USER MANUAL

ATEQ VT 55

Version CA1-01

www.ateq.com

Reference: UM-28500B-U

REVISION OF THE ATEQ VT55 MANUAL

Edition/ Revision	**Reference**	**Date** (week/year)	**Chapters updated**
First edition	UM-28500A-U	23/2007	-----
Second edition	UM-28500B-U	37/2007	Modification of the VT55 front face.

DECLARATION OF CE CONFORMITY 00

We the undersigned, **ATEQ**, manufacturers of the **ATEQ VT55** REF : **285.00** declare that it complies with the requirements of :

- LOW VOLTAGE Directive 93/68/CEE regarding :

  - standard EN 61 010-1 « Safety requirements for electrical equipment for measurement, control and laboratory use »,

- Directive CEM 89/336/CEE partially modified by Directive CEM 92/31/CEE regarding :

  - standard EN 50 081-2 « Industrial environment emission generic standard », except in the 95 MHz to 140 MHz range.
  - standard EN 50 082-2 « Industrial environment immunity generic standard »,
  - standard EN 61 000-4-2 « Test for immunity to electrostatic discharges »,
  - standard EN 61 000-4-3 « Test for immunity to electromagnetic fields radiated at radio frequencies »,

This enables **ATEQ** to guarantee that this instrument may be used in complete safety under the following environmental conditions :

- indoor use,
- altitude up to 3000 metres,
- ambient operating temperature from 5°C to 45 °C,
- 70 % maximum relative humidity without condensation,
- degree of pollution 2 as in CEI 664 (only non-conductive pollution. However a temporary conductivity caused by condensation may occasionally be expected).

Chairman and Managing Director.
Mr. Jacques MOUCHET

ATEQ

Tél. : +33 (0) 1 30 80 10 20 **- Fax : +33 (0)** 1 30 54 11 00

15, rue des Dames - 78340 LES CLAYES SOUS BOIS – France

www.ateq.com

PREFACE

Dear Customer,

You have just purchased an **ATEQ** instrument, we thank you for the trust you have placed on our brand. This instrument has been designed to ensure a long and unparalleled life expectancy, and we are convinced that it will give you complete satisfaction during many long years of operation.

In order to maximise the life expectancy and reliability of your **ATEQ** instrument, we recommend that you install this instrument on a secured workbench and advise you to consult this manual in order to familiarise yourself with the functions and capabilities of the instrument.

Our **ATEQ** After Sales Service centre can give you recommendations based on your specific operation requirements.

ATEQ

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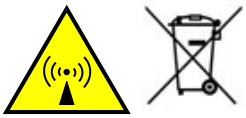


See appendices for the security, care, maintenance and recycling information.

1. VT55 DESCRIPTION

The purpose of the VT55 is to:

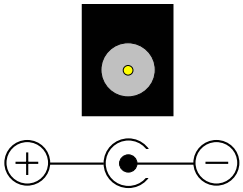
- Test the RKE signal strength
- Retrieve data from the tire pressure sensor.
- Verify the identities of each tire pressure sensor mounted on vehicle wheels
- Assist a technician to reset TPM system on vehicle.

The instrument interacts with the tire pressure sensor without contact through wireless communication.

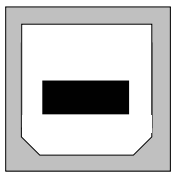
1.1. FRONT FACE

1.2. CONNECTORS

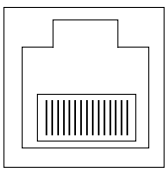
1.3. POWER SUPPLY CONNECTOR

	Power supply connection to the tool for charging the internal battery. The voltage of the charger is a 24 V DC.

1.4. USB CONNECTOR

	The USB connector allows software updates to be installed onto the tool.

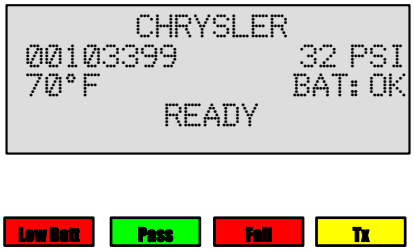
1.5. RS232 CONNECTOR

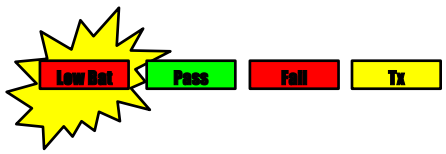
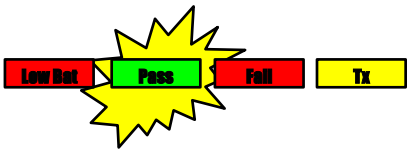
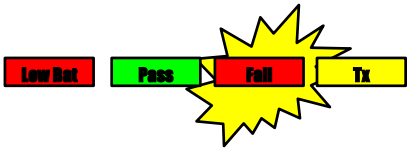
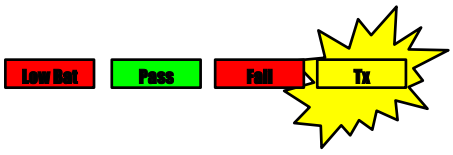
	The RS232 connector allows software updates to be installed onto the tool. Not typically used.

2. LIGHT INDICATORS

Four lights indicate the status of the instrument and the results of the measurement.

They are placed under the LCD display.



