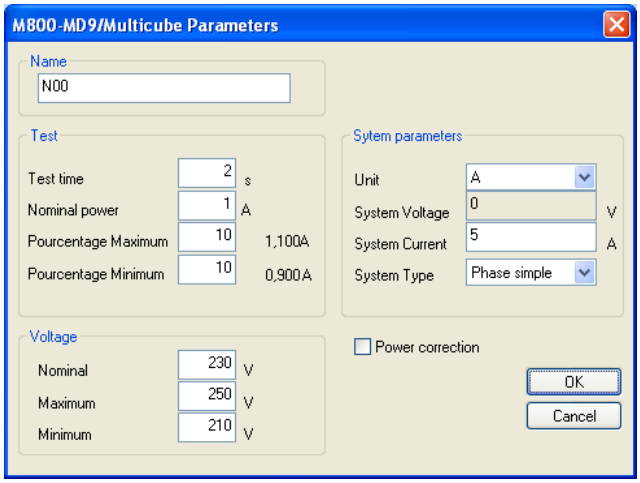
This windows use to specify:

- **the name of the set of test parameters** *(max. 20 alphanumeric characters),*
- **the waiting time at the start cycle,** time with beyond which the test probe will start, (*in seconds*),
- **the commutation time** between each relays changing, *(in milliseconds),*



- **contacts configuring,** each contact (maximum 56) are configured by phase, neutral etc.. Following a cycling defined by the customer, (choose in the list R, S and T for the phases 1, 2 and 3, N for neutral, 0 for nothing and X for none control).

2.4.3. Setting parameters for the M800-MD9



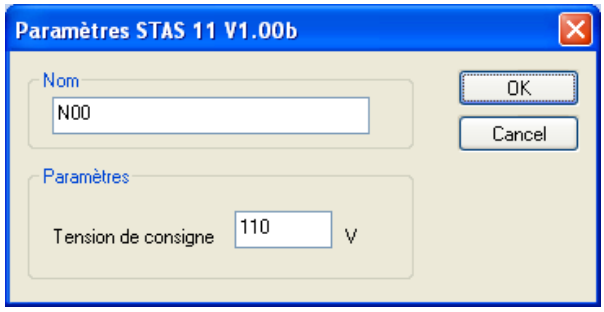
This windows use to specify:

- **the name of the set of test parameters** (*max. 20 alphanumeric characters*),
- **the test time** (*in seconds*),
- **the nominal power value** *(following the specified unit in the options – A or kW),*
- **the minimum and maximum power values** (*in % compared to the nominal power*),
- **the nominal test voltage** (*in Volt*),
- **the minimum and maximum test voltage** (*in Volt*),
- **the used unit to express the nominal power** (*in A or kW*), (choose in the list),
- **system voltage** *(in Volt*),
- **system current** *(in Ampere*),
- **the phase type** (choose in the list), (single phase, 3 phases 3 wires or 3 phases 4 wires).

2.4.4. Setting parameters for the ELECTRONA STAS 11 device

The **ELECTRONA STAS 11** device is a variable power supply.

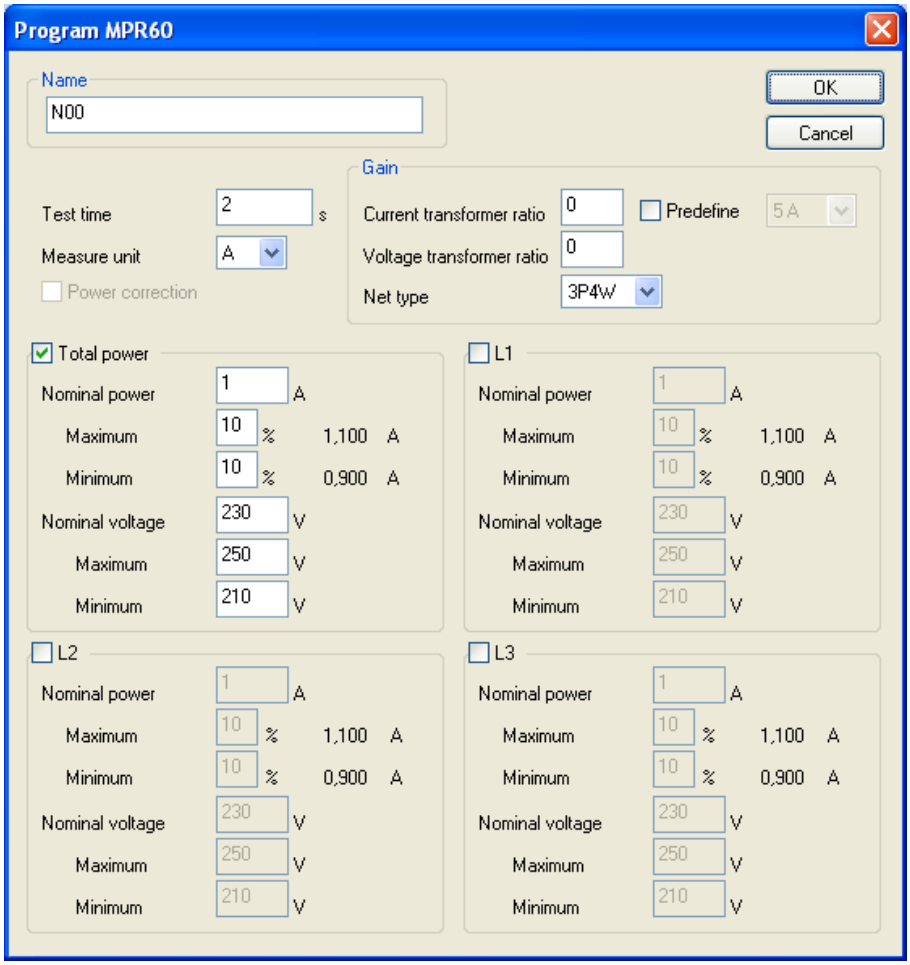
This windows use to specify:



- **the name of the set of test parameters** *(max. 20 alphanumeric characters)***,**
- **the voltage instruction** (*Volt*).

2.4.5. Setting parameters for the MPR60S device

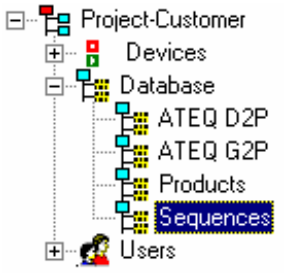
The **MPR60S** device is a electric network digital analyzer.



This windows use to specify:

- **the name of the set of test parameters** *(max. 20 alphanumeric characters)*,
- **the test time** (*in seconds*),
- **the measurement unit** *(Amperes or kilowatts),*
- **the choice of the measurement ranges, the network type** *(select in the list: single phase, 3 phases 3 wires 3P3W or 3 phases 4 wires 3P4W)*.
- Then for a global measurement or on the selected phases the following measurements:
- **the nominal power value** *(in A or kW following the above choice),*
- **maximum and minimum of the nominal power** *(in %),*
- **the nominal voltage** *(in volts),*
- **maximum and minimum of the nominal voltage** *(in volts),*

3. SETTING TEST SEQUENCES



In the previous section we saw how to configure the parameters for each device so that they could perform a particular test.

The various tests then have to be chained. This is the role of the sequence: it includes all the stages in a test cycle.

***Note**: it is essential to use a mouse for setting test sequences.*

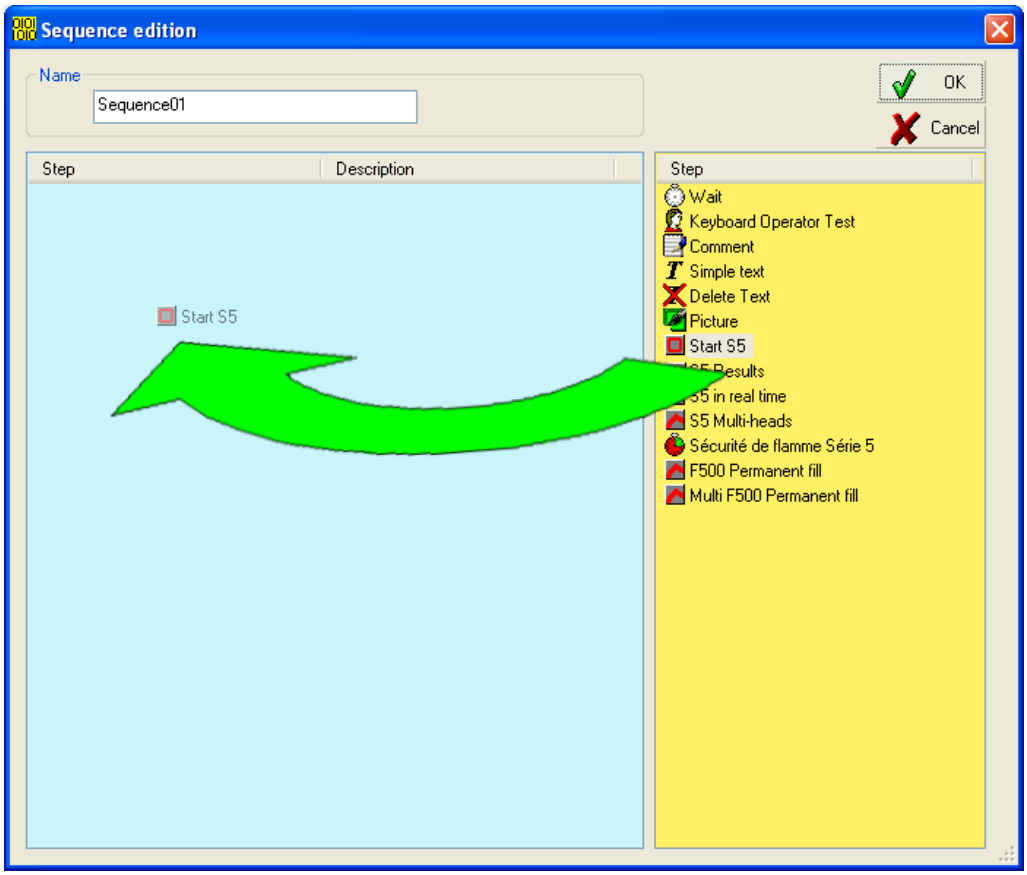
3.1. PUTTING TOGETHER A NEW SEQUENCE

To create a new sequence, double-click on the Sequences icon.

A blank sequence window appears.

Change the name of the sequence to your own choice.

Then to create the test sequence for your product: select a step from the right hand window and drag it over to the left hand window (by holding down the left mouse button)

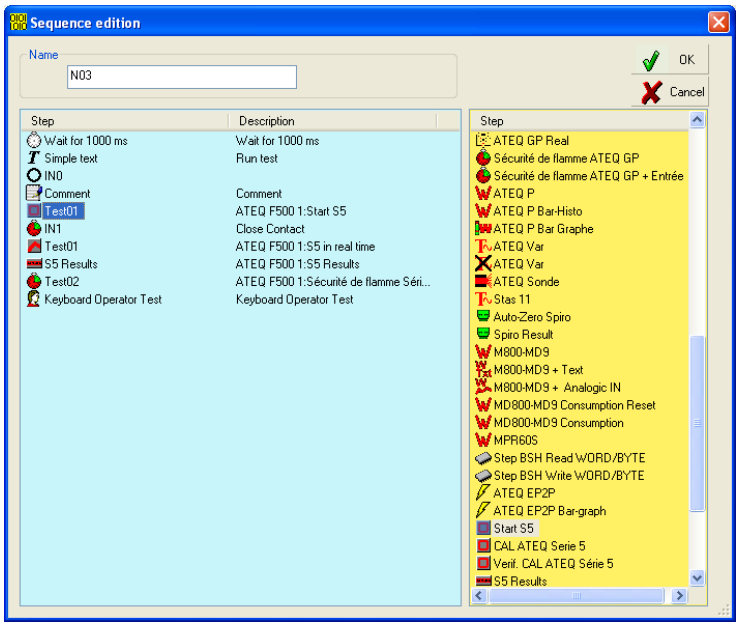


Once the stage you have chosen has been inserted in the left hand window, a new screen will appear to enable you to set target parameters.

3.2. MODIFICATIONS TO THE PROPERTIES OF A TEST SEQUENCE

The various steps in a cycle are shown in the window below, which shows:

- the **name of the sequence** (*max. 20 alphanumeric characters*),
- in the left hand window: the various **phases** of the cycle, with a brief description,
- in the right hand window: the various **phases available**.



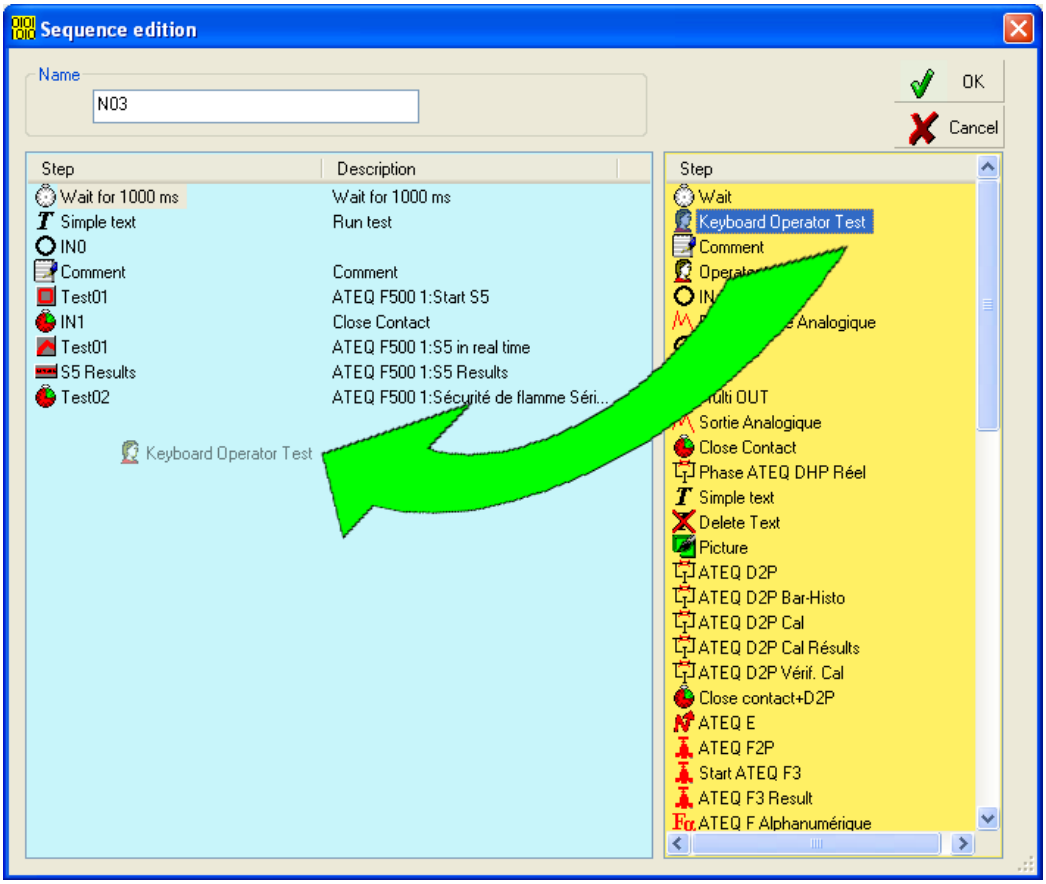
The different steps of a cycle may be (and several other):

Wait	**Hold period.**
IN	Waiting **input** module.
Multi IN	Waiting of **several inputs** module simultaneously.
OUT	Change of **state of an output** module.
Multi OUT	Change of **state of several outputs** simultaneously.
Operator test	Waiting **operator confirmation.**
Simple text	**Text display** during the test.
Picture	**Picture display** during the test.
Comment	A **comment** capture of the operator.
Delete Text	Text deletion.
Start S5	Start a **cycle** with a 5th series device.
S5 Results	Display the **measurement result** of a 5th series device.
S5 in real time	Display in real time the **measurements** of a 5th series device.
Sécurité de flamme Série 5	**Timing an event** with a 5th series device.

These phases may be **inserted, modified** or **deleted** from the test sequence.

3.3. INSERT A NEW PHASE INTO A SEQUENCE

To insert a phase in a sequence, select it and drag it into the list of phases in the cycle.



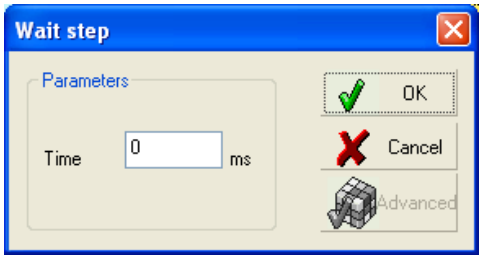
Each phase is associated with a parameter window.

3.3.1. General phases

- Wait : **Use hold periods**:

  Pauses of *x* ms may be introduced in execution of cycles.

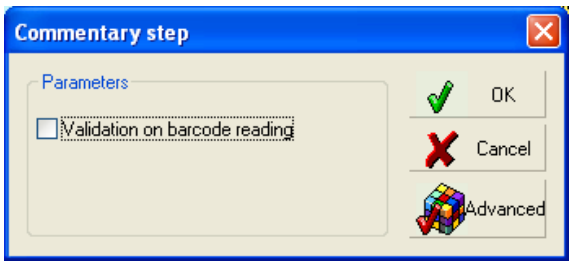
  Simply enter the duration (*in ms*),



- Keyboard Operator Test: **wait the operator validations from the keyboard**, this step allows to the operator to validate a test from the keyboard.

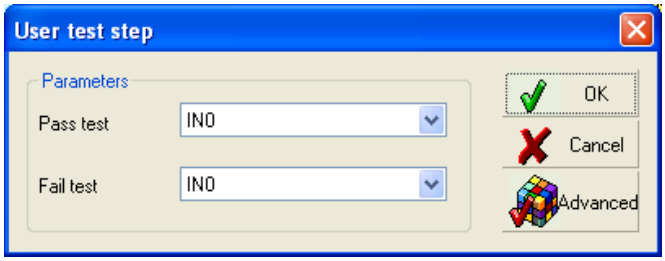
- Comment : **wait the operator comments:** this step allows to the operator to capture a comments from the keyboard.

  The "**validation on bar code reading**" allows capturing a comment from the bar code reader.



- Operator test : **Wait for operator validation** :

  To move on to the next test, the operator must confirm with PASS TEST or FAIL TEST.

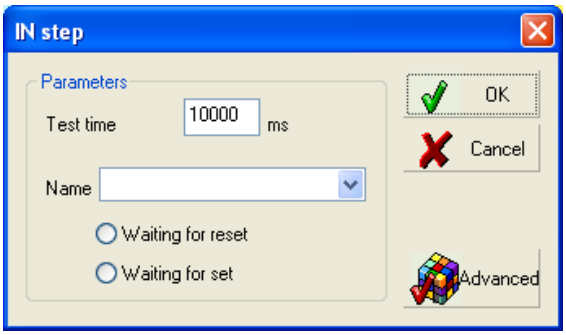


These confirmations must be defined by two different inputs (choose from the pick-list).

- IN : **Wait for inputs module** :

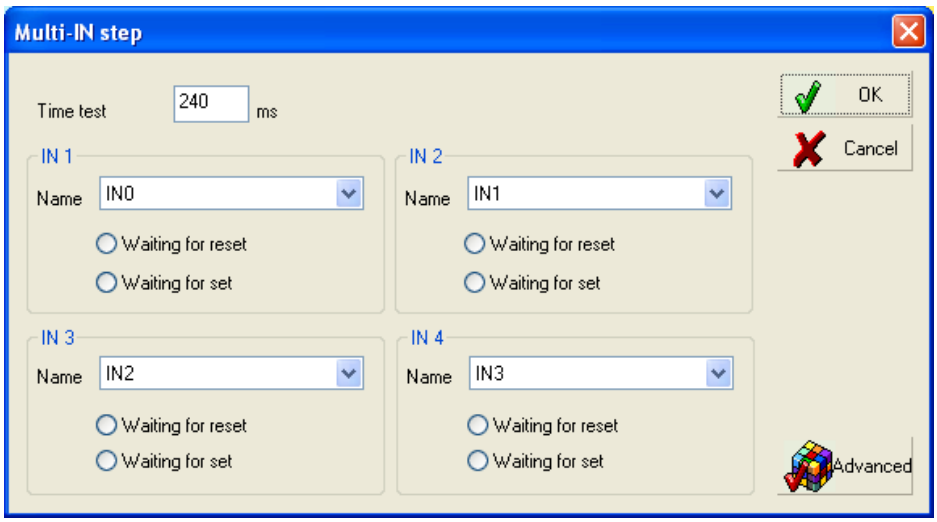
  A test cycle may be suspended if a required input has not been reached. You must state:

  - the time out of the test, after this time the test will be rejected, (*in ms*),
  - the name of the input, (choose from the pick-list),
  - the state to be reached (0 or 1).



- Multi IN : **Waiting the state of several inputs simultaneously :**

Several inputs can be tested simultaneously at a given moment in the test cycle.



You must state:

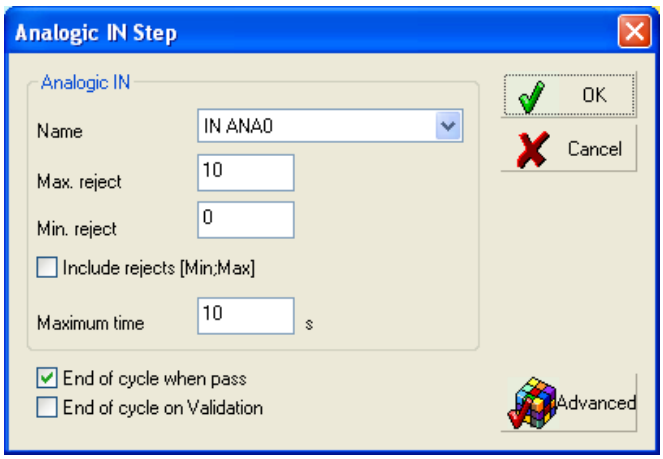
- the time out of the test, after this time the test will be rejected, *(in ms),*
- the name of the input, (choose from the pick-list),
- the state to be reached (0 or 1)

If the state is not reach during the test time, the test of this input will be rejected.

- Phase Entrée Analogique **: Analog input measurement:**

  To control and supervise an analog input. You must state:

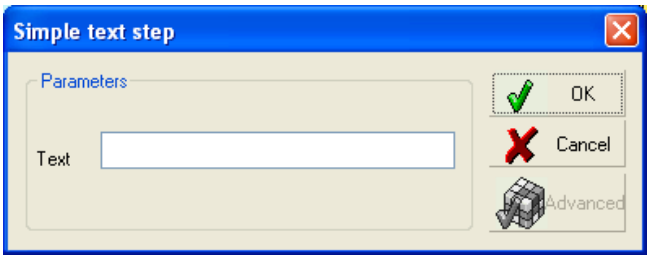
  - the input name, (select in the list),
  - the maximum and minimum rejects.
  - if the reed value is not between the rejects during the test time, this test is fail.



The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

The "**End of test on validation**" waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). .

***Note**: if the option "**Include the rejects (Min ; Max)**" is validated, the values of these rejects are took in account in the supervising (greater than or equal at the minimum and less or equal at the maximum) else the values are out (strictly greater than minimum or strictly less than maximum).*



- Simple text **: Text display during test** :

  Text may be displayed on the screen when cycles are being carried out.

The maximum length of the message is 50 alphanumeric characters. Click in the text box then enter the text.

- Delete Text : delete the text.

  - OUT **: Change state of outputs module**:

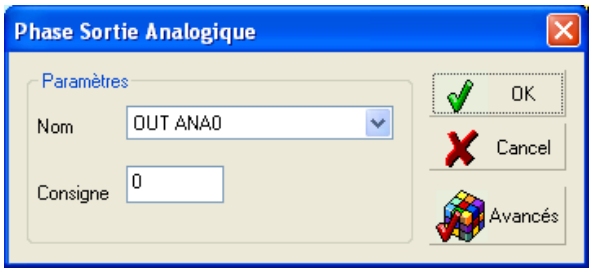
    An output may be activated or deactivated at a given moment in the test cycle. You must state:

    - the name of the output, (choose from the pick-list),
    - the state to be reached (0 or 1).

- Sortie Analogique **: Analog output:**

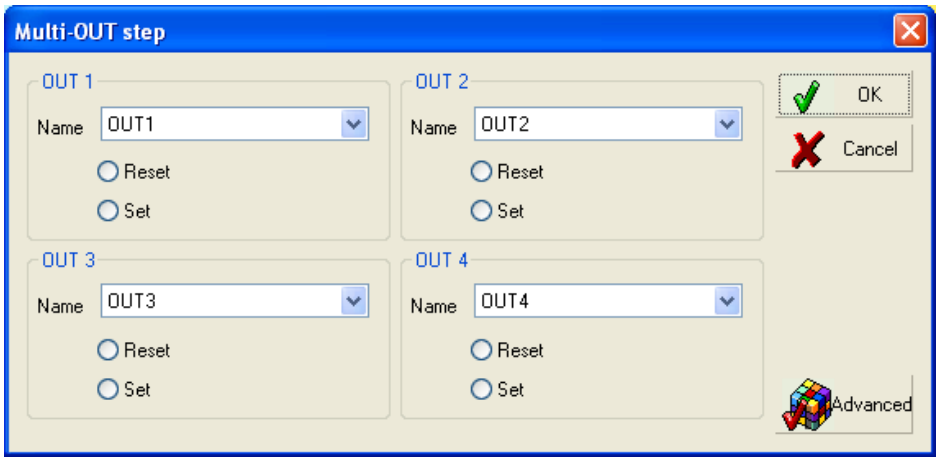
  To drive an analog output and give an instruction. You must state:

  - the output name (select in the list)
  - the instruction value to apply.



- **Multi OUT : Change the state of several outputs simultaneously:**

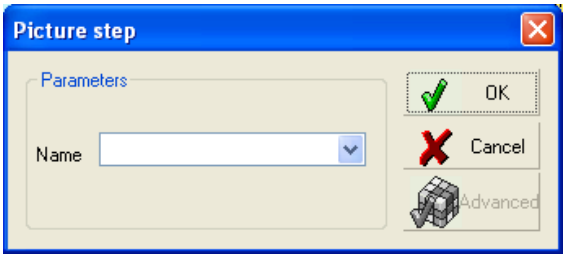
Several outputs may be modified simultaneously at a given moment in the test cycle.



You must state:

- the name of the output, (choose from the pick-list),
- the state to be reached (0 or 1).

- **Picture : Picture display during test** :



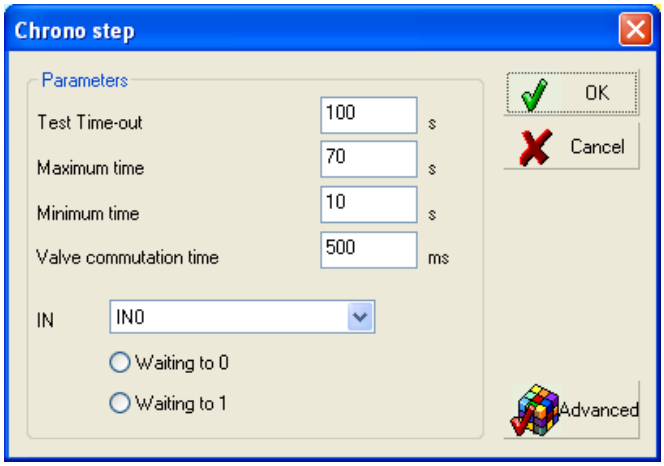
Pictures may be displayed on the screen above the control window when cycles are being carried out.

Simply select a picture (from the relevant pick-list), from among the ones available in the PICTURES directory on your system.

This directory is defined in the OPTIONS part of your system (*see Chapter 6 - paragraph 1.1 "Generalities"*).

It is possible to create a whole library of pictures, customized for your applications, by adding your own pictures to the directory. These pictures must be created in the BITMAP format (*.BMP extension*), and must be 770 x 190 pixels size.

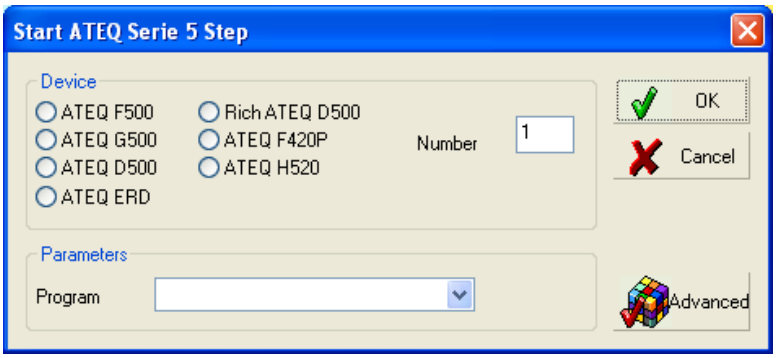
- **Close Contact : Close contact (timer):**



To time the state change of an input. The timer starts at the phase starting. You must state:

- the "Time-out" maximum total time of timing,
- the maximum and minimum time of the event (input change),
- the time of valve commutation (not integrated time in the timing),
- the input name (select in the list),
- the state to reach (0 or 1).

3.3.2. Phases for 5th series devices

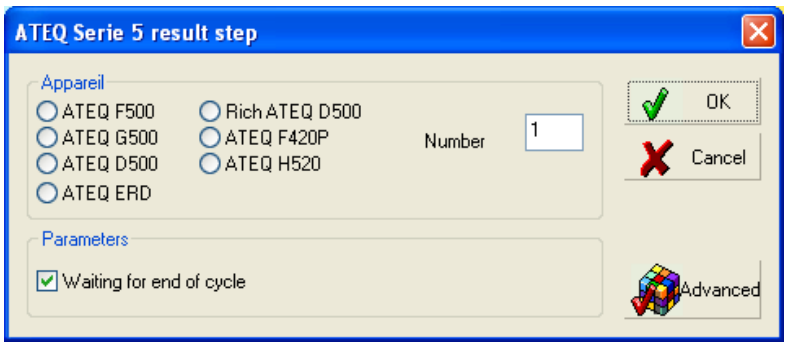


- Start S5 : **make a test with an 5th series device:**

  to include a test step with an **5th series** device, it may select the type, then specify the name of the set of test parameters. (Choose the test in the list).

- S5 Results : **make a result reading of a 5th series device:**

  this step allows displaying the measurement result of the selected instrument.

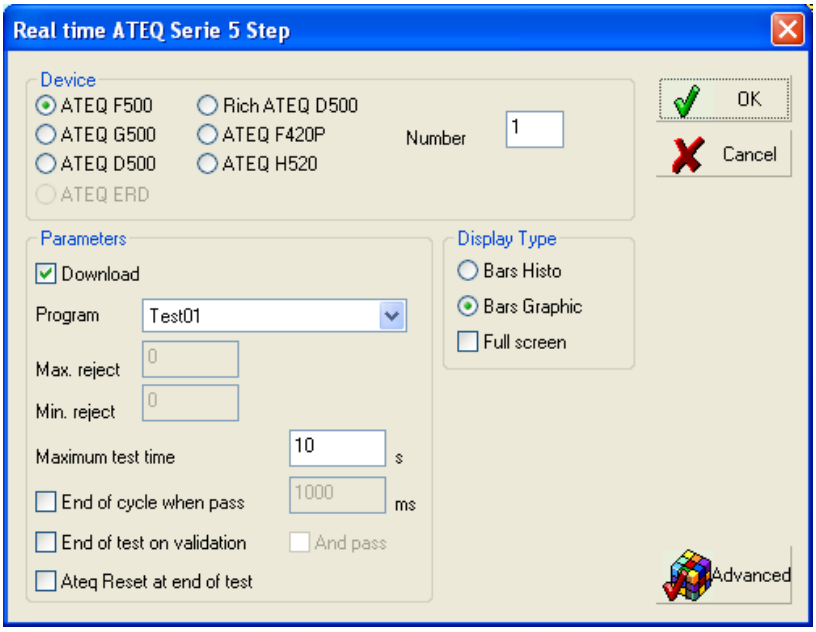


  The option "**Waiting for end of cycle**" displays the result when the device has finished the test cycle; else the measurement reading is instantaneous.

- S5 in real time : **run a test with displaying an histogram in live:**

  To include a test step with an **ATEQ 5th** series instrument, it may select the concerned device and specify the name of the set of test parameters among the defined ones. (Choose in the list).

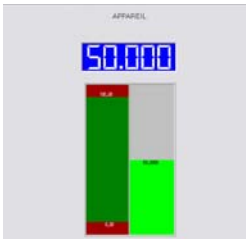
  The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.



The "**End of test on validation**" waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). The option "**And pass**" requires that the two conditions are met.

The "**Ateq reset at end of test**" stops the device at the end of the step.

The measurement display can follow two types under the user preferences, histogram bar or graphic bar with the possibility of full screen to enlarge the reading.

