Piranha/Cobia & Quick Check

Getting Started

Piranha/Cobia & Quick Check Getting Started - English - Version 1.14A

RTI articel number: 9629057-00

Welcome to Quick Check

Ocean 2014 with Quick Check is a is a powerful tool for everybody working with Quality Assurance of X-ray systems. Ocean 2014 can be used with the X-ray meters Piranha and Cobia from RTI.

INDEPENDENT X-RAY
QUALITY ASSURANCE

NOTICE

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Contact Information - World-Wide

RTI Group AB
Flöjelbergsgatan 8 C
SE-431 37 MÖLNDAL
Sweden

Phone: Int. +46 31 7463600

E-mail
Sales: sales@rtigroup.com
Support: support@rtigroup.com
Service: service@rtigroup.com

Web site: https://www.rtigroup.com

Contact Information - United States

RTI Electronics Inc.
33 Jacksonville Road, Building 1
Towaco, NJ 07082
USA

Phone: 800-222-7537 (Toll free)
Int. +1-973-439-0242
Fax: Int. +1-973-439-0248

E-mail
Sales: sales.us@rtigroup.com
Support: suppor.ust@rtigroup.com
Service: service.us@rtigroup.com

Web site: https://www.rtigroup.com

Intended Use of the Ocean Software

Together with instruments from RTI Group AB the Ocean Software is intended to be used for independent service and quality control, including measurements of kerma, kerma rate, kVp, tube current, exposure time, luminance, illuminance, and dose area product, within limitations stated below.

If installed according to accompanying documents, the product is intended to be used together with all diagnostic X-ray equipment except for:
- therapeutical X-ray sources.
- X-ray equipment w ith tube potential below 18 kV or above 160 kV.
- X-ray equipment on w hich the instrument cannot be mounted properly.
- specific types of X-ray equipment listed in the instructions for use or in additional information from the manufacturer.

With the X-ray installation without patient present, the product is intended to be used:
- for assessing the performance of the X-ray equipment.
- for evaluation of examination techniques and procedures.
- for service and maintenance of the X-ray equipment.
- for quality control of the X-ray equipment.
- for educational purposes, authority supervision etc.

The product is intended to be used by hospital physicists, X-ray engineers, manufacturer's service teams, and other professionals w ith similar tasks and competencies. The operator needs training to be able to use the product as intended. This training can be achieved either by study of the manual, study of the built-in help function in measurement softw are or, on request, by a course ordered from the manufacturer.

The product is intended to be used inside X-ray rooms ready for clinical use and can safely be left sw itched on and in any measuring mode in the vicinity of patients.

The product is NOT intended to be used:
- for direct control of diagnostic X-ray equipment performance during irradiation of a patient.
- so that patients or other unqualified persons can change settings of operating parameters during, immediately before, or after measurements.
- for any guidance to diagnosis of patients.

Table of Contents

1 Quick Check

Use Quick Check when you just need to make a quick measurement. Quick Check automatically adapts to the meter you use and the detector you have connected. It is fully plug-and-play and any change you do is automatically detected and Quick Chick adapts to the new situation. Quick Check is designed for a tablet (touch screen) but works of course also on a standard laptop. You can do the following with Quick Check.

- Quick measurements
- Save
- Print
- Export to Excel
- Applications with analysis

