

# Photometer Maintenance Guide

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Product Support Information

This guide is designed to help ensure your instrument remains in a good condition and continues to deliver accurate results. It includes a series of the most Frequently Asked Questions (FAQs) about maintaining photometers, and provides some guidance on how to keep the instrument in best use. Should you have any further questions please contact the sales team on +44 (0) 191 491 0808 or email [sales@palintest.com](mailto:sales@palintest.com)

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## Best practice maintenance tips:

- Keep the instrument as clean and dry as possible.
- Before blanking, wipe down the test tube with a clean microfibre cloth. Dirt or marks on the glass can affect the results.
- Always use the cap for the test tube to prevent spillages into the test chamber
- Remove the test tube from the chamber once the test is complete.
- Palintest recommend a monthly optics clean to prevent any dirt or mark on the lens from affecting the photometer reading.
- Store the instrument in a clean and dry place when not in use.
- Dirty or damp cloths should not be stored in the carrying case with an instrument.

## Frequently asked questions:

### 1. Why am I getting a service reminder and how do I turn it off?

Palintest recommend that instruments are serviced on a yearly basis. The notification is built into the instrument to remind you that your instrument is due a service. To disable the notification, with the instrument switched on, restart the instrument consecutively three times. Please note that once the reminder has been disabled, it will not show again unless this is reset by Palintest's service department.

### 2. Why is my instrument using a lot of batteries?

There are two main reasons why an instrument uses a lot of batteries. Firstly, like many devices, the back light of the instrument may be utilising a lot of power. To disable this please follow the instructions below for each instrument.

Alternatively it may be that the instrument's test cell has been contaminated and therefore it is drawing on the battery power to get the correct light levels needed for correct operation. The cleaning guide below explains how to overcome this issue.

### 3. How do I turn off the backlight on the instrument?

The backlight can be disabled on all instruments, please see the instructions below for your instrument.

#### Multiparameter Photometers and Compact Turbimeters:

On the main menu select the **System** or **System Mode** tab, within here you can select the **Backlight** tab. Here you can set the backlight to **Off**.

#### Compact Photometer

When turning the instrument on, hold down the **On** button to deactivate the backlight.

### 4. My instrument is IP67 rated, what does this mean?

IP67 means that the electronics of the instrument are protected in case it is splashed or dropped into a pool of water.

The Ingress Protection rating system is a classification system which shows the degrees of protection from solid objects and liquids. The first number refers to the protection against solid objects, normally dust. The number 6 signals that the instrument has total protection against dust. The second number of the IP rating

system refers to protection against liquids. The number 7 refers to protection against immersion from 15 – 100cm.

Please be aware that humidity is different and can penetrate the plastics of an instrument if it is left in a humid environment for long periods of time. If the inside of the case is wet, we recommend that you allow the foam to dry out before closing the lid. Where possible the instrument should not be left in a hot and humid environment for prolonged periods of time. For example we recommend that an instrument is stored in a cool area away from the pool area once testing has been completed.

## **5. I am getting unexpected results from my Compact Turbimeter, why is this?**

Lower than expected results can be caused by contamination of the optical chamber which prevents the light sources being transmitted with full intensity. If you are experiencing this, please return your instrument to Palintest for evaluation.

If results are consistently higher than expected please ensure your sample test tube is clean and free from scratches. Small scratches on the sample tube can cause discrepancies in the test results. To reduce the effect of these scratches, place two or three drops of Silicone oil onto the tube and wipe across the glass using the lint free cloth.

If you are still experiencing unexpected results, please contact us.

## **6. What are check standards?**

Check standards are used to determine if an instrument is still within calibration.

Consider the following when using check standards:

- Standards are specific to an instrument, please ensure that you are using the standards that match your instrument.
- Standards have a shelf life and should not be used after the expiry date.
- Liquid standard must remain at room temperature (20° - 25° degrees) for over a couple of hours before use.
- Each set of standards come with a certificate. Before using the standards confirm that the certificate is present and matches the number on the test tube.
- Fingerprints, marks and scratches can affect the results of your test. Before testing, wipe down the test tube with a clean microfibre cloth. If the test tube

has scratches, place two or three drops of Silicone oil onto the tube and wipe across the glass using the microfibre cloth.

## 7. Can my instrument be recalibrated using check standards?

Check standards allow you to confirm that your instrument is reading results correctly. To have your instrument recalibrated it will need to be returned to Palintest.

## 8. How do I clean my Photometer 7100/7500 or Pooltest 9/25?

Four parts of the instrument require cleaning, shown in the diagrams below. To clean, place a small amount of anti-static cleaning foam on to a lint free cloth and wipe the instrument.

