

Pooltest 10

User Manual

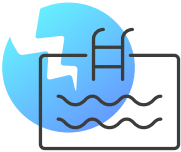


At Palintest we deliver:



Swimmer safety

Safeguard pool users through effective disinfection and water balance control



Pool integrity

Regular pool testing helps maintain your pool and protects the pool infrastructure



Water balance

Maintain optimum water balance to avoid corrosion or scaling



Cost efficiency

Optimise your pool treatment plan

Backed by over 100 years of research, our equipment has been designed to make testing simple and easy.

Our technology delivers reliable results, to drive confident water quality management, ensuring that we can all bathe and play safely.



Contents

Contents	2
General Information	3
Choosing and Performing a Test	5
Timer, Follow On	7
Check Standard Mode	8
Enter Check Standard Values	8
Enter Check Standard Measurement	9
System Mode Settings	10
Log	11
Operator ID/ Sample ID	12
USB	13
Units, Dilution Factor	14
DPD Range, System Lock, Water Balance	15
Temperature, Language, Set Time/Date	16
Date Format, Time Out, Backlight	17
LCD Contrast, Version	18
Technical Specification	19

Important Information about Bluetooth®

The Palintest Aqua Pal App that this instrument was designed to connect to, via Bluetooth, is now no longer available. Connectivity is therefore solely via USB. Therefore, all references to Bluetooth have been removed from this user manual. You may still notice menu options in the instrument relating to Bluetooth and it remains installed and functional on the instrument. However, it would require third-party software or an application to be developed for it to be useable. Please contact Palintest should you require further information about this.

Thank you for choosing the Palintest Pooltest 10. Please take time to read this manual and only use this instrument for the purposes specified. This instrument is waterproof to IP67. However, for best performance please ensure it is clean and dry before use.



Battery Cover

When changing the 3 x AA batteries, ensure this cover is replaced correctly and screws tightened just sufficiently to maintain waterproof seal with integral gasket.

Optics Cover

Should the optics need cleaning, remove cover and gently wipe the optical windows. Only use a soft, lint free cloth and a non-abrasive water-based cleaner, such as anti-static foam.

The LCD screen is provided with a backlight option. See System Mode settings.

Navigation



When the instrument starts up it will display the **'Choose a Test'** screen.

To get to the main menu (Mode screen), press the left arrow to highlight 'Menu' and press 'OK'



The Mode screen contains the following options

Choose a Test

Select this mode to choose and perform a test.

System Mode

Select this mode to change the system settings.

Check Standards Mode

Select this mode to check the optical performance of the instrument.

5 Choosing and Performing a Test

1

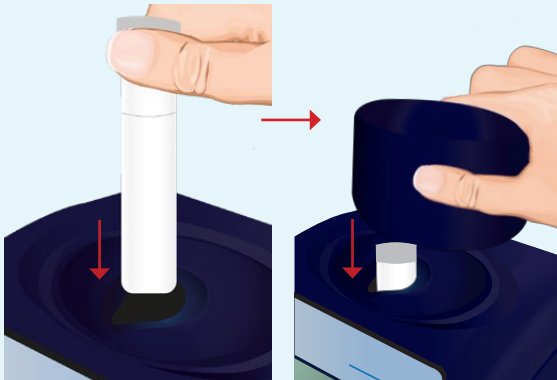


Select a Test in one of two ways:

- Use the arrows to scroll through the list.
- Key in the Phot Number of the test.

If you have dilution enabled, the dilution step will appear before blanking. See System Mode settings for more information.

2

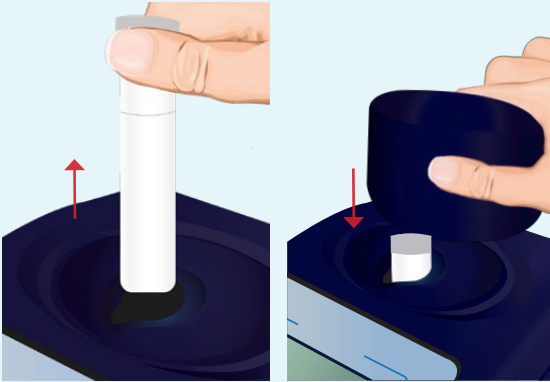


Insert the blank, place the light cap on the photometer and press OK.

Remove the blank when complete.

A blank is a sample of pool or spa water which does not contain any reagents.