1.1 Start the Tablet

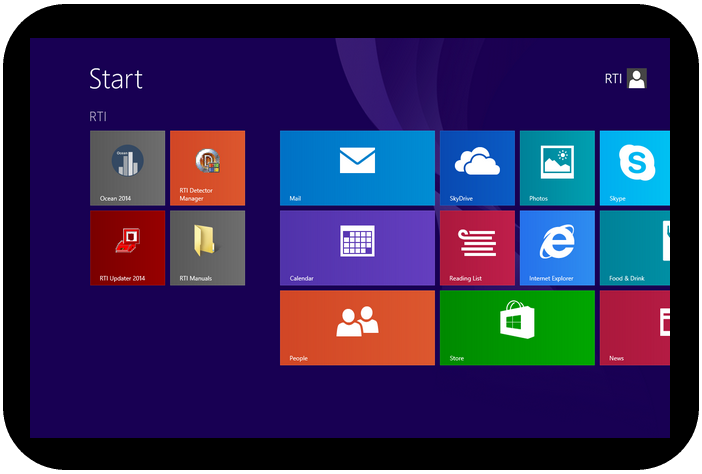
This is a quick introduction to how you get started with the tablet that comes with your meter. The tablet has Windows 8 and is configured and ready to be used with the meter.

To start measuring:

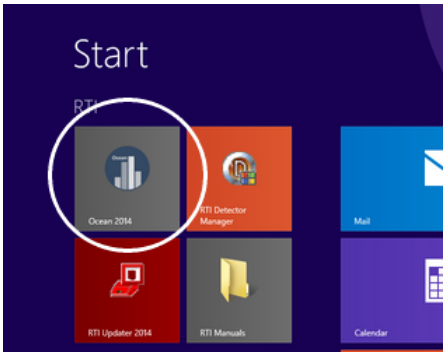
1. Power on the meter.

2. Power on the Tablet.

3. Windows 8 starts and the Start screen is launched.

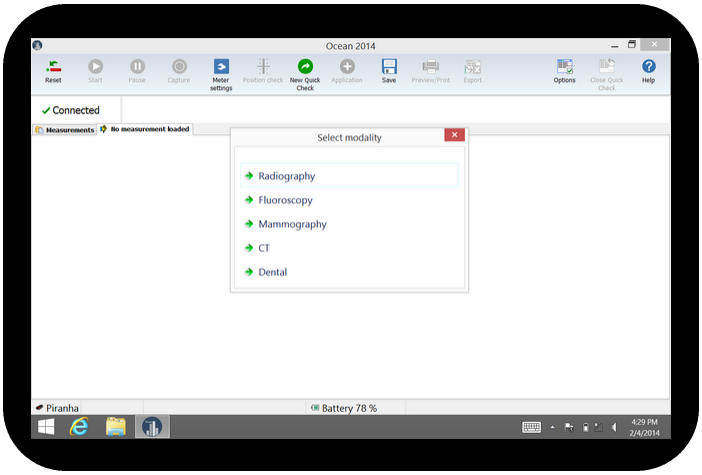


4. You will see the Ocean 2014 tile to the left, click on it to start Ocean 2014.



5. Assuming that your meter is powered on; Ocean 2014 starts in Quick Check mode.

6. Select the modality you want to use:



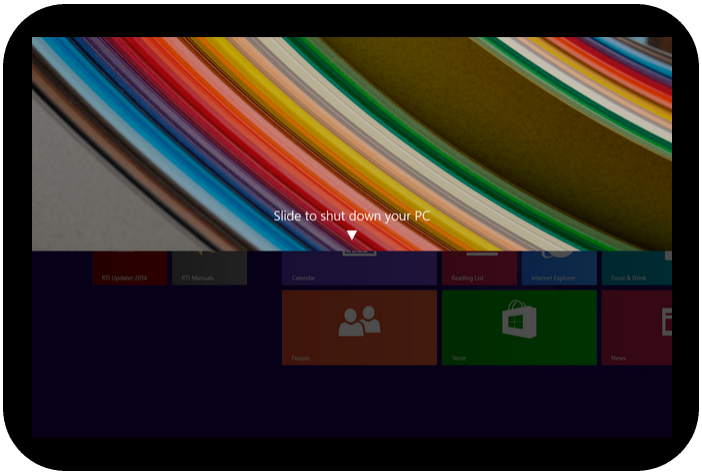
The coming topics will describe how you perform your first measurement and how you navigate in Quick Check.