	Low Bat	**Battery level light**: When this light is on the battery level is low. Connect the power supply to charge the battery.
	Pass	**Pass test light:** When this light is on the tool has correctly received the information from the valve or the remote keyless entry unit.
	Fail	**Fail test light:** When this light is on the tool has not received the information from the valve or the remote keyless entry unit.
	Tx	**Transmission light:** When this light is flashing the tool is currently transmitting a signal to activate a valve. ***Note:*** *light may illuminate continuously and will not always flash.*

Charge indicator on the bottom of the front face:

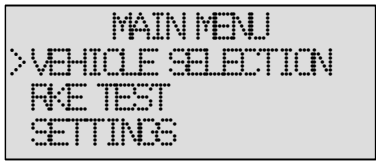
Charge Charge	**Battery charging light:** When this light is on in red the power supply is currently charging the tool. When this light goes to green the tool battery is filled.

3. KEYS

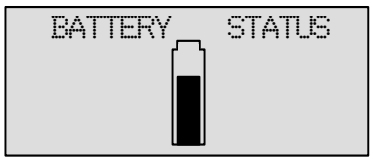
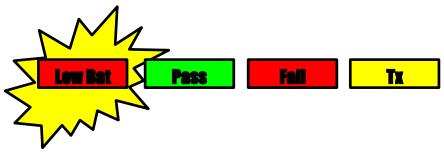
3.1. POWER ON KEY

KEY	FUNCTION
	**First function**: **Power on**: starts the instrument, press the **I** key to power on the tool. **Second function**: Indicates the **battery level**. Press and hold to see the battery status

3.1.1. First function

At power on, it displays the ATEQ logo.	
Then it displays the software revision number.	
And after it displays the main menu.	

3.1.2. Second function

When the instrument is on, keep pressing this key  and the battery level is displayed.	
When the "**LOW BATT**" light flashes the instrument will turn off. Connect the power supply to charge the battery.	

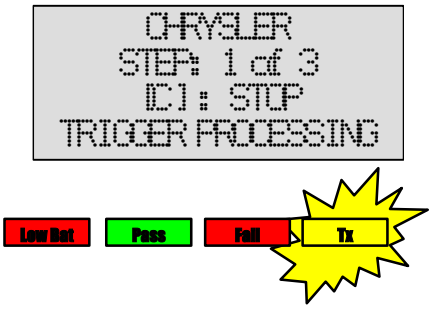
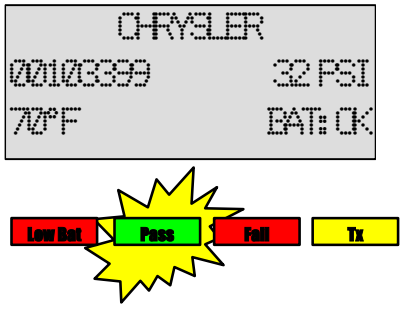
3.2. POWER OFF KEY

KEY	FUNCTION
	**First function**: **Power off**: press and hold the **C** key for more than 3 seconds to power off the tool. **Second function**: "**C**" for **CANCEL** return to the previous menu or function without modifying a parameter.

3.3. CYCLE KEY

KEY	FUNCTION
	Starts the acquisition cycle for a valve.

3.3.1. Measurement

When the instrument indicates "**READY**", press the  acquisition key.	
During the test cycle, the message "**TRIGGER PROCESSING**" is displayed, and the "**TX**" light will illuminate.	
After a few seconds, the instrument vibrates and the valve data is displayed.	

3.4. NAVIGATIONS KEYS

KEY	FUNCTION
	Scroll **up** or **increase** numerical values.
	Scroll **down** or **decrease** numerical values.

3.5. VALIDATION KEY

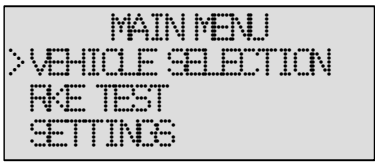
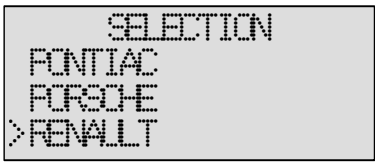
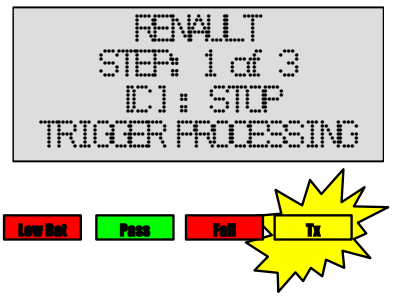
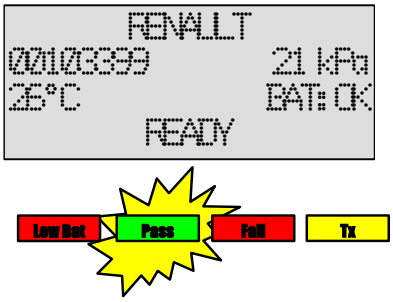
KEY	FUNCTION
	Press the **ENTER** key to open a menu, enter a parameter and confirm a parameter.

3.6. KEY PAD SUMMARY

	Power on and battery status.		Test key, to force a test cycle.
	Navigation through menu or adjust a parameter "**up**".		Selection key, **press** to enter the chosen function or validate a parameter.
	Navigation through menu or adjust a parameter "**down**".		Cancel key, **return** to the previous menu or function without parameter validation.