3



Insert the sample with tablet reagents added (see Test Methods). Replace light cap and press OK.

4



When the test is complete, the result will display on screen.

By using the ▲ and ▼ arrow keys, the result will display with alternative chemical units, where available.

Message	Error	To solve
Error 7	Too much light	Ensure the light cap is being used to block out external light. If the error persists with the light cap in use, contact Palintest.
Error 9	Not enough light	Instrument is not detecting enough light to perform the test. Clean the test tubes being used to remove any marks. Clean the optics as described in General Information"

1



A timer can be set after the blanking process. Refer to the test method to see if this is required. The development time for the test will automatically appear. This can be modified using the arrow keys. Press start to set timer running.

2



When the timer is running the following options will appear:

Exit – this will return to the previous screen with the timer still counting down.

Exit and Read – this will return to the previous screen and will automatically read the sample when the timer has finished.

Follow On



Refer to the test method to see if this is required. If a follow-on test is available, it will appear in the bottom menu. Select if required.



Select 'Check Standard Mode' from the main menu. There are two options, one to enter the values, the other to read them back when checking performance.

Enter Check Standard Values

This process is only carried out when a set of standards is used for the first time. Otherwise, go straight to Check Standard Measurement.



Standard No	Wavelength (nm)	Test Value/Tolerance (%T)
44225/A		
44225/B	450	49.5± 2
44225/C	500	68.6± 2
44225/D	550	50.8± 2
	570	69.2± 2
	600	60.7± 2
	650	45.3± 2

Enter the value for Standard B for 450nm and press OK. Enter the value for standard B for 500nm and press OK

2



Repeat for check standards C and D.

Once complete, 'check standards assigned successfully' will appear on screen.

Check Standard Measurement

1



Select this to read the check standards. Then follow the on-screen instructions.

This checks the optical performance of the instrument. The measured value is compared to the previously entered values on the certificate.

2



An on screen report will be shown at the end of the process.

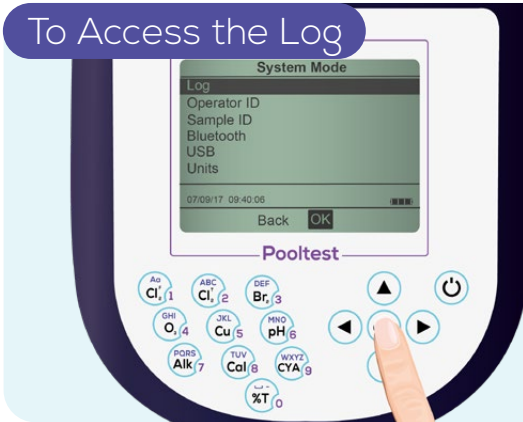
Select 'System Mode' from the main menu and choose from the following options:



Log	See Page 11
Operator ID/ Sample ID	See Page 12
USB	See Page 13
Units, Dilution Factor	See Page 14
DPD Range, System Lock, Water Balance, Temperature, Language, Set Time/Date	See Page 15
Date Format, Time Out, Backlight	See Page 17
LCD Contrast, Version	See Page 18

The instrument has an internal log of the most recent 500 tests. Each result, including those from Check Standard Mode, is recorded along with the sample number, time, date, operator ID, and sample ID.

To Access the Log

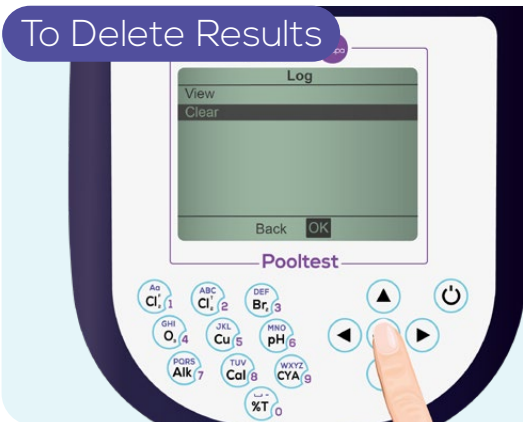


From the main menu select 'System Mode' then 'Log'.

Select 'View' to see the last result, use the keys to navigate through the log.

The log can be viewed on the device or downloaded to a PC as a text file using the USB connection. See page 14.

To Delete Results



To delete results from the log, select 'Clear', this will permanently remove all results from the log.

Operator ID/ Sample ID

Operator IDs and Sample IDs will be stored in the results log to show which operator performed the test and which sample was used.

