

Alcolizer HH4 Alcohol Tester User Manual

User Manual



Disclaimer – External Documents note to reader

The BAC reading obtained by correct use of this device is only considered accurate at the time of testing.
Great care has been taken to ensure the accuracy of each reading.
Neither the manufacturer, the distributor, nor the owner accepts liability or responsibility due to any action or claim arising from the reading produced by this device, whether used correctly or incorrectly.

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1 Introduction

This User Manual details the operation of the Alcolizer HH4 Alcohol Tester and Alcoconnect software for managing and analysing breath test results.

The manual is divided into various Sections and Sub-sections to enable the user to access the required information with ease. It includes Cautions and Notes applicable to the HH4 device and Specifications table.

Note

This User manual is applicable to the Alcolizer HH4 alcohol tester running firmware version FR-1.0.0 and later.

2 Description of HH4

2.1 Equipment Overview

The HH4 Equipment List includes the following items:

- HH4 Handheld Device (Li-ION powered)
- USB Cable
- Battery Chargers (240VAC and 12VDC Vehicle Charger)
- Wrist Strap
- Carry Bag or Hard Plastic Carry Case (Optional), and
- Bluetooth Printer (Optional)

2.2 Device Overview

The HH4 is a handheld device consisting of a hard-plastic case, rubberised hand grip, wrist strap and the following user displays, buttons and adaptor sockets. (Refer to Figure 1)

- Mouthpiece Locator and Sample Inlet Spigot
- LCD Colour Graphics Display
- Test Key
- Up and Down Buttons
- USB Port
- Wrist Strap, and
- Battery Charging Port (refer to Figure 2- Charging Port)



Figure 1 - User Display, Buttons and Adapter Sockets



Figure 2 - Charging Port

2.2.1 Test Key

The Test Key activates selected functions.

2.2.2 LCD Colour Graphics Display

Displays the various functions of the device including:

- Welcome screen which included days remaining until the next calibration (If Activated)
- Various Test Modes (Mouthpiece, Passive Standard and Passive Only)
- Extensive menus and options
- Ready Notification
- Blow Notification including progress bar
- BAC Level in various formats
- Printer Setup
- Records Information

These and other displays are explained in the Operating Instructions Section of this manual.

2.2.3 Mouthpiece Locator and Sample Inlet Spigot

This disposable mouthpiece (sample tube) is located on the Mouthpiece Locator which surrounds the Sample Inlet Spigot.

2.2.4 Up and Down Buttons

The Up and Down buttons allow access to various sub menus. Operation of both buttons also facilitates access to the Off function (Refer to Section 3).

2.2.5 USB Port

The USB Port facilitates connection of the device to a USB equipped computer using the cable included with the device. Refer to Section 12 for instructions on using the Alcoconnect toolbox.

2.2.6 Battery Charger Port

The Battery Charging Port is located beneath a moisture proof cap under the wrist strap bracket and facilitates connection to the battery chargers included with the device.

3 Operating Instructions

CAUTION

*While the HH4 is a robust device, it does contain sensitive instrumentation and should not be subject to rough handling or become submerged in water.
Do not store the device in direct sunlight or places where extreme temperature conditions can occur.*

Note

The HH4 has optional functions which may or may not be active on your device. The screen images shown in this User Manual may differ to your device depending on the options fitted or functions enabled.

3.1 General Information

The following information should be observed when conducting a breath test analysis using this device:

- To obtain an accurate reading, alcohol should not be consumed, or mouthwash containing alcohol used for at least 15 minutes prior to using this device.
- Blood Alcohol Concentration (BAC) readings can continue to rise or fluctuate for up to two hours after alcohol is last consumed. Should the BAC readings be near or over the local threshold, drinking should cease, then a re-test conducted after 15 minutes.
- Driving or operating machinery should not occur until a new test shows a decline in the BAC reading and the BAC reading is below the local legislation legal limit.
- It can take up to one hour for the average person's system to absorb a 0.01 BAC before the level returns to zero. In such circumstances further testing later in the day or the following morning is strongly recommended.

3.2 Turning On The Device

Turn the device on as follows:

- Press either the Test Key or Up/ Down buttons. A company logo screen will appear for a period of five seconds prior to the test screen displaying. The logo screen can be terminated sooner by pressing either the Test Key or Up/ Down buttons a second time.

Note

On specially configured devices, additional information may be displayed on start-up e.g. Device serial number, Sample module serial number and days till calibration. To permanently display this information, hold the Test key down for an extended period upon start up.

- The Display will show *press to test* (Refer to Figure 3).



Figure 3 - Press To Test Message

3.3 Charging the Battery

Prior to initial use, the HH4 battery should be fully charged. The battery charge cycle may take up to two hours.

CAUTION

The battery in the HH4 device is a Li-ION battery. As such it should not be tampered with in anyway. Should any problems occur that are related to the battery, contact your local Alcolizer representative for advice.

Only use the battery charger supplied with the Alcolizer certified equipment. Use of non Alcolizer battery chargers could damage the device and render it inoperative.

Charge the battery as follows:

- Connect the charger DC socket to the HH4 battery charging port (Refer to Figure 2)
- Connect the AC or DC (vehicle) plug to a suitable power supply and switch on power.

The device will automatically start, and *Charging* will be displayed.

When the battery is fully charged, the battery condition indicator on the LCD Colour Graphics Display will display five bars. (Refer to Figure 4 - Battery Condition Indicator)

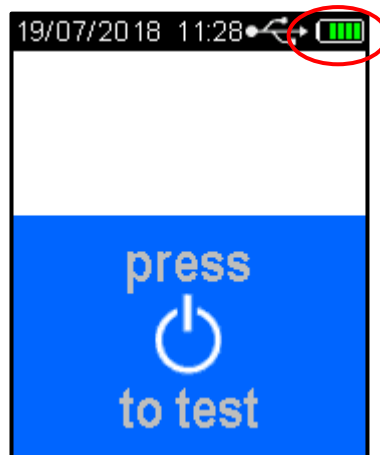


Figure 4 - Battery Condition Indicator

Recharge the battery when the Battery Condition Indicator shows one bar to ensure testing will not be interrupted by a flat battery.

Note

The device cannot be used for testing during charging but can be used for accessing Records.

3.4 Testing Types

The HH4 can perform both Mouthpiece and Passive (Passive Standard and Passive Only) testing. Mouthpiece testing provides a BAC reading in g/100ml (or other formats as required) and Passive testing will display the presence of alcohol in breath. Following a Passive test that indicates the presence of alcohol, a Mouthpiece test should then be performed if an accurate BAC is required.

Note

Mouthpiece testing is also referred to as Standard or Active testing.

3.4.1 Mouthpieces

There are two types of Mouthpieces available for use on the HH4 (Refer Figure 5).

Mouthpiece Types:

- Spit Trap Non-Return Valve Mouthpiece (2 variants), and
- Standard Spigot Locator Mouthpiece.

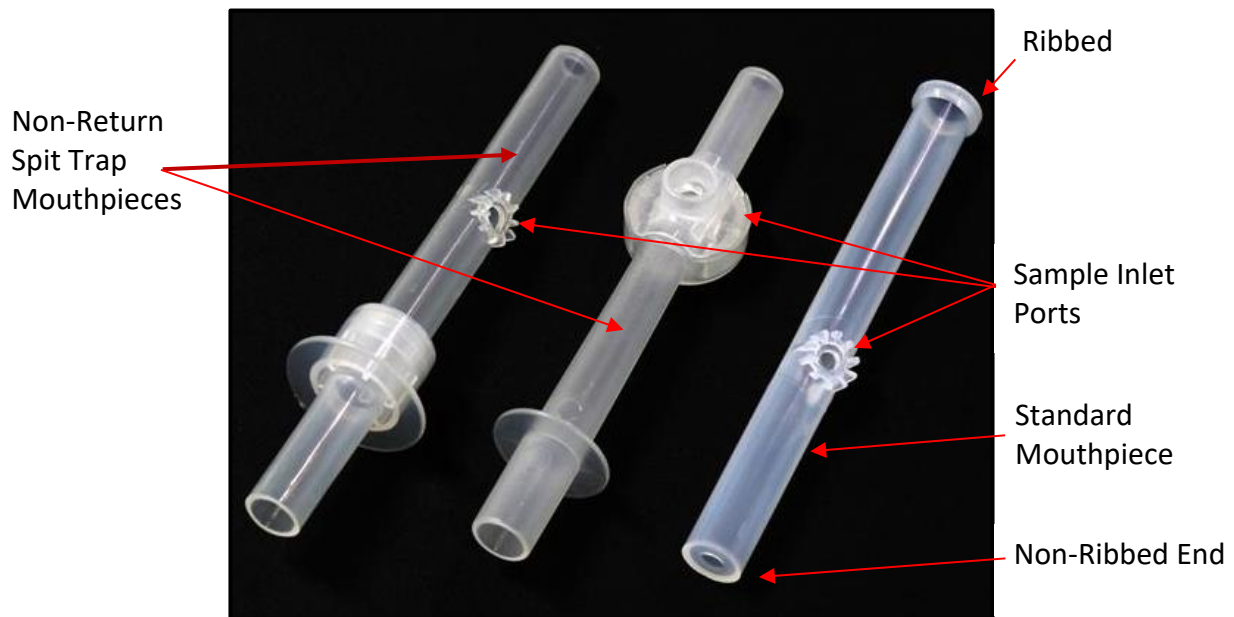


Figure 5 - Mouthpiece Types

The advantage of using the spit trap mouthpieces is that most of the saliva in the exhaled breath is collected in the mouthpiece and does not enter the device.

3.4.2 Mouthpiece Testing

CAUTION

To maintain a healthy sampling environment, the following procedures must be strictly adhered to.