How to turn off the Tablet

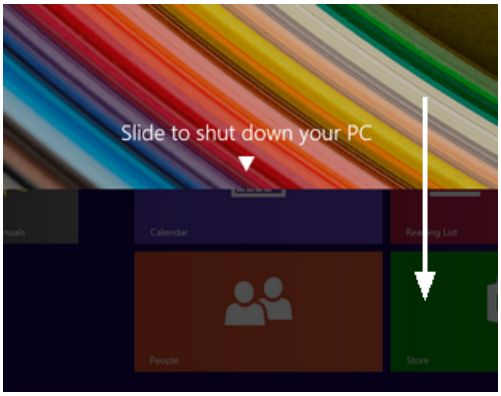
It is recommended that you turn off the Tablet, and not just puts it in sleep mode, when you don't use it. It consumes power even in sleep mode and the battery will be drained quite fast even if you don't use it.

To turn off the tablet:

1. Press the power button and keep it pressed until the screen shows the following:



2. Release the button and slide the panel down to shut down the Tablet.



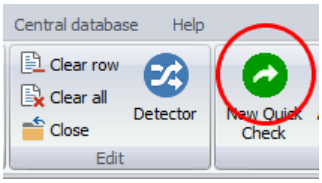
1.2 First measurement with Quick Check

By default, Quick Check is launched automatically when Ocean 2014 starts and the meter is available. Use Quick Check when you just want "a meter" to do a quick measurement. Quick Check is extremely simple to use since it automatically recognizes what type of meter you have and which detectors you use. It is full plug-and-play, directly when you unplug or plug in a detector; Quick Check sets up the measurement for you. You can save data you measure with Quick Check but you must save manually - Quick Check will never ask you if you want to save. It is also possible to print and export measured data to Excel. Quick check also has built-in applications for accuracy, linearity, reproducibility, half-value layer and more. Quick check is designed for use with a tablet and easy to operate directly on a touch screen.

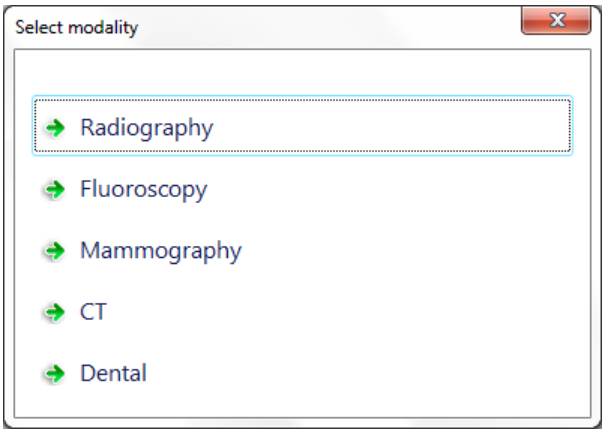
Let us start with a simple measurement to illustrate how to use Quick Check. This example assumes a Piranha 657. If you have another model follow this example and apply it on what you see on your screen when you use your Piranha.

Make sure your meter is powered on and within distance for Bluetooth communication or connected via USB. Disconnect any external probe that might be connected (unless you have a Piranha model that only works with external detector or a Cobia Sense). Assume that we are using a Piranha 657.

1. Start Ocean 2014 or start the Quick Check from the Measure tab on the ribbon bar if you are in Ocean 2014 main view:
(Note: If you use Windows 8; you start Ocean 2014 from the desktop)