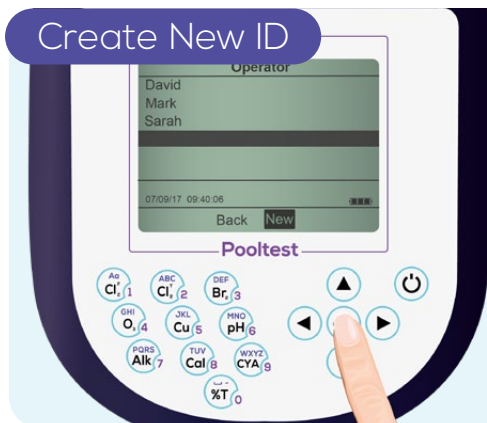


To access Operator ID or Sample ID from the main menu select 'System Mode' then 'Operator ID' or 'Sample ID'.

Up to 12 Operator IDs and 24 Sample IDs can be created.

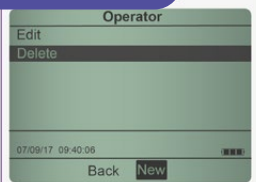


To edit an Operator ID or Sample ID, highlight the option, select 'Edit' and make the changes.



To create a new Operator ID or Sample ID, scroll to the bottom of the list, then select 'New' to create an ID.

Delete ID



To delete an Operator ID or Sample ID, highlight the option, and select 'Delete'.

Deleting an Operator ID or Sample ID will not affect previously recorded data.

USB



To transfer the log to a PC via USB, select 'USB' from the mode menu, then select 'Hard Drive'. Once the device is in 'Hard Drive' mode, connect to a PC using the supplied USB cable.

When the instrument is connected it will be accessible on the PC as a removable drive, containing the LOG.txt file. The log file should be copied to the PC before being opened or edited in a text viewer or other application.

This data can be imported into most common spreadsheet applications by using the import wizard and setting the columns as 'Tab' delimited.

COM Port

In COM Port mode results are streamed across the USB connection in real time using a serial communication format (emulating RS-232).

In this mode of operation, Palintest COM Port drivers are required. Please contact Palintest to access the drivers for installation.

Units



Units can be displayed in the following options:

- mg/L
- ppm
- mmol/L
- µmol/L
- g/L
- µg/L

Select system mode then units to change the units displayed.

Changing the units will not affect previously stored results.

Dilution Factor

If the sample concentration is higher than the test range, then it may be necessary to dilute the sample with deionised or distilled water. A dilution tube is available to simplify this procedure.

See the separate Test Instructions for how to do this.

To simplify this process, a dilution factor can be added to the test procedure. From the main menu select 'System mode' then 'Dilution Factor'. The highlighted option will be the one which is currently enabled. To change, highlight the option and press OK. The screen will return to System Mode.

If the sample has not been diluted, leave the value as x1.

DPD Range



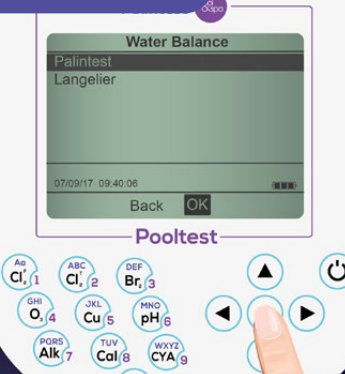
There is a choice of two ranges for the DPD test for Free and Total Chlorine. See Test Instructions to ensure that range selected matches the reagents being used.

System Lock



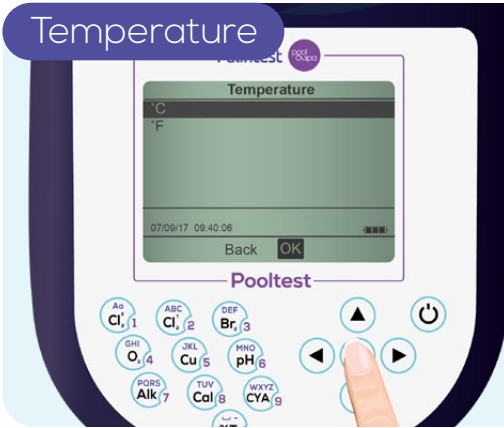
The system settings can be locked to prevent changes. From the main menu, select 'System Mode', then 'System Lock'. To lock or unlock the instrument enter the code 6812. To change this code, contact Palintest.