Attach the mouthpiece to the device as follows:

- Grasp the mouthpiece at the ribbed end and tear the plastic wrapping from the non-ribbed end, downwards to expose the sample inlet hole.
- Locate the mouthpiece sample inlet port over the mouthpiece locator in line with the recess that surrounds the spigot (Refer Figure 6).
- Press the mouthpiece sample inlet port onto the locator until it is attached securely (Refer Figure 7). The orientation of the mouthpiece will not affect the sampling.
- Remove the remaining portion of the plastic wrap just prior to testing to ensure hygienic use.



Figure 6 - Locating the Mouthpiece

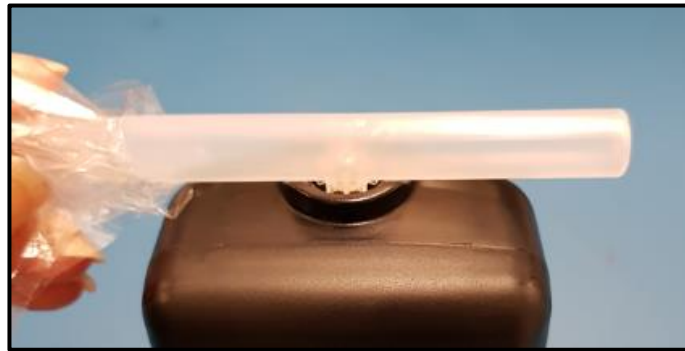


Figure 7 - Mouthpiece Correctly Positioned

3.4.3 Taking a Mouthpiece (Active) Breath Sample

Note

Before taking a breath sample, ensure the subject has not consumed alcohol for at least 15 minutes.

If any step in a breath test sequence is not completed or the device is left idle for a prolonged period of time, the device will then terminate the breath test and display Test timed out. The device will return to the press to test display

The standard breath test time out period is 60 seconds. If a test time out does occur during a breath test, a new breath test must be performed.

Perform a Mouthpiece Test as follows:

- Press the Test key and the device will perform a self-test and *Please wait...* and a progress bar will be displayed.

Note

If the self-check is unsuccessful an error code will be displayed, and the device will not accept a breath sample.

- *Blow* will be displayed when the device is ready (Refer to Figure 8).

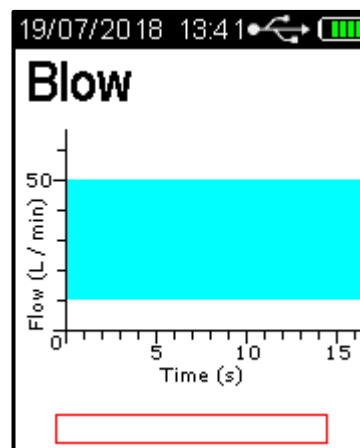


Figure 8 - Blow is displayed when the device is ready

After taking a deep breath, the test subject places their mouth over the mouthpiece inlet (ribbed end) and blows a gentle to medium breath sample into the mouthpiece (Refer Figure 9).



Figure 9 - Providing A Sample

- The exhaled flow is indicated via a bar graph; showing air flow over time in seconds (Refer to Figure 10). A beeping sound is also heard during the breath sample delivery phase, indicating a satisfactory breath sample is being delivered.

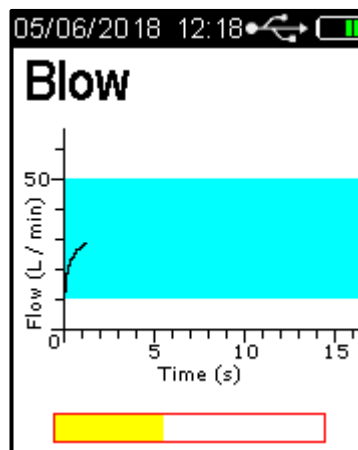


Figure 10 - Sample Process Bar

- The test subject continues blowing until the device takes a sample of the exhaled breath volume, indicated by a click and long beep sound.
- The frequency of the sound beeps increases with the intensity of the blow pressure. Blowing too hard or too soft will result in *Invalid Sample Try Again* being displayed (Refer Figure 11). The device will return to the Blow screen, another sample can now be taken.



Figure 11 - Invalid Sample Try Again Message

3.4.4 Analysing a Mouthpiece Breath Sample

After a valid breath sample is taken, the *Analysing Sample* message is displayed until the device calculates the BAC reading. This will normally take a few seconds. In cold climate conditions it may take longer to display the BAC reading (Refer to Figure 12)

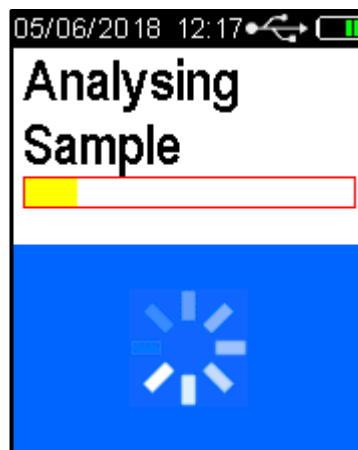


Figure 12 - Analysing Sample Message

When the BAC reading is calculated, it will be displayed on the screen together with the unit of measurement (e.g. g/100ml, g/210L) and be retained until the Recovering period has ended.

The screen colour will vary depending on the percentage of alcohol present; green for zero to 0.019g/100ml, orange for 0.020g/100ml to 0.049 g/100ml, g/210L and red for readings greater than 0.050 g/100ml, g/210L. The *Recovering* period is indicated by Recovering shown on the display (Refer to Figure 13)

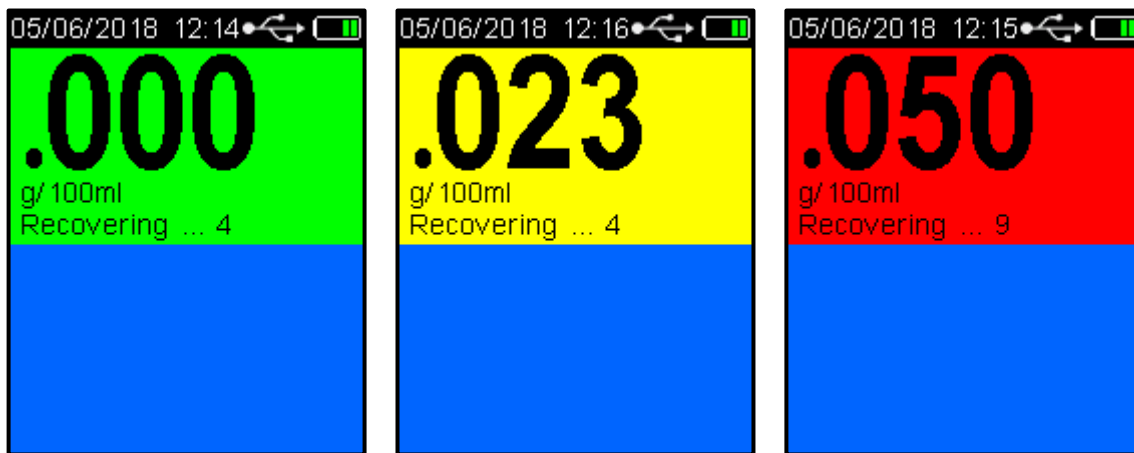


Figure 13 - Various BAC and Screen Colours Displayed

The Recovering period is the time the fuel cell sensor requires to recover from the previous breath test. This period will vary according to BAC readings displayed, longer for higher readings.

Remove the used mouthpiece by rotating it and it will come away from the spigot easily. Dispose of the mouthpieces in a responsible manner.

To perform another breath test, repeat paragraph 3.4.2.

3.4.5 Passive Testing

Passive testing is a test that is performed without using a mouthpiece. The HH4 can perform two types passive testing, that is triggered by button or blow pressure.

All Passive testing is performed by holding the device approximately 50mm in front of the test subject's mouth and asking them to count or talk so that exhaled breath may be picked up by the device and analysed for the presence of any alcohol.

When using Passive Standard testing, a Mouthpiece test is automatically enabled should the device detect alcohol on the subject's exhaled breath. Passive Only testing does not prompt the user to perform further testing.

3.4.6 Enabling Passive Standard

If passive standard mode has not been enabled, proceed as follows:

- With the screen displaying *press to test*, press the Up and Down buttons simultaneously. The User Menu will be displayed.
- Press the down button to scroll down to *Test Type* (Refer to Figure 14).

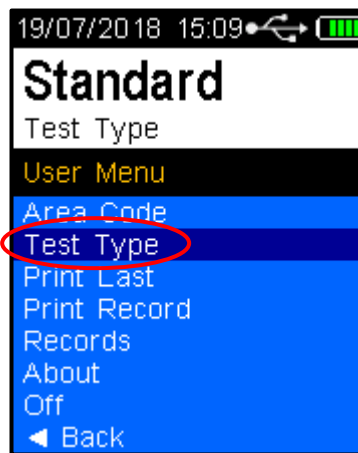


Figure 14 - Test Type Displayed

- Press the Test key until *Passive Std* is displayed (Refer to Figure 15).

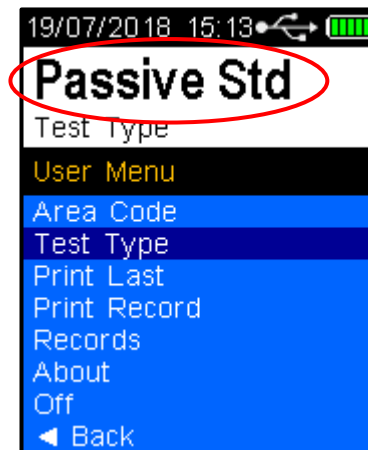


Figure 15 - Passive Standard Displayed

- Press the Up and Down buttons simultaneously. Passive Standard is now enabled or press the Down button until *Back* is highlighted then press the Test key to leave the User Menu.

3.4.7 Taking a Passive Standard Breath Sample

Note

If any step in a breath test sequence is not completed or the device is left idle for a prolonged period of time, then the device will terminate the breath test and display Test timed out the device will return to the press passive test display. The standard breath test time out period is 60 seconds. If a test time out does occur during a breath test, a new breath test must be performed. Press the Test key to perform a new passive breath test as per steps above.