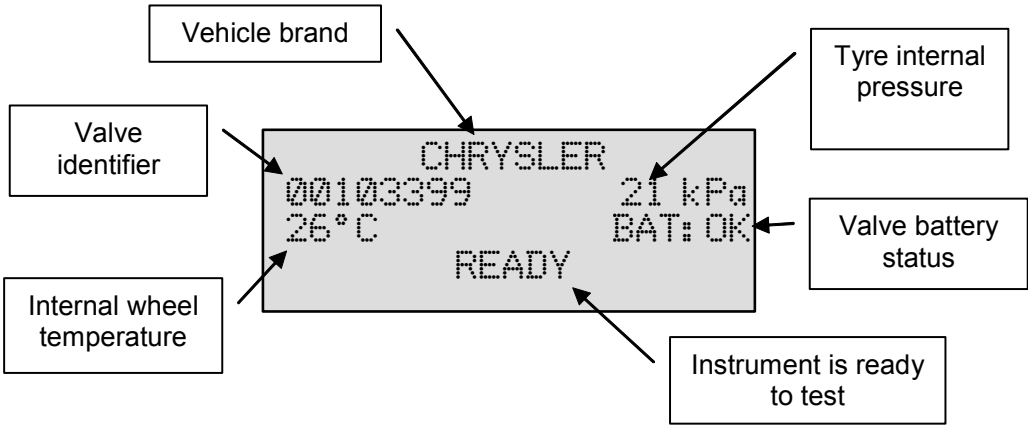
4. TESTING A TPM VALVE

4.1. LAUNCH A TEST

Step 1 – Select the "**VEHICLE SELECTION**" menu and validate with the  key.	
Step 2 – Select the vehicle brand by using the  or  keys and validate with the  key.	
Step 4 - Hold the tool with in a few inches from the TPM sensor and press the  button. The tool will begin to transmit some frames and search step by step between the several valves types of the selected brand.	
Step 5 – The tool will vibrate after receiving the sensor information. The tool will display the sensor ID, pressure, and sensor state of the valve that is triggered. If the tool does not receive the correct information, the fail LED will illuminate and you can restart the trigger sequence by pressing the  button again.	
Step 6 - Press the  button to return to the "**VEHICLE SELECTION**" menu and on the  to return to the main menu.	

4.2. RESULTS EXPLANATION

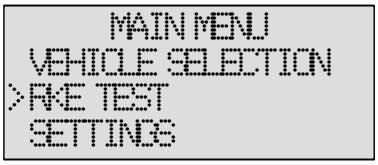
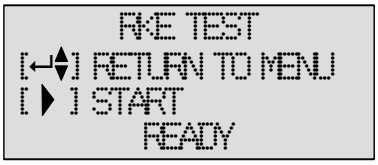
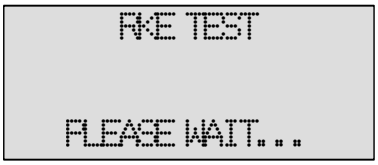
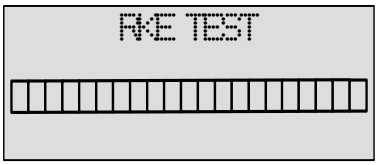
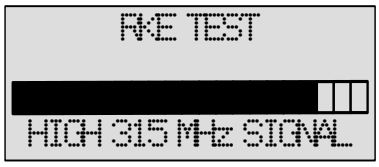
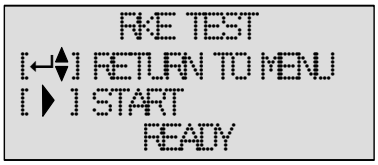
The picture below is an example of a valve data communication result:



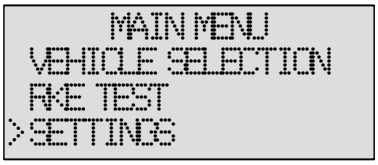
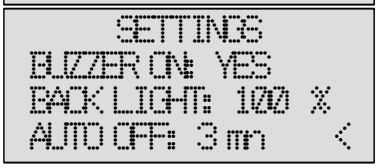
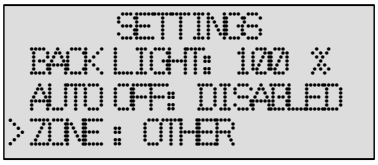
4.3. NO VALVE RESPONSE

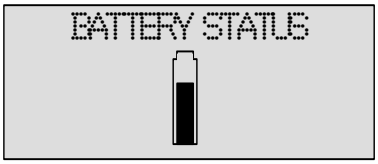
If the instrument doesn't receive any information from the valve, or if the valve is not compatible with the parameters, after a time out the instrument stops its cycle and the "**FAIL**" light is switched on.

5. TESTING A REMOTE KEYLESS ENTRY

To test a Key FOB: **Step 1** - Select this mode in the main menu with the  or  keys and validate with the  key.	
Step 2 - The tool prompts you to launch the test by pressing the  key.	
Step 3 - Wait a few seconds until a horizontal bar is displayed.	
Step 4 – When the horizontal bar is displayed, hold the Key FOB approximately 3 to 6 inches from the nose (antenna) of the VT55. Press any button on the Key FOB.	
Step 5 - The intensity of the RF signal force is indicated on the scale of the horizontal bar. The greater the RF signal power, the greater the horizontal bar is filled.	
Step 6 - Press the  button to return to the RKE TEST menu and on the  to return to the main menu.	

6. SETTING ADJUSTMENT FOR VT55

Step 1 – press the select button on settings in the main menu. 	
Step 2 – Press the **up** or **down** keys until you are ready to select the feature you would like to adjust.	
➢ **Units:** User can change the unit of result display among kPa and ° C or PSI and ° F.	
➢ **Buzzer on:** The user can select if the tool is vibrating after receiving the sensor information.	
➢ **Back light:** The user can adjust the light intensity of the display. The back light increases the battery consumption.	
➢ **Auto Off:** The VT55 tool will turn off automatically after a preset number of minutes since the tool has been last used. This feature can be disabled.	 
➢ **Zone:** User can change the choice between: America, Europe, Asia and others.	