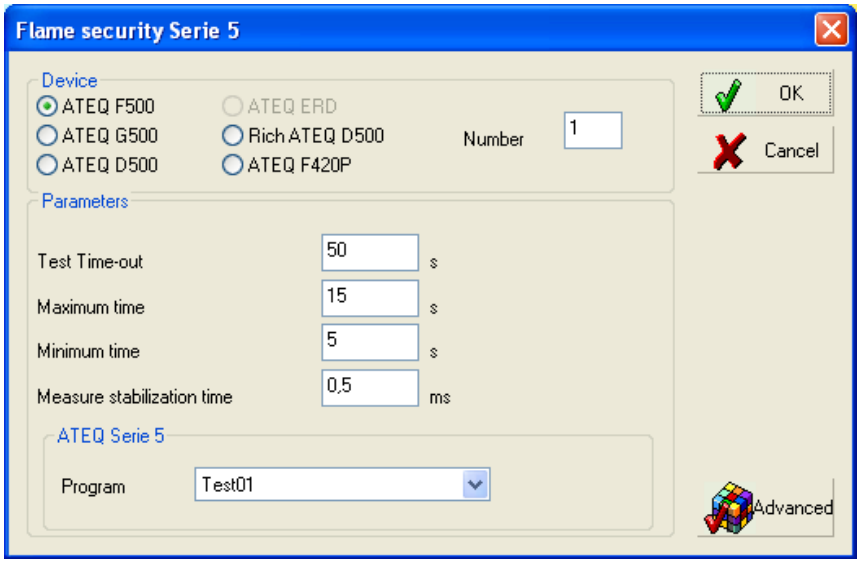


***Note**: the function "**Validate when pass**" goes to the following step without stopping the ATEQ device, than can continue its measurement, the function "**Reset Ateq at end of phase**" allows stopping it to run it in the next step.*

- Sécurité de flamme Série 5 **: Test with 5th series device and timing:**

  The timer is starting at the beginning of the phase and stops when the part is pass on the **ATEQ S5** device. To include this step, it needs:

  - Specify the device type and its order number,
  - The **"Time-out"** maximum total time of timing,
  - The maximum and minimum time of the event,
  - The measurement stabilization time (time not integrated in the timing),



  - Specify name of the set of parameters (Choice in the list).

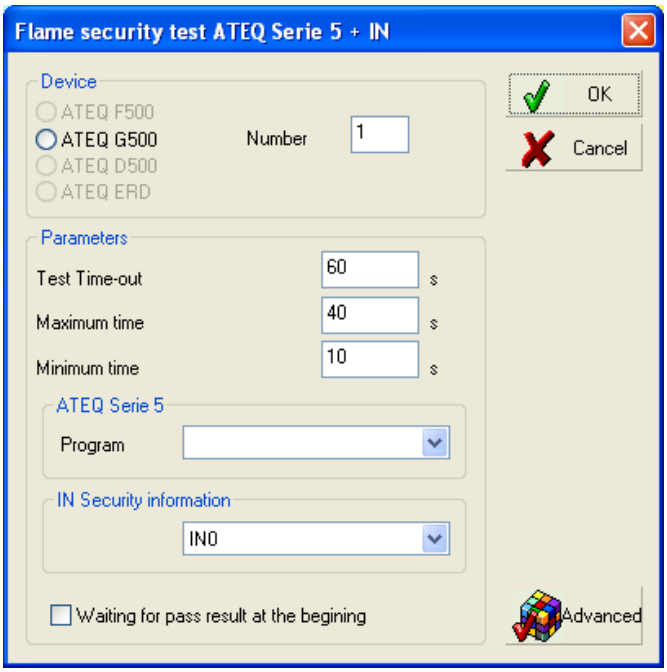
- Sécurité de flamme ATEQ S5 + Entrée **: Test with 5th series device with timing and input supervising:**

  Phase only for the **G5** devices.

  This phase is measuring the time that take the **G5** device to go from the fail state (large leak) to the pass state (between the thresholds configured in the program).

  To include this phase, it needs:

  - Specify the device type and its order number,
  - The **"Time-out"** maximum total time of timing,
  - The maximum and minimum time of the event,
  - Specify name of the set of parameters (Choice in the list).



➢ The input name (choice in the list).

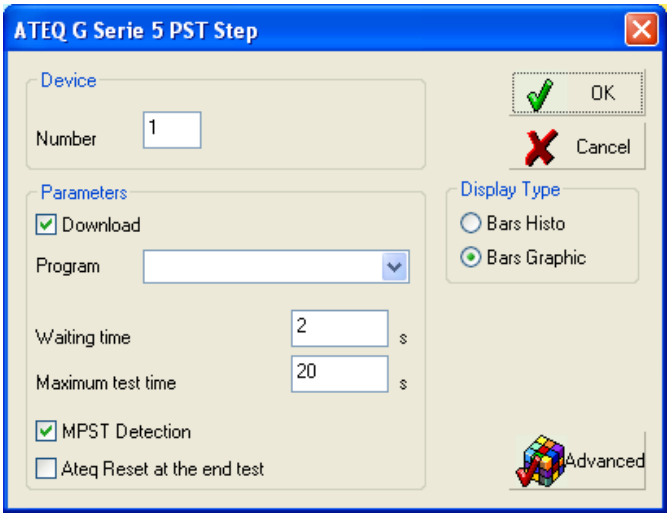
The "**Waiting for pass result at the beginning**" function prompts that the test product is leak pass to continue the "**Security flame**" test (large leak).

- ATEQ G500 PST **: ATEQ G5 "PST" phase:**

This phase is additional only for the **ATEQ G5** device, it allows to check a large leak, if the option "**MPST Detection**" is validate, as blockage (**MPST** = low pressure)

Else its **PST** supervision (**PST** = pressure to high).

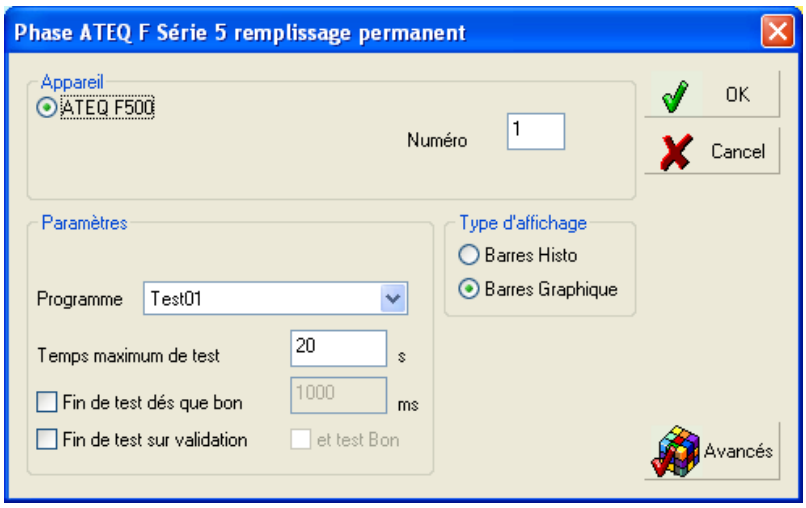
To include this step with a **ATEQ G5** device, it must specify the order number, then the name of the set of parameters (choice in the list).



The "**Ateq reset at end of test**" stops the device at the end of the step.

- F500 Permanent fill **: ATEQ S5 test with permanent blowing:**

To include a test phase with **ATEQ S5** device, it must select the device type and its order number, and then specify the name of the set of parameters (choice in the list).

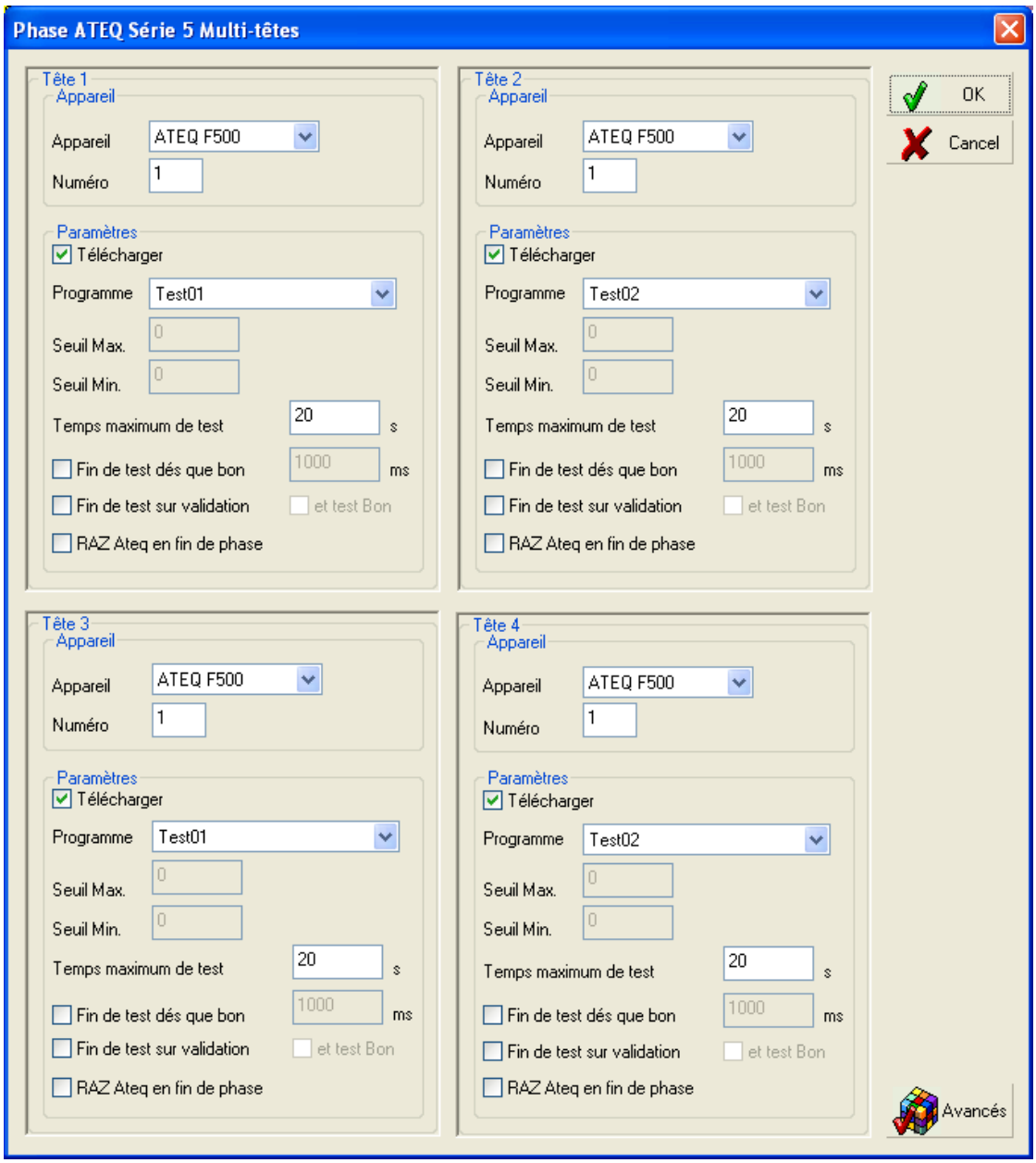


The "**End of test on validation**" waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). The option "**And pass**" requires that the two conditions are met.

The "**Ateq reset at end of test**" stops the device at the end of the step.

- S5 Multi-heads : **Test with several 5th series ATEQ devices (multi heads)**:

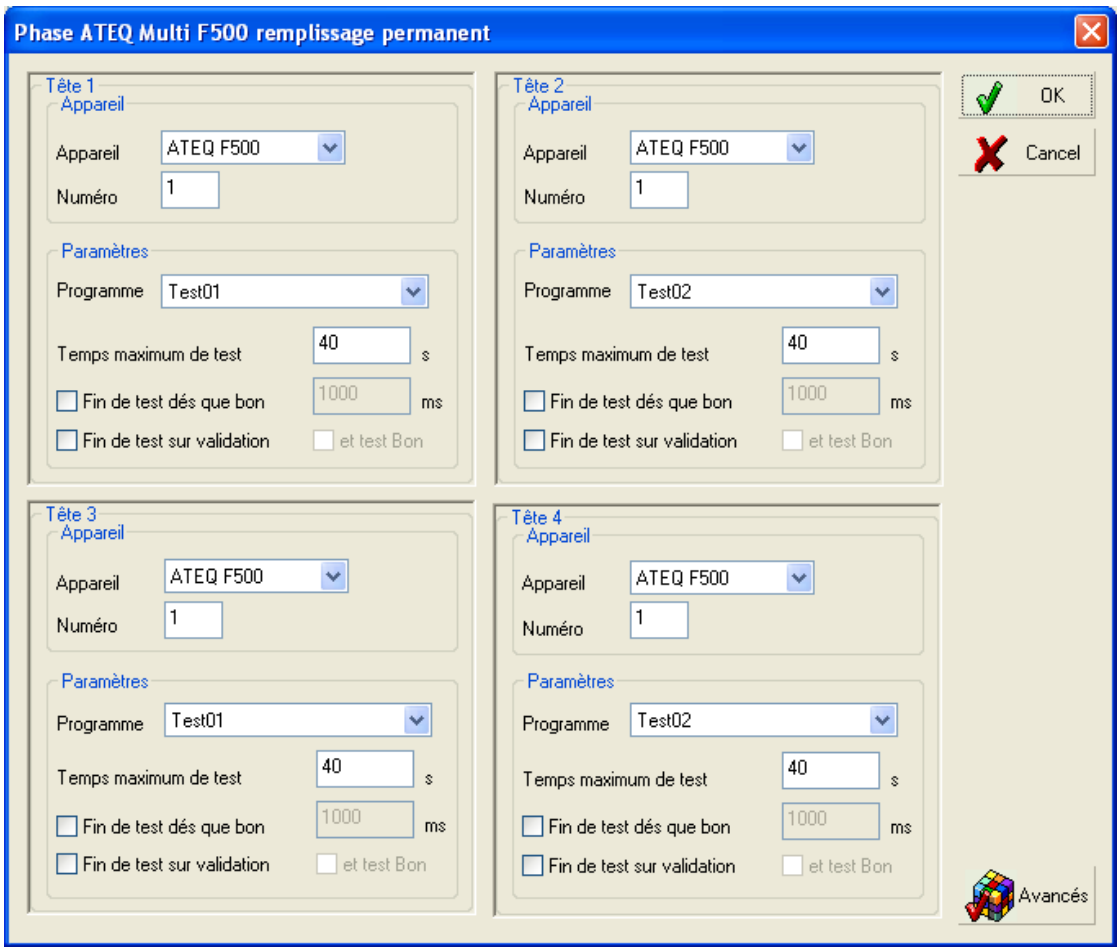
  To include a phase with several **5th series ATEQ** devices, it must select the device type to start and its order number in each window (from 1 to 4) then specify the name of the set of parameters for each head (choice in the list).



  The options to validate have the same meaning as the phases see above.

- Multi F500 Permanent fill **: Test with several 5th ATEQ devices and permanent blowing:**

  To include a phase with several **5th series ATEQ** devices, it must select the device type to start and its order number in each window (from 1 to 4) then specify the name of the set of parameters for each head (choice in the list).

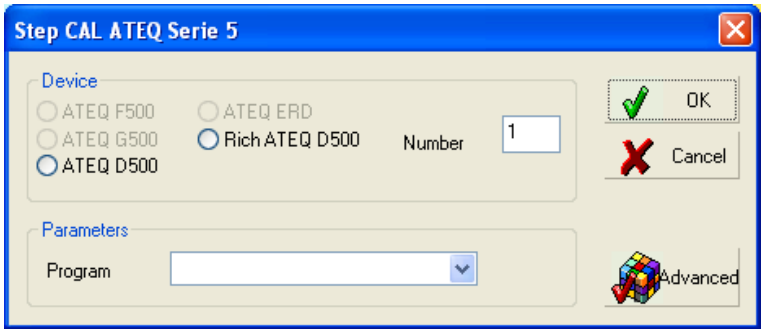


The options have the same meaning as the "Multi head" phases see above.

- CAL ATEQ Serie 5 **: ATEQ D5 Calibration:**

The calibration allows calibrating the device compared to a master and a "customer" flow unit, this calibration carry out a learning cycle with this new unit.

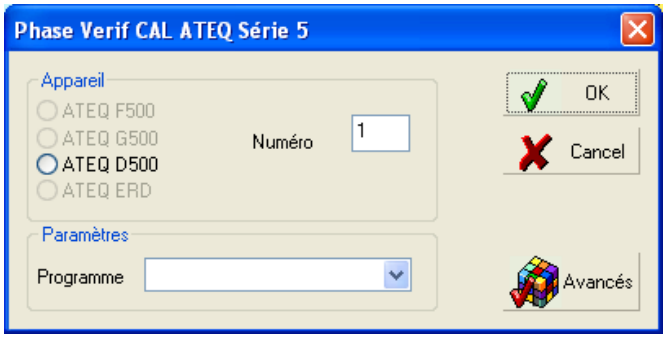
To include this phase with a **ATEQ D5** device, it must select the device and its order number, then specify the name of the set of parameters (choice in the list).



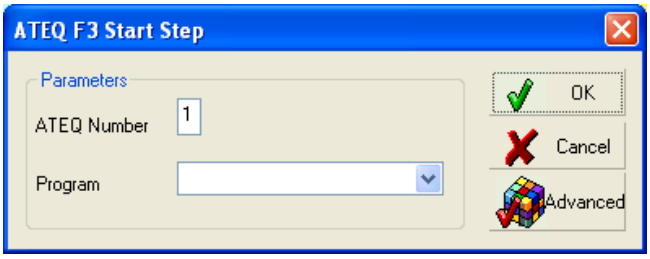
- Verif. CAL ATEQ Série 5 **: Calibration check with ATEQ D5 device:**

This phase allows checking the device in the calibrated mode and its customer unit.

To include the phase of calibration check (CAL) with an ATEQ **D5** device, it must select the device and its order number, and then specify the name of the set of parameters (choice in the list).



3.3.3. Phases for 3rd series devices



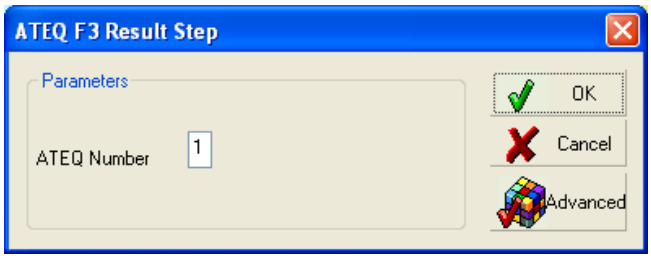
- Start ATEQ F3 : **Test with an ATEQ F3**:

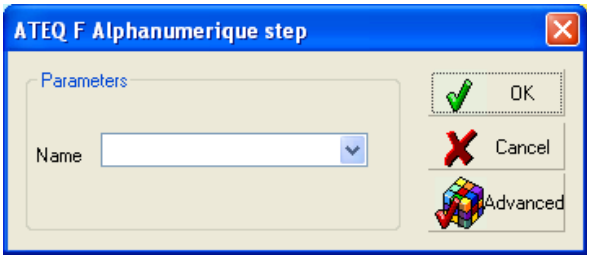
  This phase carry out a start cycle.

  To include this phase, it must select the device order number and specify the name of the set of parameters. (Choice in the list).

- ATEQ F3 Result : **Result reading of an ATEQ F3:**

  this step is waiting the end of test cycle and recover the result of the selected device (order number).



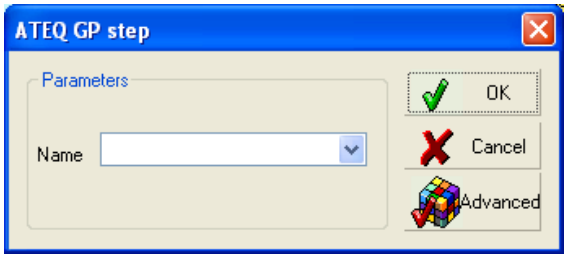


- Fα ATEQ F Alphanumérique : **Test with an ATEQ F Alphanumeric**:

  This phase carry out a start cycle with an **ATEQ F Alphanumeric**, wait for the end of cycle and recover the result. It must specify the name of the set of parameters (choice in the list).

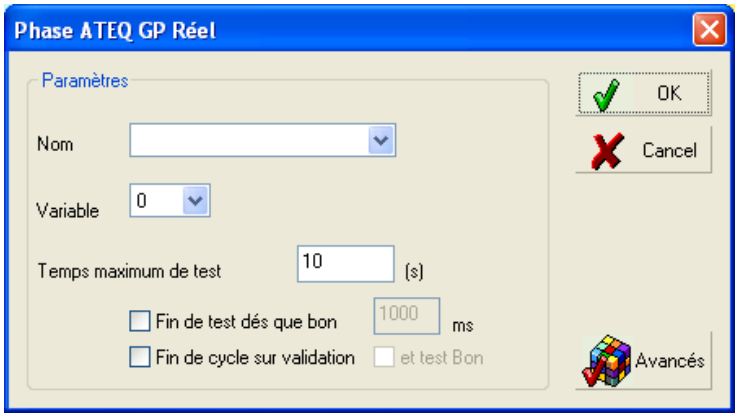
- ATEQ GP : **Test with an ATEQ GP**:

  This phase carry out a start cycle with an **ATEQ GP**, wait for the end of cycle and recover the result. It must specify the name of the set of parameters (choice in the list).



- ATEQ GP Real : **Test with an ATEQ GP with real time histogram display:**

  To include this phase, it must select the device order number and specify the name of the set of parameters (choice in the list).



The **"End of cycle when pass"** function allows to go to the following step when the measurement value is between the thresholds.

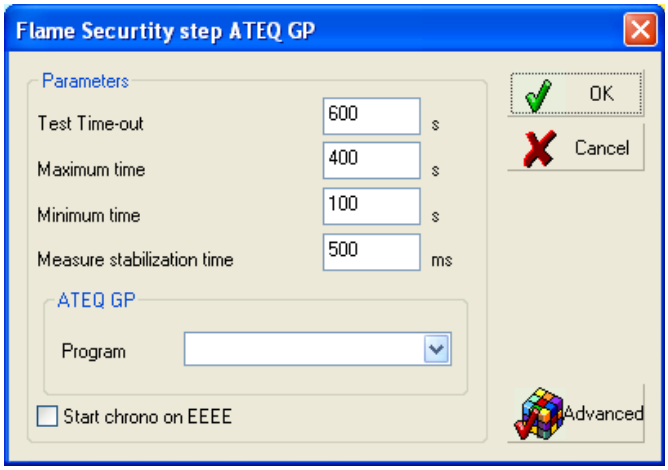
The **"End of test on validation"** waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). The option **"And pass"** requires that the two conditions are met.

***Note**: the "**Variable**" field is not used.*

- Sécurité de flamme ATEQ GP **: Test with an ATEQ GP and timing:**

  The timer starts at the beginning of the phase and stops when the product is pass. To include this phase, it needs:

  - The "**Time-out**" maximum total time of timing,
  - The maximum and minimum time of the event,
  - The measurement stabilization time (time not integrated in the timing),
  - Specify the name of the set of parameters (choice in the list).



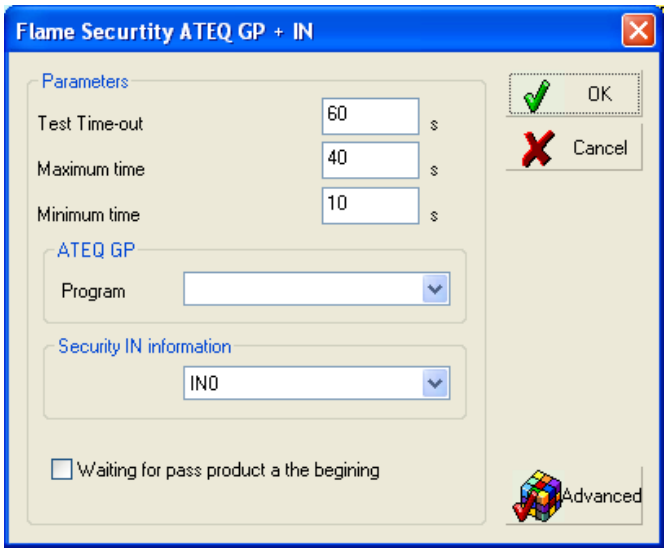
  The "**Start chrono on EEEE**" function is waiting for detecting a large leak to start the timer.

- Sécurité de flamme ATEQ GP + Entrée **: test with an ATEQ GP, timing and input supervision:**

  The timer starts at the beginning of the phase and stops when the product is "**Pass**" and the security input is switched.

  To include this phase, it needs:

  - The "**Time-out**" maximum total time of timing,
  - The maximum and minimum time of the event,
  - Specify the name of the set of parameters (choice in the list).

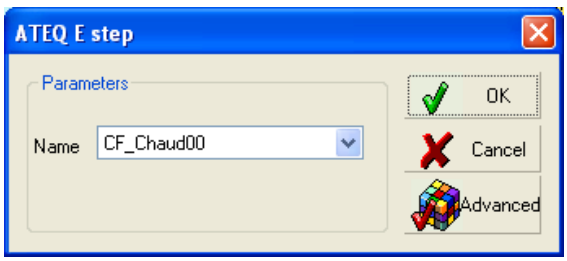


  - The input name (choice in the list).

  The "**Waiting for pass product at the beginning**" function prompts you to have a pass part product in leak mode to carry out the flame security flame test (large leak).

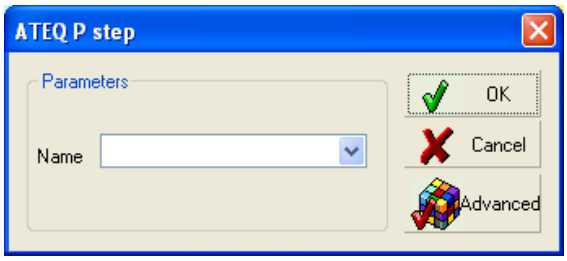
- ATEQ E : **Test with an ATEQ E device**:

  This phase carry out a start with an **ATEQ E**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list). The test choice will select the test type applied to the product.



- ATEQ P : **Test with an ATEQ P**:

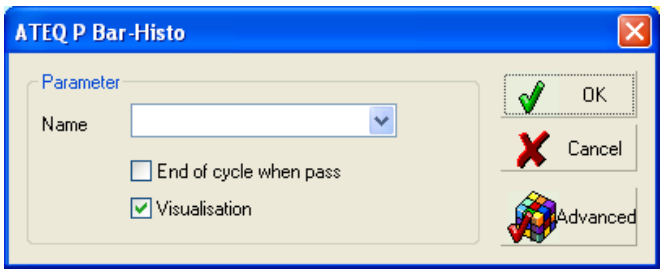
  This phase carry out a start with an **ATEQ P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).

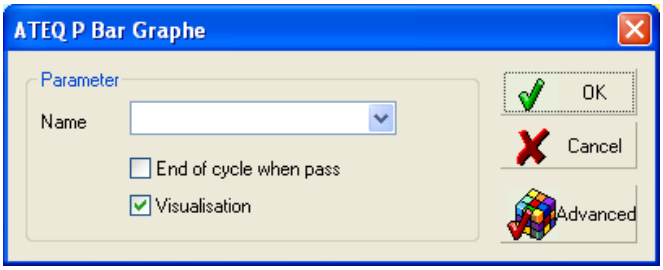


- ATEQ P Bar-Histo **or** ATEQ P Bar Graphe **: Test with an ATEQ P with real time graphic display:**

  The graphic display of the measurements is different between the "**Bar-History**" mode and the "**Bar-Graph**" mode.

  This phase carry out a start with an **ATEQ P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).





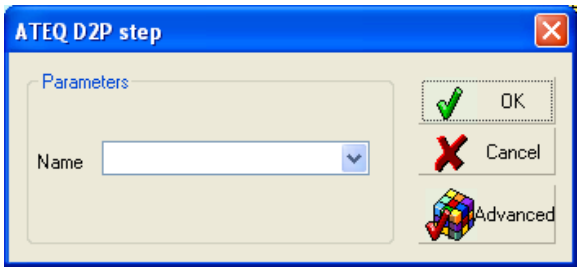
The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

The "**Visualization**" function displays or not in real time the graph.

3.3.4. Phases for 2P series devices

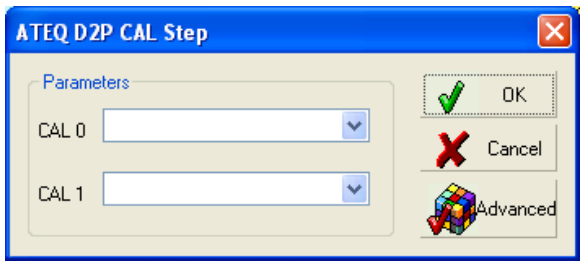
- ATEQ D2P : **Test with an ATEQ D2P** :

  This phase carry out a start with an **ATEQ D2P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).



- ATEQ D2P Cal : **CAL with an ATEQ D2P** :

  This phase carry out a start for **CAL** with an **ATEQ D2P**, wait the end of **CAL** cycle and recover the result. It must specify the name set of parameters for the selected **CAL**, 0 or 1 (choice in the list).



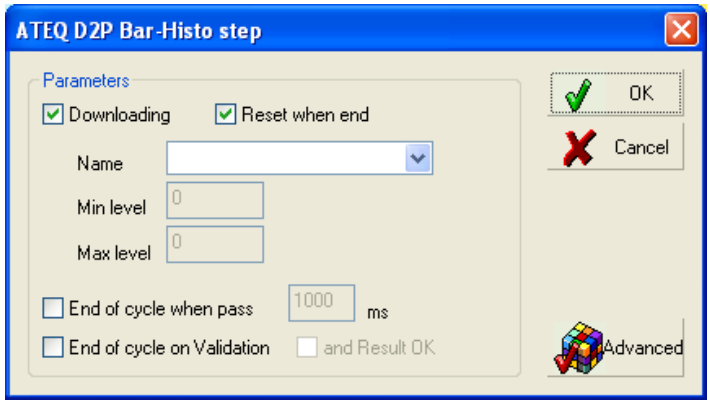
- ATEQ D2P Bar-Histo : **Test with an ATEQ D2P with real time graphic display**:

  This phase carry out a start with an **ATEQ D2P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).

  The "**Validate when pass**" function allows to go to the following step when the measurement value is between the thresholds.

The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

The "**End of test on validation**" waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). The option "**And pass**" requires that the two conditions are met.



- ATEQ D2P Cal Results **: CAL Results with an ATEQ D2P:**

  This phase is waiting the end of cycle and recovers the CAL measurement result of the device.

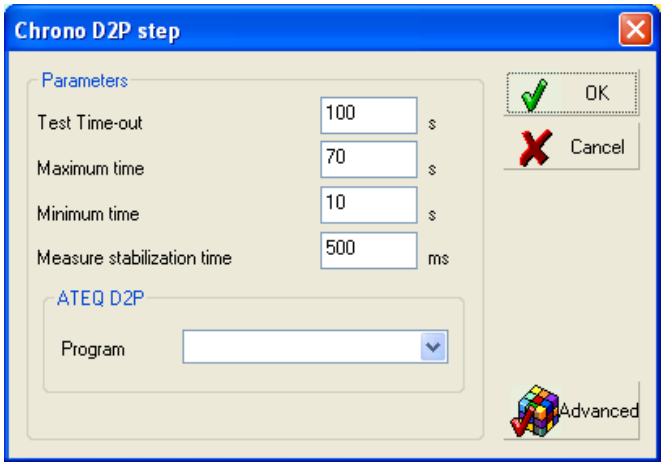
- ATEQ D2P Vérif. Cal **: CAL check with an ATEQ D2 :**

  This phase carry out a start with an **ATEQ D2P**, wait the end of cycle and recover the CAL checking result of the device.

- Close contact+D2P **: test with an ATEQ D2P with timer and input supervision:**

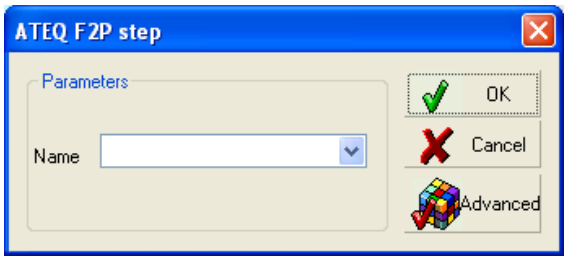
  The timer starts at the beginning of the phase and stops when the product is "Pass". To include this test phase, it needs:

  - The "**Time-out**" maximum total time of timing,
  - The maximum and minimum time of the event,
  - Specify the name of the set of parameters (choice in the list).
  - The measurement stabilization time (time not integrated in the timing),
  - Specify the name of the set of parameters (choice in the list).



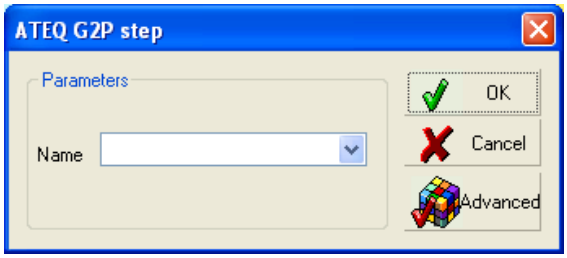
- ATEQ F2P: **Test with an ATEQ F2P**:

  This phase carry out a start with an **ATEQ F2P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).



- ATEQ G2P: **Test with an ATEQ G2P** :

  This phase carry out a start with an **ATEQ G2P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).