Perform a Passive Standard test as follows:

- On the *press test* screen, press the Test key. *Ready for passive test* is displayed (Refer to Figure 16)

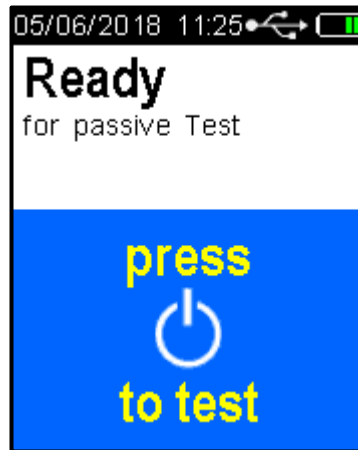


Figure 16 - Ready for Passive Test Message

- Press the Test button. The device will perform an electronic auto check and then return to *Ready for passive Test*.
- Hold the device 50mm in front of the test subjects mouth: so that the subject is breathing or talking directly into the device's sample inlet port (Refer to Figure 17).



Figure 17 - Providing a Passive Sample

- Ask the Subject to start counting from 20 onwards with a one second rhythm, until you tell them to stop, "20...21...22...23...24...25...etc."
- Press the Test button while the subject is counting. The device will make a series of clicking sounds as the sample is being taken,
- The device is set to take three pump samples. During these three pumps the operator must hold the device steady and at the same distance from the subject. The device will give three sample pump clicks, followed by a long beep sound. Analysing Sample will then be displayed (Refer to Figure 18).

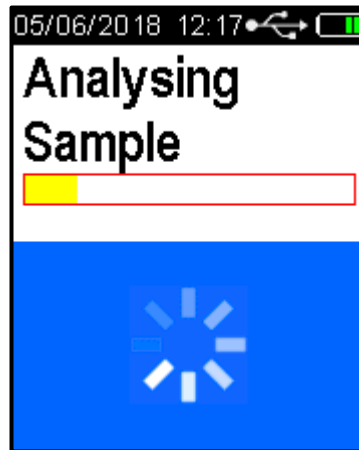


Figure 18 - Analysing Sample Message

3.4.8 Analysing a Passive Breath Sample

- After a valid breath sample is taken, the *Analysing Sample* message is displayed until the device determines if alcohol is present. This will normally take a few seconds. In cold climate conditions it may take longer to display the result.
- When the Passive standard reading is calculated, it will be displayed and retained until the Recovering period has ended.
- If a *Pass No Alcohol* reading is displayed the device has indicated that no alcohol was detected in the near vicinity of subject's exhaled breath. When the Recovering period has ended the device is ready for the next Passive standard breath test (Refer to Figure 19).

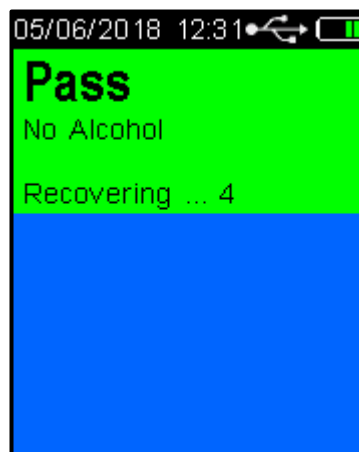


Figure 19 - Pass No Alcohol Message

- To perform another Passive Standard breath test, repeat these steps again.
- If a *Warning Alcohol Present* reading is displayed the device has indicated that alcohol was detected in the near vicinity of subject's exhaled breath (Refer to Figure 20).



Figure 20 - Warning Alcohol Present Message

- After the recovery period has ended, the device is enabled automatically to take an Active (Mouthpiece) sample (Refer to Figure 21). Perform an Active test in accordance with the procedures in paragraph 3.4.2.



Figure 21 - Warning Alcohol Present/ Press for Active Test Display

3.4.9 Enabling Passive Only

To enable Passive Only, perform the same steps as in paragraph 3.4.6. Press the Test key until *Passive Only* is displayed.

Note

A Passive Only test will not automatically enable an Active (Mouthpiece) test the same way a Passive Standard test does.

3.4.10 Taking a Passive Only Breath Sample

The procedures for performing a Passive Only test are the same as those for performing a Passive Standard test (refer paragraph 3.4.7).

Note

When a Warning Alcohol Present reading is displayed after performing a Passive Only test, it is strongly recommended that a Mouthpiece Breath Test be performed, after the recovery period has ended.

3.4.11 Pressure Activated Passive- Blow Testing

The Pressure Activated Passive testing is used when it is desired that the subject's blow starts a sampling.

3.4.12 Enabling Pressure Activated

To enable the pressure activated, access the device setup menu (refer to paragraph 5)

Note
Pressure Activated or Passive Blow testing stands for the triggering method used on Passive testings.

Enable the pressure activated as follows:

- Press the Down button until *Test Options* is highlighted (Refer to Figure 22).

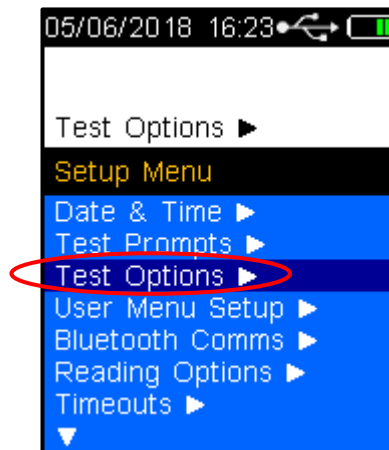


Figure 22 - Test Options Menu

- Press the Test key. The screen will display the Test Options.
- Using the down button, scroll down to *Passive Trigger* (Refer to Figure 23).

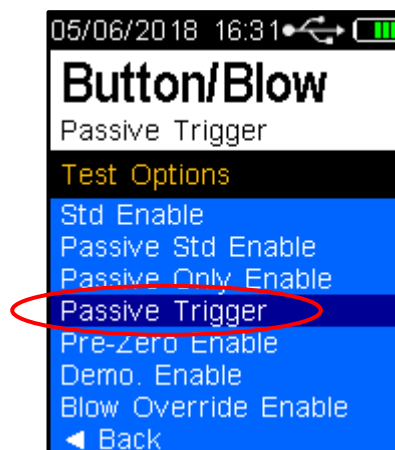


Figure 23 - Passive Trigger

- Press Test key to select *Blow or Button/Blow*.
- Then go down to Back and Back again

Note

*Blow Only Passive Trigger set the Passive Standard and Passive Only to take a sample only when a difference in pressure is detected on device's spigot locator.
Button/Blow Passive Trigger set both Passive testing to take a sample by pressing the test button or when a difference in pressure is detected.*

3.5 Back Operation

The user menu includes a Back selection which when selected will return to the previous screen. To select Back, proceed as follows:

- Press the Up/down buttons until ◀ **Back** is highlighted (Refer to Figure 24).

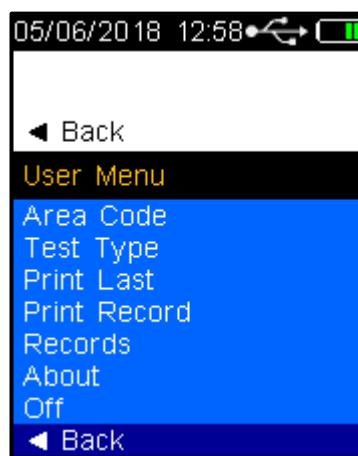


Figure 24 - Screen Back Selection

- Press the Test key and the display will return to the previous screen.

3.6 Shutting Down

The HH4 will automatically shut down after a period of inactivity. Should the device be required to be shut down manually (e.g. to conserve battery life), perform the following procedures:

- With the screen displaying press to test, Press the Up and Down buttons simultaneously. The User Menu will be displayed (Refer to Figure 13).
- Using the down button, scroll down to Off. (Refer to Figure 25).

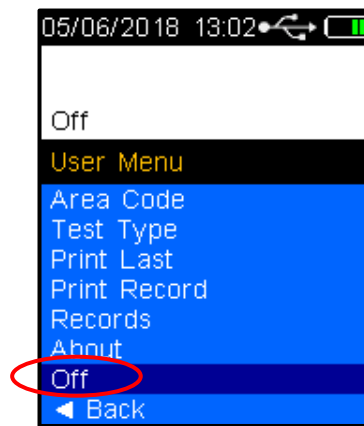


Figure 25 - Off Displayed

- Press the Test Key and the device will turn off.

To further conserve battery life, the device will automatically switch off the display back light after two minutes. To re-activate the device following back light power down, Press the Test key or Up/down buttons. The device will display the last screen that was activated at the time the back light switched off.

4 Test Options Menu

4.1 Test Cancel

If the user wishes to cancel a test, perform the following steps:

- With the Blow screen displayed, Press the Up and Down buttons simultaneously. The *Test Options Menu* will be displayed and using the down arrow to *Test Cancel* is selected (Refer to Figure 26).

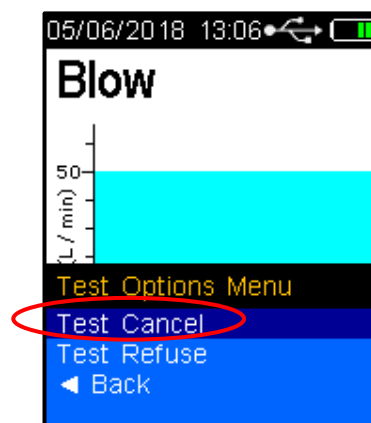


Figure 26 - Test Options Menu and Test Cancel

- Press the Test key and the screen will return to the press to test display.

4.2 Test Refusal

If a test is refused, the user can activate the Test Refuse option as follows:

- With the Blow screen displayed, press the Up and Down buttons simultaneously. The *Test Options Menu* and *Test Cancel* is displayed (Refer to Figure 26).
- Press the Down button to highlight *Test Refuse* (Refer to Figure 27).