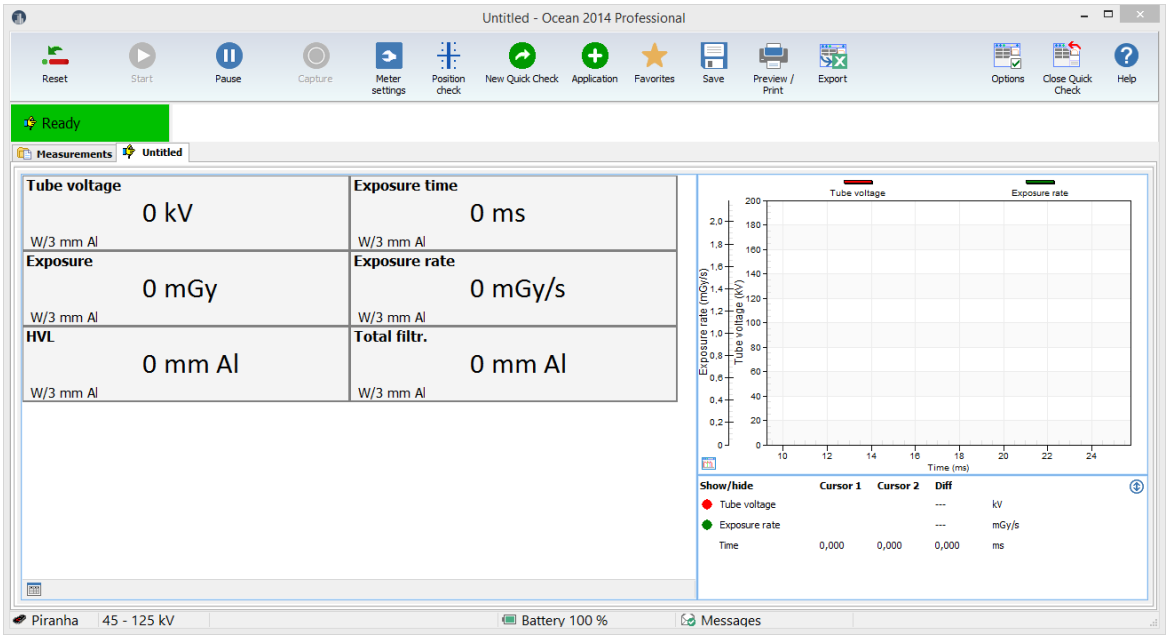


2. Quick Check starts and a menu will be shown. The list is depending on your meter type, it might not appear at all.

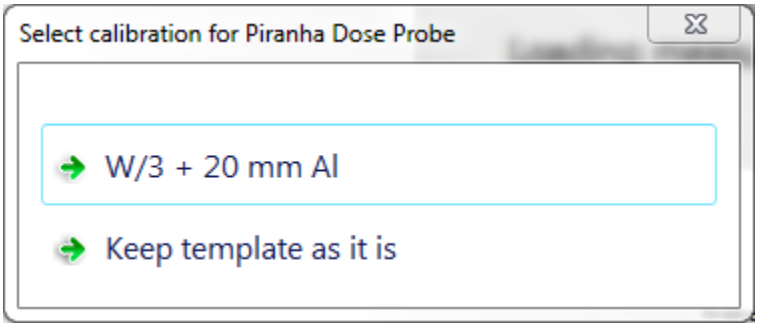


3. Select for example Radiography. For other modalities from here and on; it may be several choices to make before the measurement screen appear. For example, for mammography you must chose calibration and if compression plate is used or not.

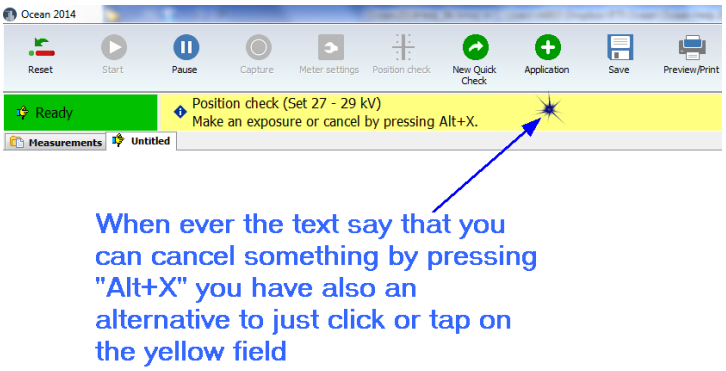
4. The measurement loads and you are ready to start to measure.