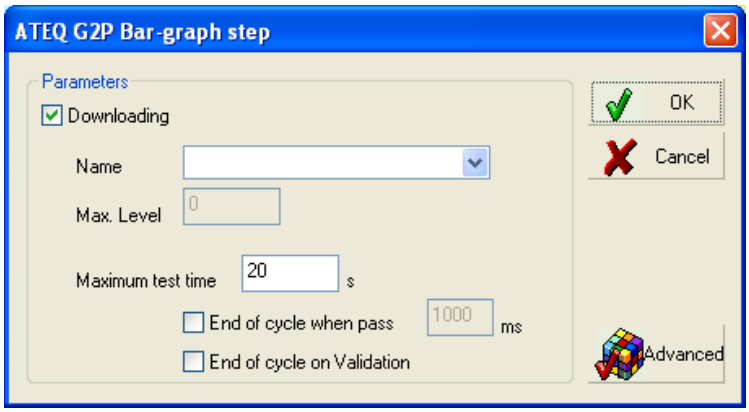
- ATEQ G2P Bar-graphe **: Test with an ATEQ G2P with real time graphic display**:

  This phase carry out a start with an **ATEQ G2P**, wait the end of cycle and recover the result.

  The "**Validate when pass**" function allows to go to the following step when the measurement value is between the thresholds.

  To include this phase, it must select the device order number and specify the name of the set of parameters (choice in the list).

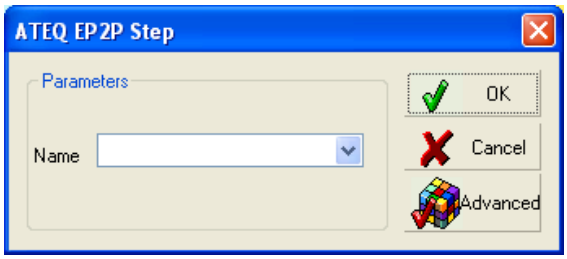
  The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.



  The "**End of test on validation**" waits an operator validation to jump to the following step. The option "**And pass**" requires that the two conditions are met.

- ATEQ EP2P : **Test with an ATEQ EP2P**:

  This phase carry out a start with an **ATEQ G2P**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).



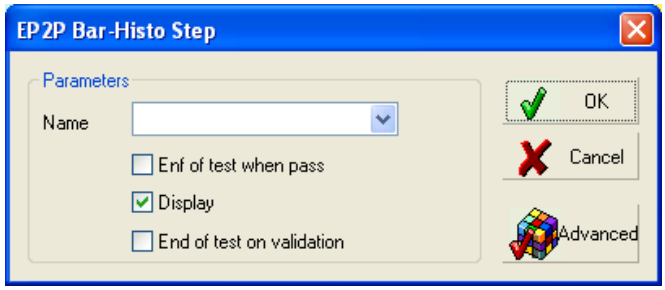
- ATEQ EP2P Bar-graph : **Test with an ATEQ EP2P with real time graphic display**:

  It must specify the name set of parameters (choice in the list).

  The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

  The "**Display**" function displays or not the real time graphic.

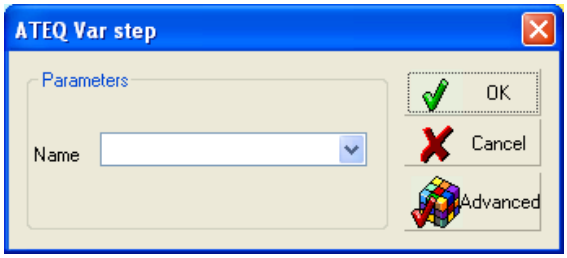
  The "**End of test on validation**" waits an operator validation to jump to the following step. The option "**And pass**" requires that the two conditions are met.



3.3.5. Phases for others devices

- ATEQ Var : **Electric supply with an ATEQ VAR**:

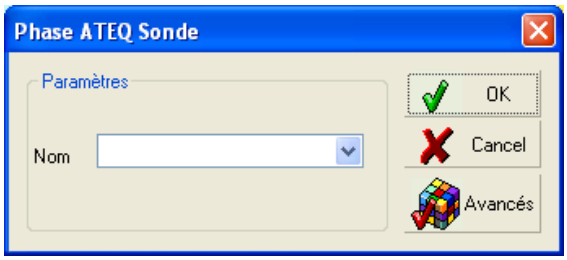
  This phase carry out a start with an **ATEQ VAR**, wait the end of cycle and recover the result. It must specify the name set of parameters (choice in the list).



- ATEQ Var : **Stop supply with an ATEQ VAR.**

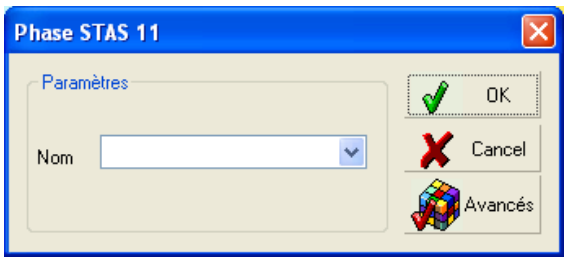
- ATEQ Sonde: **Test with an ATEQ Probe**:

  It must specify the name set of parameters (choice in the list).



- Stas 11: **Test avec un STAS11**:

  It must specify the name set of parameters (choice in the list).

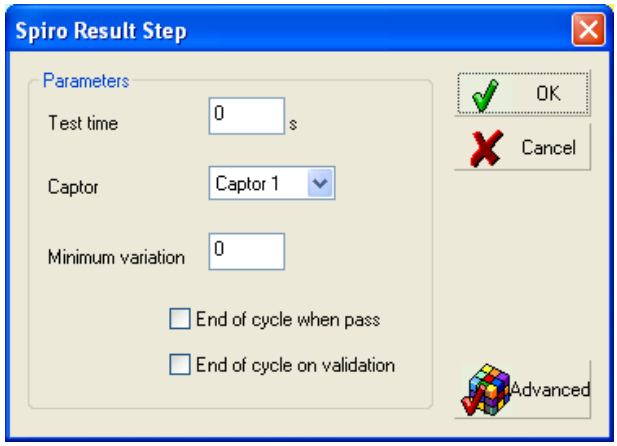


- Auto-Zero Spiro: **Auto-reset Spiro board**:

  Select the sensor (1 or 2) where apply the auto-reset.

- Spiro Result: **Spiro board result**:
  - Specify the test time.
  - Select the sensor (1 or 2).
  - The minimum variation.

  The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

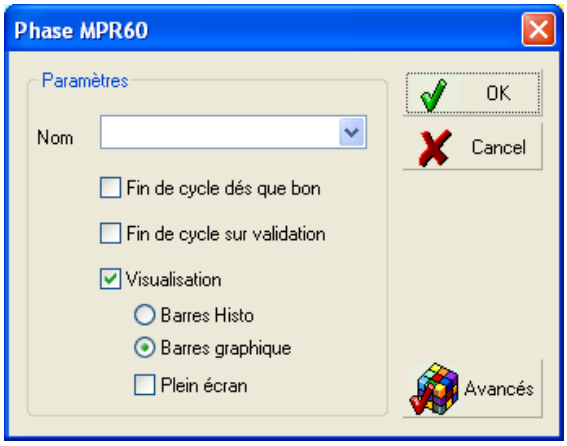


  The "**End of test on validation**" waits an operator validation to jump to the following step (see chapter 5, paragraph 3.3). The option "**And pass**" requires that the two conditions are met.

- MPR60S: **Test with an MPR60S**:

  The **MPR60S** from **Entes** factory is a power measurement instrument for the electrics networks.
  - It must specify the name set of parameters (choice in the list).

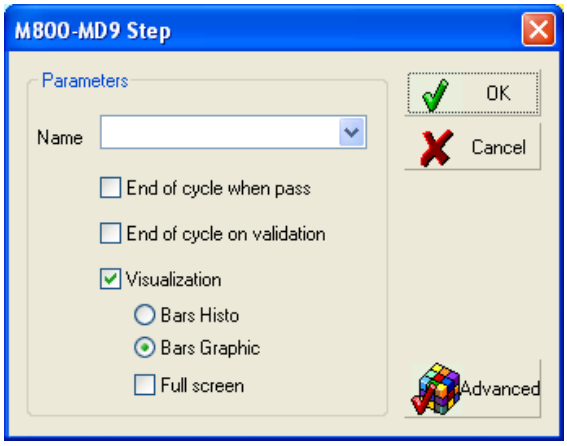
  The "**Validate when pass**" function allows to go to the following step when the measurement value is between the thresholds.



  This step gets "**End of test on validation**" function which is waiting an operator validation to go to the following step (see chapter 5 paragraph 3.3).

The "**Visualization**" function displays or not the measurement in real time, the measurement display can follow two types: histogram bar or graphic bar with full screen option to improve readability.

- M800-MD9 : **Test with a M800-MD9**:



The M800-MD9 is a power measurement device for the electrics networks.

➢ It must specify the name set of parameters (choice in the list).

The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

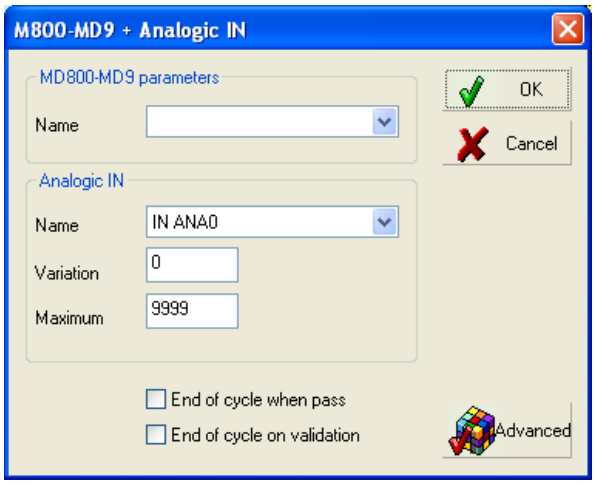
The "**End of test on validation**" waits an operator validation to jump to the following step. The option "**And pass**" requires that the two conditions are met.

The "**Visualization**" function displays or not the measurement in real time, the measurement display can follow two types: histogram bar or graphic bar with full screen option to improve readability.

- M800-MD9 + Texte : **Test with an M800-MD9 and text**:

Same phase as the previous one, except at the end, a comment must be capture by the operator in the field for this purpose.

- M800-MD9 + Analogic IN : **Test with a M800-MD9 and analog input**:



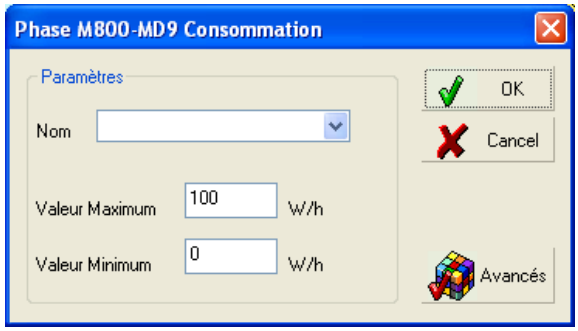
Same phase as the M800-MD9 single phase, with a physical value supervision of an analog input.

➢ Specify the analog input name to supervise (select in the list), and its maximum variation.

The "**End of cycle when pass**" function allows to go to the following step when the measurement value is between the thresholds.

The "**End of test on validation**" waits an operator validation to jump to the following step.

- MD800-MD9 Consumption : **M800-MD9 Consumption**:



This phase is measuring an instantaneous electric consumption.

➢ Specify the maximum and minimum values to supervise.

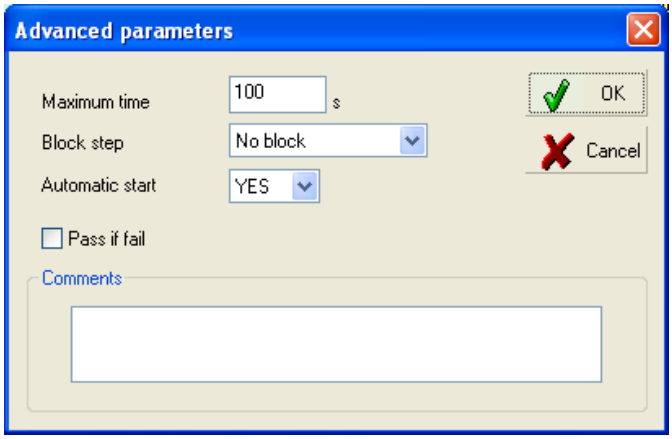
MD800-MD9 Consumption Reset : **M800-MD9 Reset consumption**: to reset the current consumption measurement.

3.4. ADVANCED PARAMETERS

When including a step, it's possible to access (for someone) to advanced parameters of the progress of the cycle.

To access at this function click on the advanced button 

, the following window will appears.



- **Advanced Parameters:**

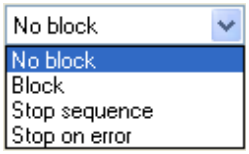
  When setting the advanced parameters you must state:

  Maximum Time: it's the maximum time given to a perform step. If the step is not finish during this time, the step will be rejected.

  Block step: (Choose from the pick-list ) :

  ⇒No block: whoever the result of the step, the cycle is carrying on the next steps.

  ⇒Block: if the result of the step is fail, the same step is starting again.



  ⇒Stop sequence: if the result of the step is fail, the sequence is stopped.

  ⇒Stop on error: if the result of the step is fail, a window shown below and waits for operator confirmation to re-start the test, continue with the sequence or to stop the sequence. See *Chapter 5, paragraph 3.5 "Fail test results".*

Automatic start: (Choose from the pick-list ) choose between yes or no to start automatically the step or not.

The option "**Pass if fail**" reverses the test result, it report the pass product if it's a fail result and vice versa (useful function to validate a fail product detection in an self test).

Comments: to include a text, this text will be displayed on the screen during the progress of the step; it could be information or an order to the operator. 3 commentaries lines can be captured.

3.4.1. Modify a sequence phase

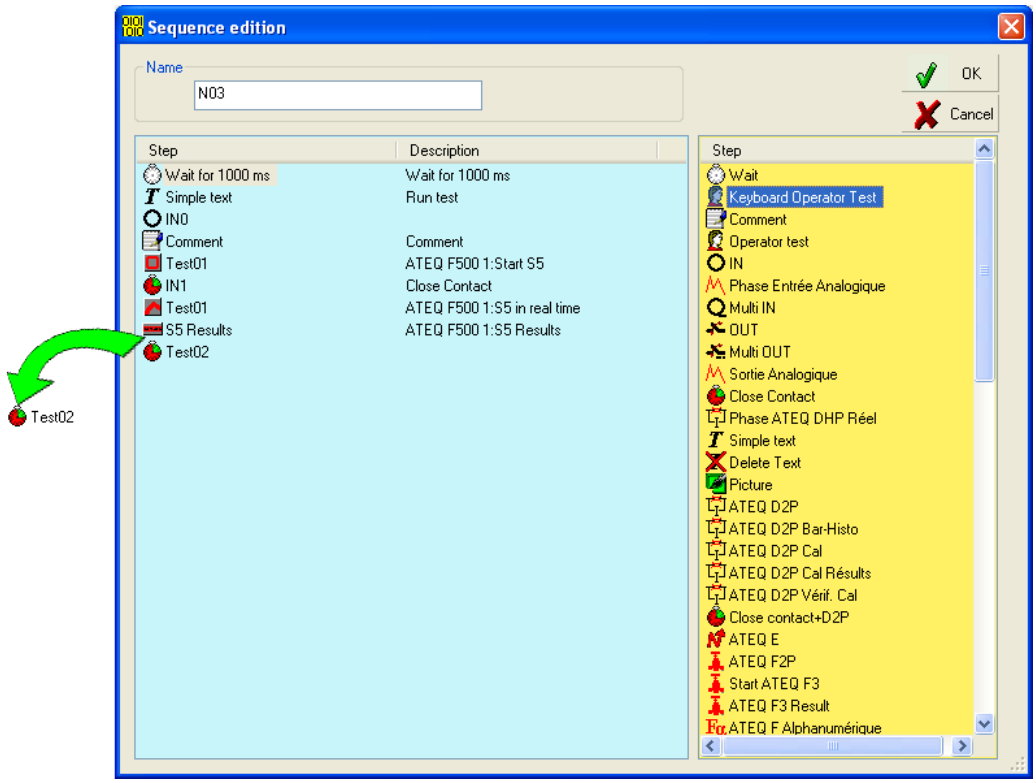
It is possible to modify the order of execution of the phases of a sequence. To do this, use the mouse to select the phase to be moved, then while holding down the left mouse button drag it to the required position.

It is also possible to modify the parameters of a phase by double-clicking on the required phase.

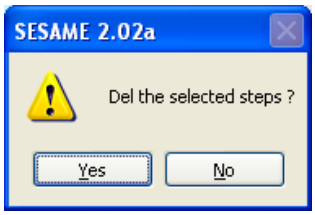
3.4.2. Delete a sequence phase

There are two possible methods of deleting a phase:

- select the phase to be deleted and press Del.;
- select the phase to be deleted and drag it outside the window, then confirm the deletion at the new window prompt.

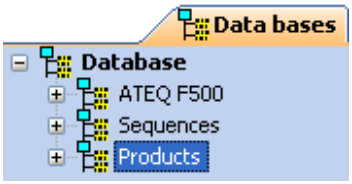


In both cases you will be asked to confirm the deletion of the phase.



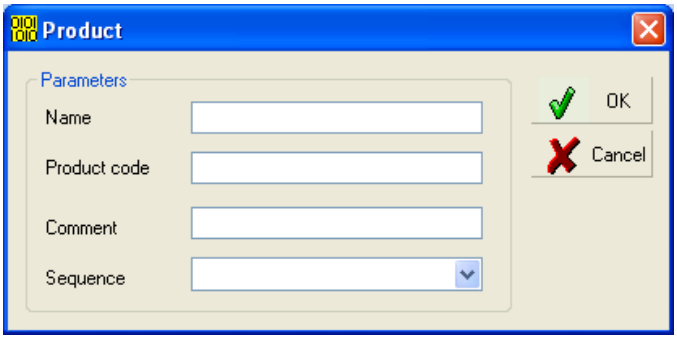
Note: *all deletions are irreversible. If you want to restore a phase you will have to create a new one.*

4. MANAGEMENT OF TEST PARTS



Once the sequence has been created and the parameters have been entered for the devices, you must define the parts on which you want to run the tests.

Only one test sequence may be allocated to each part. However the same sequence may be used to test several parts.



This window is used to specify:

- **the name of the test part** (*max. 20 alphanumeric characters*),
- **the code for the test part** which enables automatic selection using the keyboard or a bar code reader (*see Chapter 6, paragraph 1.2 "Cycles configuration"*),
- **any comments** concerning the test part (*max. 20 alphanumeric characters*),
- **the sequence to be used** to test the part, chosen from those already defined in the associated pick-list .

Example of customer's component parameters:

Designation in the window "**Product**":

- Name: MIXTE 4 FEUX,
- Product code: 000192,
- Comment: Plaque mixte,
- Sequence: Sequence01 (Choose from the sequences pick-list).

Definition of the product code: see chapter 7 paragraph 3.

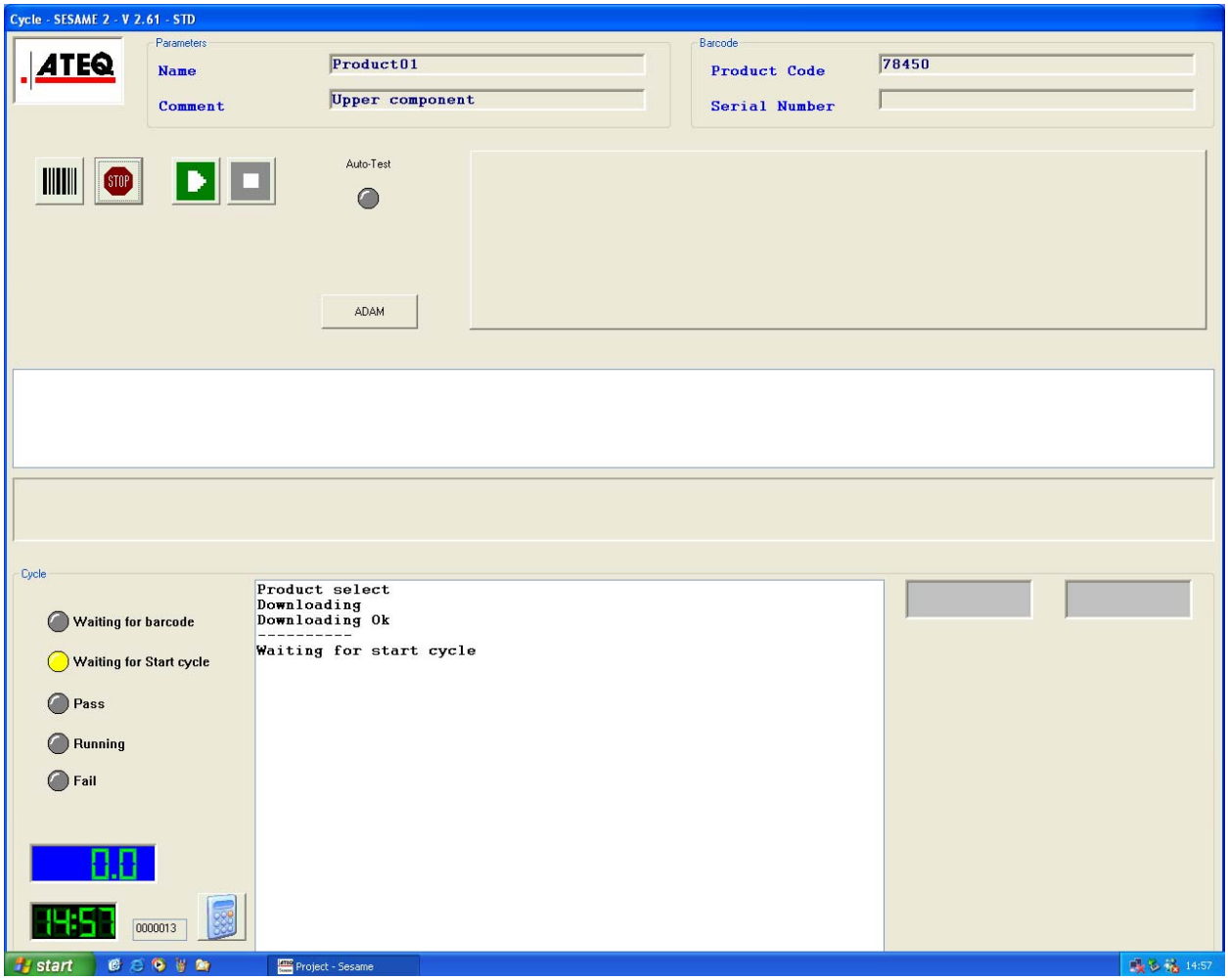
Chapter 5
TEST MODE

1. RUNNING TEST MODE

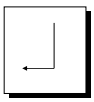
There are two methods of access to test mode:

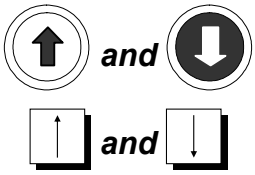
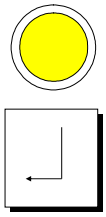
- In menu mode, select CYCLE from the pull-down menu, then START.
- In level 3 user mode, when the program starts running, test mode is started directly.

The test mode screen looks like this:



2. DESCRIPTION OF THE ELEMENTS OF TEST MODE

Reminder: *in this mode, the*  *and*  *buttons, and the ENTER button on the remote control have respectively the same functions as the*  ,  *and*  *buttons on the keyboard, pushing the*  *and*  *together is the same as the validation.*

or  ⇨ ***Select;*** ***or***  ⇨ ***Enter***

- **"Cycle" buttons:**

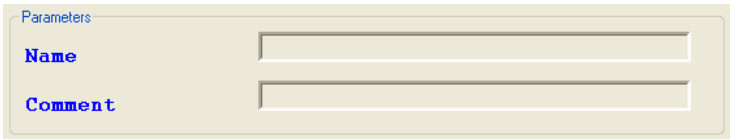
 ⇒ Choose the control sequence, or type a serial number,

 ⇒ Move to menu mode, of ***SESAME***,

 ⇒ To start a control cycle (start),

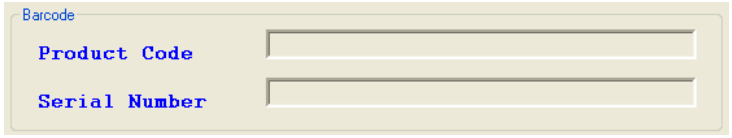
 ⇒ Stop a cycle which is running, (reset).

- **"Parameters" and "bar code" information fields:**



⇒ "**Parameters**" window:

- The name of the test part,
- Any comments on the part.



⇒ "**Barcode**" window:

- The part code entered using the keyboard, or read by the bar code reader.
- The serial number.

- **Time and counter:**

The time and the number of parts tested are displayed at the bottom left of the screen.

The  button displays the counters window.

- **Timer:**

The window displays the time elapsed since the start cycle, it stops at the end of cycle, then reset at the next start cycle.

- **"Cycle" lights:**

Waiting for barcode	⇒ The system is waiting to read the bar code,	(*yellow light*),
Waiting for Start cycle	⇒ The system is ready to test the part,	(*yellow light*),
Pass	⇒ The last part tested is a Pass,	(*green light*),
Running	⇒ The system is currently carrying out a cycle,	(*blue light*),
Fail	⇒ The last part tested is a Fail,	(*red light*).

- **Auto test cycle:**

Auto test cycle result light: the auto test cycle is a control sequence chosen by the customer and allows to determinate the control quality, example: check sequence with a master jet component.

In the case of the auto test cycle is declared **pass**, the light will lighting in green.

If the test is fail, the light will lighting in red and two cases arise according to the selected configuration (*see Chapter 6, paragraph 1.2 "Cycles configuration"*):

The auto test cycle is configured "Blocking": in this case, none control cycle could not be carried out before it is not become again "good".

The auto test cycle is configured "No blocking" : in this case, the control cycles could be carried out but the auto test light will flashing in red to indicates that the last auto test cycle is "**fail**"

- **"Operator" button:**

this button allows to the operator when it leaves the station to put **SESAME** in "**Connection**" mode. This will oblige the following operator to again capture his name and its password.

It allows to change the operator without quit the cycle mode, for that capture the name and the password of the new operator in the "**Connection**" window.

***Note**: the button is holding the current operator name.*

- **Pictures:**

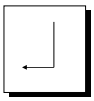
The screen also has an information window which can display information about the cycle, according to the options allocated by the system administrator (*see Chapter 6, paragraph 1.2 "Cycles configuration"*).

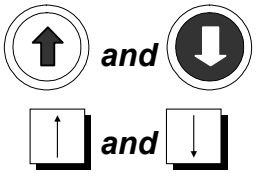
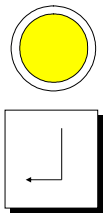
Pictures can also be displayed above the test window.

It is possible to create a customized picture library for your applications by adding your own pictures. The directory is defined in the OPTIONS part of your system (*See Chapter 6, paragraph 1.1 Generalities*).

These pictures must be created using the BITMAP format (*.BMP extension*), and must be 770x190 pixels size.

3. TEST PROCEDURE

Reminder: *in this mode, the*  *and*  *buttons on the remote control have respectively the same functions as the*  *,*  *and*  *buttons on the keyboard, pushing the*  *and*  *together is the same as the validation.*

or  ***and*** ***and*** ⇨ ***Select;*** ***or***  ⇨ ***Enter***

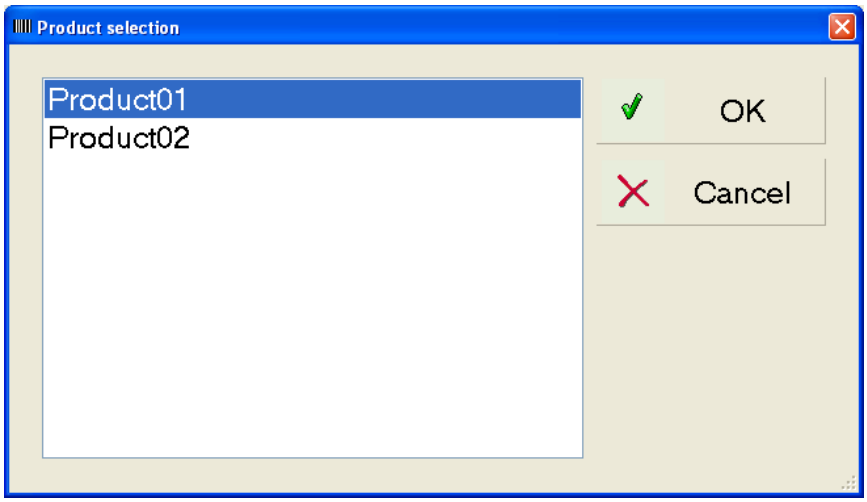
- When a test is started, the program goes to WAITING BAR CODE mode, or part reference. To start a cycle, press the *start cycle* button.
- The test begins with the choice, from the data base, of the type of part to be tested. But selection of this differs according to whether or not a bar code reader is used:

3.1. BAR CODE READER

3.1.1. Not using a bar code reader

By pressing the  button, the products list is displayed.

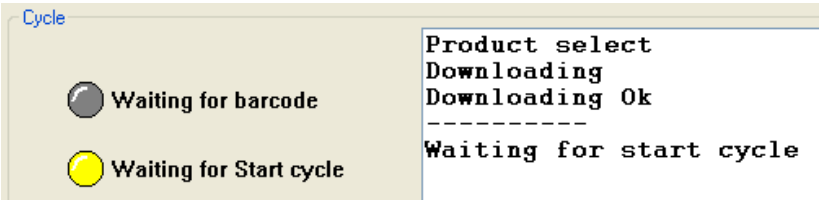
Select, among the list, the product to control (*whether by using the remote control*  *et*  *, whether by the keyboard and the mouse*).



3.1.2. Using a bar code reader

Simply read the bar code and the program will automatically assign a test sequence to the test part then read the serial number to identify the test product.

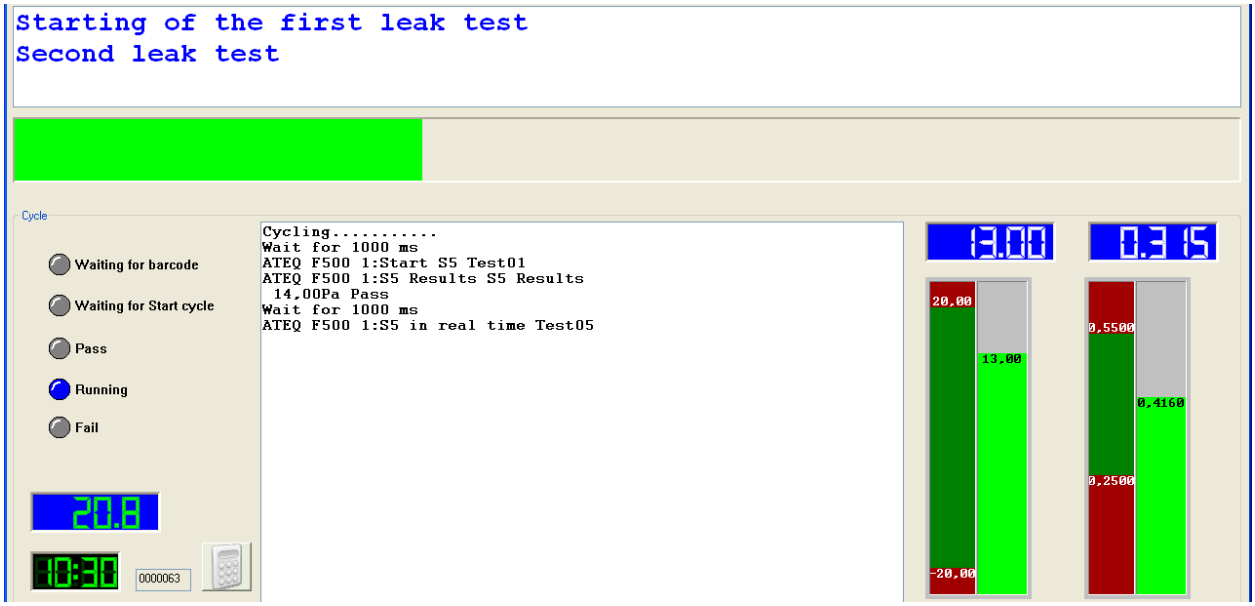
The software carries out the downloading of the parameters to the measurement devices.



Once the downloading ends, it waits for the "**Start cycle**" (press on the treadle or on the  button).

3.2. CYCLE PROCESSING

The operator follows the progress of the test cycle on the screen, and makes necessaries handlings procedures and remarks for a good cycle progress.



One or two bars charts can be displayed during the cycle, to visualize measurements values and see if they are into the rejects limits.

3.3. FUNCTION "VALIDATE WHEN PASS"

During the cycle, it's possible to jump to the next step before the end of the current one when the component is passed. It's the "**Validate when pass**" function.

The program will wait a start cycle, in this case the 

indicator light show (blue color) to signalize to the operator that he can validate (by pressing the start button) to jump to the next step. (This is to win time in the total test cycle).