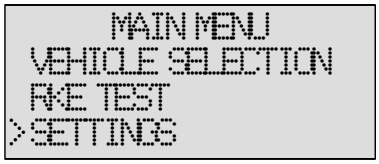
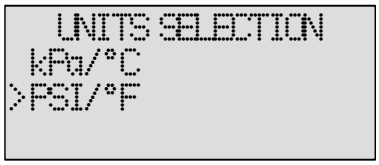
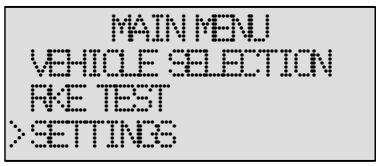
➢ **Battery Level:** press and hold the  key to check the battery status.	

7. PARAMETERS SETTING

7.1. PRESSURE UNIT

This parameter allows the operator to choose the pressure unit displayed by the instrument.

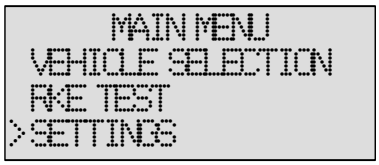
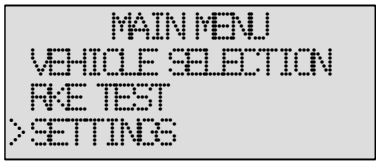
You have a choice among **kPa/°C** or **PSI/°F**.

From the main menu, access to the settings menu by pressing the ↵ key.	
Select **UNITS** menu and confirm with the ↵ key.	
Mocve the cursor in front of the unit to use by using the up and down arrows ▲ ▼ and confirm with ↵ Key.	
The new units are selected.	
Return to the main menu by pressing the C key.	

7.2. BUZZER

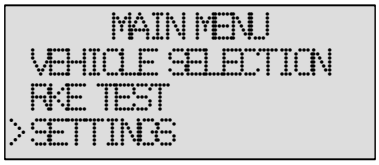
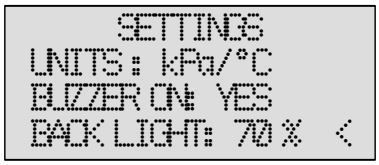
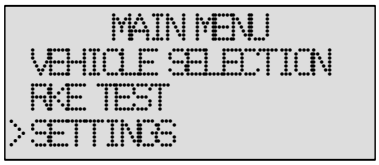
This parameter allows the user to select if the tool will vibrate after receiving the sensor information.

You have a choice among **YES** or **NO**.

From the main menu, access to the settings menu by pressing the  key.	
Select **BUZZER** menu and confirm with the  key (the cursor goes on the right side).	
Select **YES** or **NO** by using the up and down arrows  and confirm with  Key (the cursor return to the left side).	
The new option is selected.	
Return to the main menu by pressing the  key.	

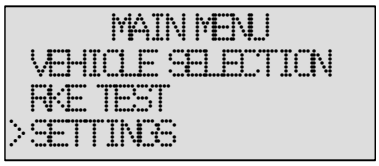
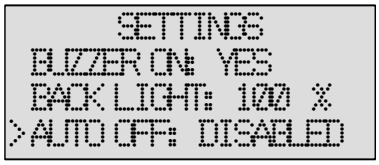
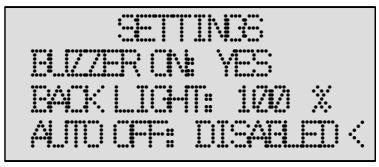
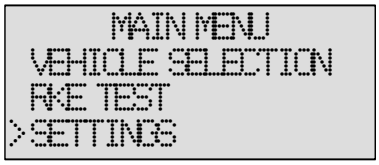
7.3. BACK LIGHT

The "**BACK LIGHT**" function allows the user to adjust the light intensity of the display. The back light increases the battery consumption.

Step 1 - Select the "**SETTINGS**" menu by using the  and  keys and press the  key.	
Step 2 - Select the "**BACK LIGHT**" parameter and press the  key.	
Step 3 - The cursor position moves to the right of the screen and by using the  and  keys, adjust the back light intensity. Choose between 1 to 100 percent in 1 percent increments and then press the  key.	
Step 4 - Press the  button to return to the main menu.	

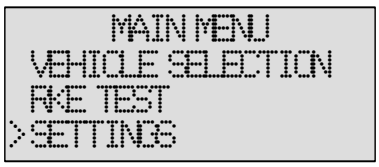
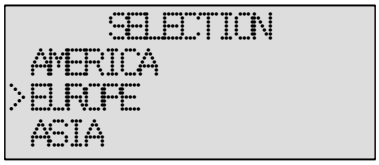
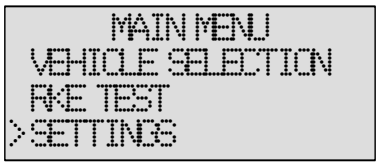
7.4. STAND BY PARAMETER

This function is used to switch off the instrument after a programmed time without use. The programmed time is between 1 and 60 minutes or never.

From the main menu, access to the settings menu by pressing the  key.	
Select **AUTO OFF** menu and confirm with the  key (the cursor goes on the right side).	
Configure a new timing for the auto off by using the up and down arrows  and confirm with  Key (the cursor return to the left side).	
The new timing is validated. ***Note**: to have a disable **AUTO OFF** function, configure the timing under 1 minute then **DISABLE** is displayed.*	
Return to the main menu by pressing the  key.	