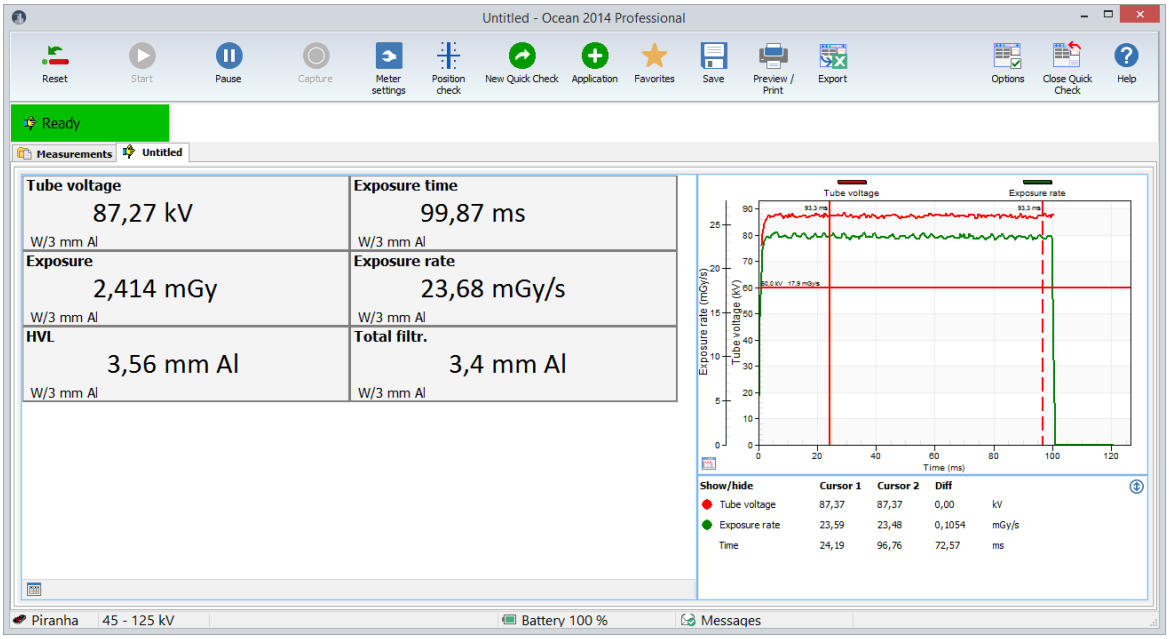
If the selected Quick Check is using a calibration that isn't available in your meter/detector, a dialogue is shown. You can here select another calibration instead of the one saved in the document.



In some situations a message is shown with a yellow background; all such messages can be closed by just clicking or tapping on the yellow background.



5. Make some exposures.



6. You can operate Quick Check with mouse and keyboard or with your fingers if you have a tablet with touch screen.

Quick Check is designed to be simple to use on a tablet (touch screen) but you can of course also use a mouse. Below are the most important operations described.

Toggle between displays and logged data: Click on the button in the lower left corner of the display panel or sweep left or right on the displays if you use a tablet.

Enlarge waveform: Click on the button in the lower left corner of the waveform graph or double-click on the waveform. Same to minimize it.

Zoom waveform: Zoom the waveform by holding down the left mouse button and mark the part you want to zoom. When you have zoomed it is remembered for current exposure. If a new row is automatically created for the next exposure, the zoom state is inherited for the new row.

Enlarge a display/single display: Double-click on a display.

Change unit of measure: Right-click on a unit and choose a new unit from the list shown. To right-click one tablet; hold your finger on the unit, remove it when a small square appear.