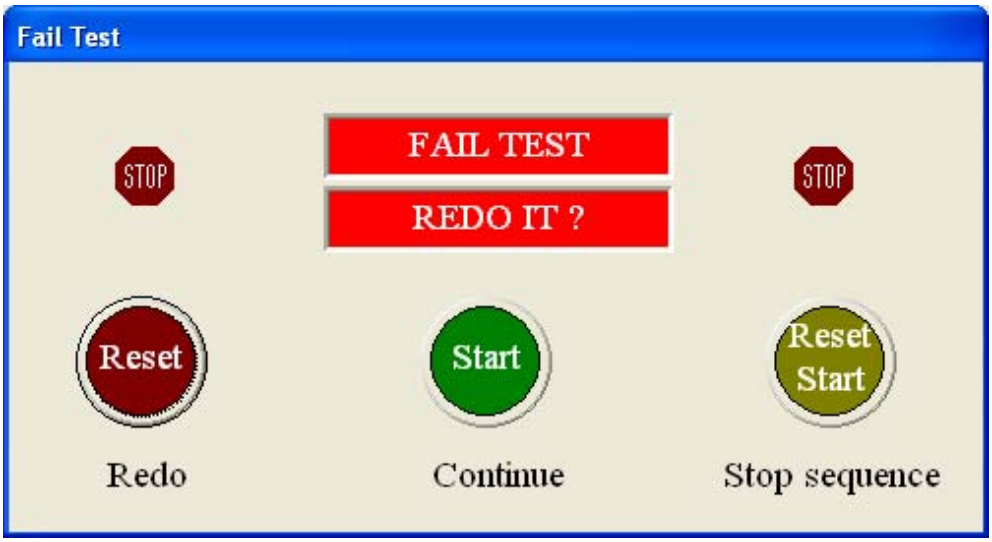
***Note**: this function is not available for all the phases, see chapter 4, paragraph 3.3 "Insert a new phase into a sequence".*

3.4. CHART BAR OF CYCLE PROGRESS

The chart bar on the middle of the screen indicate the cycle progress and the results of each steps, green for the passed, red for the failed and orange for the alarms (on the test conditions).

3.5. FAILED TEST RESULT

If in the advanced parameters of the current phase, the "**Stop on error**" option is validate and if the test sequence is declared a **Fail** the program displays the window shown below and waits for operator confirmation to re-start the test, continue with the sequence or stop the sequence.



It's possible to select one of the three buttons by using the  and  of the remote control and validating by pressing at the same time the two buttons, or click on one of these button by using the mouse.

⇒ To stop the sequence and re-start the last fail step.

⇒ To continue the sequence and leave the failed step.

⇒ To stop the current sequence.

Chapter 6
SYSTEM OPTIONS

A test cycle follows certain rules when it's running according to the options defined for it.

We explain the various options below.

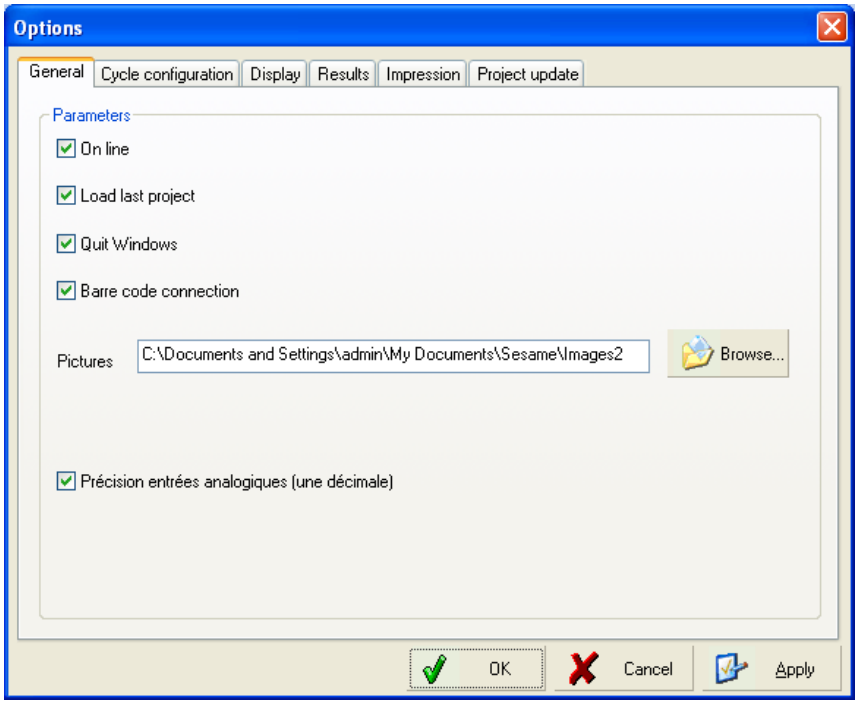
These are defined by the ***administrator***, who determines how cycles run.

1. SYSTEM OPTIONS

1.1. GENERALITIES

The "**Options**" menu allows configuring the software following the user preferences.

The parameters are the following ones and allow different software functioning modes.



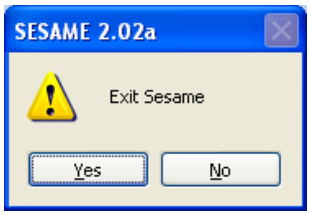
- In the "**On line**" mode (activated box), where all information sent to the serial ports is processed by ***SESAME***. In the "**Off line**" mode (box not activated) where no communication through the serial links is processed.

  The advantage of being off line is that you can create test sequences and run them without using the device. This mode is very useful for checking how a newly-created cycle will run.

  Note that running an imaginary cycle (in *off line* mode) produces results which bear no relation to reality.

Note: *to run real tests, you need to be "on line" to be able to communicate with the various devices present in the system.*

- The "**Last project download**" option allows starting the last project used at the starting of **SESAME**.
- The "**Quit Windows©**" function allows at the closing of ***SESAME*** to quit too the operating system Windows© in the case of ***SESAME*** is installed on one of these system, in this case the computer will shutdown if the answer is "**Yes**".



- The "**Bar code connection**" function allows to the operator to enter into ***SESAME*** (at the starting of the software) by using the bar code reader. The bar code reader reads the operator personal bar code and ***SESAME*** is downloading all the user's parameters.

***Note**: with the "**Bar code connection**" function, the user must not have a password.*

- The "Pictures" directory is the path where are located all the pictures who can be used in the sequence.

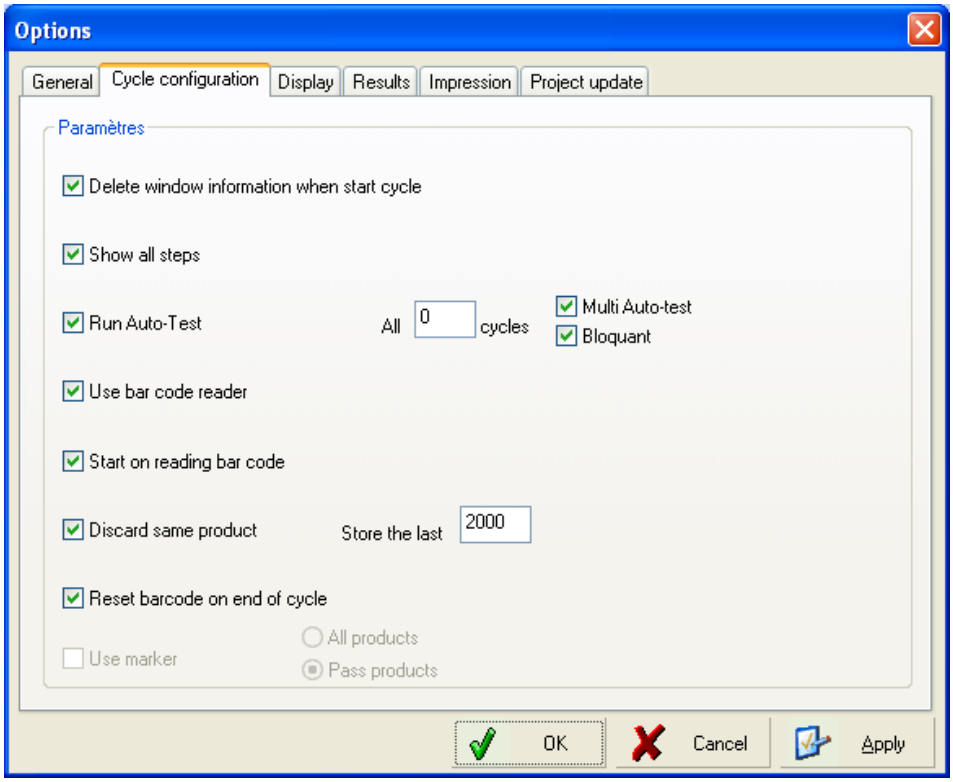
***Note**: it's necessary to up dating the complete picture directory after the software installation. Example: C:\Program files\Ateq\Images.*

- The "**Analog input precision**" function allows improving the precision of the displayed value of the analogical input. The display switches from a whole value to a value with a decimal.

1.2. CYCLES CONFIGURATION

The appearance and progress of a test cycle may vary depending on how it has been configured.

The various options are described below:



This window is used to specify the following options:

- ☑ Delete window information when start cycle : To clear the information window when starting cycle (lower window). If the box is not validated, the text stays and the information history is available.
- ☑ Show all steps : To display in the information window all the phases of the cycle during the test procedure. If the box is not validated, the middle results are not displayed.
- ☑ Run Auto-Test : When you move into cycle mode, run an auto-test.

  This is a special sequence which checks the operation of the system:

  - the AUTO-TEST frequency must be informed
  - for it to operate, an AUTO-TEST sequence must be present among the test sequences on the system, and a master part which is also called AUTO-TEST must be defined in order to run this sequence.
  - If the "**Bloquant**" box is validate, it's impossible to start a new test cycle until the auto-test cycle is not pass or if it is not carried out. If the "**Bloquant**" box is not validate , the control cycles can be carried out, but the auto-test light will flashing in red color to indicate that the last auto-test cycle was fail.
- ☑ Use bar code reader : This allows validating the use of bar code reader. The bar code reader will select the sequence to run among the defined ones in the data base.

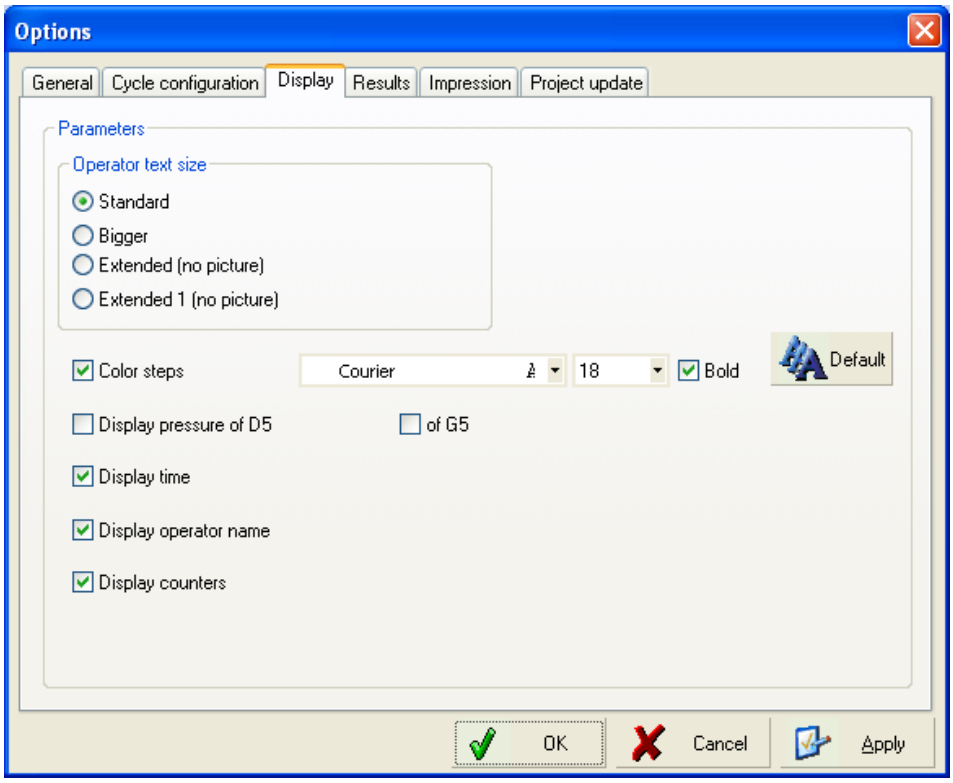
  If a reader is not used, or if the part does not have a bar code, it is still possible to select a sequence from those already defined by selecting the type using the  button.
- ☑ Start on reading bar code : To start the cycle automatically when the bar code is read.

  The operator doesn't need to press on a start key, the control will be carried out automatically as of the reading and recognition of a bar code.
- ☑ Discard same product : Allows not realizing the test cycle on a product which was already made, allows avoiding carrying out doubled blooms. When this parameter is validated, it is necessary to inform the quantity of preceding products in which there should not be of double Store the last 2000 . Example, in the preceding case, it should not have double during the last 2000 tests carried out.
- ☑ Reset barcode on end of cycle At the end of the measurement sequence, if other bar codes were read (by inadvertency) they are deleted. If the box is not notched, they are deleted at the cycles start.
- The "**Stamp activation**" allows carrying out the stamping of the tested products at the end of cycle. Then choose the stamping option "**All products**" or "**Pass products**".

1.3. CYCLE DISPLAY CONFIGURATION

The control cycle display overview can vary following the mean it was configured.

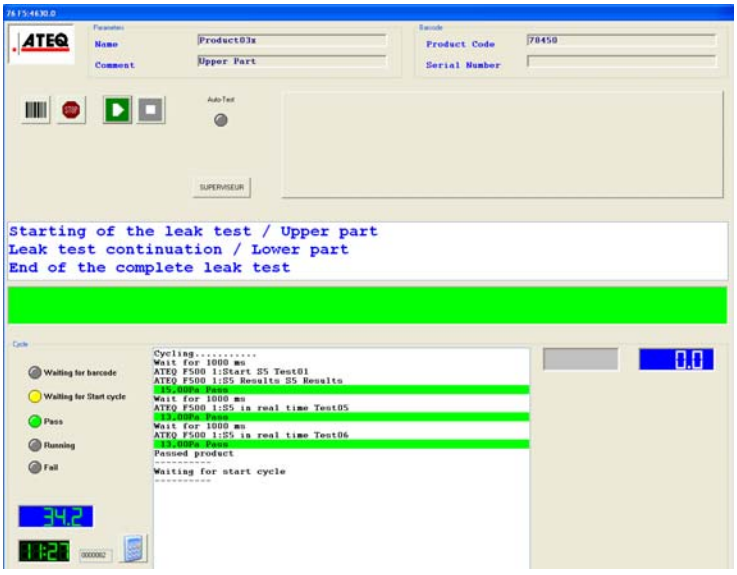
The different options are described below:



"**Operator text size**": this parameter allows modifying the display window size, the font and the number of displayed lines, this in order to adapt the message screen for easy reading.

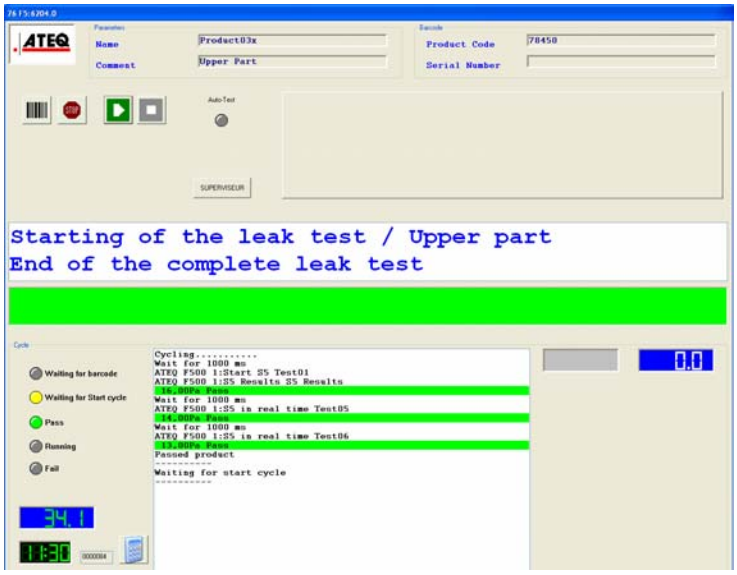
"Standard" size:

3 lines of messages



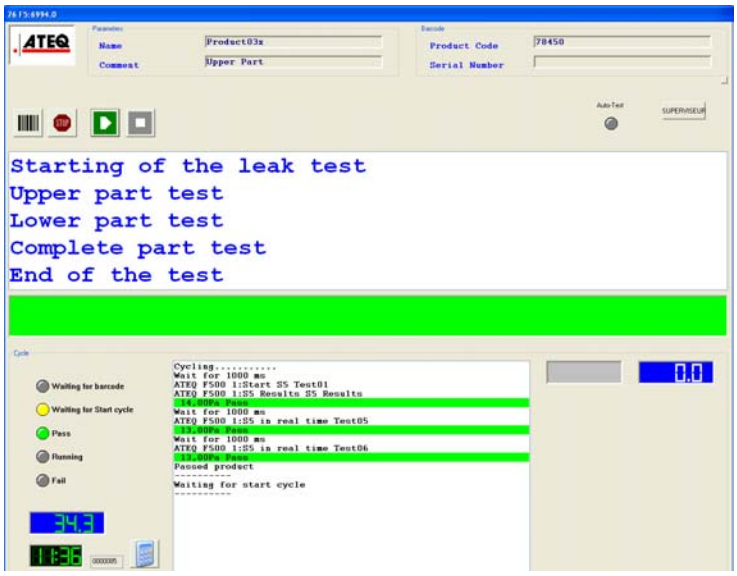
"Bigger" size:

2 lines of messages



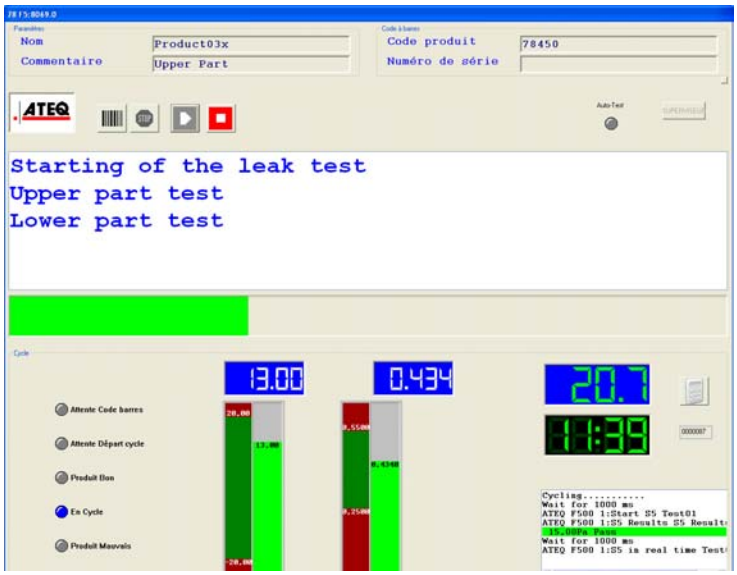
"Extended" size (no picture):

5 lines of messages

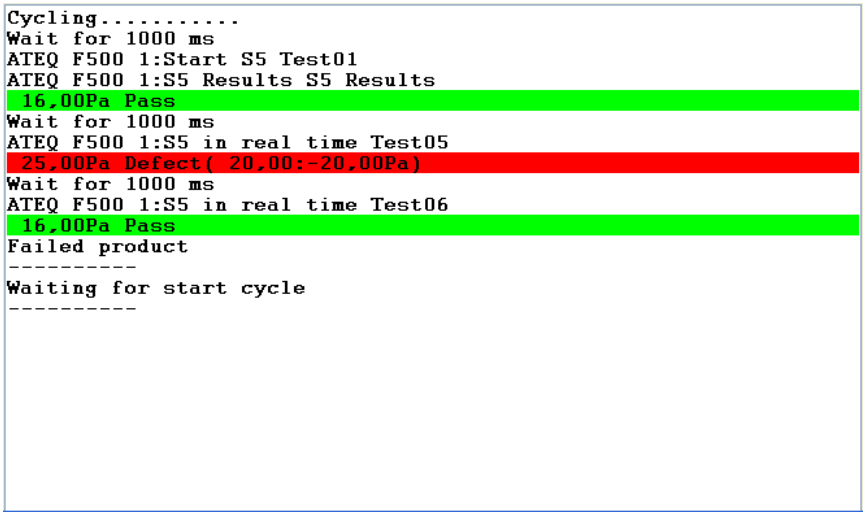


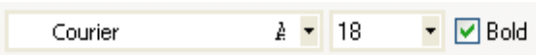
"Extended 1" size (no picture):

5 lines of messages, with modified arrangement to privilege the timer, the clock and the histograms display.



- The "**Color the phases**" option allows highlighting the phase's results. If the phase result is pass, the phase will be green highlighted, if it's fail in red highlight and orange highlight if it's an alarm.



The fields 

allows to select the font, the size and the (bold or not) for the text display in the events window.

The 

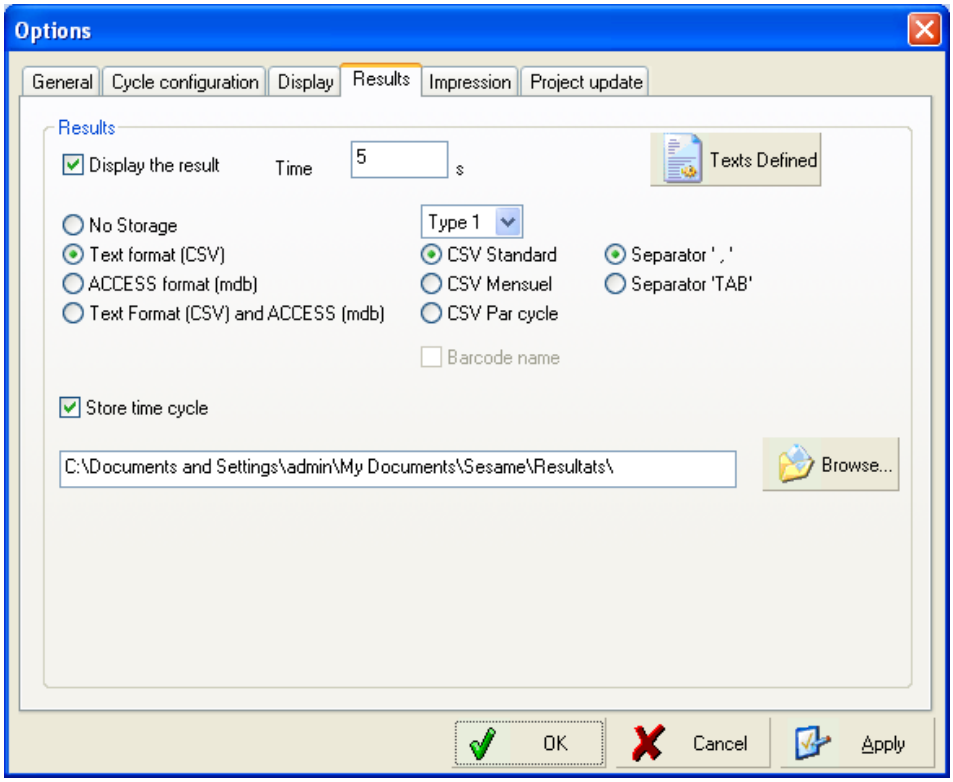
button allows applying the default texts display.

- The "**Display the D 5th series pressure**" option or "**G 5th series**" allows to display the pressures of the **ATEQ D** or **G** 5th series.
- The "**Display hour**" option displays or not the clock.

- The "**Operator display**" option displays or not the changing operator button.

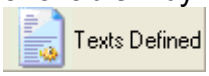
- The "**Counters display**" option displays or not the counters window.

1.4. MANAGING RESULTS

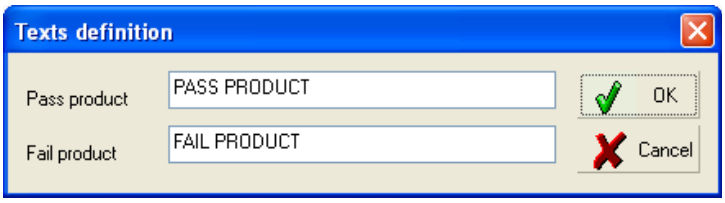


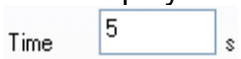
At the end of each cycle it is possible to:

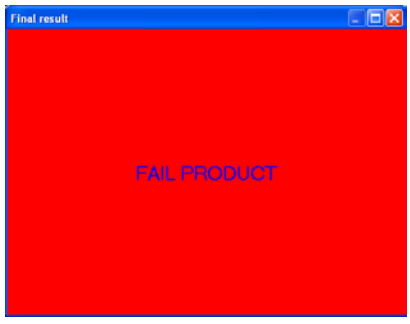
- Display the test result with a "**Popup**" window containing the captured texts.

  The texts to display are available by pressing the 

button and are the following one:



  At each end of cycle one of the following windows will be displayed in order with the test result, this during the defined time in the field: 

Pass product case	Fail product case	Alarm product case
		

- Archive the results to use with others applications. Specify in the lower window, the archiving folder. See paragraph 1.4.1 "Results archiving". **Example: C:\Documents\Results\.**
- Print the results following some conditions, always: whatever the test result a print will be carried out; on fail products: only in the case of the product is declared fail; never: none print will be carried out. See paragraph 1.4.2 "Print the results".

1.4.1. Archiving results

The results of the measurements performed by the devices during the test may be archived in a directory on the hard disk or on floppy disk(s).

They will be saved as text files (*.TXT extension*), in CSV format: **these files are not used by SESAME**, but they can be read using any text editor or spreadsheet which uses the comma-separated variables function.

The AW extension is a specific format for "AW Europe" customer.

⚠ ***SESAME does not create a backup directory for saving these if it is not present. If there is no directory, no archive file will be created.***

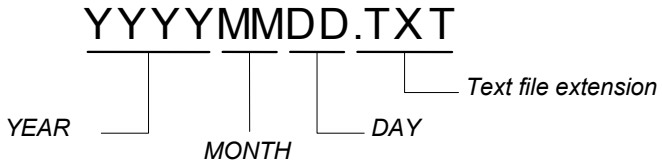
In the case of CSV text files, the results can be archived following three different means: Standard; Monthly; by cycle.

Note*: the "TTT" field is not in the archiving frames with the previous* ***SESAME*** *versions before* ***2.31a****.*

1.4.1. 1) Standard

Archiving of results is arranged in the following mean (*if the directory is correctly defined and if it exists*):

- A specific subfolder is created for each type of product defined and tested (*it bears the same name as the part defined*).
- In the results folder, another folder is created with the product name. Within this last folder a .TXT file is created each day of testing. It is this file which archives all the test results for the same type of part. The name of this file is defined as follows :



This file makes an inventory of the test log, defined by values in the form of frames. Each of these values is differentiated by a separator, comma or tab, which enables the results to be used by other applications (*spreadsheets, data bases, word processing etc. ...*)

To read these, each frame includes elements whose meanings are as follows:

Frame Model:

Product, Serial n°, Bar code n°, TTT, Hour, Operator, Nph_1,

Val T_1, Unit T_1,Res T_1,…Nph_n, Val T_n, Unit T_n, Res T_n, Global res

Note*: if the selected separator is TAB, the commas which are between each fields are replaced by tabs.*

With:

Product = Test product name (20 characters).

Serial n° = Serial number of the product, ⚠ **Needs to read the bar code** ⚠ (20 characters).

Bar code n° = the product bar code number, ⚠ **Needs to read the bar code** ⚠ (20 characters).

TTT = Total Time of the Test.

Hour = test end time, following the format: hh:mm:ss.

Operator = Operator's name (20 characters).

Nph_1 = Phase number 1 (see paragraph 1.4.1.4) "Phases numbers".

Val T_1 = Test 1 measurement value.

Unit T_1 = Test 1 measurement unit.

Res T_1 = Test 1 result, with 0 = fail test, 1 = pass test, 2 = alarm.

Nph_n = Phase number n (see paragraph 1.4.1.4) "Phases numbers".

Val T_n* = Test n measurement value.

Unit T_n* = Test n measurement unit.

Res T_n* = Test n result, with 0 = fail test, 1 = pass test, 2 = alarm.

**n represent the total number of tests included in the sequence.*

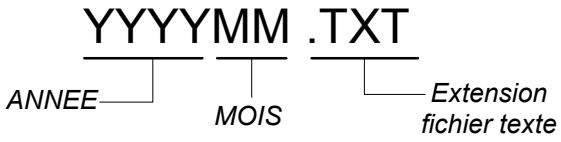
Global res = Sequence global result, with 0 = fail product, 1 = pass product, 2 = alarm.

***Note:** phase number (Nph), each phase gets a different number, to be able to identify it in the archiving or in the spreadsheet software treatment.*

1.4.1. 2) Monthly

Archiving of results is arranged in the following mean (*if the directory is correctly defined and if it exists*):

- A specific subdirectory is created for each type of part defined and tested (*it bears the same name as the part defined*).
- In the results folder, another folder is created with the product name. Within this last folder a .TXT file is created each month of testing. It is this file which archives all the test results for the same type of part. The name of this file is defined as follows:



This file makes an inventory of the test log, defined by values in the form of frames. Each of these values is differentiated by a separator comma or tab, which enables the results to be used by other applications (*spreadsheets, data bases, word processing etc. ...*)

To read these, each frame includes elements whose meanings are as follows:

Frame model:

Product, Serial n°, Bar code n°, TTT, Date, Hour, Operator, Nph_1,

Val T_1, Unit T_1,Res T_1,…Nph_n, Val T_n, Unit T_n, Res T_n, Global res

***Note**: if the selected separator is TAB, the commas which are between each fields are replaced by tabs.*

With:

Product = Tested product name (20 characters).

Serial n° = Product serial number, ⚠ **Needs bar code reading** ⚠ (20 characters).

Bar code n° = product bar code, ⚠ **Needs bar code reading** ⚠ (20 characters).

TTT = Total Test Time.

Date = Date of the test, following the format: yyyymmdd.

Hour = test end time, following the format: hh:mm:ss.

Operator = Operator's name (20 characters).

Nph_1 = Phase number 1 (see paragraph 1.4.1.4) "Phases numbers".

Val T_1 = Test 1 measurement value.

Unit T_1 = Test 1 measurement unit.

Res T_1 = Test 1 result, with 0 = fail test, 1 = pass test, 2 = alarm.

Nph_n = Phase number n (see paragraph 1.4.1.4) "Phases numbers".

Val T_n* = Test n measurement value.

Unit T_n* = Test n measurement unit.

Res T_n* = Test n result, with 0 = fail test, 1 = pass test, 2 = alarm.

**n represent the total number of tests included in the sequence.*

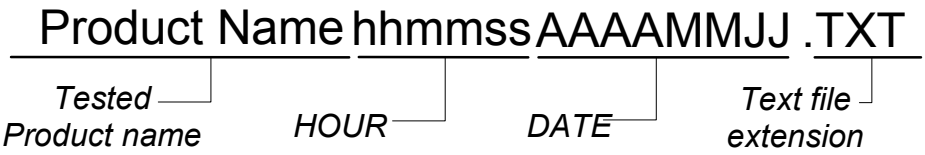
Global res = Sequence global result, with 0 = fail product, 1 = pass product, 2 = alarm.

Note: *phase number (Nph), each phase gets a different number, to be able to identify it in the archiving or in the spreadsheet software treatment.*

1.4.1. 3) By cycle

Archiving of results is arranged in the following mean (*if the directory is correctly defined and if it exists*):

- In the result folder, one .TXT file is saved by control. The file name is defined as following:



This file makes an inventory of the test log, defined by values in the form of frames. Each of these values is differentiated by a separator comma or tab, which enables the results to be used by other applications (*spreadsheets, data bases, word processing etc. ...*)

To read these, each frame includes elements whose meanings are as follows:

Frame model:

Product, Serial n°, Bar code n°, TTT, Date Hour, Operator, Nph_1,

Val T_1, Unit T_1,Res T_1,…Nph_n, Val T_n, Unit T_n, Res T_n, Global res

Note*: if the selected separator is TAB, the commas which are between each fields are replaced by tabs.*

With:

Product = Tested product name (20 characters).

Serial n° = Product serial number, ⚠ **Needs bar code reading** ⚠ (20 characters).

Bar code n° = product bar code, ⚠ **Needs bar code reading** ⚠ (20 characters).

TTT = Total Test Time.

Date Hour = Date and Hour of the test end, following the format: yyyy/mm/dd hh:mm:ss.

Operator = Operator's name (20 characters).

Nph_1 = Phase number 1 (see paragraph 1.4.1.4) "Phases numbers".

Val T_1 = Test 1 measurement value.

Unit T_1 = Test 1 measurement unit.

Res T_1 = Test 1 result, with 0 = fail test, 1 = pass test, 2 = alarm.

Nph_n = Phase number n (see paragraph 1.4.1.4) "Phases numbers".

Val T_n* = Test n measurement value.

Unit T_n* = Test n measurement unit.

Res T_n* = Test n result, with 0 = fail test, 1 = pass test, 2 = alarm.

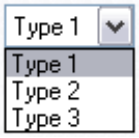
**n represent the total number of tests included in the sequence.*

Global res = Sequence global result, with 0 = fail product, 1 = pass product, 2 = alarm.

Note: *phase number (Nph), each phase gets a different number, to be able to identify it in the archiving or in the spreadsheet software treatment.*

1.4.1. 4) Files results types

Three results files types are available; they change slightly the order of the fields in editing results files.



Type 1: the global test result is at the end of the frame as the above examples.