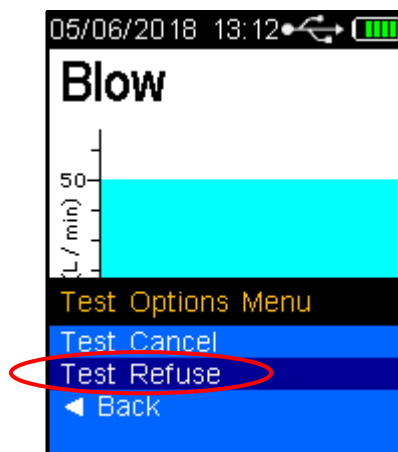


Figure 27 - Test Refuse Displayed

- Press the *Test* key. The device will beep rapidly for one second and *Test Refused* will be displayed flashing momentarily (Refer to Figure 28). The screen will then return to the *press to test* display. The test refusal will be recorded in Records.

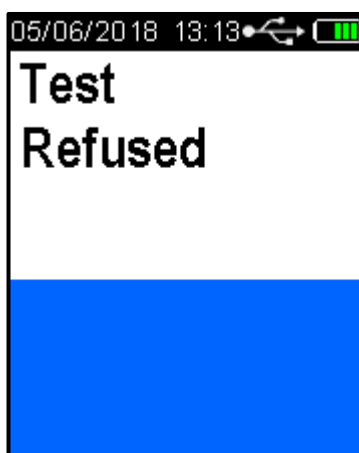


Figure 28 - Test Refused Displayed

5 Setup Menu

To access the setup menu, perform the following procedures:

- Switch the HH4 device on (refer to paragraph 3.6).
- With the screen displaying *press to test*, Press the Up and Down buttons simultaneously for approximately five seconds. The menu screen will be displayed during this process and then the password set-up code '00000000' will be displayed (Refer to Figure 29).

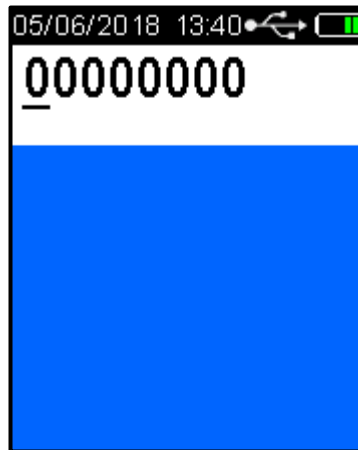


Figure 29 - Password Set-up Code

- Press the Test key until the cursor is under the fifth '0'.
- Press the Up button until that number is '5' (Refer to Figure 30).

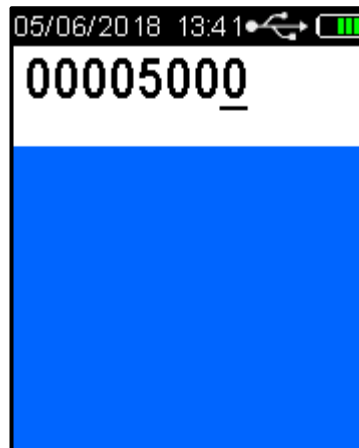


Figure 30 - Password Set Up Code 00005000

- Press the Test Key until the Setup Menu is displayed (Refer to Figure 31).

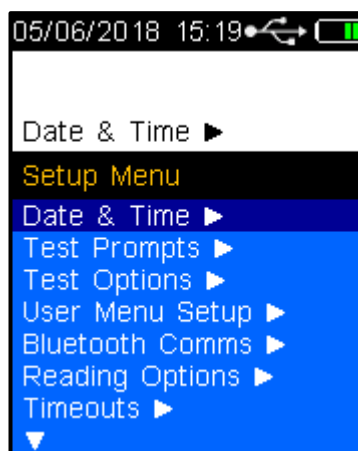


Figure 31 - Setup Menu

6 Printing Function

The printing function (if installed) enables the printing of records by connecting the HH4 to a portable printer via Bluetooth connection.

The device supports the following printers:

- Axiohm A631
- SPRT SP-T5
- SPRT SP-T7
- Custom S'Print
- Custom MYPrinter
- Bixolon SPP-R200
- Zicox HDM322

Note

For information on operating the printer, refer to the appropriate printer User Manual.

6.1 Accessing Bluetooth

To establish the connection with the printer via Bluetooth, access the device set up menu (Refer to Section 5).

6.2 Enabling Bluetooth

Establish Bluetooth connectivity as follows:

- Press the Down button until *Bluetooth Comms* is highlighted (Refer to Figure 32).

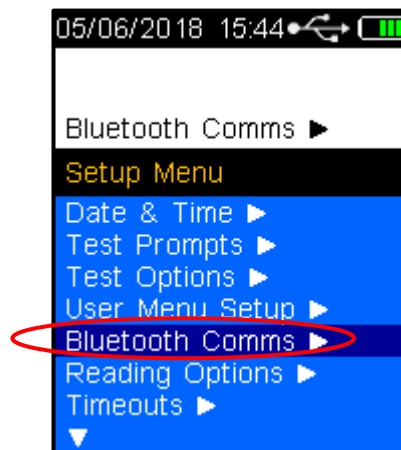


Figure 32 - Bluetooth Comms

- Select the test key to Enable Bluetooth (Refer to Figure 33).

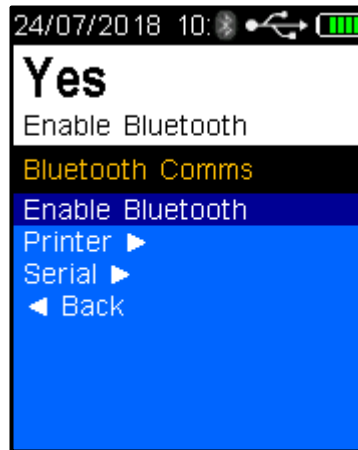


Figure 33 - Enable Bluetooth

6.3 Bluetooth Printer PIN

A Bluetooth Printer is required to proceed, to set the PIN proceed as follows:

- Press the down button once and use the test key to select Printer (Refer to Figure 34).

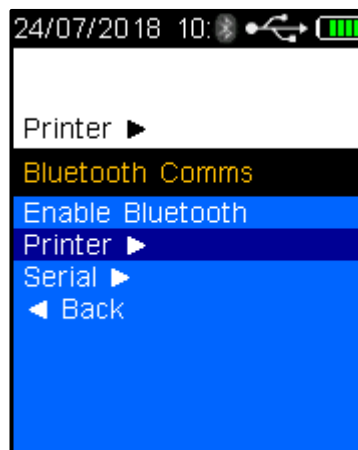


Figure 34 - Selecting Printer

- Use the down arrow and test key to select Edit PIN (Refer to Figure 35).

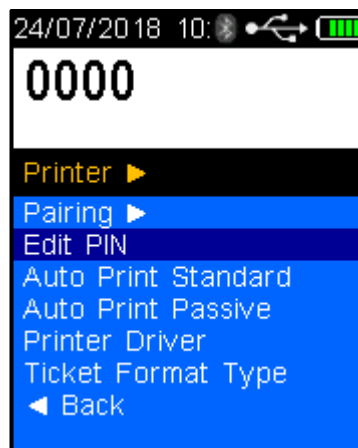


Figure 35 - Edit PIN

- Refer to the below table for the printer PIN length and number. The Communications Ranger is provided as additional information.

Standard Printers	PIN Digit Length	PINs	Communication Range
Bixolon SPP-R200	4	0000	Up to 10 metres
Axiohm 631	6	631200	Up to 10 metres
Custom S'Print	5	12345	Up to 5 metres
Custom MYPrinter	4	0000	Up to 5 metres
Zicox HDM322	4	0000	Up to 3 metres
SPRT SP-T5	4	1234	Up to 0.5 metre
SPRT SP-T7	4	1234	Up to 5 metres
NOTE: If the printer is not listed, refer to the printer User Manual for PIN			

Using the Up/down buttons, select the PIN length that applies to the printer, e.g. for the Bixolon SPP-R200, select 4.

Use the Up or Down buttons to display the first number of the PIN, e.g. 0.

Press the Test key to advance to the next number.

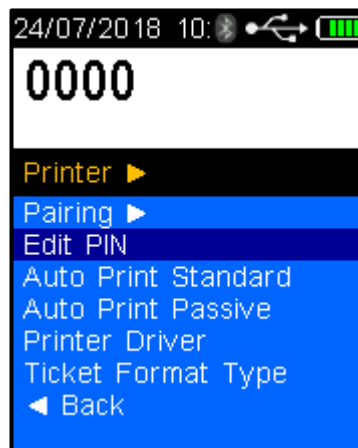


Figure 36 - PINs Entered

6.4 Pairing the Printer

To Pair the device to the nominated printer, proceed as follows:

- Select the up button once and use the test key to select Pairing (Refer to Figure 37).

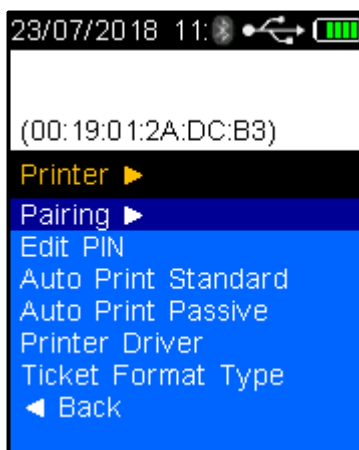


Figure 37 - Pairing Selected

- Place the HH4 device next to the Bluetooth printer and switch the printer on. Press the test key and the HH4 will search for the printer and display *Searching...* (Refer to Figure 38).