Water Balance



Water Balance can be set to use the Palintest Scale or Langelier Index. Select the preferred option and press OK

Temperature



Temperature can be set to either °C or °F.

From the main menu, select 'System mode', then 'Temperature'. Highlight the preferred option and press OK.

Language



Language options are:

English, Français, Deutsch, Español, Italiano, Türkçe, and Chinese.

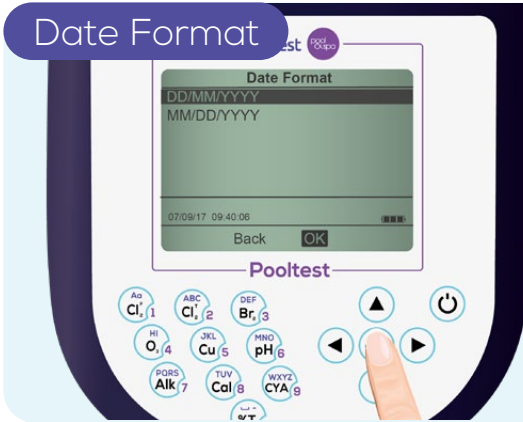
From the main menu, select 'System mode', then 'Language'. Highlight the preferred option and press OK.

Set Time/Date



From the main menu select 'System mode' then 'Set Time' or 'Set Date'. Use the navigation keys to select and adjust each part of the time or date.

Date Format



To change the date format select 'System Mode' from the main menu then 'Date Format' DD/MM/ YYYY or MM/DD/YYYY.

Time Out



From the main menu select 'System Mode' then 'Time Out'. Options can be set to 5 minutes, 15 minutes or Off. Highlight the preferred option and press OK.

Backlight



The instrument display features a high intensity backlight for use in low light conditions. To change the backlight settings, from the main menu select 'System mode' then 'Backlight'. Highlight the preferred option and press OK.

LCD Contrast



From the main menu select 'System mode' then 'LCD Contrast'. The LCD screen contrast can be manually adjusted. Use the up/down buttons to adjust the contrast until the alternating shapes are clearly visible and press 'Save'.

Version



From the main menu select 'System' then 'Version'. The software version number is displayed.

This will be needed if contacting Palintest for technical support.

19 Technical Specification

Instrument type	Dual light source photometer offering direct-reading of pre-programmed test calibrations, absorbance and transmittance
Optical source	Dual LED source with optical filters
Optical detectors	Silicon photodiodes
Peak wavelengths	450 nm, 500 nm, 550 nm, 570 nm, 600 nm, 650 nm
Wavelength selection	Automatic
Wavelength accuracy	±5 nm
Range	1 - 100%T (0-2 Abs)
Photometric accuracy	± 1.0% T
Display	320 x 240 pixel LCD with contrast adjustment
Backlight	Timed, on key press with auto-dim and off
User interface	On-screen prompts available in English, French, Spanish, German, Italian, Turkish and Mandarin (Chinese).
Keypad	Numeric keypad with four navigation keys and OK key
Size (W x L x H)	150 x 250 x 70mm
Weight	975g
IP Rating	IP67
Batteries	3 x 1.5v 'AA' batteries
Lifetime	40 hours (typical use, backlight off, 'AA' alkaline cells)
External power	5V DC, 900mA delivered via USB port
Power management	Auto-switch off (user selectable between 5-15 minutes on battery) or continuous operation
Power saving	User control for Backlight to minimise battery consumption
Tests available	Preprogrammed for Palintest tablet and liquid reagent tests. Can also be used in Transmission (%T) mode.
Test selection	Selection from 'on screen' list or use number keys to select test number.

Test cuvettes	12-20mm OD with automatic cuvette centering
Result units	g/L, mg/L, ppm, mmol/L, $\mu\text{mol/L}$, $\mu\text{g/L}$, ppb
Blanking	Automatic blanking at all wavelengths. Blank value stored in memory until power off or new blank recorded
USB	USB Type B port. Waterproof connection cable available.
Instrument memory	Non-volatile storage
Memory capacity	Up to 500 data sets. Each data set includes date, time, sample ID, operator ID, method number, method name, result, units
Sample IDs	Up to 500 at any time
Operator IDs	Up to 100 at any time
Data download	To computer via USB using Hard Disk or COM port mode.
Data output format	Plain text
Software upload	Software update by 'drag and drop' in USB Hard Disk Mode

Palintest

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