Type 1 standard frame model:

Product, Serial n°, Bar code n°, TTT, Hour, Operator, (A)

Nph_1, Val T_1, Unit T_1,Res T_1,…Nph_n, Val T_n, Unit T_n, Res T_n, (C) **Global res** (D)

(B)

Example:

A					B	C		D
Ball bearing,	,	,	14,9s,15:50:35,	GEORGES,	047, 0,000,Pa,1,	049,	0,,0,	0
Ball bearing,	,	,	13,0s,16:21:11,	GEORGES,	047, 0,000,Pa,1,	049,	0,,1,	1
Ball bearing,	,	,	13,0s,16:27:40,	GEORGES,	047, 0,000,Pa,1,	049,	0,,1,	1
Ball bearing,	,	,	14,3s,16:45:04,	GEORGES,	047, 0,000,Pa,1,	049,	0,,1,	1
Ball bearing,	,	,	14,3s,16:45:34,	GEORGES,	047, 0,000,Pa,1,	049,	0,,1,	1
Ball bearing,	,	,	13,3s,16:46:29,	GEORGES,	047, 0,000,Pa,1,	049,	0,,1,	1

Type 2 : the global test result is after the operator name.

Type 2 standard frame model:

Product, Serial n°, Bar code n°, TTT, Hour, Operator, Global res, Nph_1,

$Val\ T_1$, $Unit\ T_1$,$Res\ T_1$,…Nph_n, $Val\ T_n$, $Unit\ T_n$, $Res\ T_n$

Type 3 : the test conditions for each measurement are add to the frame.

Type 3 standard frame model:

Product, Serial n°, Bar code n°, TTT, Hour, Operator, Nph_1,

$Val\ T_1$, $Unit\ T_1$,$Res\ T_1$, $Val\ CT_1$, $Unit\ CT_1$…Nph_n, $Val\ T_n$,

$Unit\ T_n$, $Res\ T_n$, $Val\ CT_n$, $Unit\ CT_n$, Global res

With:

$Val\ CT_1$ = Measurement 1 test condition value.

$Unit\ CT_1$ = Measurement 1 test condition unit.

$Val\ CT_n$ = Measurement n test condition value

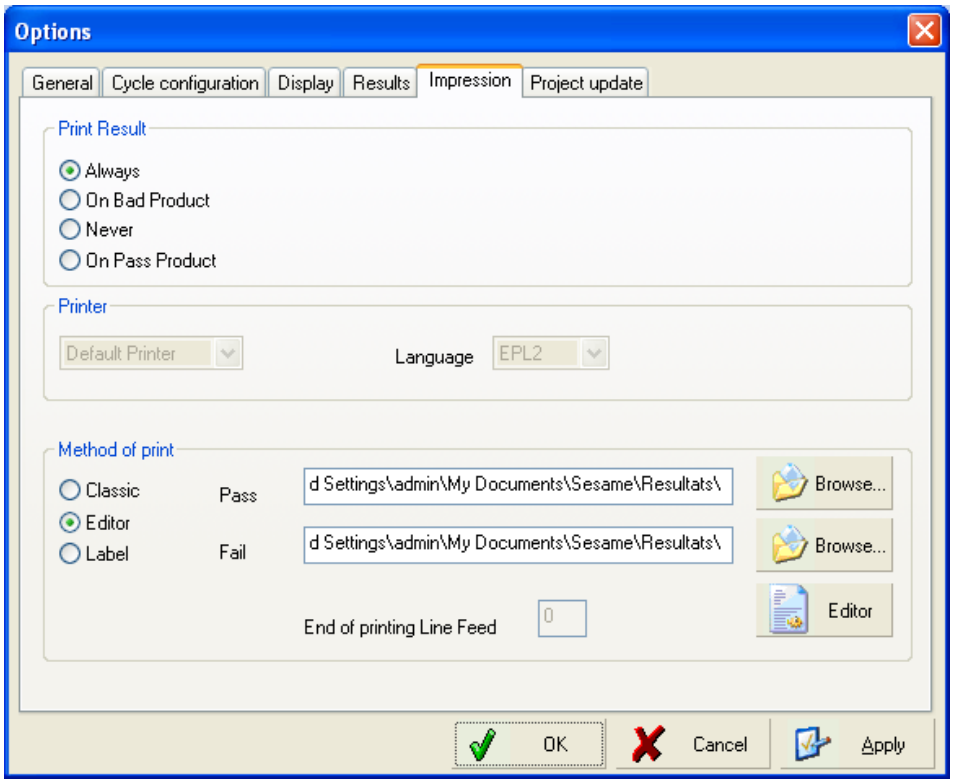
$Unit\ CT_n$ = Measurement n test condition unit.

1.4.1. 5) Phases numbers

The following phase's numbers are able to appear in the archiving files.

N°	Designation
004	Operator test phase
005	ATEQ E test phase
006	ATEQ P test phase
007	ATEQ F2P test phase
008	ATEQ GP test phase
009	ATEQ D2P test phase
010	Real time ATEQ D2P test phase
011	Real time ATEQ P test phase
013	ATEQ VAR test phase
017	Real time ATEQ P test phase
020	MD800-MD9 phase
021	MD800-MD9 phase and text
022	Brewing test phase
023	ATEQ Probe test phase
024	ATEQ G2P test phase
025	ATEQ F alphanumeric test phase
026	MD800-MD9 analog input test phase
028	Spiro result phase
029	Stas11 phase
030	Real time ATEQ G2P test phase
031	Counter phase
032	Burners phase
033	Real time ATEQ GP test phase
034	ATEQ D2P calibration phase
035	ATEQ D2P calibration result phase
036	ATEQ D2P CAL check phase
038	ATEQ F3 result phase
041	ATEQ EP2P test phase
042	Real time ATEQ EP2P test phase
043	JFA-CF AI06 supply result phase
045	ATEQ D2P test phase and counter
047	5th series ATEQ result phase
048	Real time 5th series ATEQ test phase
049	Visual on keyboard operator test phase
050	Calibration by volume ATEQ F3 phase
051	ATEQ GP test phase and counter
052	Analog input test phase
053	real time ATEQ DHP test phase
054	Flame security 5th series ATEQ test phase
055	ATEQ GP with counter and input test phase
056	5th series ATEQ calibration phase
057	5th series ATEQ calibration check phase
058	5th series ATEQ test test phase with flame security and input
061	5th series ATEQ multi heads phase
062	ATEQ G500 PST phase
066	MPR60 phase
068	MD800MD9 Consumption phase

1.5. PRINTING MANAGEMENT



1.5.1. Printing results

The measurements results carried out by the devices during the control can:

- Be **Always** printed after each test cycle whatever the result.
- Be printed after the cycle which the result is **Fail**.
- **Never** be printed.
- Be printed after the cycle which the result is **Pass**.

1.5.2. Printing method

1.5.2. 1) Classic print

Printing is like the example given below:

```
========================================
Customer           :IOFF

Serial number      :
Product code       : TEST
User name          : ADM
Control date       : 04/04/2000 16:15:59
----------------------------------------
Leak 5 s(Program ATEQ G2P)
  0.0cm3/h Pass
                                   ACCEPT
Test 123-50(Program D2P Bar-Histo)
   0.0Cal Defect( 135.0 25.0Cal)
                                   REJECT
Test 27(Program D2P Bar-Histo)
 235.3Cal Defect(  30.0 25.0Cal)
                                   REJECT
Test 123-50(Program D2P Bar-Histo)
 120.8Cal Pass
                                   ACCEPT
----------------------------------------
END : REJECT
Tests number              : 4
Passed tests number       : 2
Failed tests number       : 2
========================================
```

1.5.2. 2) Editor print

An individualized impression of the results is possible, for that it is necessary to pass through an editor.

The formats files of the labels impression for the pass or fail parts are to be informed in the fields "Pass" and "Fail".

1.5.2. 3) Label printing

SESAME can print directly labels. For this configuration, all labels must be on the ASCII format (files extension: see below).

The labels files for the pass or fail products may be inform in the "**Pass**" and "**Fail**" fields, these are the folders: "**Print Bon**" and "**Print Mauvais**".

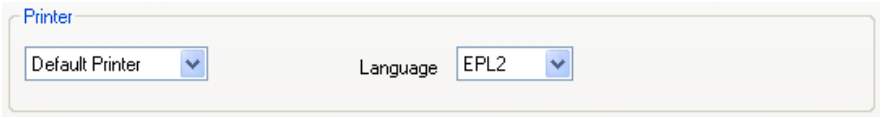
The different fields filled dynamically by the ***SESAME*** software may be defined in the "**Label**" file, under in the form of fixed fields and in the following format:

➢ <DATE> (Current date format JJ/MM/AA) ➢ <OPERATEUR> (Operator name) ➢ <HEURE> (Current hour) ➢ <PIECE> (Product name) ➢ <CODEBARRE> (bar code value) ➢ <NUM-SERIE> (serial number) ➢ <COMMENTAIRE> (commentary field value) ➢ <RES-FINAL> (final result, pass or fail) ➢ <NOMPHASEi> (ie phase name)	➢ <DESCPHASEi> (ie phase Description) ➢ <RESULTATi> (ie result i [0;999]) ➢ <CONDITIONi> (ie result condition i [0;999]) ➢ <NOMPHASE-Mi> (ie phase fail name) ➢ <DESCPHASE-Mi> (ie fail phase description) ➢ <RESULTAT-Mi> (ie fail result i [0;999]) ➢ <CONDITION-Mi> (ie fail condition i [0;999])

1.5.2. 4) Printer (labels only)

In the case of label printing with ***SESAME***, the printer choice, or the port which it is connected, as its language must be specify.

- PrintBon.Epl2 ou
- PrintBon.Zpl2
- PrintMauvais.Epl2 ou
- PrintMauvais.Zpl2



Default Printer is the default printer installed under Windows©.

Additional note about the language choice:

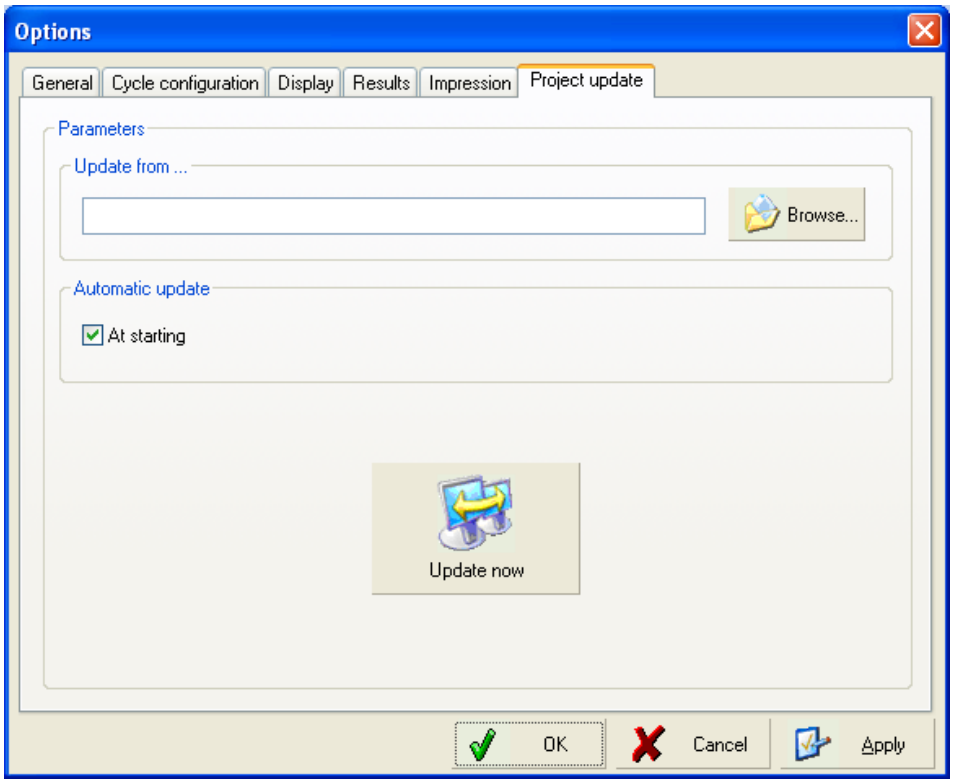
EPL2: *Eltron Programming Language 2, an order language, is designed to assemble all the elements of the label before printing, which increases the speed of processing and printing, EPL2 makes an ideal language for label printing and bar code.*

ZPL2*: Zebra Programming Language 2, is one of three programming languages used by Zebra printers (printers, high performance, commercial, RFID, thermal, portable label).*

Example of ZPL2 file:

```
;-------------------------------------------
; Fichier d'impression des etiquettes pour imprimante ZPL2
; Toutes les commandes seront envoyées tel quel a l'imprimante
; Les mots reservés seront remplacés par une chaine
; Listes des mots reservés :
;                         OPERATEUR           (Nom de l'opérateur)
;                         DATE                (Date courante)
;                         HEURE               (Heure courante)
;                         PIECE               (Nom de la piece)
;                         CODEBARRE           (Valeur du code barre)
;                         NUM_SERIE           (Valeur du numero de serie)
;                         COMMENTAIRE         (Valeur du champ commentaire)
;                         NOMPHASEi           (Nom de la ieme phase)
;                         DESCPHASEi          (Description de la ieme phase)
;                         RESULTATi           (ieme resultat i [0;999])
;                         CONDITIONi          (ieme condition du resultat i [0;999])
;                         NOMPHASE_Mi         (Nom de la ieme phase mauvaise)
;                         DESCPHASE_Mi        (Description de la ieme phase mauvaise)
;                         RESULTAT_Mi         (ieme resultat mauvais i [0;999])
;                         CONDITION_Mi        (ieme condition mauvais i [0;999])
;                         RESFINAL            (Resultat final, bon ou mauvais
;                         ANNEE               (Année)
;
;  !! Attention : Un seul mot reservé par ligne
;  !! Attention : Aucun texte après un mot reservé
;-------------------------------------------
^XA                     ^FO80,70            ^FO280,100          ^FO80,130
                        ^A0,24,20           ^A0,24,20           ^A0,24,20
^FO80,40                ^FDNum.Serie:^FS    ^FDHeure:^FS        ^FDOperateur:^FS
^A0,24,20               ^FO180,70           ^FO380,100          ^FO180,130
^FDProduit:^FS          ^A0,24,20           ^A0,24,20           ^A0,24,20
^FO180,40               ^FDNUM_SERIE^FS     ^FDHEURE^FS         ^FDAlro^FS
^A0,24,20
^FDPIECE^FS             ^FO280,70           ^FO80,100           ^FO280,130
                        ^A0,24,20           ^A0,24,20           ^A0,24,20
^FO280,40               ^FDDate:^FS         ^FDResultat:^FS     ^FD- ATEQ -^FS
^A0,24,20               ^FO380,70           ^FO180,100
^FDCodebarre:^FS        ^A0,24,20           ^A0,24,20           ^FO275,120
^FO380,40               ^FDDATE^FS          ^FDRESFINAL^FS      ^GB100,40,5^FS
^A0,24,20               ^FO430,70
^FDCODEBARRE^FS         ^A0,24,20                               ^XZ
                        ^FDANNEE^FS
                  ->                  ->                  ->
```

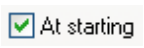
1.6. UP DATING PROJECT



This option allows updating regularly the control sequences of the station compared to another computer sequences on the network. These sequences can be modified remotely without obstructing the production.

To allow this up dating, it must it is necessary to inform the **path** in the field "**Updated from...**" in which the checkpoint will seek the new control sequences.

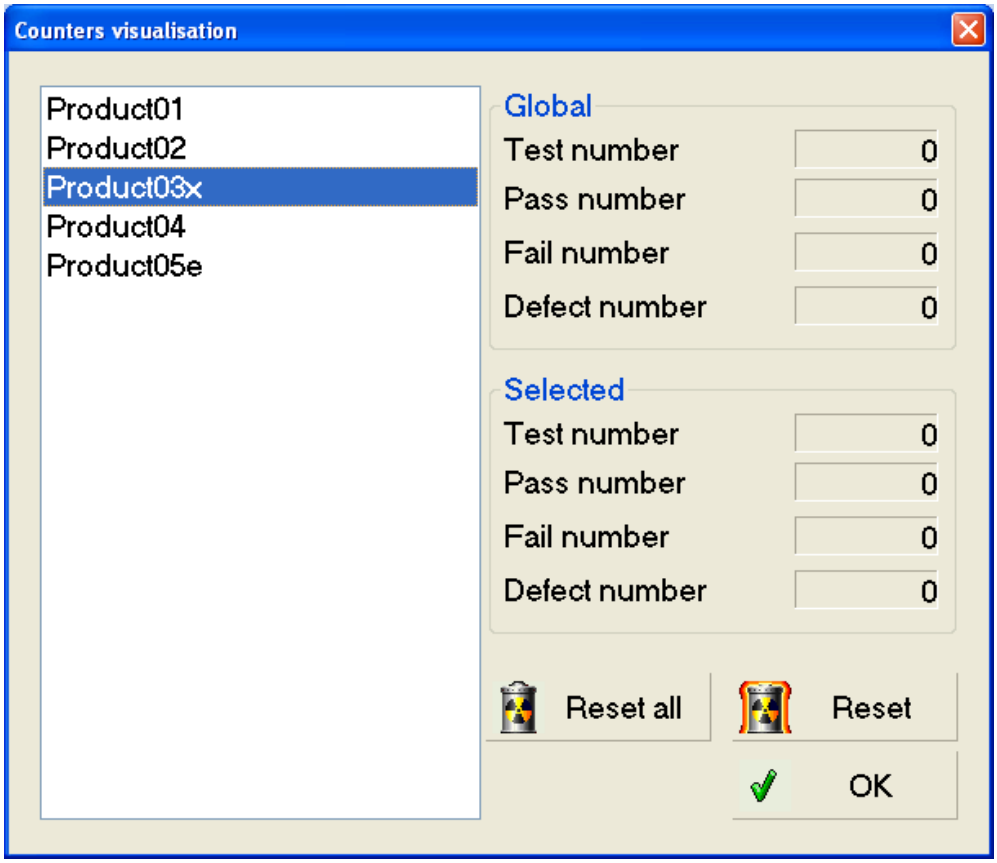
The up dating can be made in two possible ways:

- 

at each ***SESAME*** software starting, if the box is validate.
- Or at the order by clicking on the "**Update now**" button.

2. MANAGEMENT OF COUNTERS

In the "**cycle/counter**" menu there is a list of the parts counters as shown in the figure below.



The counters displayed in the "**Global**" window cumulate all the results.

The counters displayed in the "**Selected**" window cumulate the results of the selected product in the left hand window.

⇒ "**Reset All**" which resets all the counters.

⇒ "**Reset**" resets the counter for the selected product in the left hand window to zero.

***Note**: counters can not be reset to zero from a level 3 user account.*

Chapter 7
MAINTENANCE

This section explains the method for carrying out a diagnosis in real time of the devices installed on the test station.

1. MAINTENANCE OF THE ATEQ DEVICES

For checking the operation of the **ATEQ** devices and communications with the PC, the software has a real-time diagnostics tool to check links with the various devices. If communication problems are encountered, *see Chapter 8, "Communication and MODBUS network".*

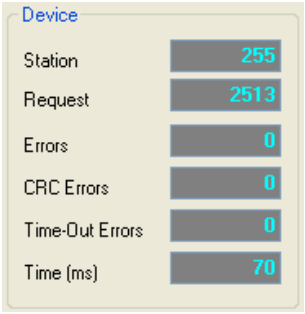
Each device has a maintenance window similar to this one (*accessed by double-clicking on the icon for the selected device*) :

These windows are used for:

- Getting information, in real time, on exchanges in progress,
- Finding out, in real time, the state of the test device,

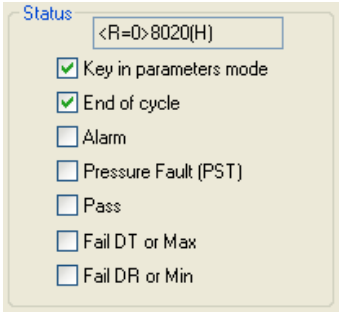
Suggest available services actions. The common for all the windows are detailed as follow (example with a F500 device):

Device communication window, allows checking the communication between ***SESAME*** and the device:



- The "**Station**" number must be different for all the device installed in the network and must be the same in the device parameters.
- The "**Request**" field must regularly increase.
- The "**Errors**", "**CRC Errors**" and "**Time Out Errors**" fields must stay at **0** or do not increase.
- The "**Time (ms)**" field must stay with the same value and with the low value (less than 500 ms).

The **Status** window, allows to know the device status in real time: In cycle, pass part, alarm, key position etc.



The "**Actions**" window contains buttons that can remote drive the device, read the results or edits a new test set parameters.

The "**Measure**" window allows knowing in real time the measurement values.

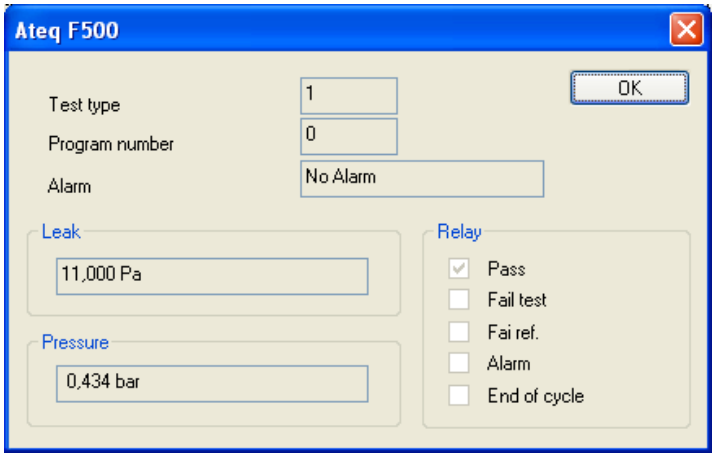
The "**Results number**" shows the results quantity recorded in the FIFO memory (maximum 8).

***Note**: FIFO = First In First Out.*

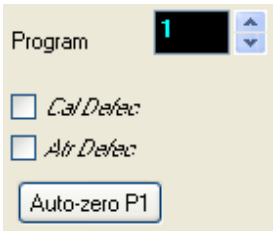
By pressing the 

button, a window with the first result in FIFO is displayed (example with an ATEQ F5) :

When the result is read, it's deleting from the FIFO and the result number is subtracting 1.



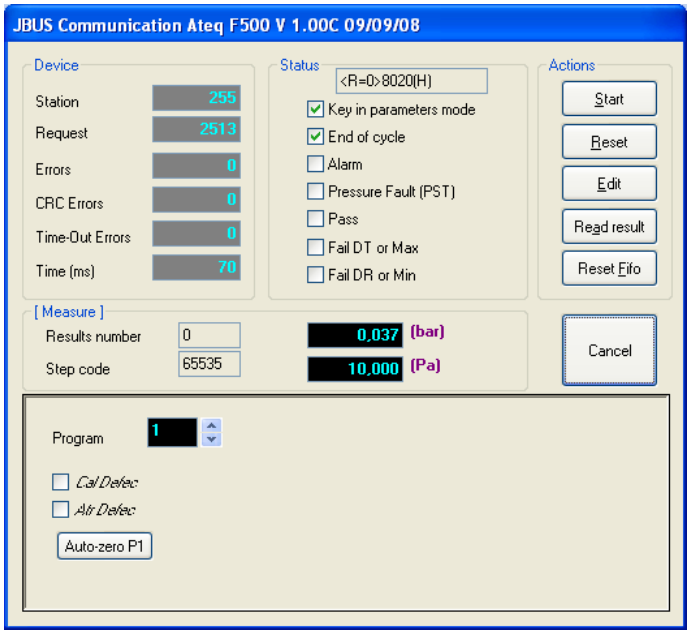
The "**Step Code**" field is displaying the device current step in real time, the steps codes are different following the device. In all cases, the step "**65535**" shows that the device is end of cycle and standing by for a new start. *For further information, see the ATEQ network Fieldbus user manual.*



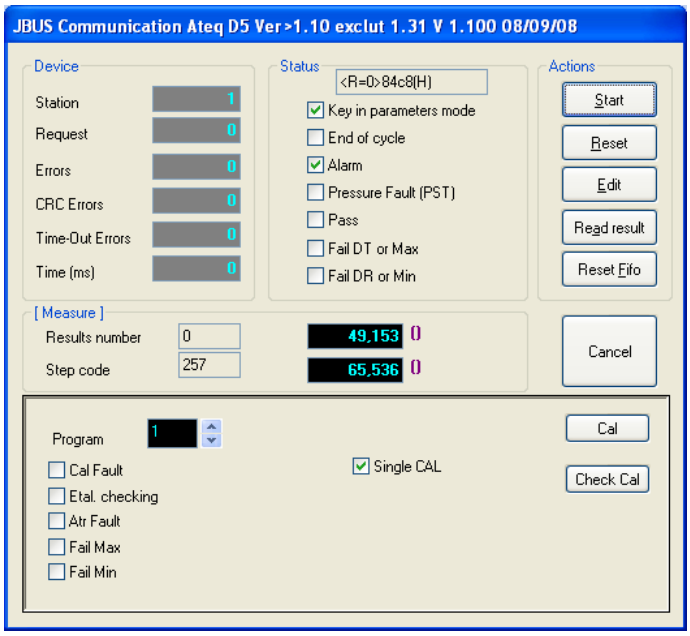
The last window allows knowing the general step of the device, the current program number and carrying out some actions following the device connected.

1.1.1. 5th series instrument type

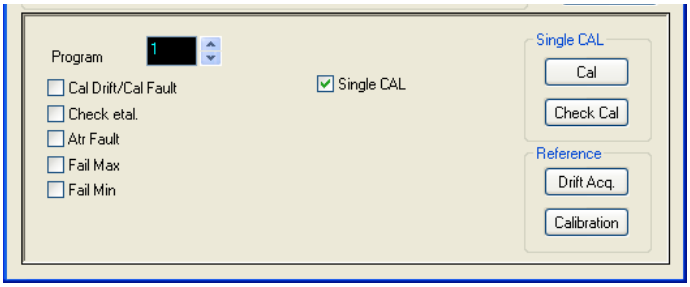
ATEQ F5 device:



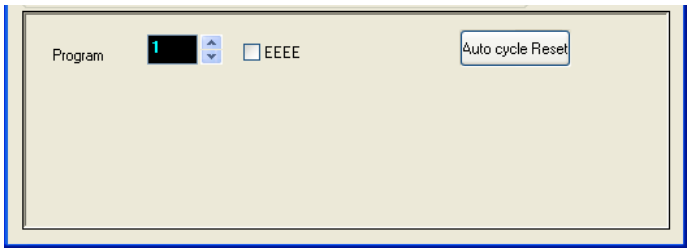
ATEQ D5 device:



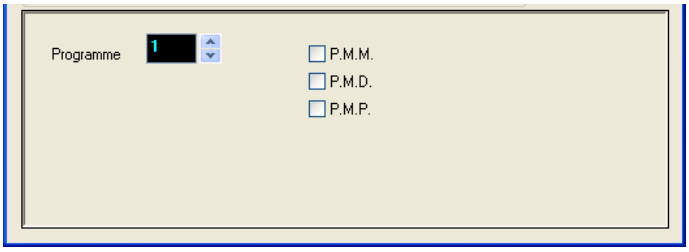
ATEQ D5 high precision (the upper window is the same as the **D5** standard device):



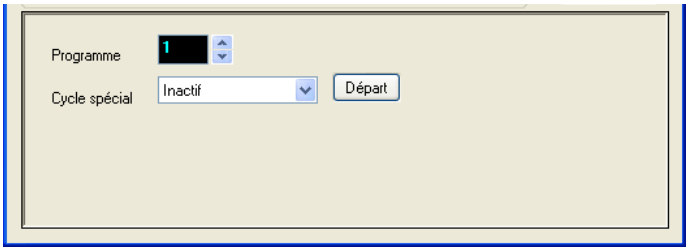
ATEQ G5 high precision (the upper window is the same as the **D5** standard device):



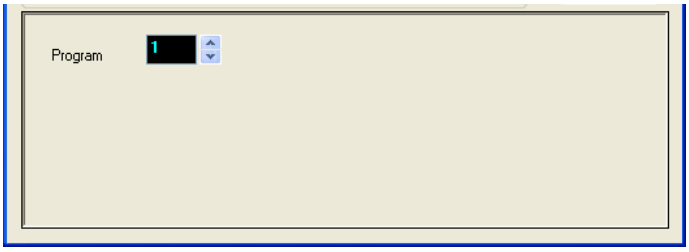
ATEQ ERD5 high precision (the upper window is the same as the **D5** standard device):



ATEQ H5 (the upper window is the same as the **D5** standard device):

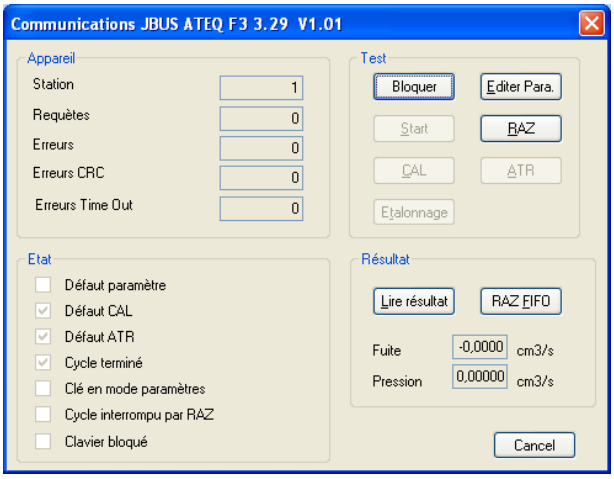


ATEQ F420P high precision (the upper window is the same as the **D5** standard device):

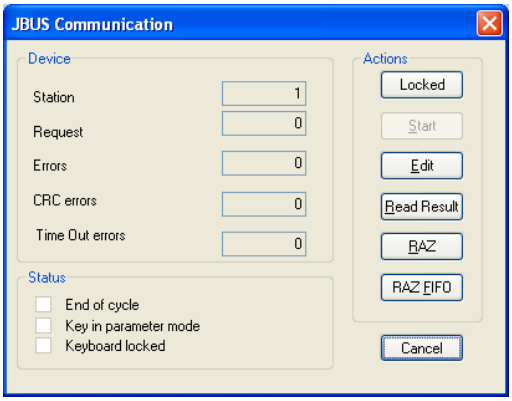


1.1.2. 3rd series instrument type

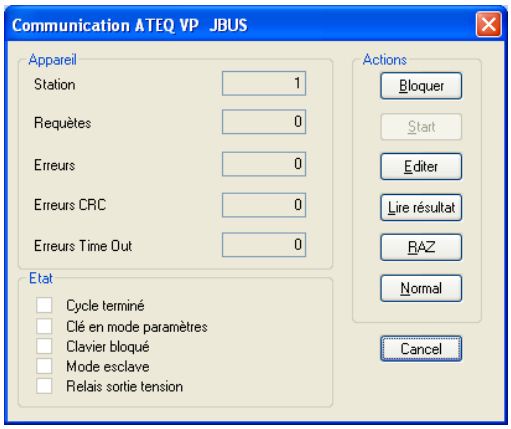
ATEQ F3 device:



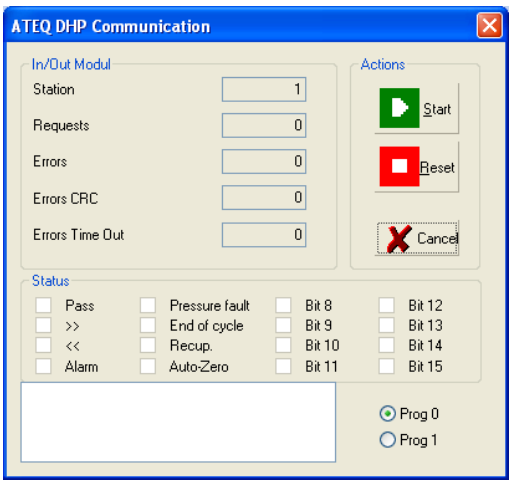
ATEQ F alphanumeric, ATEQ G, ATEQ GP, ATEQ E, or **ATEQ P**.



ATEQ VP (var) high precision (the upper window is the same as the **ATEQ F alphanumeric** device):

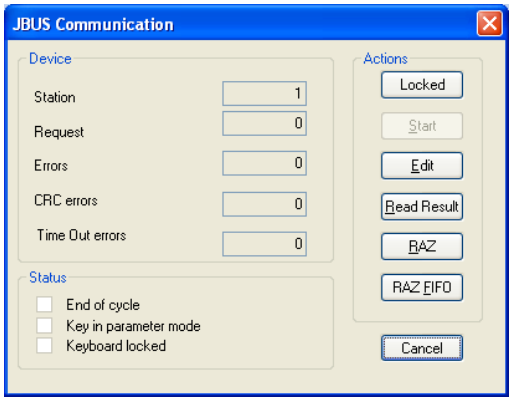


ATEQ DHP device:

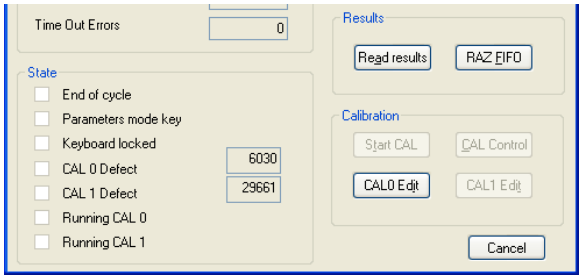


1.1.3. 2P series instrument type

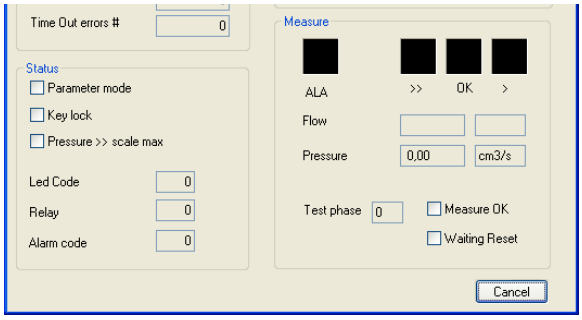
ATEQ F2P device:



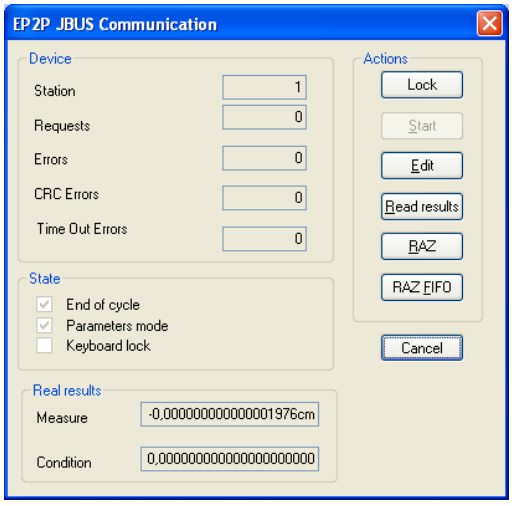
ATEQ D2P device:



ATEQ G2P device:



ATEQ EP2P device:



1.1.4. Other standard instrument type

The communication windows for all the others instrument has the same type and use the same protocol than the devices shown above.