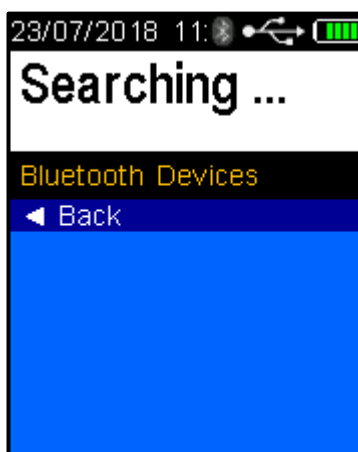


Figure 38 - Searching Displayed

NOTE

The HH4 will search and display all Bluetooth devices in range. To avoid attempting to connect to a device other than the intended printer, move other Bluetooth items away.

When the HH4 identifies the printer, the printer type will be displayed, e.g. "SPP-R200" (Refer to Figure 39).

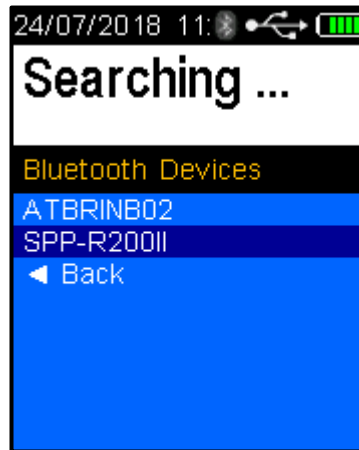


Figure 39 - Printer Identified

Press the test key to accept the selected printer, the device will then show Pairing... then Paired



Figure 40 - Printer Pairing...

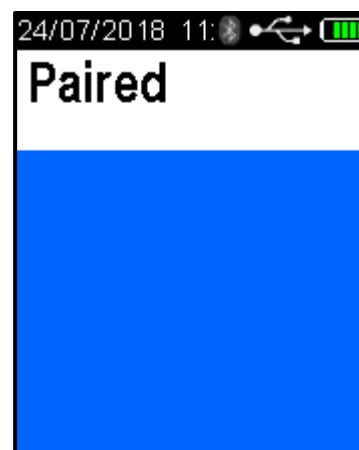


Figure 41 - Printer Paired

6.5 Printer Driver

6.5.1 Installing the Printer Driver

To install the printer driver, proceed as follows:

- Access the Printer Menu as described in paragraphs 5
- Press the Down button and scroll down to *Printer Driver* (Refer to Figure 42).

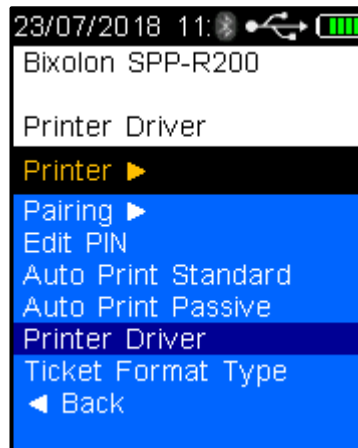


Figure 42 - Printer Driver Selected

- Press the test key to select
- Press the down button and scroll down to the printer brand and type, e.g. Bixolon SPP-R200 and press the test key to select (Refer to Figure 43).

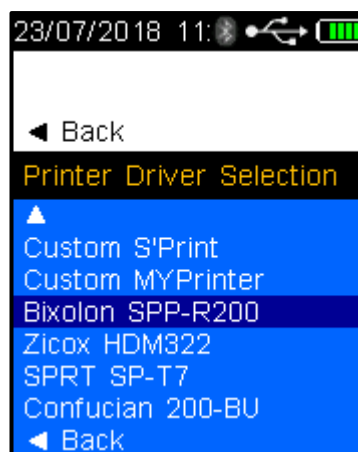


Figure 43 - Printer Selected

Once the HH4 device is paired with the printer the Bluetooth icon is visible on the screen at all times (Refer to Figure 44).

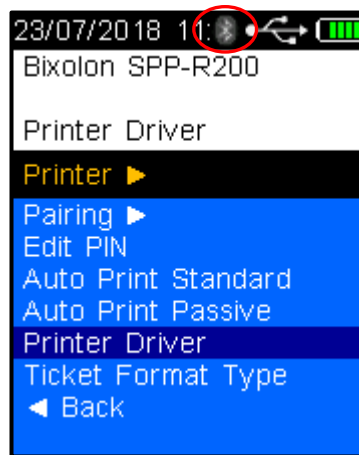


Figure 44 - Bluetooth Icon on Screen

6.6 Auto Print

The Auto Print functions allow the automatic printing of results via a Bluetooth connection to a paired printer.

NOTE

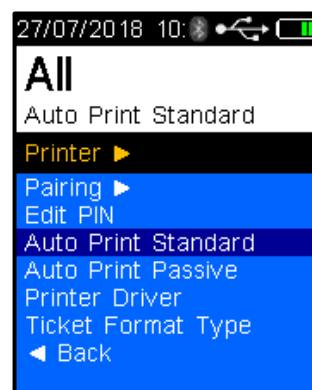
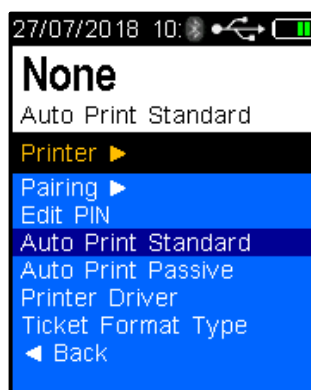
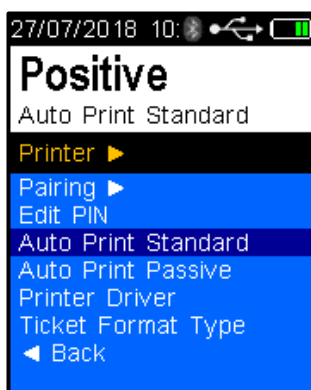
To ensure the correct operation of the Auto Print function, Auto Send Standard and Auto Send Passive must be set to **None**!

6.6.1 Auto Print Standard

Auto Print Standard applies only to Mouthpiece (Active) testing. Depending on the Auto Print Standard option selected, the following information will be printed following tests:

- Positive – if alcohol is detected: a complete report including device serial number, record no, date, time, result etc will be printed.
- All – regardless of results: a complete report including the device serial number, record no, date, time, result etc will be printed.
- None – regardless of results: nothing transmitted.

To set the HH4 to Auto Print Standard, scroll down until *Auto Print Standard* is highlighted. Positive is the default option. To select *All or None*, press the Test key until the desired option is highlighted.

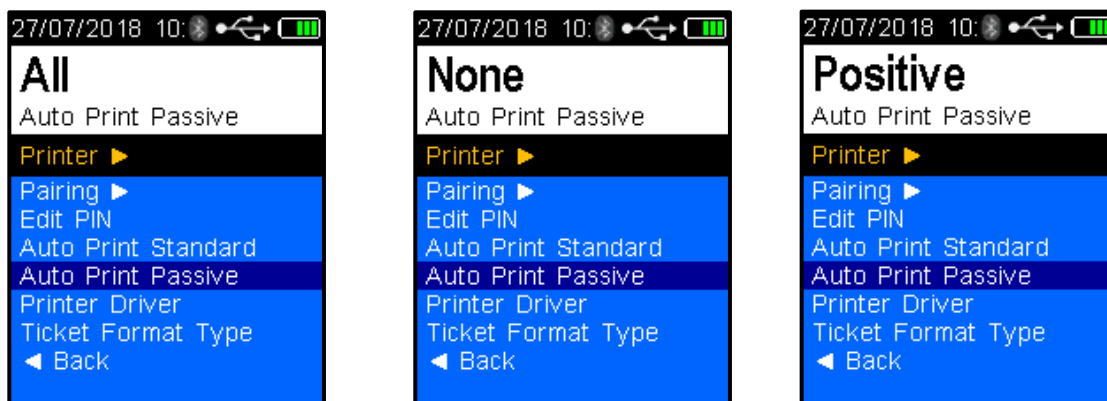


6.6.2 Auto Print Passive

Auto Print Passive applies only to *Passive testing*. Depending on the Auto Print Passive option selected, the information may be printed following the various tests except *None*. The result will be either *false* if no alcohol is detected or *true* if alcohol is detected per the following explanations:

- Positive – if alcohol is detected: A short report including the device serial number, record number, date, time and a pass/fail result.
- All – if alcohol is either detected or not: A short report including the device serial number, record number, date, time and a pass/fail result.
- None – regardless of results: nothing transmitted.

To set the HH4 to Auto Send Passive, scroll down until *Auto Print Passive* is highlighted in a similar manner to *Auto Send Passive*. Positive is the default option. To select *All or None*, press the Test key until the desired option is highlighted.



6.7 Ticket Format Type

- Ticket Format Type 0- Default Format, Standard English
- Ticket Format Type 1- Vietnamese Format 1
- Ticket Format Type 2- Vietnamese Format 2
- Ticket Format Type 3- Extended English ticket format with main and sample module serial numbers
- Ticket Format Type 4- Chinese Format
- Ticket Format Type 5- Taiwan (Specific Alterations)
- Ticket Format Type 6- Taiwan (Specific Alterations)

7 Sending Data (Serial)

7.1 Accessing Bluetooth

To establish the connection with the printer via Bluetooth, access the device set up menu (Refer to Section 5).

7.2 Enabling Bluetooth

Refer to Section 6.2

7.3 Bluetooth Printer PIN

A serial PIN number is required to pairing device to a computer or other device. If a PIN is not setup, device will use as default '0000'.

- Use the down arrow and test key to select Edit PIN.

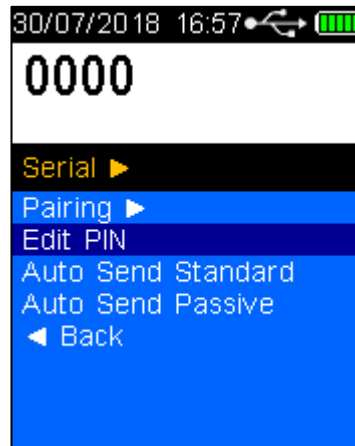


Figure 45 - Serial PIN

7.4 Pairing as Serial Device

To Pair the device to a computer as serial device proceed as follows:

- Setup an incoming Bluetooth COM port.
- Ensure application on computer is running this incoming Bluetooth COM port.
- Go to Bluetooth device option on computer and select 'Add Bluetooth'.
- Select 'Pairing' on HH4 to search for Bluetooth devices (Refer to Figure 46).