7.5. ZONE

The parameter "**ZONE**" allows the user to select the geographic location of the vehicles being tested.

Step 1 - Select the "**SETTINGS**" menu by using the  and  keys and press the  key.	
Step 2 - Select the "**COUNTRY**" parameter and press the  key.	
Step 3 - Then select the region between **AMERICA, EUROPE, ASIA** or **OTHER**.	
Step 4 - Press the  button to return to the main menu.	

8. FEATURES

8.1. RADIO FREQUENCIES

The awakening transmission frequency is: 125 kHz (LF).

The reception frequencies are: 433 MHz or 315 MHz (RF).

8.2. TYPE OF VALVE

This instrument is designed and can be used for the measurement of any requested valves.

9. PROGRAM AND DRIVERS INSTALLATION

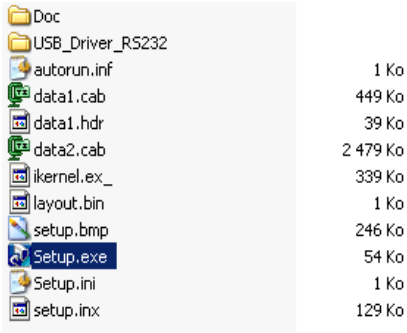
For this device, the connections for update can be carried out by two ways, RS232 or USB following the user preferences.

9.1. RS232 CONNECTION

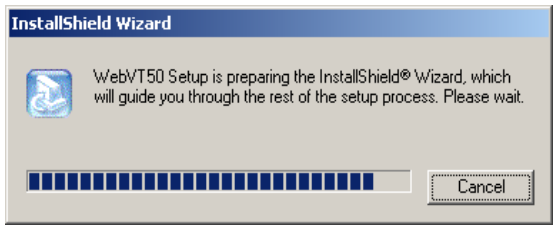
1) Connect the USB cable to your VT55 and the other end to the USB connector of your PC.

2) Insert the CDROM into your computer, the installation program will start automatically.

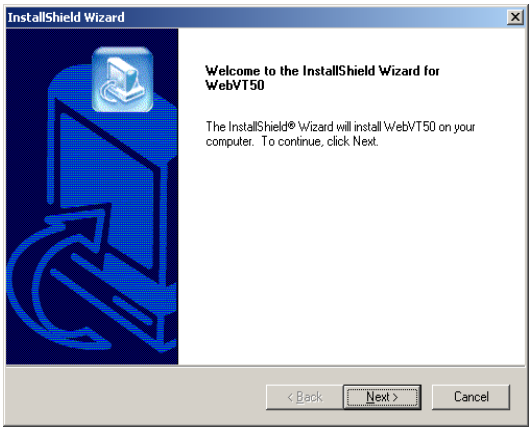
If not, open tWindows© then double click on "**Setup.exe**" to start the application.



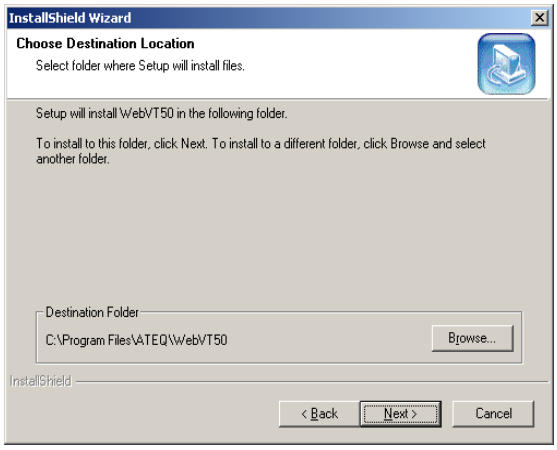
3) The installation program will start.



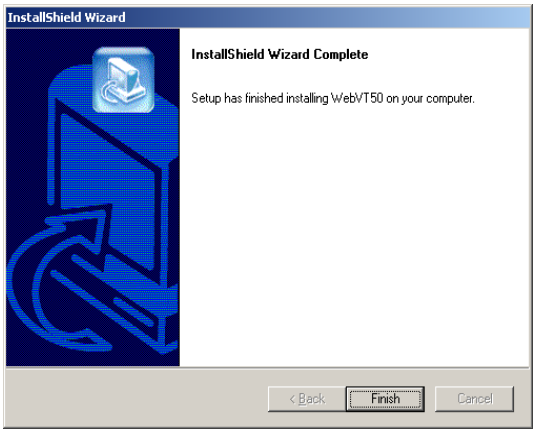
4) Follow the instruction on the screen and click on the "**Next >**" button.



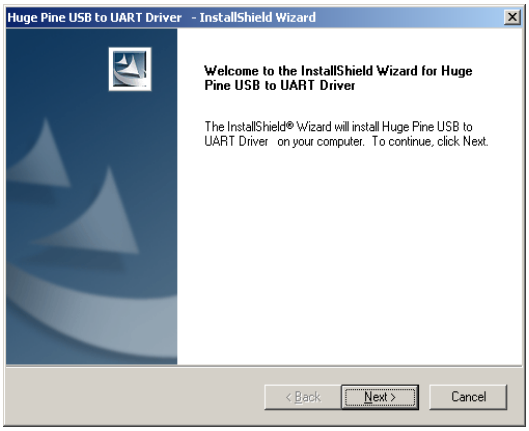
5) The program ask the folder to install the program, if you don't want to change it (recommended) click on the "**Next >** " button.