1.2. TESTING THE OPERATION OF AN ATEQ DEVICE

To test an **ATEQ**, you need to activate the maintenance window by double-clicking on the device to be tested, then:

- **Edit** the parameters of the test program :

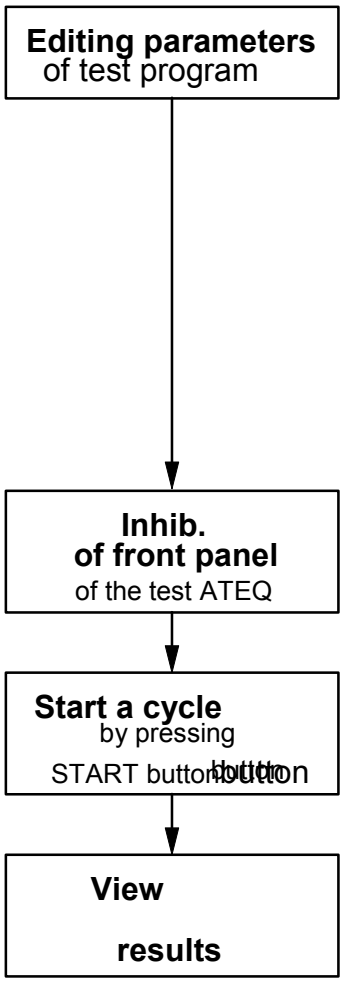
  Each **ATEQ** must be configured according to the parameters specific to their type.

  A window is displayed for editing parameters for each type of device (*these windows are similar to those described in Chapter 4 - § 2 Setting parameters for a device*).

***Note**: make sure that there is no cycle in progress during parameter setting; otherwise they can not be remotely loaded.*

For further details concerning parameter setting, *see the user manual for the device to be tested.*

- Once the parameters have been entered, **inhibit** the front panel of the device, only for the 3rd and 2P series instruments, obligatory before carrying out a start cycle.
- Start a cycle by pressing the START button. This cycle may be interrupted at any time by pressing the RESET button which will re-initialize the **ATEQ.**
- Once the cycle has ended, you can view the results for the last cycle performed by pressing on READ RESULT. This result is placed in the device FIFO and can be deleted, if necessary, by RESET FIFO.

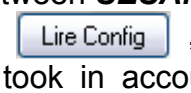


For further details with the device configuring, see the instrument's user manual.

1.3. VIEWING THE CONFIGURATION OF A DEVICE

It is sometimes necessary, for a more thorough maintenance operation, to find out the configuration for a test device.

You can display the details of the configuration of each device by selecting the CONFIGURATION option from the task menu.

We remind you that to have a good functioning between ***SESAME*** and the devices, it's important to read the configuration 

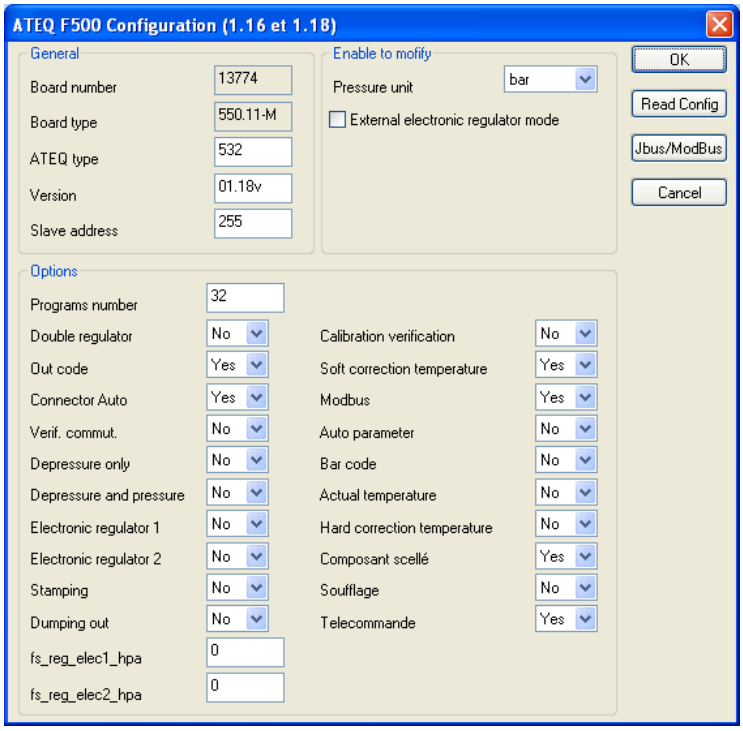
, this is to download the internal devices parameters and took in account by the software.

***Note**: the devices represented below are not inevitably installed in the bench, which depends on the configuration and the functions of the bench.*

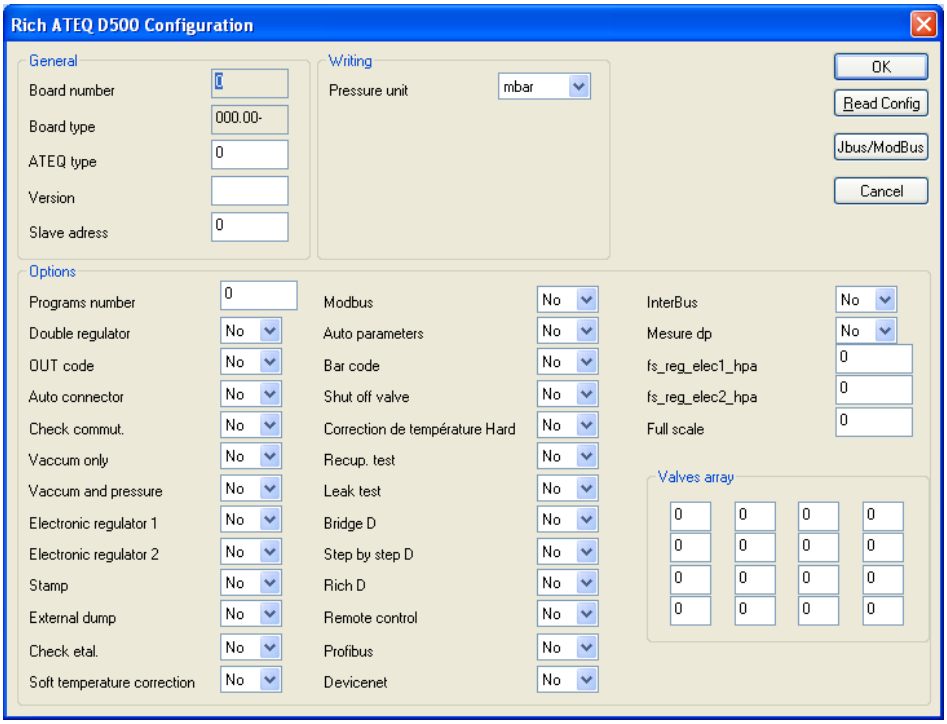
1.3.1. 5th series instrument configuration

You will find below some devices examples configuration.

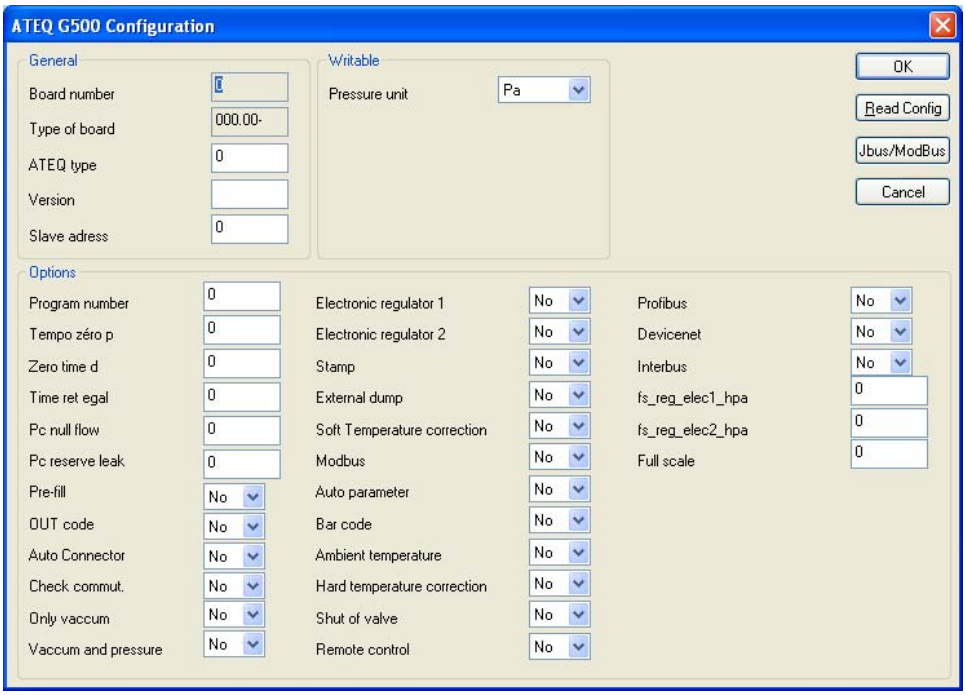
ATEQ F500 configuration:



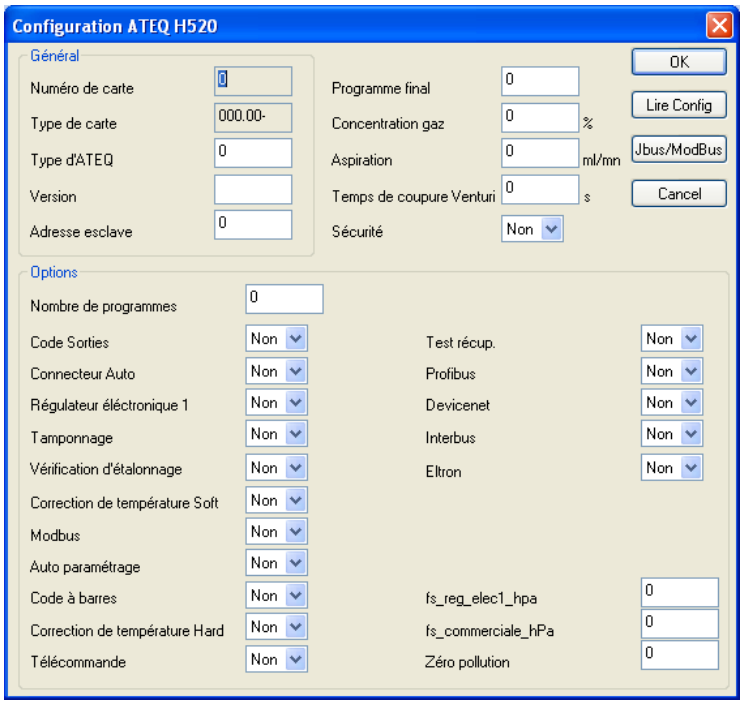
ATEQ D500 configuration:



ATEQ G500 configuration:

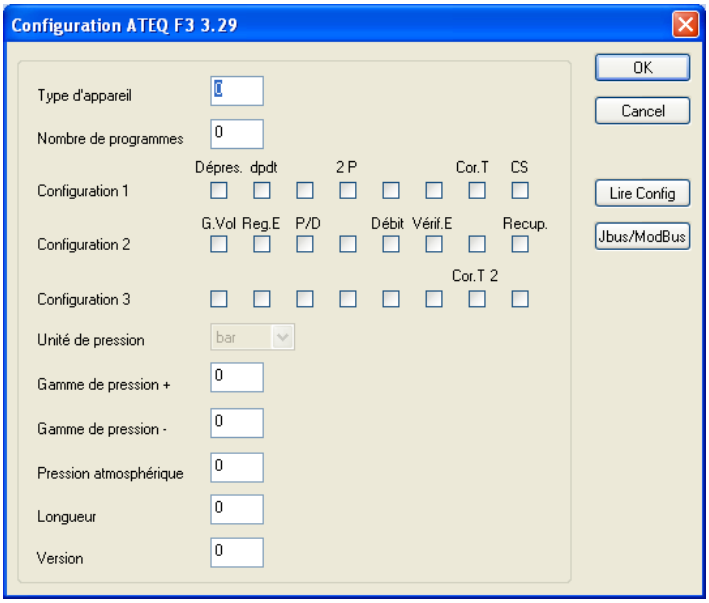


ATEQ H500 configuration:

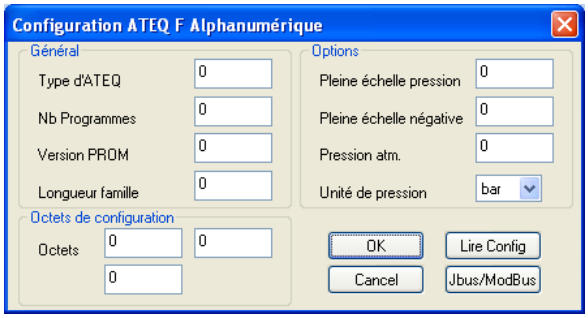


1.3.2. 3rd series instrument configuration

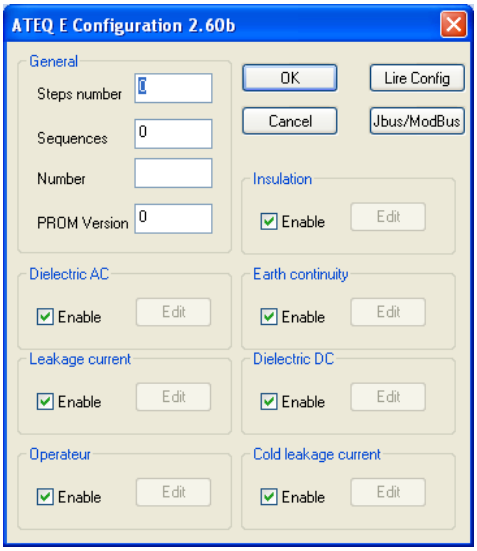
ATEQ F3 configuration:



ATEQ F alphanumeric configuration:

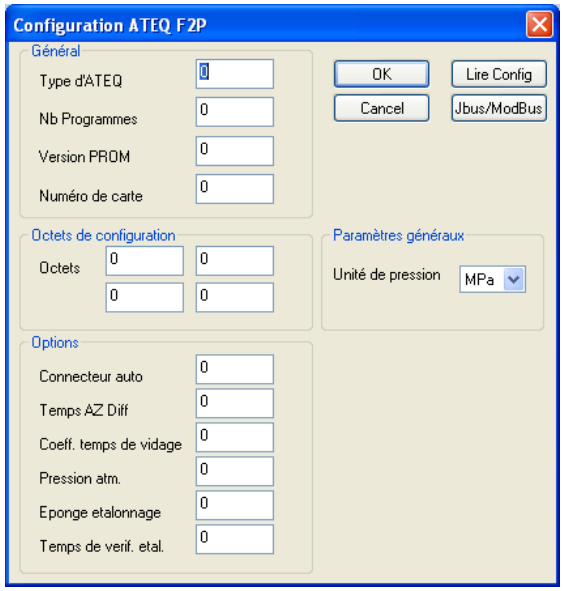


ATEQ E configuration:

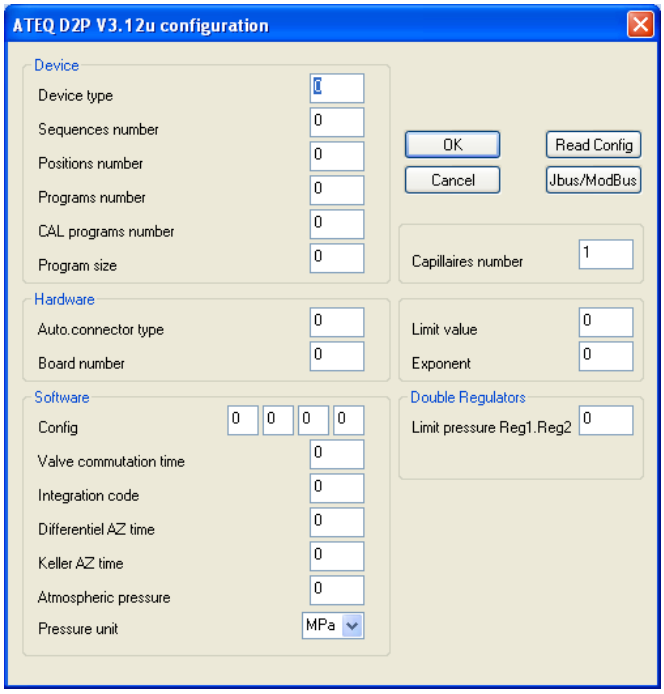


1.3.3. 2P series instrument configuration

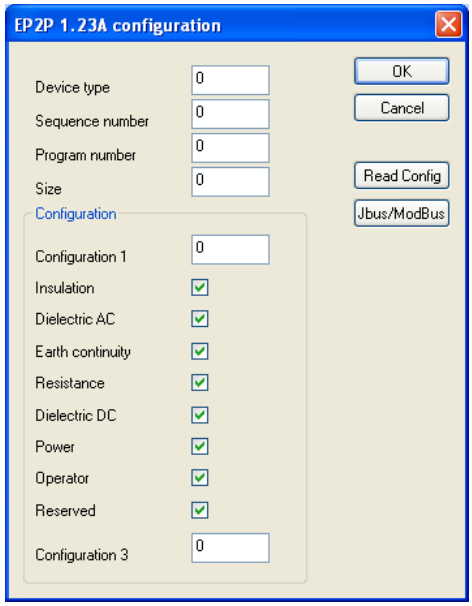
ATEQ F2P configuration:



ATEQ D2P configuration:



ATEQ EP2P configuration:



***Note**: for further information on configuration of the devices, see the relevant user manuals.*

Most of these parameters are entered at the factory by the manufacturer and can not be modified.

It is possible to modify certain parameters but this may cause malfunction of the whole machine. ATEQ therefore demands the greatest care when changing this data, and will not be held responsible for problems caused by incorrect handling or work carried out without prior consent.

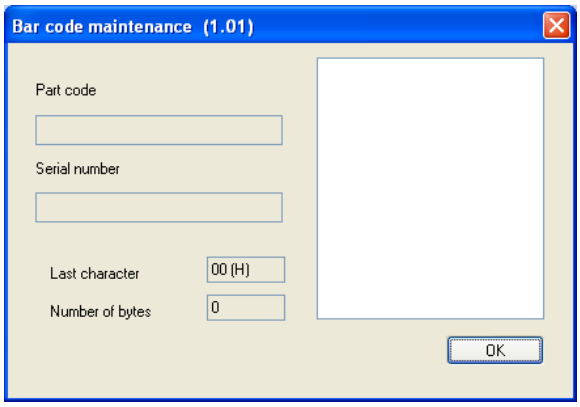
2. MAINTENANCE OF BAR CODE READER

2.1. READING TEST

In order to check that the bar code reader is functioning properly, the software has a tool which enables receipt of the frames sent by the bar code reader.

To test the reader, open the maintenance window and simply read a bar code. Then compare it with the result from the frame received.

If there is a problem, check the configuration of the frames and consult the manual accompanying the bar code reader.

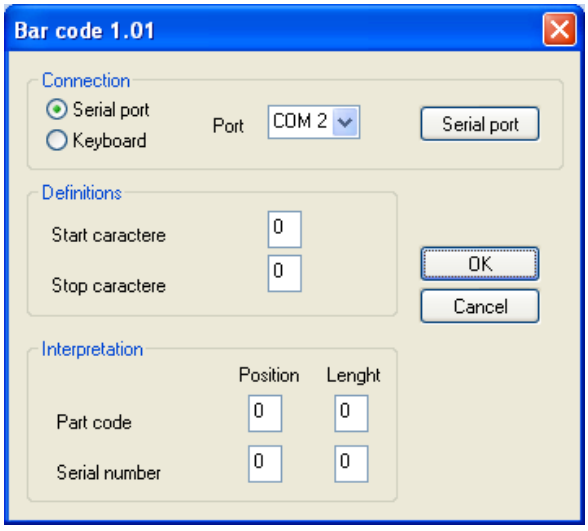


2.2. CONFIGURATION OF FRAMES

It is sometimes necessary, for a more thorough maintenance, to check the configuration of the bar code reader frames.

The details of the configuration of the reader may be displayed by selecting the CONFIGURATION option from the task menu (using the right mouse button).

The following window will appear.



Example: with a customer's bar code of 14 characters: 000192 99 20 0001.

The bar code configuration in the heading decoding of the bar code will be like below:

- Part code: position : 0, size: 6 (the first character position is 0),
- Serial number: position: 6, size: 8.

Total 14 characters.

The reading of the code will be done as follows:

- Part code: 000192, 6 characters from 0 to 5,
- Serial number: 99 20 0001, 8 characters from 6 to 13.

The reader reads the bar codes and transforms them into frames consisting of *x* alphanumeric characters, which are send to the PC.

These frames enable parts to be selected using the coding which is specific to each of them.

We note that certain readers can read bar codes continuously. With these readers their decoder does not distinguish characters which flag up the beginning or end of a message: **SESAME** enables you to differentiate between the frames by setting a start character and an end character.

Note: *start characters and end characters must be given in ASCII code.*

As default, the frame is defined as follows:

- no *start character* is specified, which means that the frame received can be processed as soon as the first character is received,
- and the *end characters* are ASCII codes 10 - LF (*line feed*), or 13 - CR (*carriage return*), which generally end the information sent, which enables specification that the frames will be processed until receipt of CR or LF.

Note: *anything received outside the start and end characters will not be processed.*

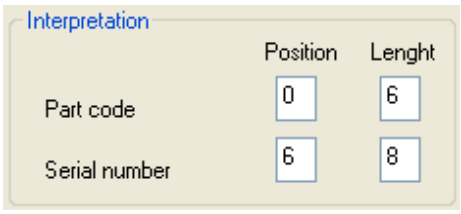
***Examples*: *ex. 1*:** *Supposing the following frame is received:* |A123G␍␊,
Supposing the start character is: *none,*
Suppose the end character is: *13 (carriage return),*
The frame which will be processed will be: |A123G.

***ex. 2*:** *Supposing the following frame is received:* |V2GZD9␍␊,
Supposing the start character is: *71 (=G),*
Supposing the end character is: *57 (=9),*
The frame which will be processed will be: :GZD9.

Concrete example with a customer bar code with 14 characters: 000192 99 20 0001.

The bar code configuration in thee decoding rubric of this code will be as:

- Part code: position: 0, size: 6 (the first character position is 0),
- Serial number: position: 6, size: 8.



Total 14 characters.

The code breaking down will be as follow:

- Part code: 000192, 6 characters from 0 to 5,
- Serial number: 99 20 0001, 8 characters from 6 to 13.

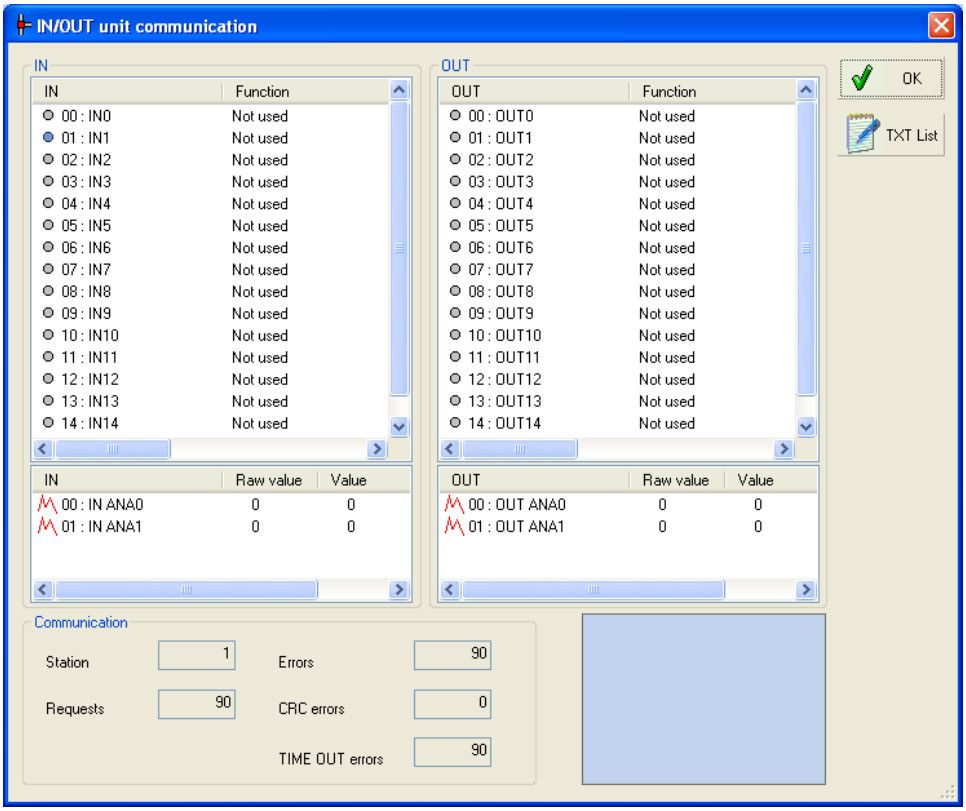
3. MAINTENANCE OF INPUT/OUTPUT MODULE

To check functioning of the input/output module and communications with the PC, the software has a real time diagnostic tool to check the links with the module. The window below is used.

To access this menu, left click on the "+" of Devices (Devices), then click twice on the I/O Module icon.

This enables you to find out:

- the **station** number, or **address**, of the I/O module,
- the number of **requests** made,
- the number of communication **errors** encountered,
- the number of **CRC errors**,
- the number of **non-communications** (*greater than 500 ms*)



In the window above, two boxes list the inputs for the module on the left and the outputs on the right. Each of these is shown by a symbol which represents:

- Small grey "*led*": input or output not used,
- Large grey "*led*": input or output inactive (*0*),
- Large red "*led*": input or output active (*1*).

3.1. TESTING THE FUNCTIONING OF THE I/O MODULE

The **INPUT** part enables you to view permanently the state of the inputs of the module.

You can find out for each of these:

- its **name,**
- it **function**,
- its cable **marker**,
- its **default state** (*normally closed - normally open*),
- if special **monitoring** is necessary: if this function is enabled, any test procedure will stop as long as the default state of this input is not reached.

***Note**: if a test cycle was in progress and the input monitored toggled into the state opposite to the default, the result of the cycle would be declared a FAIL, but would not be archived with the other test results, so you would therefore be able to re-start testing the part (e.g. : ARU, circuit breakers ...).*

The **OUTPUT** part enables you to test the outputs of the module by toggling from one state to another.

To change the state of an output, you need to:

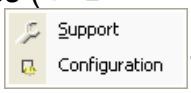
- using the mouse: click with the right button on the required output,
- using the keyboard: press Space after selecting the required output.

For each output you can find out:

- its **name,**
- its **function,**
- its cable **marker**,
- its default **state** (*normally closed - normally open*),
- if it should **flash** when it is active.

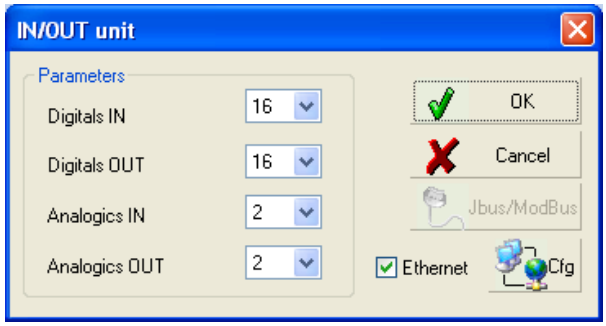
3.2. VIEWING THE CONFIGURATION OF THE INPUT/OUTPUT MODULE

It is sometimes necessary to find out the configuration of the input/output module. Details of this can be displayed by selecting the CONFIGURATION option from the task menu.

To access this menu, left click on the "+" in Devices (Devices), then right click once on the I/O module icon and this display will appear 

.

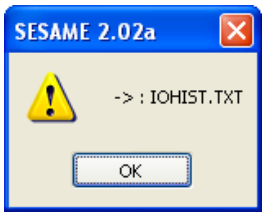
Then choose the configuration menu. The following window will be displayed:



3.3. INPUTS / OUTPUTS TXT FILE CRÉATION

The 

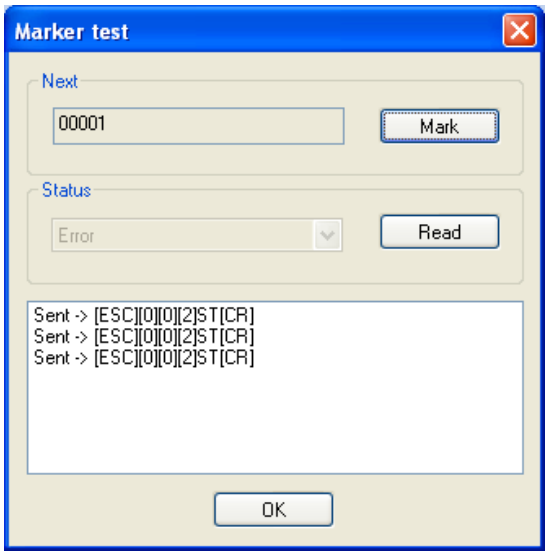
button creates a text file (.TXT) containing the inputs and outputs information, see the below example.




```
-----------------------------------------------------------------
12-10-2011  11:28:59       Project # :
-----------------------------------------------------------------
Nr  Name                        Func                        Chk  Nc
-----------------------------------------------------------------
Inputs
-----------------------------------------------------------------
00: Start HV                    Start cycle                 No  No
01: OK                          Single contact              No  No
02: Reset                       Reset                       No  No
03: Down arrow                  Down                        No  No
04: Up arrow                    Up                          No  No
05: Validation                  Validation                  No  No
06: Free                        Not used                    No  No
07: Acknowleg Emerg             Single contact              No  No
08: Emergency stop              Emergency stope             No  No
09: Voltage presence            Single contact              No  No
10: Differential error          Single contact              No  No
11: Free                        Not used                    No  No
12: Free                        Not used                    No  No
13: Free                        Not used                    No  No
14: Free                        Not used                    No  No
15: IN15                        Not used                    No  No
-----------------------------------------------------------------
Outputs
-----------------------------------------------------------------
00: Power KM2                   Single contact              No  No
01: OUT1                        Non utilisé                 No  No
02: Pass part light             Pass part                   No  No
03: Fail part light             Faail part                  No  No
04: HV light                    Start cycle waiting         No  No
05: Piezzo Auto Zero            Single contact              No  No
06: E Autorization              Single contact              No  No
07: OUT7                        Not used                    No  No
08: OUT8                        Not used                    No  No
09: OUT9                        Not used                    No  No
10: OUT10                       Not used                    No  No
11: OUT11                       Not used                    No  No
12: OUT12                       Not used                    No  No
13: OUT13                       Not used                    No  No
14: OUT14                       Not used                    No  No
15: OUT15                       Not used                    No  No
-----------------------------------------------------------------
Analog inputs
-----------------------------------------------------------------
00: Leak                            10
01: Free                            1
-----------------------------------------------------------------
Analog outputs
-----------------------------------------------------------------
00: Leak                            20
01: Free                             1
```

4. STAMP SERVICE

To check the stamp functioning, the software gets a tool allowing to check the frames sent to the stamp.



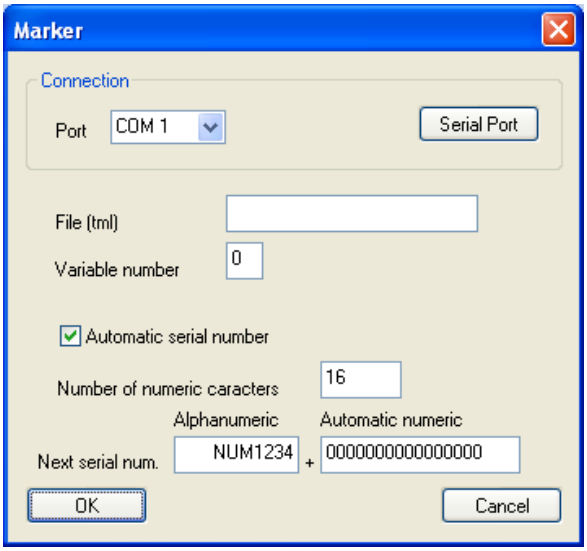
To test the stamp, open the service window, the characters string scheduled to be sent is displayed in the "**Next**" window.