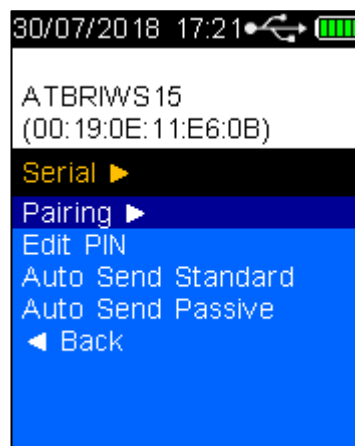


Figure 46 - Pairing Selected

NOTE

The HH4 will search and display all Bluetooth devices in range. To avoid attempting to connect to a device other than the intended printer, move other Bluetooth items away.

- Select the Bluetooth device which HH4 require to be paired (Refer to Figure 47).

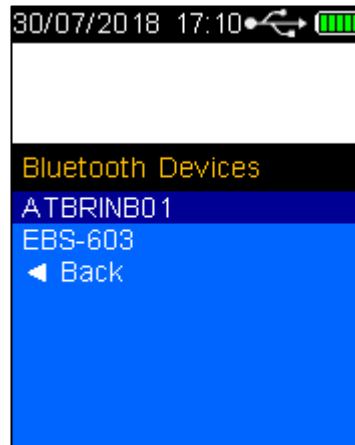


Figure 47 – Bluetooth Devices

- Press the test key to pair HH4 with device. Unit will display a PIN number sent by the computer in this case.



Figure 48 - Printer Pairing...

- Follow instruction on computer screen to confirm PIN so pairing is completed.

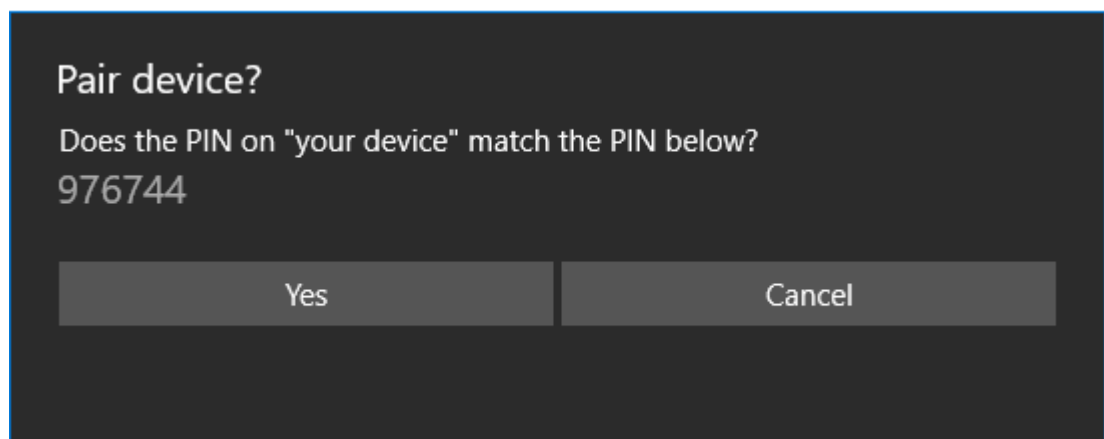


Figure 49 - Pairing Confirmation

- Select 'Yes' to pair if PIN match with displayed on HH4 screen. Then, HH4 will be paired with computer.

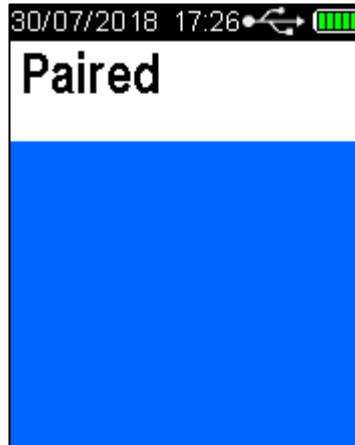


Figure 50 – HH4 Paired

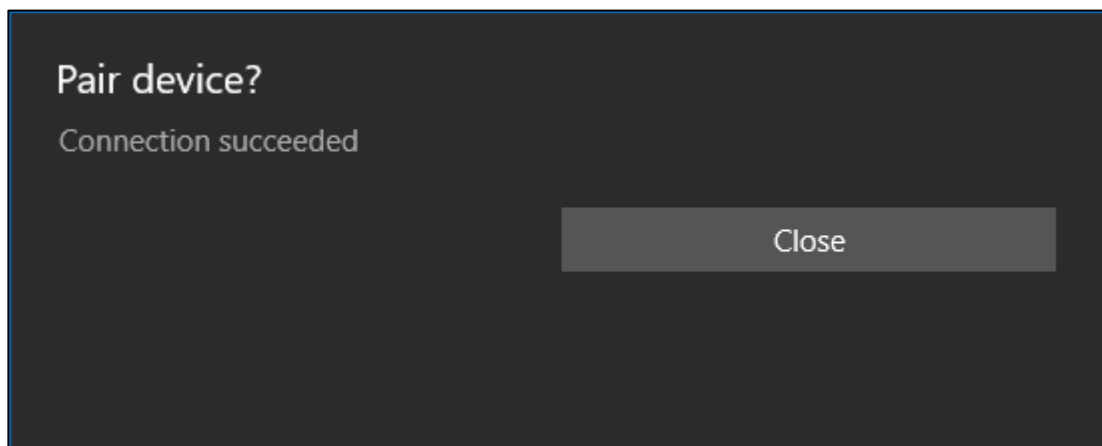


Figure 51 - Device Paired

7.5 Auto Send

NOTE

To ensure the correct operation of the Auto Send function, Auto Print Standard and Auto Print Passive must be set to **None!**

The Auto Send functions allow the automatic sending of results via a Bluetooth connection to a paired device (laptop computer, PC) in a serial data format. The data can be read/received by a serial terminal application e.g. Putty.

There are two Auto Send modes and each of these has three options. These are Auto Send Standard and Auto Send Passive. Both have the following options:

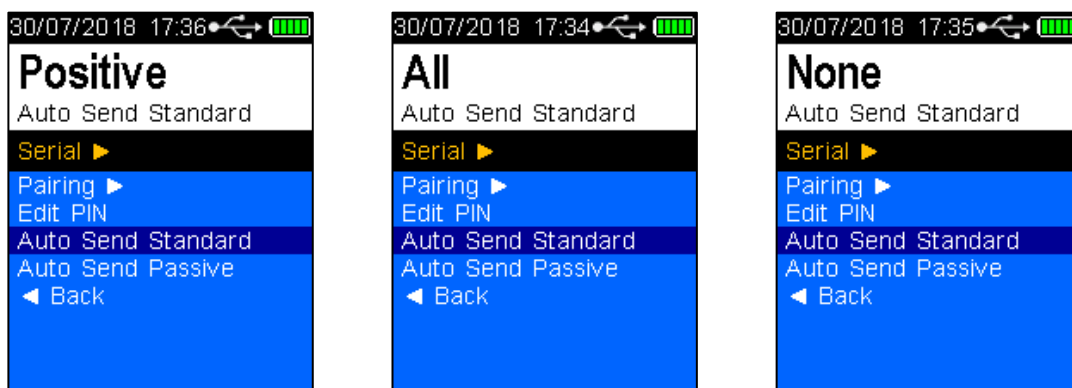
- Positive – sends positive results after test is completed.
- All – sends positive and zero results after test is completed.
- None – regardless of results: nothing transmitted.

7.5.1 Auto Send Standard

Auto Send Standard applies only to Mouthpiece (Active) testing. Depending on the Auto Send Standard option selected, the following information will be transmitted following tests:

- Positive – if alcohol is detected: a complete report including time, location (~~lat/long if GPS enabled~~), test type, result etc will be transmitted.
- All – regardless of results: a complete report including time, location (~~lat/long if GPS enabled~~), test type, result etc will be transmitted.
- None – regardless of results: nothing transmitted.

To set the HH4 to Auto Send Standard, scroll down until *Auto Send Standard* is highlighted. Positive is the default option. To select *All or None*, press the Test key until the desired option is highlighted.

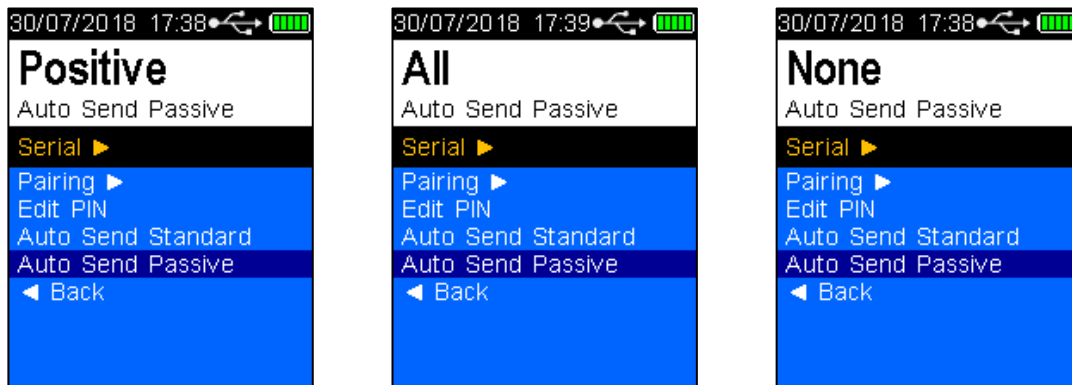


7.5.2 Auto Send Passive

Auto Send Passive applies only to *Passive testing*. Depending on the Auto Send Passive option selected, the information may be transmitted following the various tests except *None*. The result will be either *false* if no alcohol is detected or *true* if alcohol is detected as per the following explanations:

- Positive – if alcohol is detected: A short report including time, device information, test type, etc will be transmitted.
- All – if alcohol is either detected or not: a short report including time, device information, test type, etc will be transmitted.
- None – regardless of results: nothing transmitted.