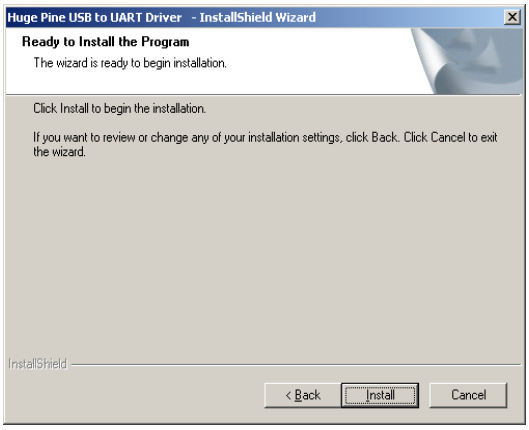
6) Congratulations, the VT55 is installed on your computer.



7) The VT55 drivers installation start automatically, click on the "**Next >**" button and follow the instructions.



8) Click on the "**Install**" key to continue the installation.

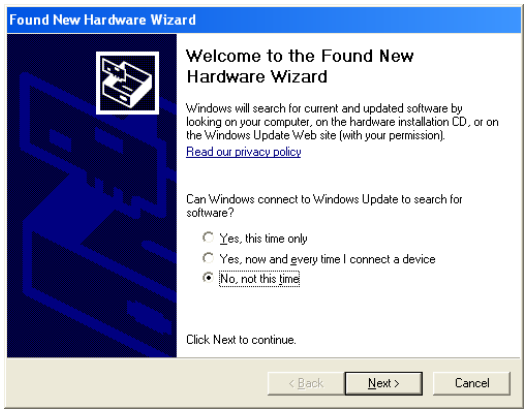


9.2. USB CONNECTION

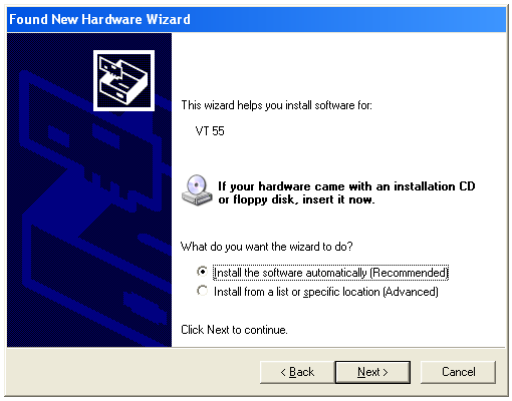
1) Connect the USB wire to the USB connector of your PC and on the VT55 device.

2) Switch on the device.

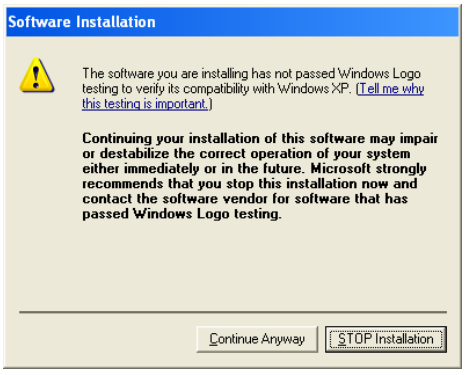
3) The following window appears, select "No, not this time" and click on the "**Next >**" button.



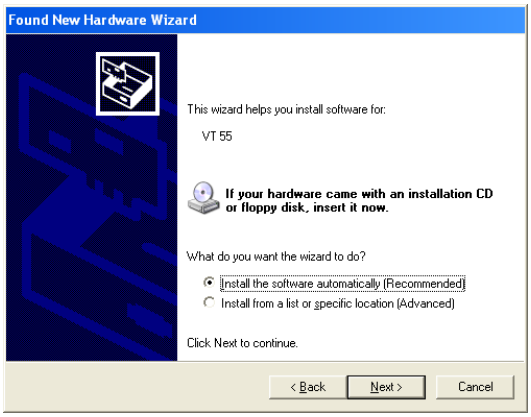
4) Select the "Install the software automatically (recommended)" option and click on the "**Next >**" button.



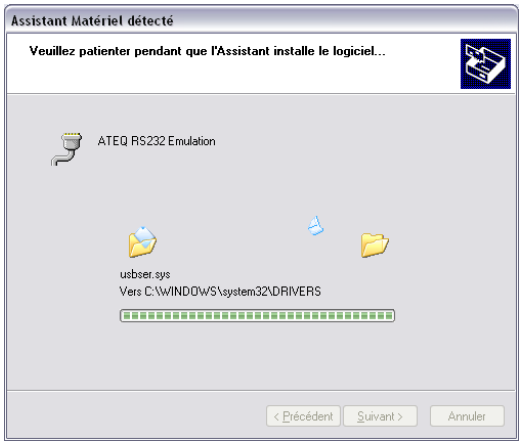
5) When this window appears, click on the "Continue anyway" button.



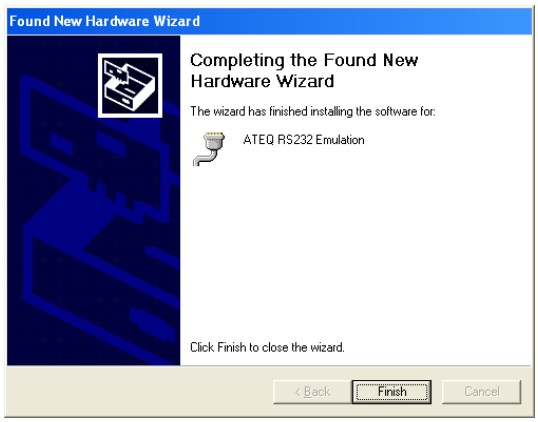
6) Insert the supplied CD into your CDROM reader.