Press the Mark button to stamp and compare it with the result printed by the stamp.

The "**Read**" button allows reading the configuration and the stamp status.

In case of problem, see the stamp user manual.

4.1. STAMP CONFIGURATION



The "**Connection**" window allows configuring the communication port which is plugged the stamp.

Lower part of the window:

File (tml) Stamp file name which defining the stamp.

Variable number 0 Variable number containing the serial number.

Automatic serial number Serial number automatic increase if validate.

Number of numeric caracters 16 Serial number size.

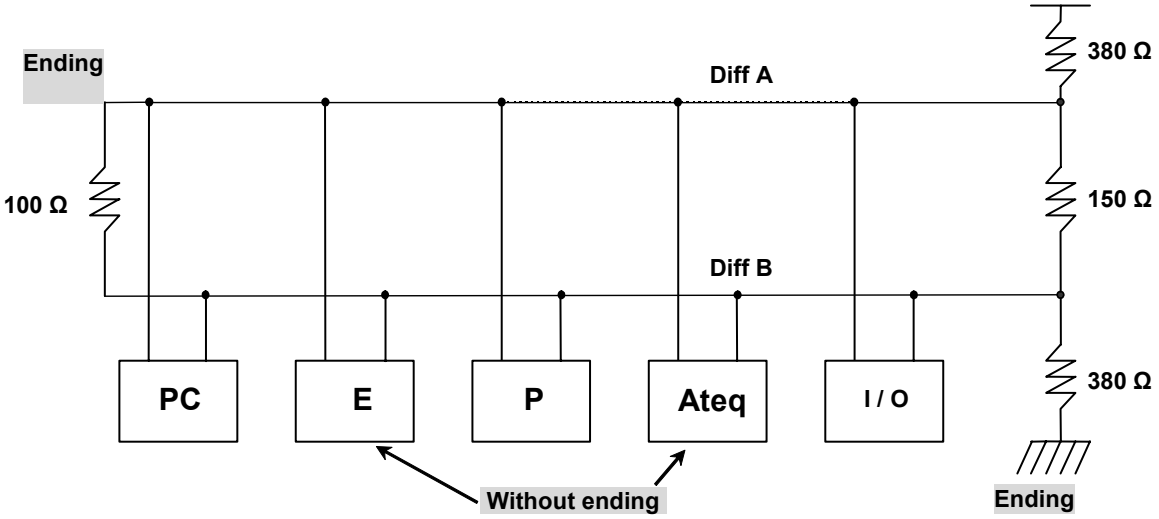
Alphanumeric
Next serial num. NUM1234 Serial number fixed part.

Automatic numeric
+ 0000000000000000 Serial number increased part (if the function "Automatic serial number" is validate) else fixed part suite.

Chapter 8
COMMUNICATION AND THE MODBUS NETWORK

1. DIAGRAM OF THE NETWORK

1.1. MODBUS NETWORK SCHEME

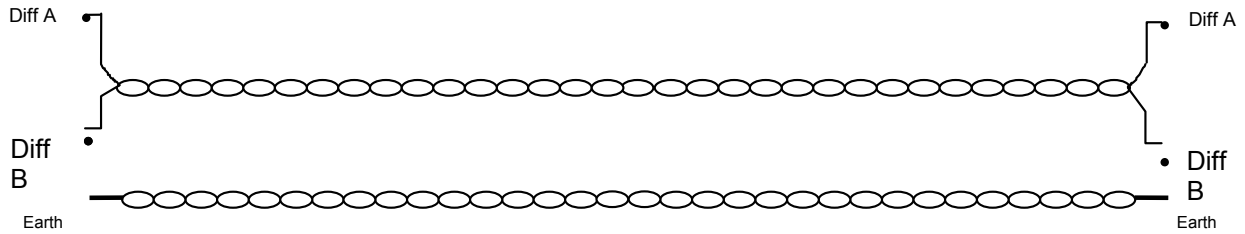


1.2. EXPLANATION

The network enables you to connect a PC (master) to the **ATEQ** devices and an input/output module. This latter is called Wago and consists of an internal strap (switch) which enables you to activate or deactivate the terminal.

The dotted line on the above plan shows the place in the network where it is possible to connect other **ATEQ** devices. Through the intermediary of the **MODBUS** network the **ATEQ** functions are accessible by a PC or a PLC.

The network is produced by means of a cabled of 2 twisted, screened pairs. One pair is used for the signals and the other for the electrical earth.



2. CONFIGURATION OF THE RS 485 CARD ON THE PC

2.1. OBJECT

This paragraph concerns configuring the COM3 communication ports and the COM4 port if necessary on the PCL-743/745B card to enable you to link your PC to different **ATEQ** devices. To do this you need to configure the card for the hardware then again for the software. The two levels of configuration, hardware and software, must have identical parameters for it to function properly.

2.2. CONFIGURATION OF THE CARD

To configure the communication ports you need to give an address and an IRQ (interruption level) to each port.

2.2.1. Plan of the PVL-743/745B card

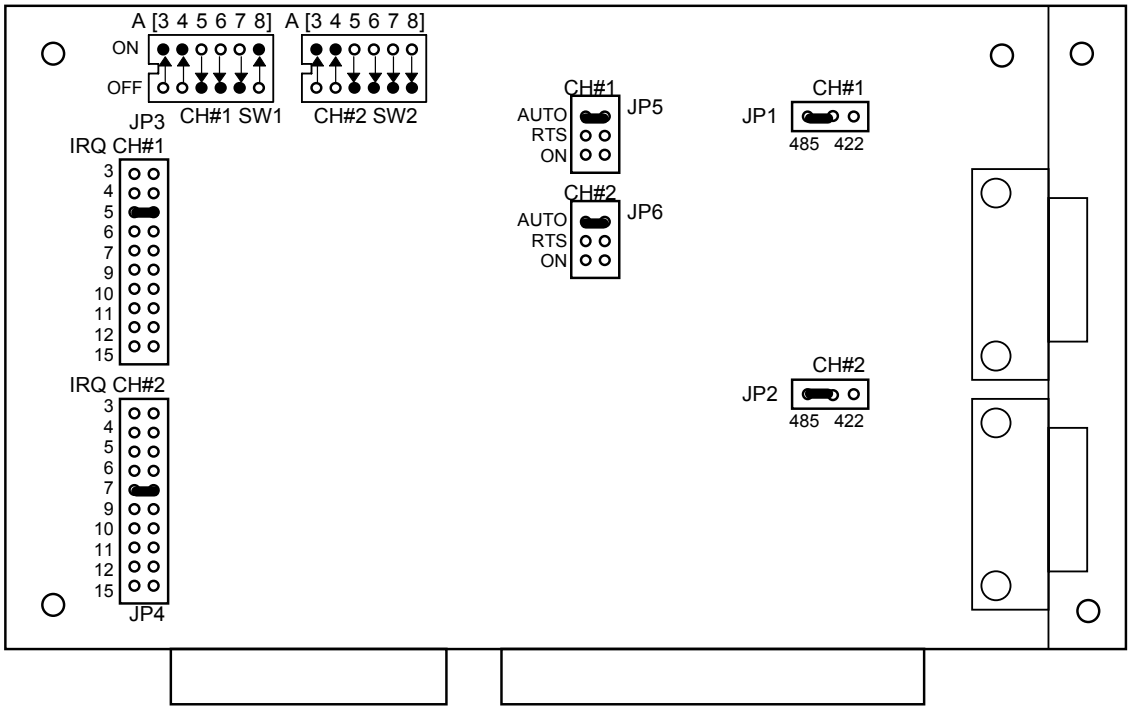


Figure 1: PVL 743/745B card drawing

2.2.2. Allocation of address to communication ports

Figure 1 shows the two switches used for allocation of basic addresses for the two ports COM 3 and COM 4 (top left), switch 1 (CH#1) for port 3 (COM 3) and switch 2 (CH#2) for port 4 (COM 4). You can choose the basic addresses for the two ports but these must be the same as those entered for the software (see *configuration of software*). The addresses are expressed in hexadecimal form.

In figure 1 the switches are configured according to the address chosen by **ATEQ**. The table shows the configuration for different addresses.

Example: COM 3 (sw1:ch#1), 2E0-2E7, COM 4 (sw2:ch#2), 3E0-3E7.

Address	A3	A4	A5	A6	A7	A8
200-207	●	●	●	●	●	●
208-20F	○	●	●	●	●	●
- -						
2E8-2EF	○	●	○	○	○	●
2E0-2E7	●	●	○	○	○	●
*2F8-2EF	○	○	○	○	○	●
- -						
3E8-3EF	○	●	○	○	○	○
3E0-3E7 -	●	●	○	○	○	○
3F8-3FF	○	○	○	○	○	○

●: ON.

○: OFF.

* : standard.

***Note:** make sure that these addresses have not already been used in the system.*

2.3. CONFIGURATION OF THE IRQ OF A COMMUNICATION PORT

The switches JP3 and JP4 enables configuration of each port. The configurable IRQ levels are: 3, 4, 5, 7, 9, 10, 11, 12 and 15. JP3 configures port 3 and JP4 port 4. **ATEQ** has chosen for these cards an IRQ of 5 for port 3, and an IRQ of 7 for port 4, as shown in figure 1.

- JP3: Port COM3, CH#1, IRQ5.
- JP4: Port COM4, CH#2, IRQ7.

***Note:** make sure that these levels of interruption have not already been used in the system.*

2.4. CONFIGURATION OF THE SOFTWARE IN WINDOWS 95/98

2.4.1. Addition of a new communication port

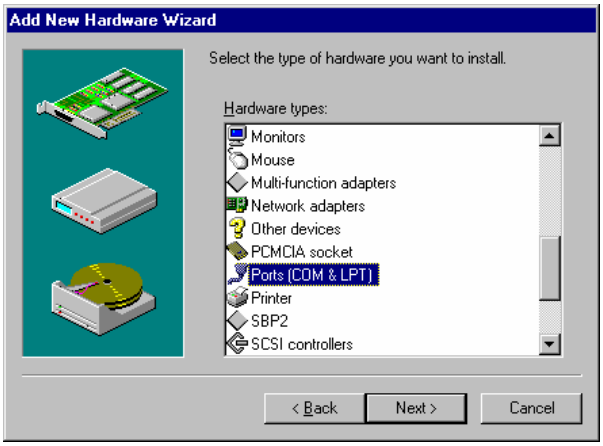
The computer needs to recognise the communication ports on the PCL-743/745B card.

To do this you need to:

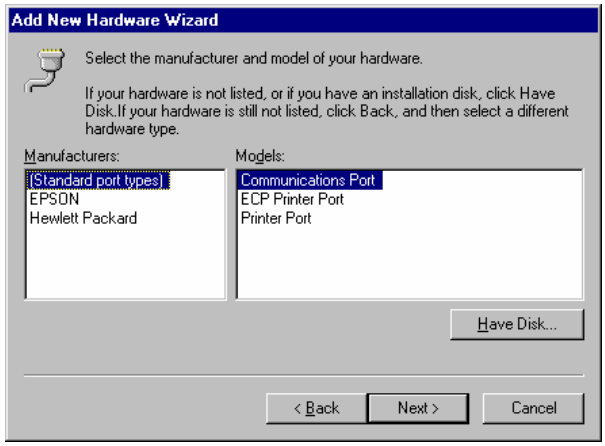
1) Click on the START button, then on SETTINGS, **Control panel.**

2) Then click on the **Add new hardware** icon.

3) Follow the instructions on the screen and when you are asked to, click on the *No, I want to choose the hardware from a list* check box.



4) In the list given, click on the **Port (COM and LPT)** icon



5) On the next screen, click on Next and the installation will be completed :

The computer will then ask you to re-start. Do this after installing the second communication in the way described above.

2.4.2. Modification of the address and IRQ of ports

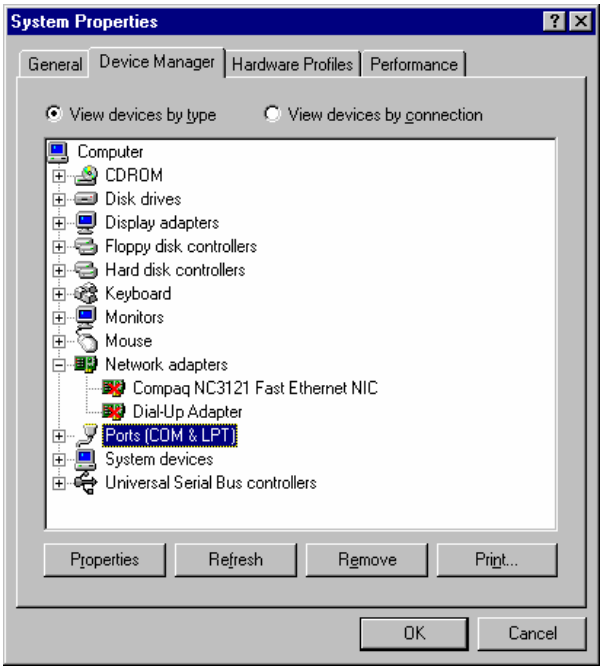
After installing the two communication ports, you now have to allocate identical addresses and IRQ's to thoses parameters on the card. To do this you need to:

1) Click on START, then on SETTINGS, Control panel.

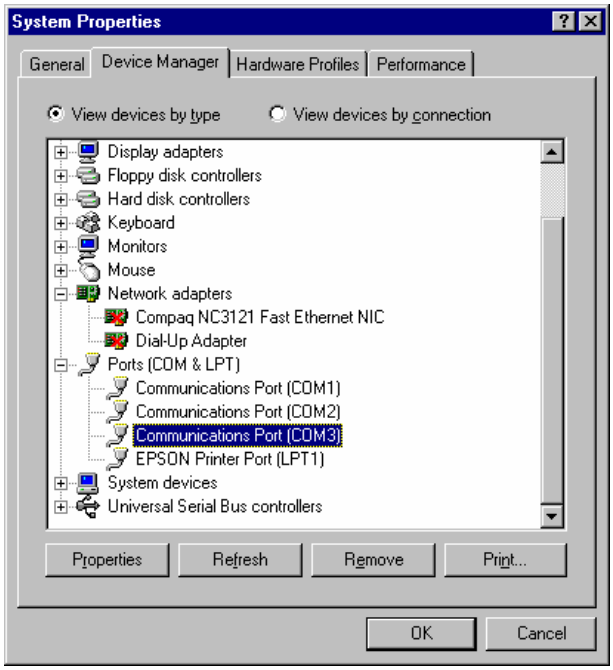
2) Then click on the System icon.

3) Select the Device manager tab from the menu.

4) Then click on the Ports (COM and LPT) icon.



5) Select the port for which you want to select the address and IRQ. This will be ports COM3 and COM4 for the PCL-743/745B card.



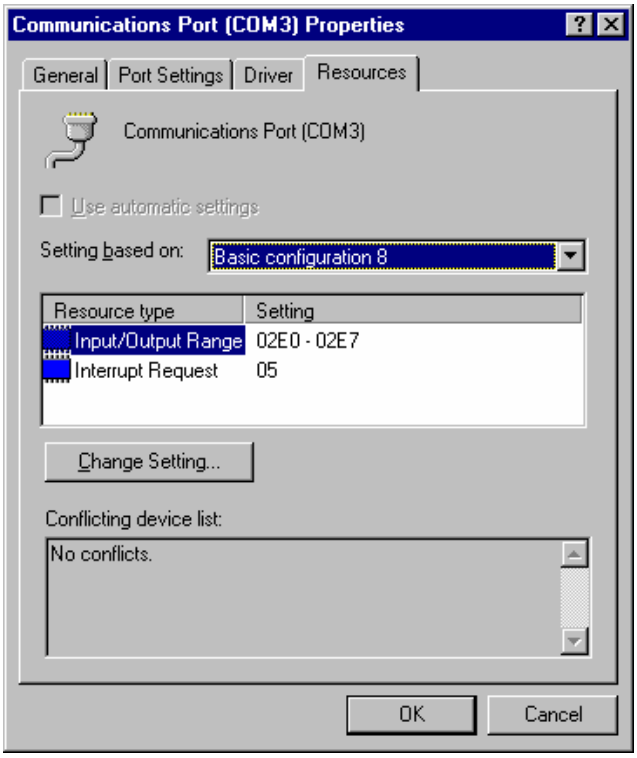
6) Then click on Properties.

7) Go to Input/output range, choose base 8 configuration from the pull-down list called Parameters based on: and click on the Modify parameters icon.

Note*: If the base 8 configuration does not work, try another configuration.*

8) Enter the address value corresponding to the port previously selected and click on OK.

9) Then go to "Interrupt request" (IRQ), click on the Modify parameters button, enter the corresponding value, click on OK.



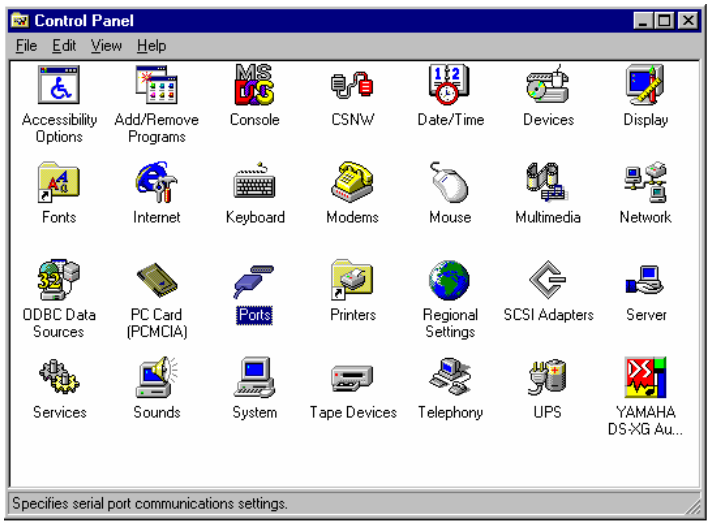
After modifying the address and the IRQ for one communication port, do the same for the other following the instructions given above.

The parameters set for the address and the IRQ of the communication ports when configuring the hardware and those for the software must be absolutely identical, otherwise the card will not function properly.

2.5. CONFIGURATION OF THE SOFTWARE IN WINDOWS NT

2.5.1. Addition and configuration of new communication ports

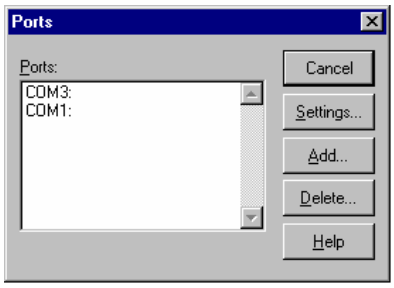
The computer needs to recognise the communication ports on the PCL-743/745B card. To do this you need to:



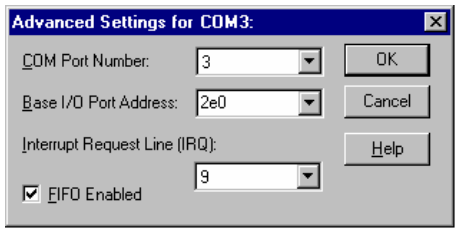
1) Click on the START button, then on SETTINGS, Control panel.

2) Then click on the Port icon.

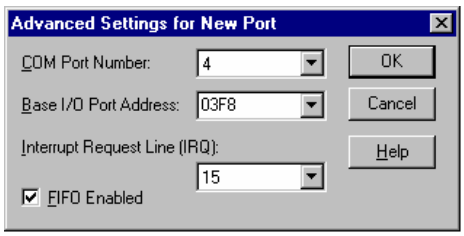
3) Click on the Add button.



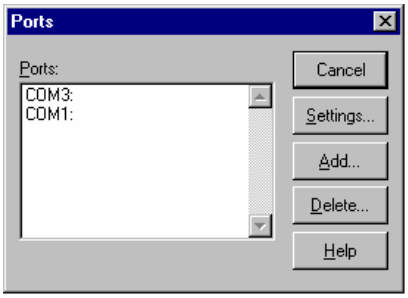
4) Then choose from the drop-down lists given the address and the IRQ of the selected communication port. These must be identical to those set when configuring the hardware.



5) The computer will then ask you to re-start. Do this after installing the second communication in the way described above.



6) The installation of the new communications ports is completed when COM 3 and COM 4 appear on the next screen.



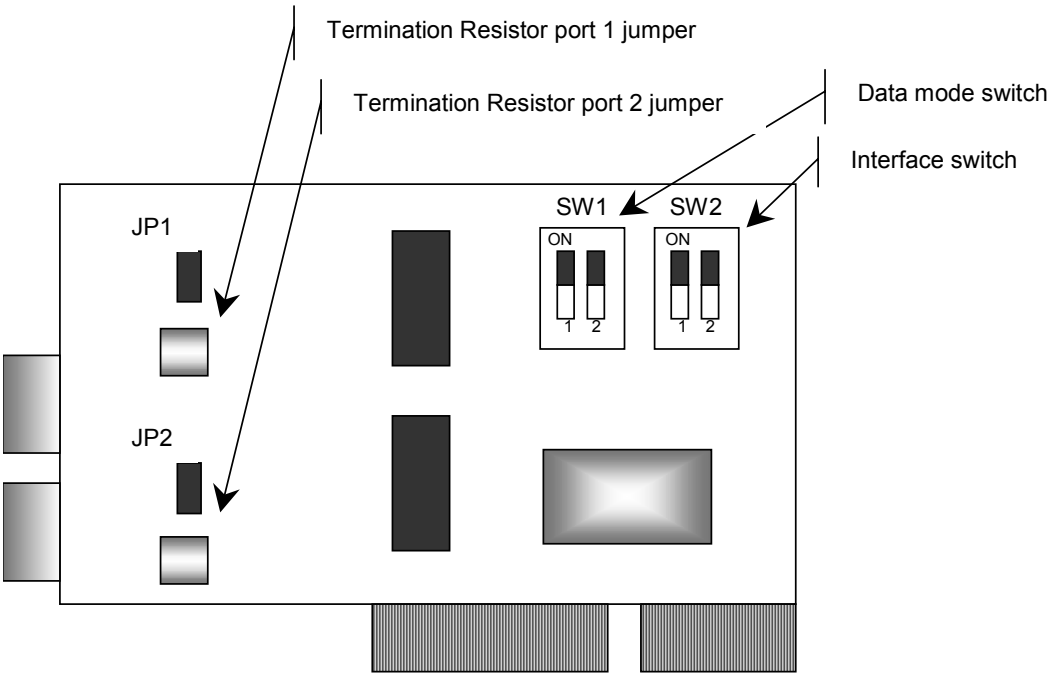
The parameters set for the address and IRQ of the communications ports when configuring the hardware and those for the software must be absolutely identical, otherwise faults may occur.

3. CONFIGURATION OF THE CP-132-IS MOXA BOARD

This paragraph concerns configuring the RS485 communication ports on the CP-132-IS card to enable you to link your PC to different devices. To do this you need to configure the card for the hardware then again for the software. The two levels of configuration, hardware and software, must have identical parameters for it to function properly.

3.1. HARDWARE INSTALLATION

To configure the communication ports you need to give an address and an IRQ (interruption level) to each port. I/O address and IRQ number is automatically assigned by the PCI BIOS. So the board must be plugged first before installing the software driver.



Configuration of the board:

Switches :

- SW1 : P1 = ON
- SW1 : P2 = ON
- SW2 : P1 = ON
- SW2 : P2 = ON

Termination Resistor :

- JP1 = OPEN
- JP2 = OPEN

⚠ Make sure your system is switched off before you start installing any board. If you don't, you may risk damaging your system and the board.

For further information see "industio CP-132 Series" user manual

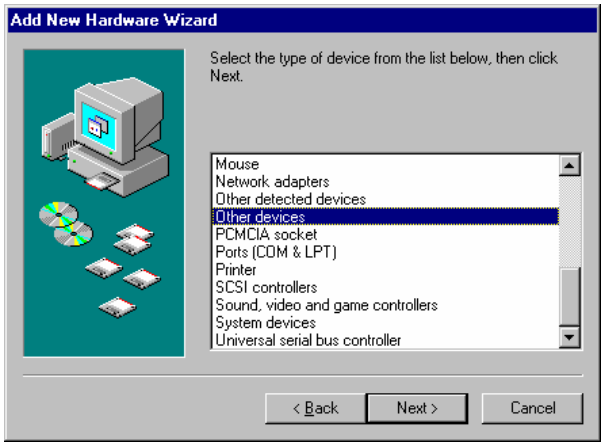
3.2. SOFTWARE INSTALLATION WINDOWS 98 DRIVERS

Windows 98 will automatically detect the presence of the newly plugged board and prompt you to install the software driver for the first time, because windows 98 is supporting plug and play capability. In this case, you need the driver diskette or CD ROM.

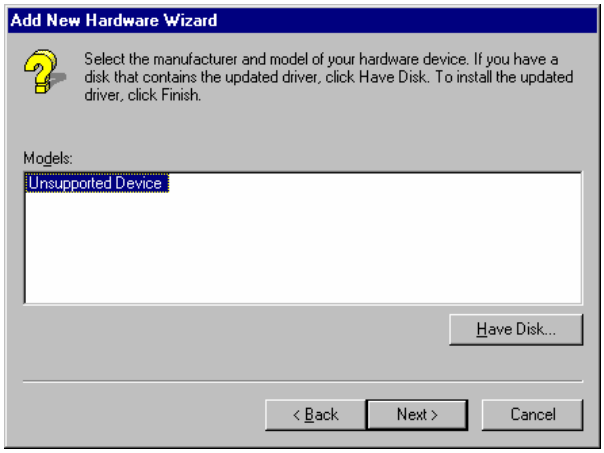
Upon detecting the CP-132 BOARD, windows 98 will automatically display the following screen:

1) Click next button.

2) Select "display a list…" Click next.



3) Select "Other devices" Click "next" button.



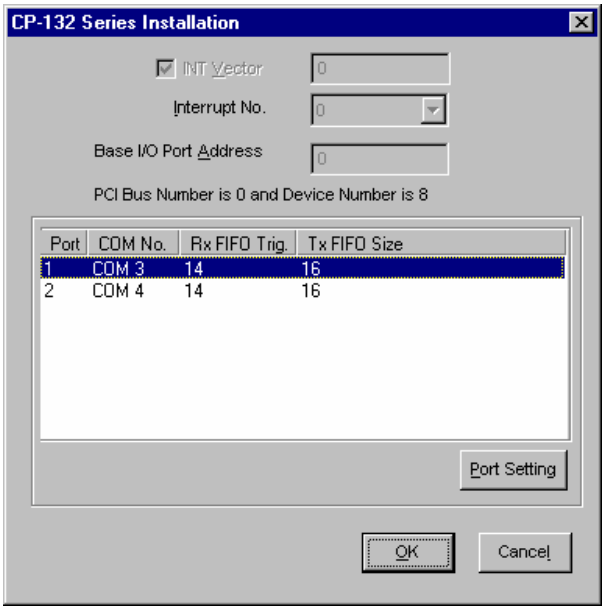
4) Click "Have disk" button and insert the CDROM in the computer.

5) Choose in the pick list F :\drivers\win95….. the system will start reading the files from the CD ROM.

6) Click "next" button.

7) Click "next" button.

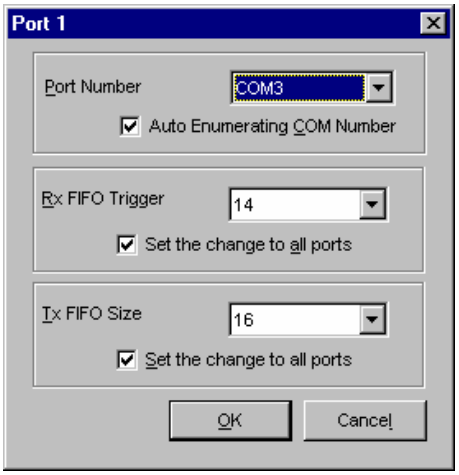
When the driver is installed, the following dialog box is automatically displayed and the port mapping is automatically done by the system.



If another board is installed, the system will prompt you to do port configuration directly discussed in this section.

8) Click on a specific port,

9) Click on "port setting" button to open the port dialog box.



10) Select a COM number for the specific Port number pick list,

11) Check auto enumerating COM number check-box then the subsequent ports are mapped to continuous COM number. For example, if COM 3 is assigned to port 1, then COM 4 will be automatically assigned to port 2. This operation is optional, if you want to assign COM number to ports manually.

Note*: for our application* ***Rx FIFO trigger*** *level is* ***14*** *bytes and* ***Tx FIFO*** *size is* ***16*** *bytes.*

12) If you want to assign others COM numbers (for example with a second communication board) the system don't recognize them, you may assign manually COM 5, 6 etc…to port 3, 4 etc…

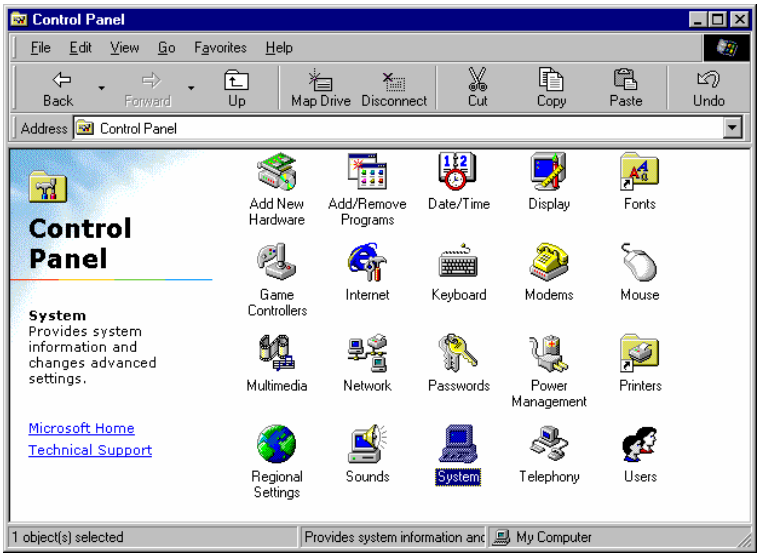
13) After the port configuration, click "finish" button. The COM board can be used without restarting the system.

For further information see "industio CP-132 Series" user's manual

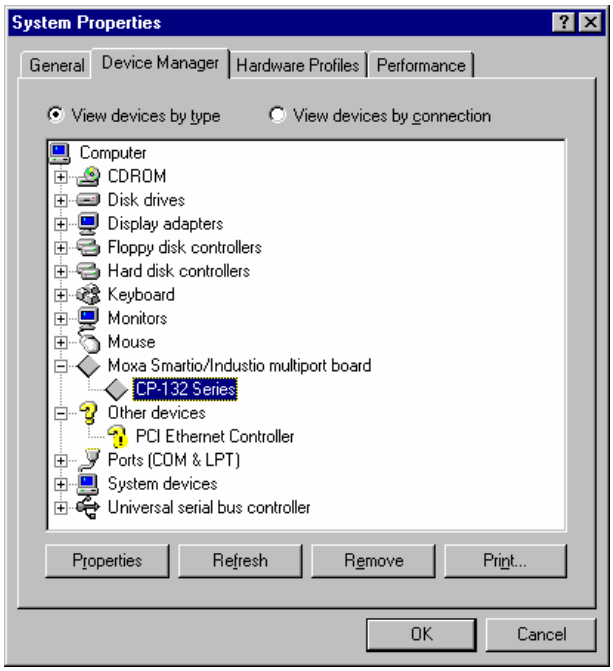
3.3. CONFIGURE BOARD AND PORTS

If desire to re-configure the COM number fir the ports of installed boards and drivers under windows 98, you have to follow procedures listed below.

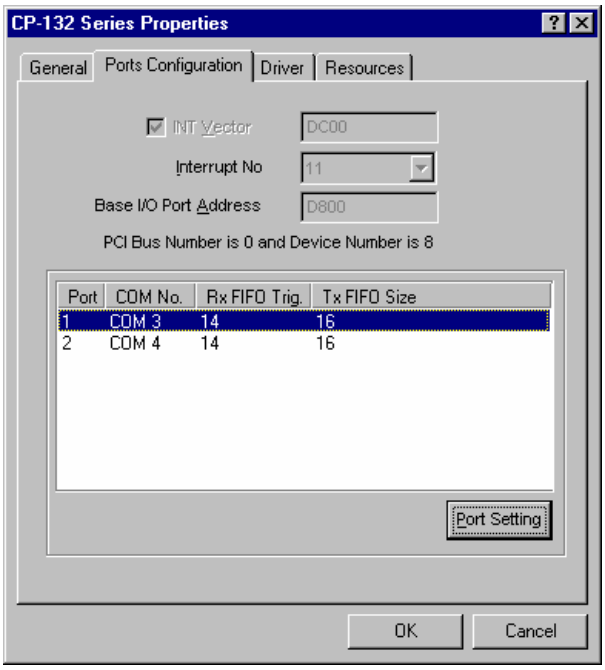
For this is a PCI board, once the board is added or unplugged, the confirmation will be automatically added or removed by the system. Thus, it saves your effort to do add or remove action.



1) Open "control panel", click on "system" icon.