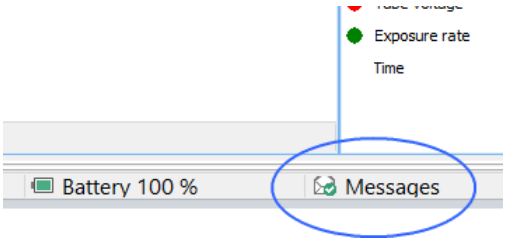
Change kV range: Click on the kV range indication in the lower part of the screen.

You have now seen the basic function of the Quick Check. You can now try to connect an external detector (if you have one) and see that Quick Check will directly recognize the probe and ask you what to do.

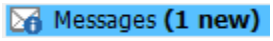
Read also the full description of Quick Check in the topic Run Quick Check on a Tablet to further see how you operate Quick Check. This section is followed by more about how to store, print and how to export your measured data to Excel.

Messages

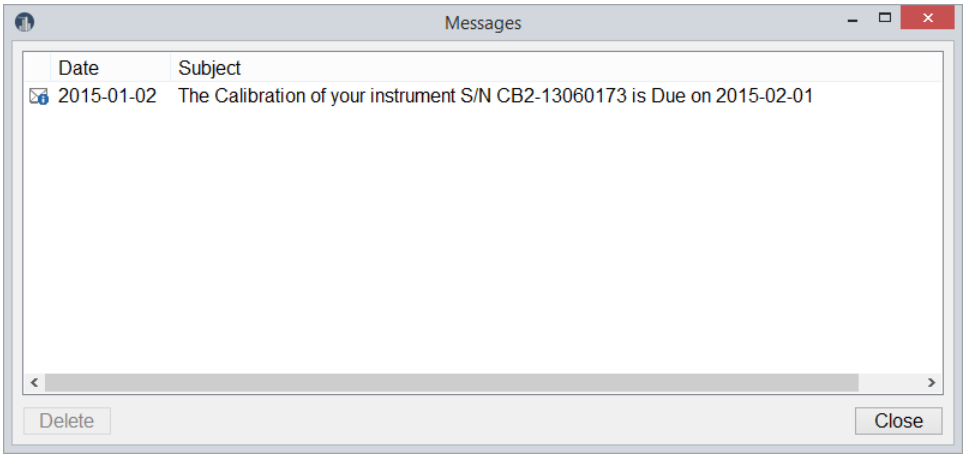
It is indicated on the lower status bar if a message arrives.



When a message arrives the icon changes to:



You can now click on the icon to open the message list:



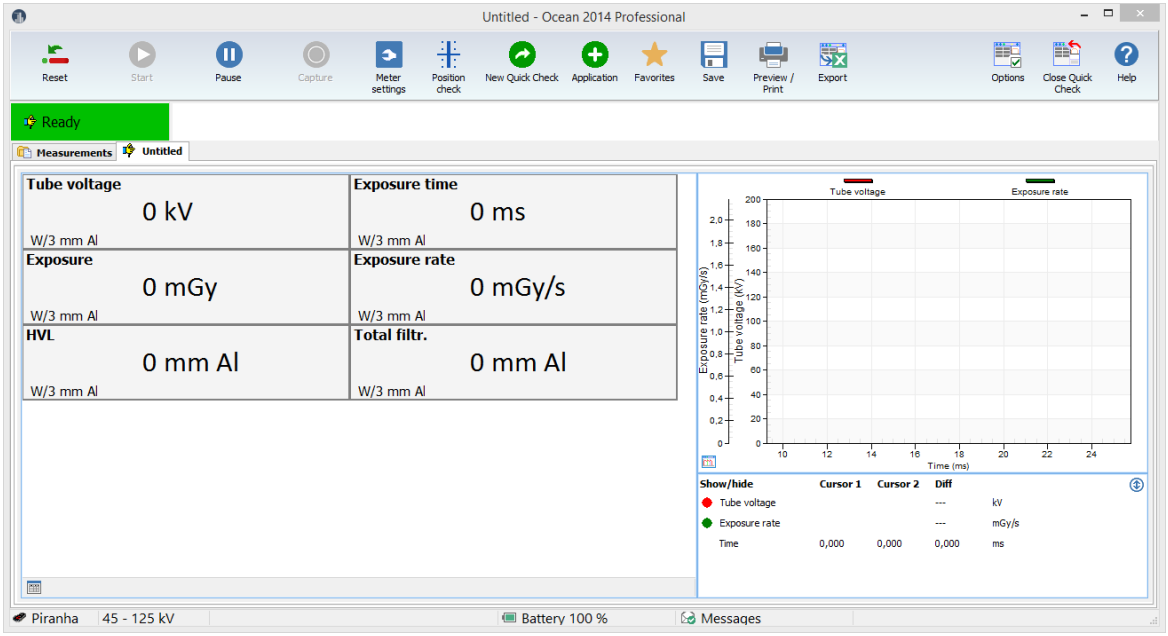
Here are all your messages shown. Double-click in the list to read a message. Unwanted messages can be deleted.