To set the HH4 to Auto Send Passive, scroll down until Auto Send Passive is highlighted. *Positive* is the default option. To select All or None, press the Test key until the desired option is highlighted.



8 Area Code

Area codes are used to identify the location of a breath test. To set an area code, perform the following procedures:

- With the screen displaying *press to test*, press the Up and Down buttons simultaneously. The User Menu will be displayed.
- Press the Down button and scroll to *Area Code*

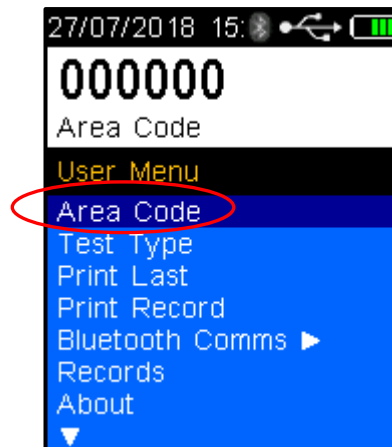


Figure 52 - Area Code Displayed

Press the Test key. The cursor will move below the first digit.

Use the Up/down buttons to advance the digit to the required number.

When the correct number is displayed, press the Test key. The number will be set, and the cursor will move the next digit. Repeat steps if necessary to all required numbers are displayed.



Figure 53 - Area Code Set

The Area Code is now set.
Press the Down button until ◀ *Back* is displayed.
Press the Test Key to return to the *press to test* screen.

9 Records

9.1 Accessing Records

Records are retained in the instrument and can be downloaded via the Alcoconnect software support (Refer to Section 12). It is recommended that records are periodically downloaded and erased from the device. Access the records as follows:

- Switch the device on
- With the screen displaying *press to test*, press the Up and Down buttons simultaneously, the User Menu will be displayed.
- Using the down button, scroll down to *Records* (Refer to Figure 54 – Records Figure 54).

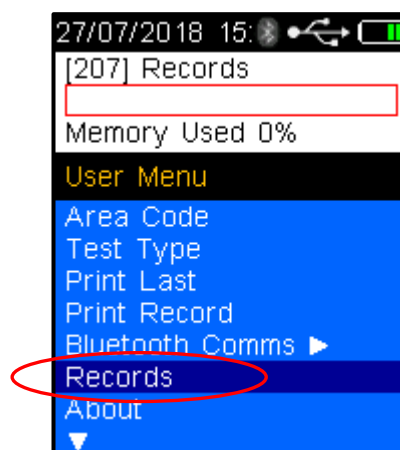


Figure 54 – Records

Press Test key to activate the records.
Press the Up/down buttons to navigate through records as required.
Press the Up and Down buttons simultaneously to return to the User Menu.

9.2 Clearing Records

As the device automatically stores records, the memory will eventually reach capacity and unless the data is downloaded, the storage of records will cease.

The device provides a series of warnings regarding memory capacity including memory reaching capacity, memory full and days since the memory has been full.

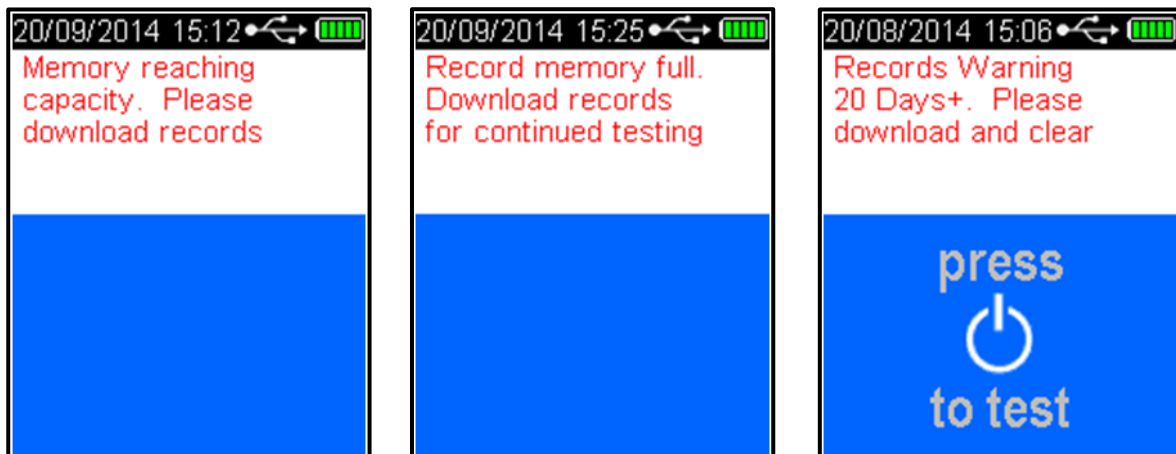


Figure 55 - Memory Capacity Warnings

10 Calibration

10.1 Calibration Alerts

The Alcolizer HH4 requires calibration every six months (190 Days) as per Australian Standards Certification Requirement.

The device will display a warning message after switching on if 14 days or less remain before calibration is required (Refer to Figure 56).

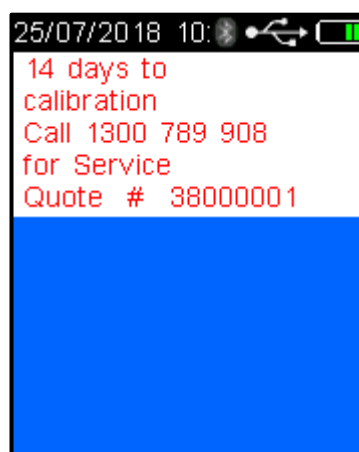


Figure 56 - Days to Calibration Displayed

To cancel the warning message, press the test key and the device will resume normal operations until zero days to calibration is reached.

When the calibration warning message period has expired, the Calibration Due Now screen is displayed, the device is locked and preventing any further breath tests until the device is calibrated (Refer to Figure 57).

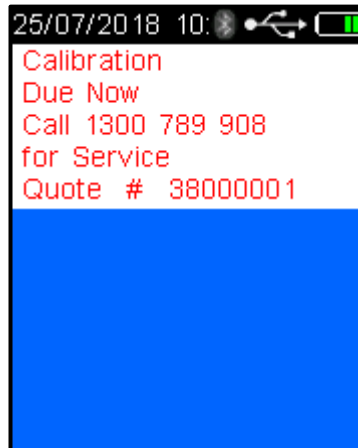


Figure 57 - Calibration Due Now Message

CAUTION

It is recommended that calibration of the device is performed before the warning message period expires. This will ensure uninterrupted testing can continue.

10.2 Calibration Process

The Alcolizer HH4 calibration can be quickly and conveniently booked online at www.alcolizer.com

The Serial Number of the instrument, your Purchase Order number if you have an account with us, or credit card details will be required. Then post your Alcolizer HH4 to our Service Centres in Cleveland or Perth.

- Unit 9/ 132-140 Ross Court, Cleveland QLD 4163
- 36 Mumford Place, Balcatta WA 6021

11 Specifications

The technical specifications of the HH4 are detailed below,

Instrument Application	Industry – Mouthpiece and Passive
BAC Range	0.000 - 0.500 g/100ml (BAC)
Accuracy	Better than 0.005 at 0.100 g/100ml (BAC)
Test Time	Within 3-5 seconds
Recovery Time	Instant for 0.000 BAC reading (reading on-screen for 2 seconds)
Mouthpiece Type	Standard spigot locator or non-return valve
Sensor Type	Law enforcement grade electrochemical fuel cell (premium platinum)
Power Supply	Rechargeable Li-Ion battery system

Weight	272g (Including battery and cover)
Dimensions	202mm H x 63mm W x 39mm D
Calibration	Six monthly calibration at Alcolizer Technology's service facilities

12 Alcoconnect

Alcoconnect assist is the analysis of data downloaded from the HH4 device. The Alcoconnect software can be downloaded from www.alcolizer.com

12.1 Installing Alcoconnect Software

On the Alcoconnect Setup window, click *Install* (Refer to Figure 58).

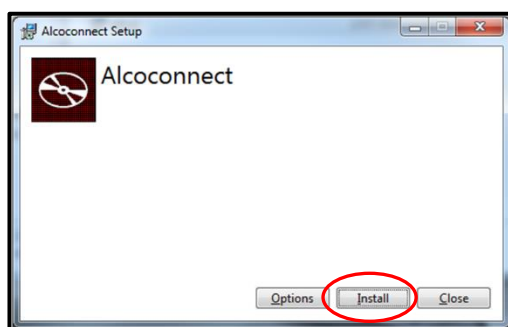


Figure 58 - Alcoconnect Setup Window

Once the program is installed the Alcoconnect Setup window will display *Setup Successful*. Click on Close (Refer to Figure 59).

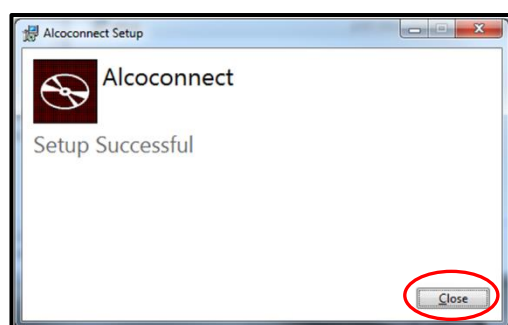


Figure 59 - Setup Successful

Following a successful installation, an Alcoconnect icon will appear on the Desktop.

12.2 Using Alcoconnect

Once installed onto the computer, access Alcoconnect as follows:

- Connect the device to the computer via the USB cable
- Double click the Alcoconnect icon
- Turn the HH4 device on
- The *Read Event Log* window will be displayed (Refer to Figure 60).