8) Then drivers are installed.



9) Congratulations, the VT55 device is ready to be updated. Click on the "Finish" button.



10. PROGRAM USE

1) To start the VT55 update program double click on the "**WEB VT55**" icon.

2) The icon appears on the task bar to indicate that the program is running and waiting for a VT55 connection.

3) Connect a VT55 to the USB to SERIAL Bridge wire, switch it on. When connected the following screen appears.

***Reminder**: to run the updating software it's important to have a valid internet connection.*

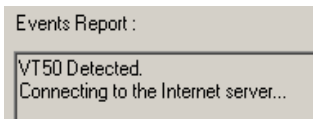
The serial number and the software version of the current VT55 are displayed.

In the "**Events report**" window are displayed all the events information.

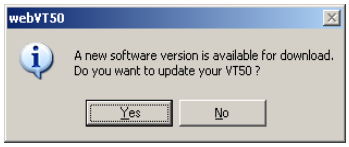
If the VT55 is not detected, go to the step 9.

4) To know if a new version of software of the VT55 is available, click on the "**UPDATE VT55**"  button.

Then the software is connecting to internet server to check for an update.



If a new software version is available, this message appears.

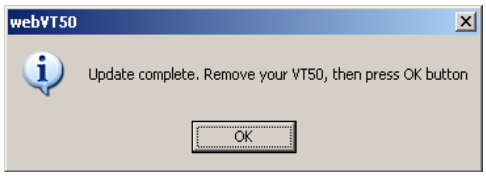


5) To update the tool. Click on the "**OK**" button.

The left hand progress bar is the web download, the right one is the VT55 upload.

Please **DO NOT DISCONNECT** the VT55 during these steps; this can cause tool failure.

When the transfer is finished, the following message is displayed:

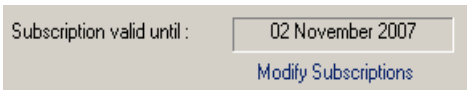


6) The VT55 is updated, remove the instrument and press the "**OK**" button.

The "**HIDE**" button allows you to hide the software and keep it on the Windows© task bar, when a new VT55 is connected, the software starts automatically.

The "**EXIT**" button allows you to quit the software program.

7) The date subscription validation is displayed:



The VT55 can be updated for no additional fee for 1 year. The subscription period begins from the first time you try to update the instrument.

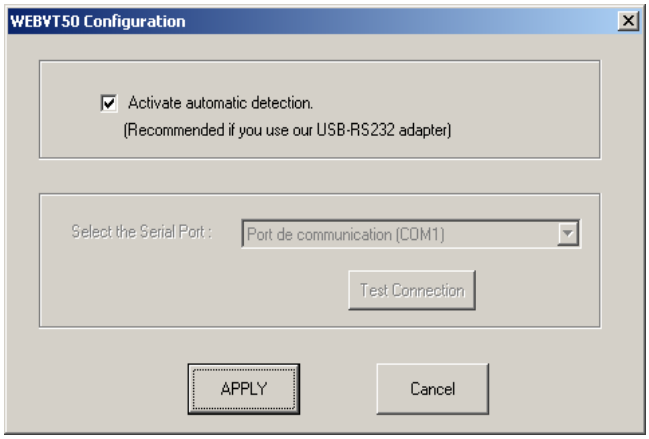
If the subscription is not available or if the date is expired, it's possible to get a new subscription on line by clicking on: "**Modify subscription**" link.

8) Follow the instructions displayed.

9) If the VT55 is not detected the following message appears:

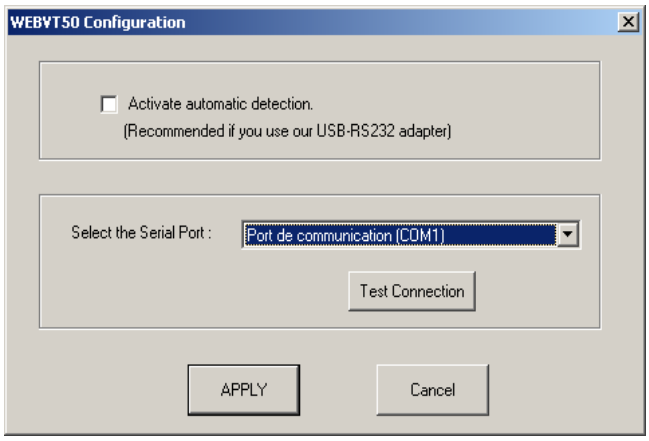
The software by default is configured on automatic search device.

10) Then configure the software to be on the automatic mode or on manual mode, press on the Configure key. The following window appears.



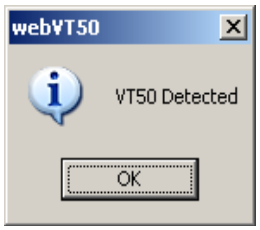
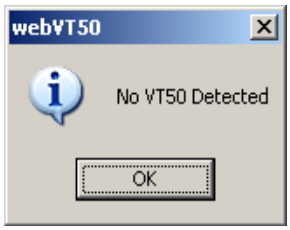
When this box is active it's for use the connection with the USB/RS232 adapter (USB to SERIAL Bridge wire)

To use the RS232 COM1 port directly on the PC, deactivate the box.



Then choose the communication port (in the list) **COM1**.

Test the connection by pressing the Test Connection key.

1st case	2nd case
	
The connection is OK, it's possible to return to step 4.	The connection is not OK. Verify if the VT55 is connected to the COM1 port and switched on.