### 1. Sample holder

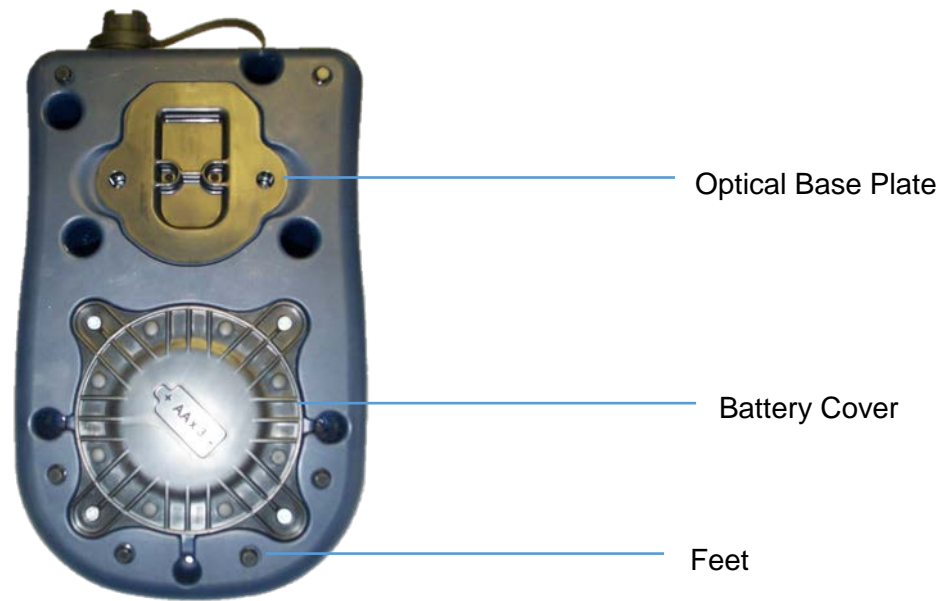
Diagram 1 shows the surface around the sample holder, all visible marks on this area should be removed.



*Diagram 1: Sample Holder*

### 2. Outside optics base plate

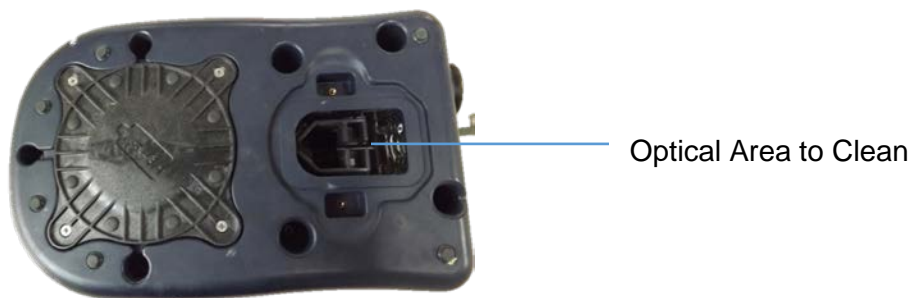
Turn the instrument over and undo the two screws on the base of the instrument, as demonstrated in diagram 2. Gently wipe the curved areas near the LEDs and the flat area on the opposite side.



*Diagram 2: Underneath the Multiparameter Instrument*

### 3. Inside optic base plate

Contamination on the inside of the base plate can migrate onto your calibration tubes leading to scratches which damage the standards. If marks cannot be removed from the base plate, a new base plate should be fitted.



*Diagram 3: Optical Area to Clean*

When refitting or replacing a base plate, you must ensure screws are tightened so that the standards are set are the correct height. Failure to do so can lead to compromised results.

## 9. How do I clean my Compact photometer?

To clean your compact photometer, you do not need to open up the instrument. Place a small amount of anti- static cleaning foam on to a lint free cloth and wipe the instrument.



*Diagram 4: Compact Photometer*



## Error Codes: What do they mean?

Photometer 7100, Photometer 7500, Pooltest 9 and Pooltest 25

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, please return your instrument for evaluation.
Error 9	Not enough light	Instrument does not have enough light to power the test, please clean the instrument to remove any potential marks. Please return your instrument for evaluation.

Error 9 is displaying but only on certain tests, why is this?

Different tests require different light levels and therefore the instrument may still be able to perform certain tests.

### Compact Meters

Error 5	Board Fault	Please return your instrument for evaluation
Error 6	Board Fault	Please return your instrument for evaluation
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, please return your instrument for evaluation.
Error 8	Optical component fault	Clean the optics and ensure the blank tube is clean. If the error persists please return your instrument for evaluation
Error 9	Not enough light	Instrument does not have enough light to power the test, please clean the instrument to

		remove any potential marks. Please return your instrument for evaluation.
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### Compact Turbimeter

Error 100	Reading is too high	Reading is above the limit of 1050 NTU
Error 101	Standards	Standards have been inserted in the wrong order
		Standards are out of date or have marks on the glass
		Optical chamber has been contaminated - instrument will need to be returned for evaluation.
Error 107	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, please return your instrument for evaluation.
Error 110	Battery power low	Battery power is too low to take a reliable reading. Replace batteries or recharge instrument.
Error 111	Battery power critical	The instrument does not have enough battery to power and will shut down. Replace batteries or recharge instrument.

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