- A successful connection between the HH4 and the computer will be shown by a green segment on the *Read Event Log* window (Refer to Figure 60).

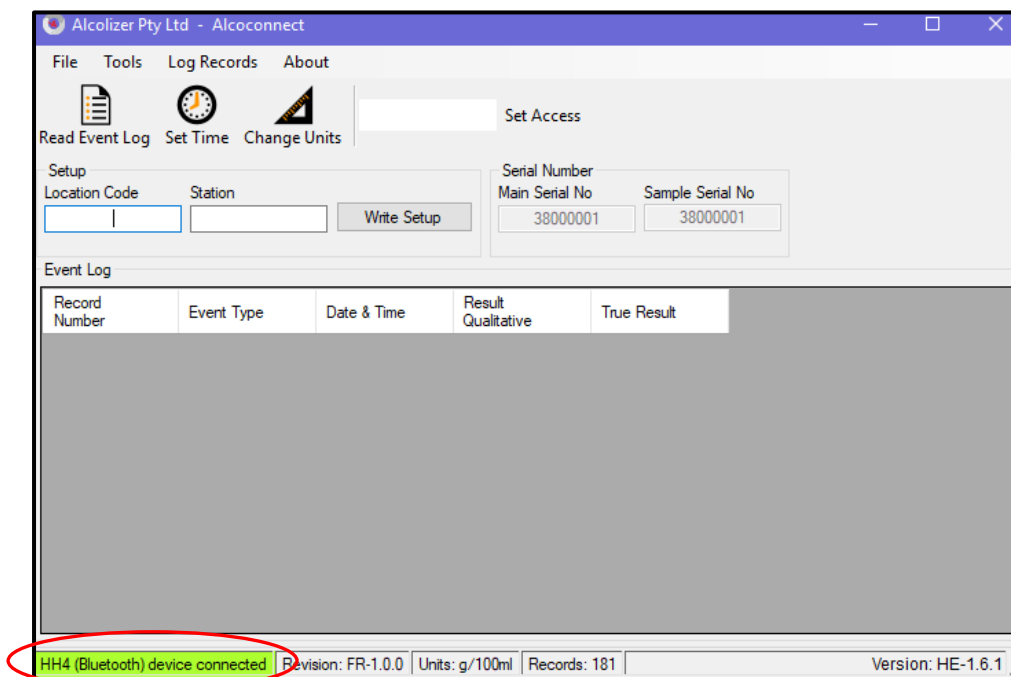


Figure 60 - Read Event Log Window

Click the Read Event Log icon and the Event Log will then be displayed (Refer to Figure 61).

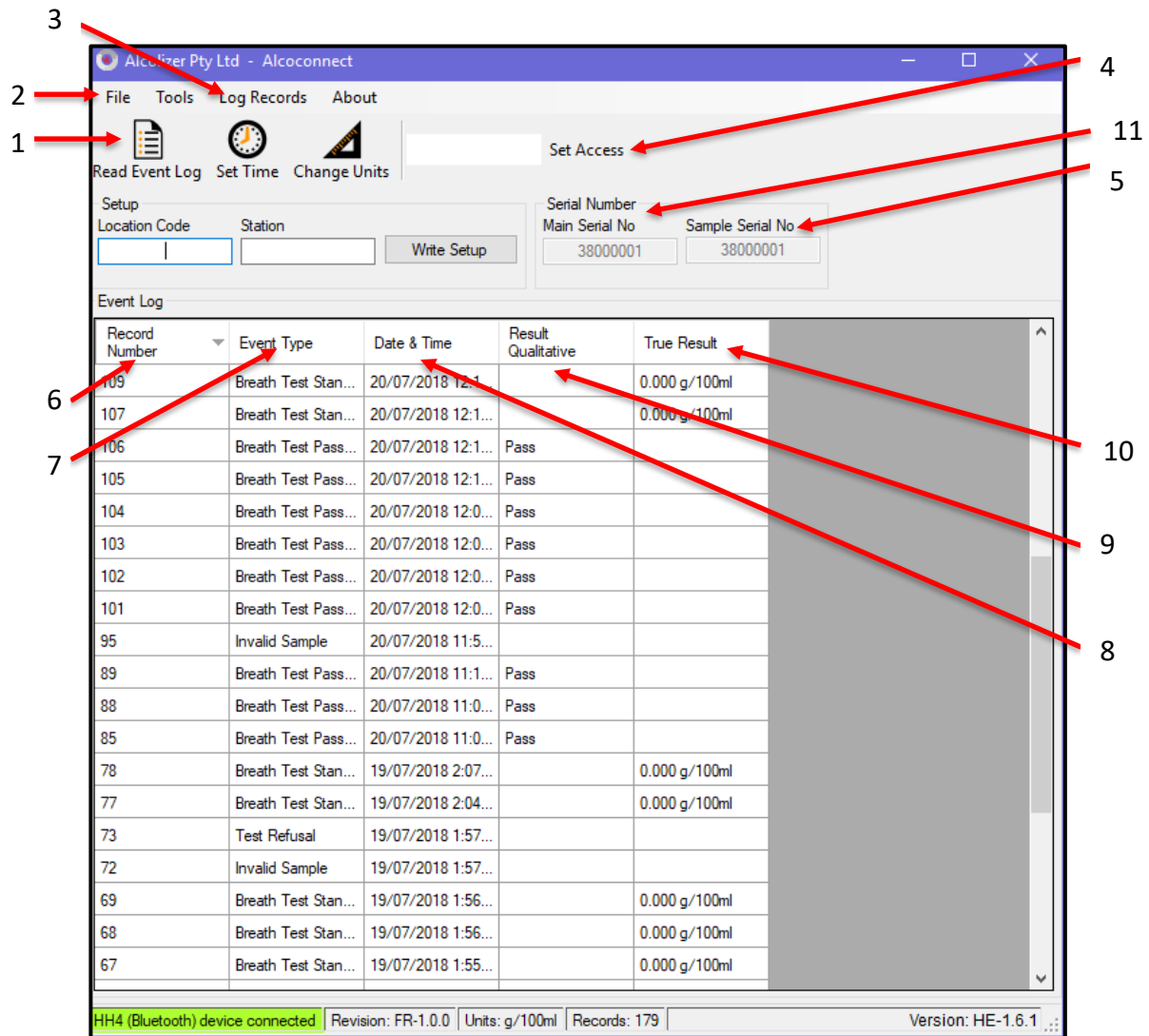


Figure 61 - Event Log

12.2.1 Navigating around the Event Log Page

Refer to the below table and Figure 61 for a description of the Event Log page.

Figure Reference	Icon, Button or Heading	Description
1	Read Event Log Icon	Select to download records from the HH4.
2	File Icon	Select for: Save Event Log – save as a .csv or xml file to a file location in computer or elsewhere. Language - Choose a language if the HH4 is configured for multiple languages. Options - Set Log Settings.
3	Log Records	Activates the Event Log application. Same function as the Read Event Log icon.
4	Set Access	Used by authorised persons to access certain Alcoconnect functionality. Select the icon after inputting correct access code.

5	Sample Serial Number	The serial number of the sample module.
6	Record Number	The number of each record.
7	Event Type	The type of test performed or event. E.g. breath test type (passive, standard), test timeout or refusal etc.
8	Date and Time	The data and time of the event.
9	Result Qualitative	Passive test result.
10	True Result	Mouthpiece test result.
11	Serial Number Main Serial No	The serial number of the HH4.

12.2.2 Set Log Settings (Filtering Data)

To filter the data, access the Log Settings by clicking on *File*, then *Options*. The Log Setting window will appear (Refer to Figure 62). The required criteria can be made by enabling/disabling the record types.

12.2.3 Saving Event Logs

Event Logs can be saved for future analysis by clicking *File*, then *Save Event Log*. The data can then be saved to the required location on the PC or laptop as a .csv or .xml file. To maintain the security of data, files must be saved and protected by the user.

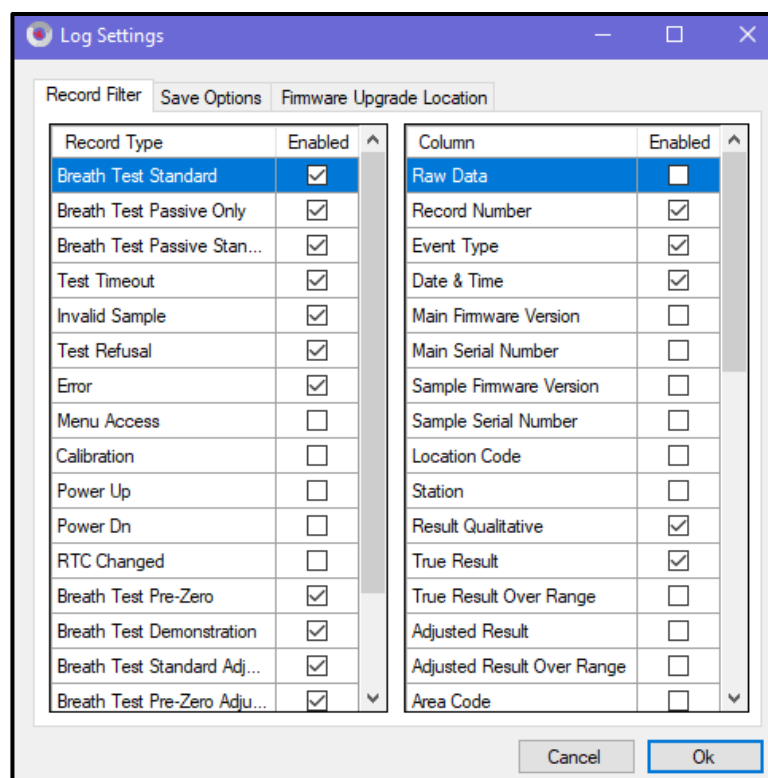


Figure 62 - Log Settings Window

12.2.4 Erasing Event Logs or Clear Logs on the Device

Insert access code '00005000' at set address field to enable additional features.