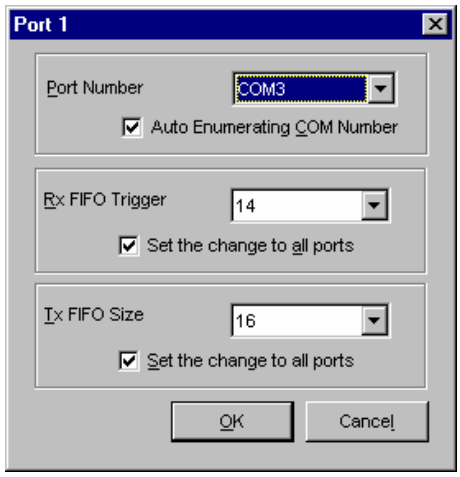


2) Click on "**device manager**" tab and then select "**Moxa Smartio/industio multiport board**", lick on desired CP-132 series board entry, and click "properties" button.



3) Select "**port configuration**" tab.

4) Click on the specific port and click "**Port setting**" button to re-assign the desired COM number



5) Check "**Auto enumerating COM number**" check box to assign continuous COM number for subsequent ports. (only you want to assign COM numbers port manually).

6) Re-assign the Rx FIFO trigger by selecting a number from the pick list. Check "**Set the change to all ports**" check-box if desire to apply this setting to all ports.

7) Re-assign the Tx FIFO size by selecting a number from the pick list. Check "**Set the change to all ports**" check-box if desire to apply this setting to all ports.

For our application **Rx FIFO trigger** level is **14** bytes, and **Tx FIFO** size is **16** bytes.

8) Click "**OK**" button in port X dialog box.

9) Click "**OK**" button in CP-132 series properties dialog box.

10) Click "**OK**" button in device manager box.

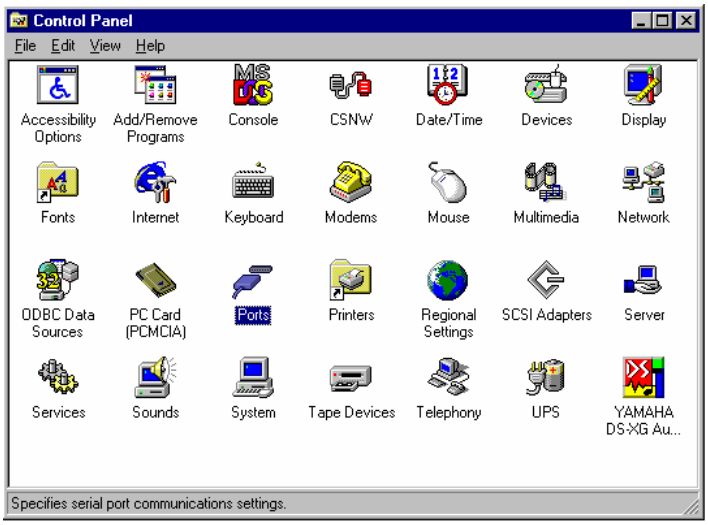
11) Restart the system to activate the latest configuration.

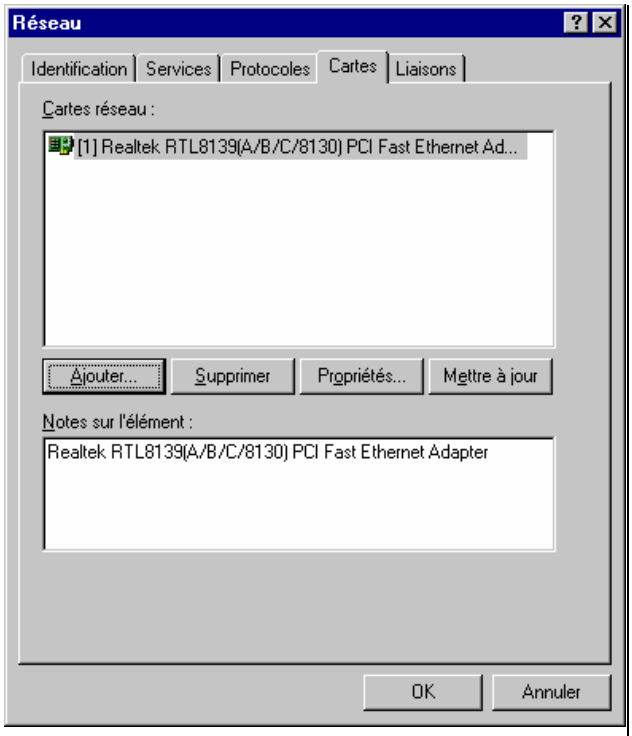
3.4. DRIVERS INSTALLATION UNDER WINDOWS NT

Windows NT doesn't recognize automatically for the components installation. You may install it manually.

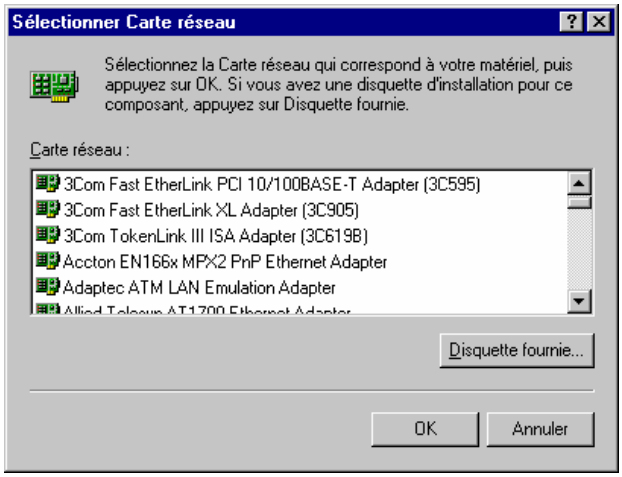
1) Open the "**Control panel**" window.

2) Select the icon "**Network**" then select the "**Boards**" tab.



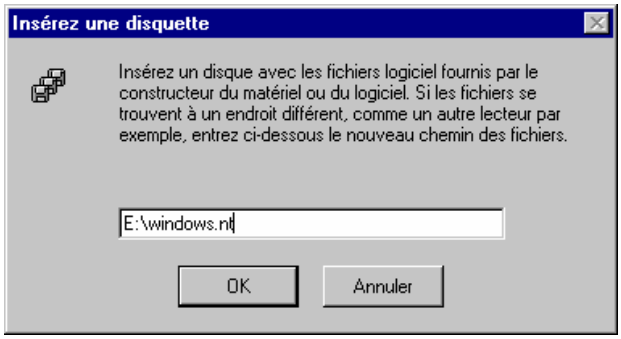


3) The Moxa board is not yet installed, click on the "**Add**" button to search the drivers.



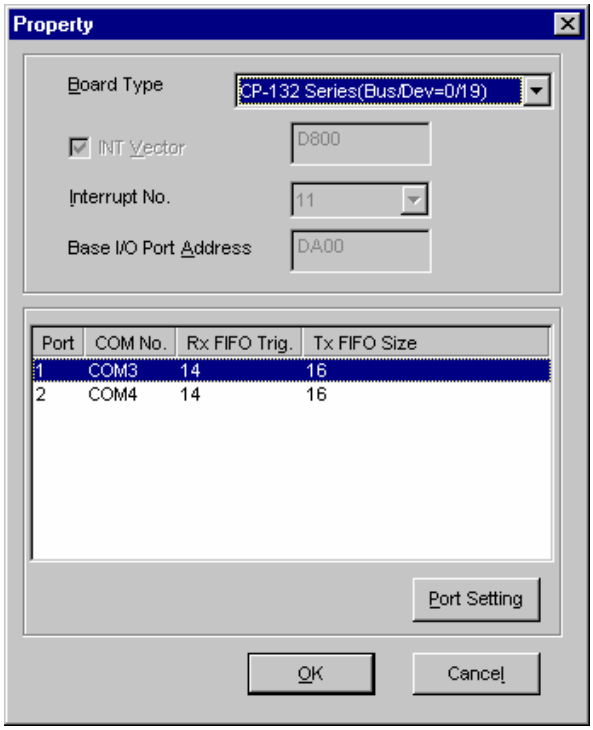
4) To download the drivers of the MOXA board, click on the "**Provided Disk**" button.

5) Insert in the reader the CD ROM provided with the board.



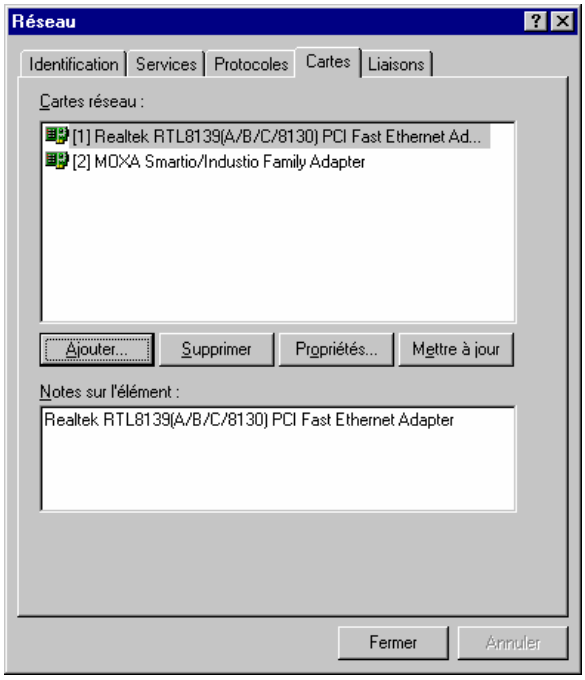
6) Type the path "**E :\windows.nt**" then clic on the "**OK**" button, the drivers will be downloaded.

7) Then select the "**MOXA Smartio/industio**" line and click on the "**OK**" button. The following window appears:



8) Click on the "**Add**" button to add the board drivers.

9) Check the communication ports as the parameters, the window must be like this one. Validate by clicking on the "**OK**" button.



10) This window appears to confirm the board driver's installation.

11) The restart your computer.

4. CONFIGURATION OF COMMUNICATION PARAMETERS

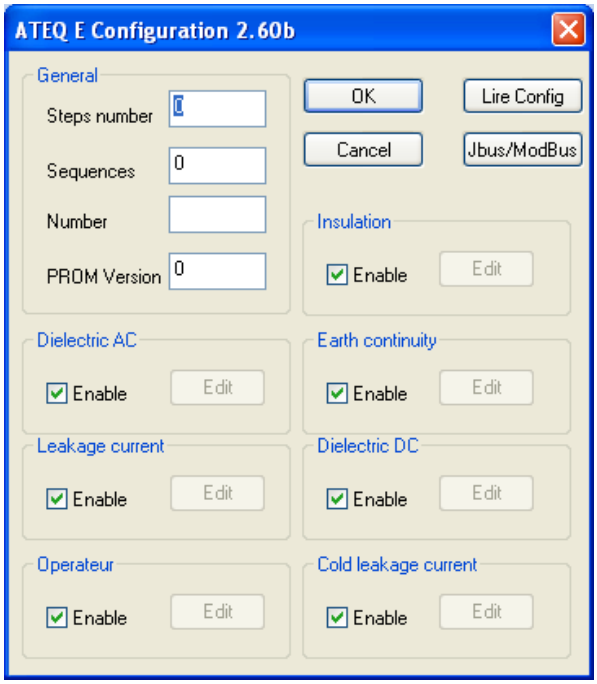
Note*: this operation can be done only with a "Superviseur" type user account.*

4.1. COMMUNICATION PARAMETERS FOR THE SESAME PROGRAM

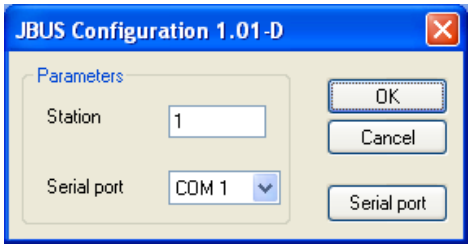
In order for the various devices connected to the MODBUS to communicate with each other you need to configure the communication parameters for the ATEQ devices and the input/output module. First start the SESAME program then:

1) Click on the Devices icon on the main page of the program to bring up the list of the various devices present on the network.

2) Select an ATEQ device or the input/output module from the list and click on the right mouse button, choose the configuration tab, and this will give you the next page:

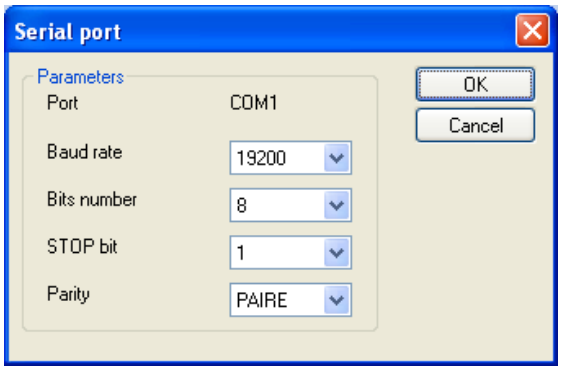


3) Click on the **Jbus/Modbus** button to get the next page:



4) In the **Address** text box, enter the station number of your ATEQ device or of the input/output module (ATEQ have chosen station number 10 for the input/output module)

5) Then choose **Serial port** from the pull-down list of communication ports. This is the one previously installed (see Paragraph 2). This is generally communications port COM 3. Then click on the **Serial port** button to get the next page:



6) Check that all the parameters, transmission speed, parity, stop bit, number of bits, correspond to those in your device and that the same applies for all the devices in the network.

After configuring the communication parameters for the device, do the same for all the others. Make sure that the transmission speed is identical for each device.

4.2. CONFIGURATION OF BAR CODES

Communication parameters configured for the bar code reader can be viewed so that they can be checked. Proceed as follows:

1) Click on the **Devices** icon on the main program page to bring up the list of devices on the network.

2) Select the bar code reader from the list and click on the right mouse button, choose the **configuration** tab and you will get the next page :

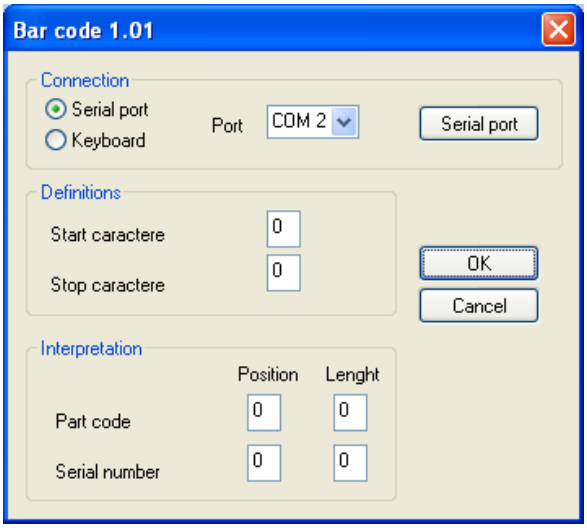


Figure 2: Configuration of the bar code reader

If you click on the "**Serial port**" button you will get this screen switch gives the communication parameters of the bar code reader.

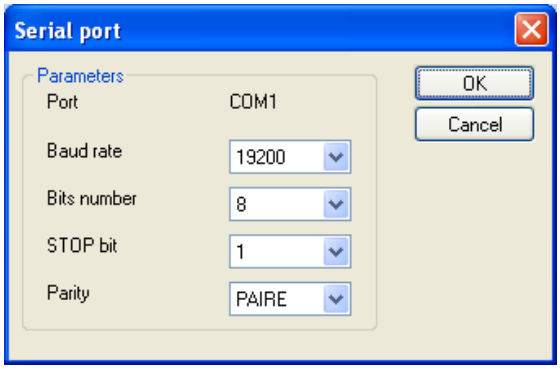


Figure 3: configuration of serial port of the bar code reader

The default configuration is: 9600, 7, E,1.

***Note**: the configuration which should be set for an "LC TOUCH" bar code reader is:*

- *9600, 7, E, 1,*
- *Frame end (CR, LF).*

For information about bar code reader operation and frames see chapter 7 paragraph 2 "Maintenance of bar code reader".

4.3. PARAMETERS FOR COMMUNICATION WITH 2P SERIES ATEQ DEVICES

4.3.1. JBUS on the mother board

3 straps located on the motherboard of the ATEQ device enable activation of communication of the ATEQ with the MODBUS network using RS 485. This is done by positioning the straps on RS 485.

The ATEQ device is located in the middle of the MODBUS network. The terminals are therefore not active and consequently the terminal resistances must be removed as well as the adjoining diodes.

The diagram below shows the 3 straps to be positioned and the resistances and diodes to be removed.

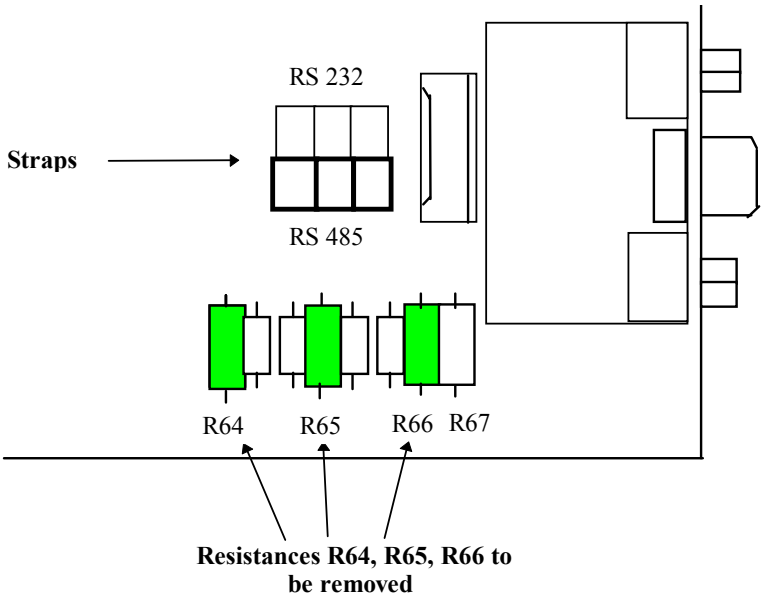


Figure 4: Plan of part of the motherboard

4.3.2. JBUS with daughter board

To configure the ATEQ devices in the MODBUS network with a daughter board you need:

- 1 RS 485 adapter card (replaces the 1488 and 1489),
- 1 RS 485 daughter board,
- 1 12V supply cable.

The adapter card connected to the daughter board enables ATEQ devices to be connected to the MODBUS with RS 485.

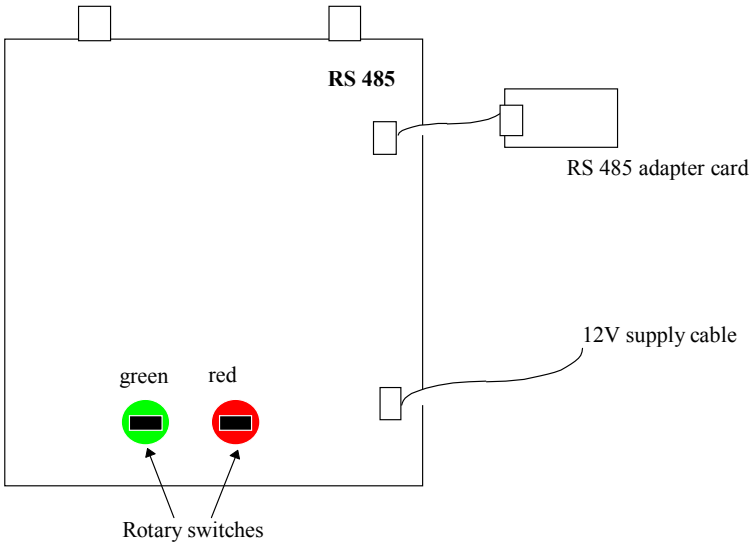


Figure 5: Diagram of daughter board

The two rotary switches configure the communication parameters of the ATEQ device.

- The green rotary switch configures the transmission speed. Position 0 corresponds to: 19200 bauds, 8 bits, even, 1 stop bit.
- The red rotary switch configures the station number. This may vary from 0 to 0fH.

The green rotary switch should be positioned on 0 and the red rotary switch at the position corresponding to the station number of your ATEQ device.

4.3.3. Configuration of the software

The communication parameters of an ATEQ device also need to be configured on the front panel. Each time one of the buttons is pressed a word appears on the digital readout. You need to:

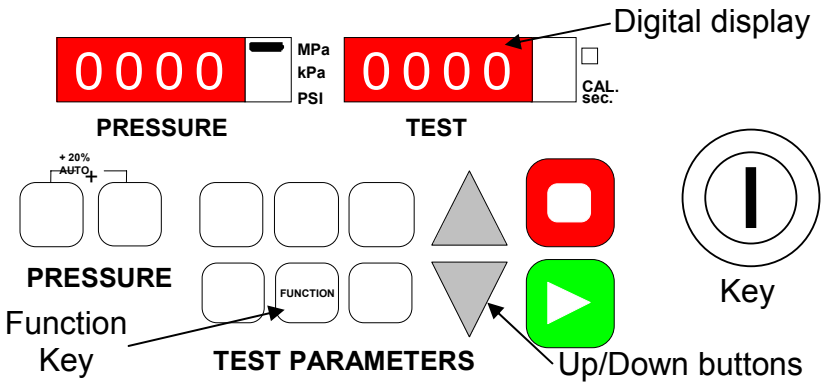


Figure 6: Plan of front panel of an ATEQ device

1) Move the switch to **Parameters.**

2) Press the **Function** key FUNCTION until the word **COM** appears on the right hand readout.

3) Press the **up** key △ until the word **MODBUS** appears**.**

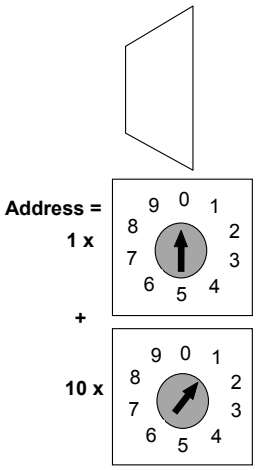
Then check the functions: speed (19200 bauds), coding (8 bits), parity (even), and number of stop bits (1 stop bit). Check these functions using the **Function** key FUNCTION and the **Up/Down** keys. △▽.

For further information refer to the manuals for the ATEQ devices.

4.4. COMMUNICATION PARAMETERS FOR THE WAGO INPUT/OUTPUT MODULE

4.4.1. Address of the input/output module

We have already assigned the station number for the input/output module in the SESAME program; you now need to do this on the module itself. Two decimal rotary switches on the left hand side of the cabinet are used to select the address for the input/output module. They look like this:



The switch at the bottom configures the digit for the tens in the address; the one at the top configures the digit for the units.

ATEQ use the addressed shown here (station 10) for the modules. The address is only read when the device is switched on.

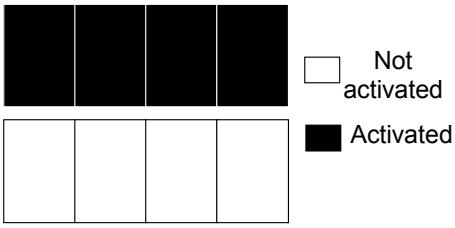
4.4.2. Terminal and cabling for the WAGO input/output module

The terminals for the inputs/outputs module used for the ATEQ MODBUS network are configured on two wires. You need to move the switch one notch the right to enable this configuration.

The terminals are now on. You need to move the switch 4 notches upwards to activate the terminals.

- **Cabling :**

- **Activation of terminals :**



4.4.3. Parameters for configuration of the wago input/output module

The two DIP's **FR** and **P** enable configuration of the Wago input/output module. The configuration is done directly onto the coupler card. A specific parameter corresponds to each switch of one of the DIP's.

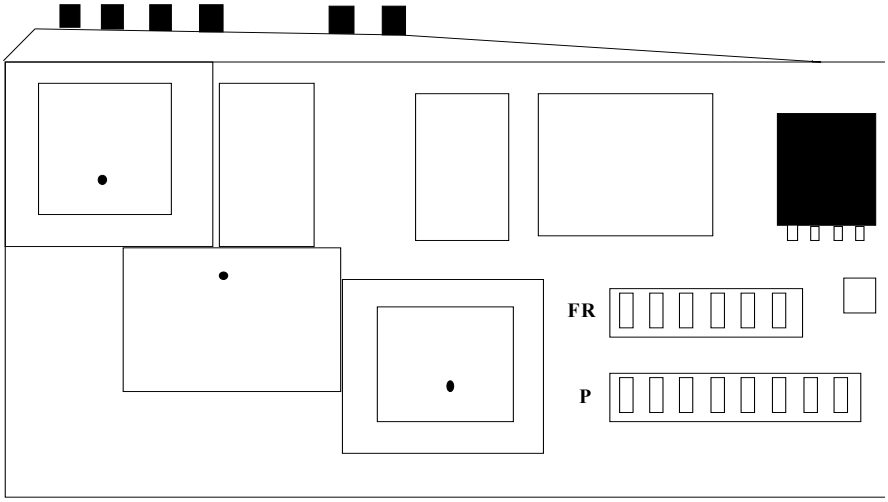
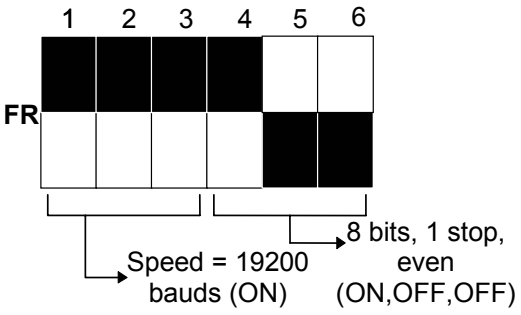


Figure 7: Diagram of coupler card

- **Configuration of the FR DIP (communication parameters):**

The transmission speed is selected on switches 1, 2 and 3 of the DIP consisting of 6 switches (FR) as described above. The transmission speed of the input/output modules used by ATEQ is 19200 bauds. The data format is selected on switches 4, 5 and 6 of the DIP consisting of 6 switches (FR).



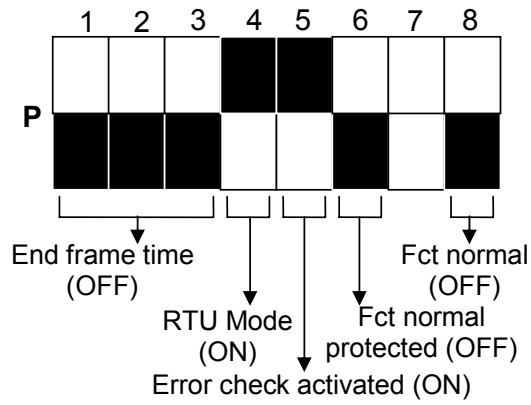
Configuration of the DIP P (operating mode):

The default end frame time is 3 characters which correspond to 3 positions off on the first three switches.

The frame is coded in RTU mode, so the flows are higher.

Switch 5 corresponds to activation of the end frame test.

Switch 6 enables locking or unlocking of the access to a certain number of diagnostic functions. Default access condition is locked.



Switch 8 is never used except for updating the software. The default is therefore OFF.

4.5. COMMUNICATION PROBLEMS

4.5.1. With the ATEQ devices

If communication problems occur with ATEQ devices, you need to:

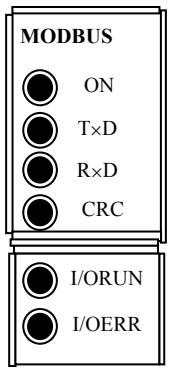
⇒ Check the connection of the devices with the MODBUS network.

⇒ Check the communication parameters and the station number previously set.

Note*: The communication parameters must be configured at each* ***Reset*** *of parameters.*

4.5.2. With the input/output module

If the I/O ERR LED is lit continuously or if it flashes, a communication problem has been detected.



The two LED's at the bottom are called I/O LED. They show the state of the modules connected to the coupler. The green LED (I/O RUN) is lit when the modules are correctly connected and operation is normal.

The red LED indicates a fault. It indicates the type of fault and its location on the input/output module. The fault is indicated by the frequency of flashing of this LED.

If an error is detected, the diode flashes rapidly, and then flashes slowly from 1 to 4 times to indicate the type of fault. After a pause the location of the fault is indicated, the location being indicated by the number of pulses.

4.5.2. 1) LED I/O ERR is continuously lit:

In this case you need to check the supply voltage which is certain to be above 24V. Then restore this voltage to below 24V. If the problem persists, you need to change the supply module.

4.5.2. 2) LED I/O ERR flashes:

The type of error is indicated in the following way:

- If the number of pulses is 3, it is a control error.
- If the number of pulses is 4, the internal bus of the input/output modules has cut out. The location of the fault is indicated by the number of pulses in the next phase of flashing.

Example: bus cut out on 3rd module:

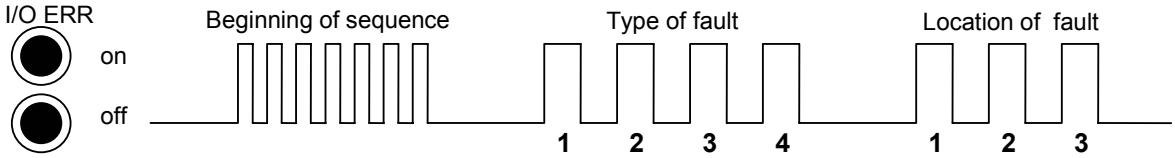


Figure 8: flashing of I/O ERR LED

The flashing does not stop when the error is eliminated. You will need to re-initialize the coupler by switching it off then on again.

⚠ Assembly and dismantling operations must be performed with the power off. Malfunction or breakdown may result from working on the device when the power on.

Appendix 1
KEYBOARD SHORTCUTS FOR SESAME

SESAME has a certain number of keyboard shortcuts (*similar to those in Windows Explorer*), which are given in the table below.

Some of these shortcuts have no equivalent in the menus.

KEY or COMBINATION	***EFFECT***
* (*on the numeric keypad*)	Expands all the branches of the directory tree connected to the icon selected.
Page Up	Moves up one level in the file structure.
Page Down	Moves down one level in the file structure.
↑ and ↓	Moves highlighting between icons in the directory tree.
→	Moves within the folder branch selected. Expands the branch if it is closed down.
←	Moves up the structure of the selected folder. If that branch of the folder is expanded it is then closed.
Ctrl + ↑ and Ctrl + ↓	Scrolls through the content of the directory tree.
↵	After selection of an icon in the directory tree, loads the default application (*the first in the task menu*).
+ (*on the numeric keypad*)	Expands the branch of the folder selected.
- (*on the numeric keypad*)	Closes the branch of the folder selected.
Alt + F4	Closes the application and enables you to exit **SESAME.**
Ctrl + +	Automatically adjusts column sizes.
Tab	Gives access to the next options.

Shift + Tab	Gives access to the previous options.
Ctrl + Tab	Gives access to the next tabs.
Ctrl + Shift + Tab	Gives access to the previous tabs.
Alt	Activates pull-down menus (*choose one of the menus using the* ← *and* → *keys, and when the required menu is displayed select the required command using the* ↑ *and* ↓ *keys, then confirm with* ↵).

Appendix 2
CREATING A DIRECTORY

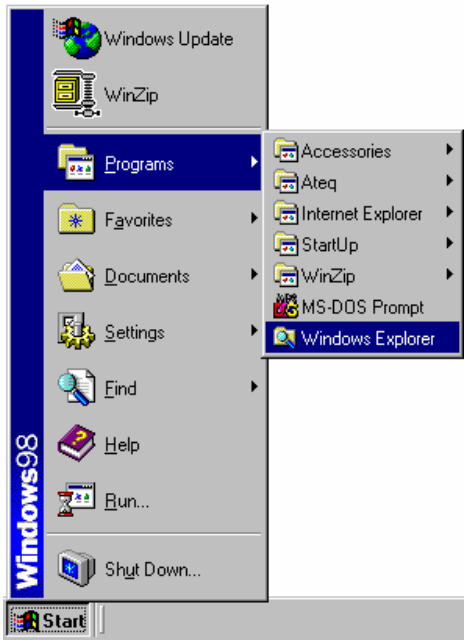
Reminder:

The results for the measurements performed by the instruments during the test may be archived in a directory on the hard disk or on floppy disk(s).

They will be saved as text files (*.TXT extensions*), in CSV format: **these files are not used by SESAME**, but can be read using any text editor and spreadsheets using the comma separation variable function.

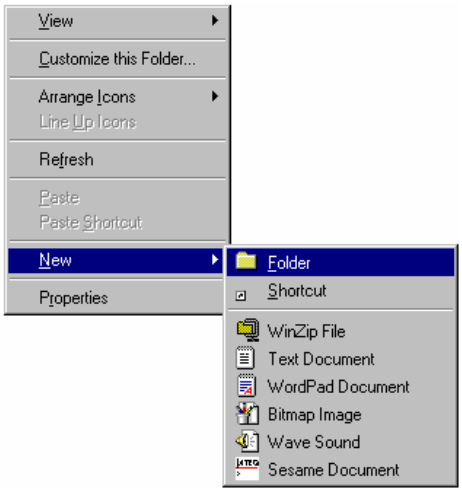
When SESAME is installed a subdirectory C:\.....\results\ is created and it is in this directory that the files of the results of the measurements will be archived. However if you do not wish to save it is possible to delete this.

If this subdirectory does not exist for any reason you can easily create one:



⇒ Go into "Windows Explorer",

⇒ Use the path: C:\Program files\ateq\,



⇒ If a subdirectory \results does not exist you will need to create it:

- In the \ateq\ subdirectory in the right hand window, click with the right mouse button
- Click on "**new**", "**folder**", give the name results to the new sub directory and confirm.

⇒ The directory is created; the results are archived in this location.

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