Press on the APPLY key and wait a few seconds.

The VT55 is ready to communicate.

Appendices
ATEQ VT55

1. TECHNICAL CHARACTERISTICS

	VT 55
Case dimensions H x L x P (mm) :	152 x 82 x 34 (184 x 82 x 34 with antenna)
Power supply:	24 V DC power supply
Battery:	Rechargeable Lithium-Ion Battery
Autonomy:	About **8 hours** following standard use and about **3 hours** following intensive use.
Electrical connections:	RS232 or USB
Display:	4 lines L.C.D. 65 mm x 32 mm
Weight (kg)**:**	About 310 g.
Temperatures:	
Operational:	+ 5°C to + 45°C
Storage:	0°C to + 60 °C
Relative humidity:	70 to 80 %

2. SECURITY, CARE AND RECYCLING

2.1. SECURITY

This device is a radio transmitter and receiver.

	**SWITCH ON SAFELY** Do not switch on the device when wireless tool is prohibited or when it may cause interference or danger.
	**SWITCH OFF WHEN REFUELLING** Do not use the device at a refuelling point. Do not use near fuel or chemicals.
	**SWITCH OFF NEAR BLASTING** Follow any restrictions. Do not use the device where blasting is in progress.
	**USE SENSIBLY** Use only in the normal position as explained in the product documentation. Do not touch the antenna unnecessarily.
	**QUALIFIED SERVICE** Only qualified personnel may install or repair this device.
	**EHANCEMENTS AND BATTERIES** Use only approved enhancements and batteries. Do not connect incompatible products.
	**WATER-RESISTANCE** The device is not water-resistant. Keep it dry.
	**CONNECTING TO OTHER DEVICES** When connecting to any other device, read its user guide for detailed safety instructions. Do not connect incompatible products.

2.2. CARE AND MAINTENANCE

This device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you protect your warranty coverage

- Keep the device dry. Precipitations, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, remove the battery and allow the device to dry completely before replacing it.
- Do not use or store the device in dusty, dirty areas. Its electronic components can be damage.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device other than instructed in this guide.
- Do not drop, knock or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvent or strong detergent to clean the device.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.
- Do not touch the main display with hard or angular materials. Objects like earrings or jewellery may scratch the display.
- Use a soft, clean, dry cloth to clean the device.
- Use only the supplied antenna. Unauthorized antennas, modifications or attachments could damage the device and may violate regulations governing radio devices.

All of the above suggestions apply equally to your device, battery or any enhancements. If any device is not working properly, take it the nearest ATEQ service facility for service.

2.3. CERTIFICATION INFORMATION (SAR)

This device meets guidelines for exposure to radio waves.

This device is a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves recommended by international guidelines. These guidelines were developed by the independent scientific organization ICNIRP and include safety margins designed to assure the protection off all persons, regardless of age and health.

For further information see ICNIRP "guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz)" or contact ATEQ.

The SAR value for this device is less than 5A/m. This value is the reference level for general public exposure to time varying electric and magnetic fields (unperturbed rms values) for the 3 – 150 kHz frequency range.

2.4. SAFETY INFORMATIONS

Your device and its enhancements may contain small part. Keep them out of the reach of small children.

Operating environment

Remember to follow any special regulations in force in any area, and always switch off your device when its use is prohibited or when it may cause interference or danger. Use the device only in its normal operating positions.

Potentially explosive environments

Switch of the device in any area with a potentially explosive atmosphere and obey all signs and instructions. Potentially explosives atmospheres include areas where you would normally be advised to turn of vehicles engines. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Switch of the device at refuelling points such as near gas pumps at service stations. Observe restrictions on the use of radio equipments in fuel depots, storage, and distribution areas; chemicals plants; or where blasting operation are in progress. Areas with potentially explosive atmosphere are often but not always clearly marked. They included chemicals transfer or storage facilities, vehicle using liquefied petroleum gas (such as butane or propane), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

About Charging

Use only the charger supplied with your device. Use of another type of charger will result in malfunction and/or danger.

Use a specified battery in the equipment.

About the Charger

Do not use the charger in a high moisture environment. Never touch the charger when your hands or feet are wet.

Allow adequate ventilation around the charger when using it to operate the device or charge the battery. Do not cover the charger with paper or other objects that will reduce cooling. Do not use the charger while it is inside a carrying case.

Connect the charger to a proper power source. The voltage requirements are found on the product case and/or packaging.

Do not use the charger if the cord becomes damaged.

Do not attempt to service the unit. There are no serviceable parts inside. Replace the unit if it is damaged or exposed to excess moisture.

About the Battery

CAUTION*: This unit contains an internal Lithium Ion battery, it is replaceable only by the competent ATEQ personnel. The battery can burst or explode, releasing hazardous chemicals. To reduce the risk of fire or burns, do not disassemble, crush, puncture, or dispose of in fire or water, do not short-circuit or connect the contacts with a metal object.*

Use a specified charger approved by the ATEQ manufacturer.

Important instructions (for service personnel only)

CAUTION*: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.*

Replace only with the same or equivalent type recommended by the manufacturer.

Use the battery only in the specified equipment.

The battery must be recycled or disposed of properly.

2.5. RECYCLING

Do not dispose of the rechargeable Lithium-Ion battery or the tool to the dustbin.

These components must be collected and recycled.

The crossed-out wheeled dustbin means that within the EU the product must be taken to separate collection at the product end-of life. This applies to your tool but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste. For further information, please contact ATEQ.

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