You can turn off calibration reminders in the Program Options, see more in section Program Options

1.3 Run Quick Check on a Tablet

Quick Check is simple to operate and use both on a tablet with touch screen or a normal laptop. This section will describe all the actions you can use to operate Quick Check if you use a tablet, as well as a laptop.

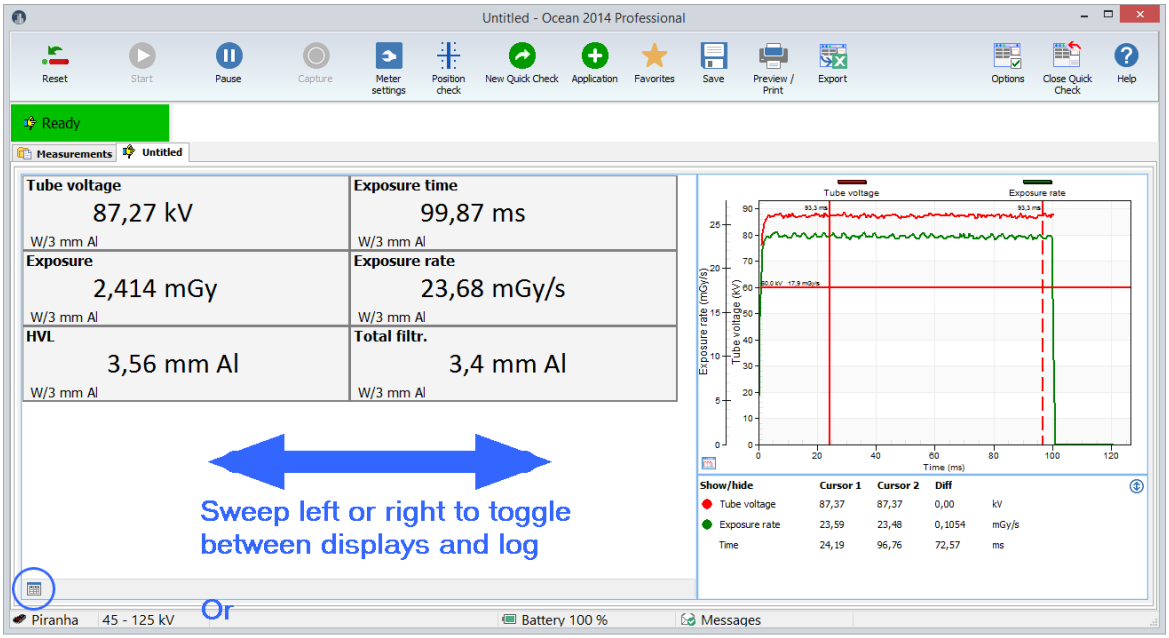
Quick Check main screen for standard measurements looks like this:



You have a ribbon bar at the top with different buttons to activate different function. You can click on these buttons with a mouse click or by tapping on the screen with your finger if you use a tablet.

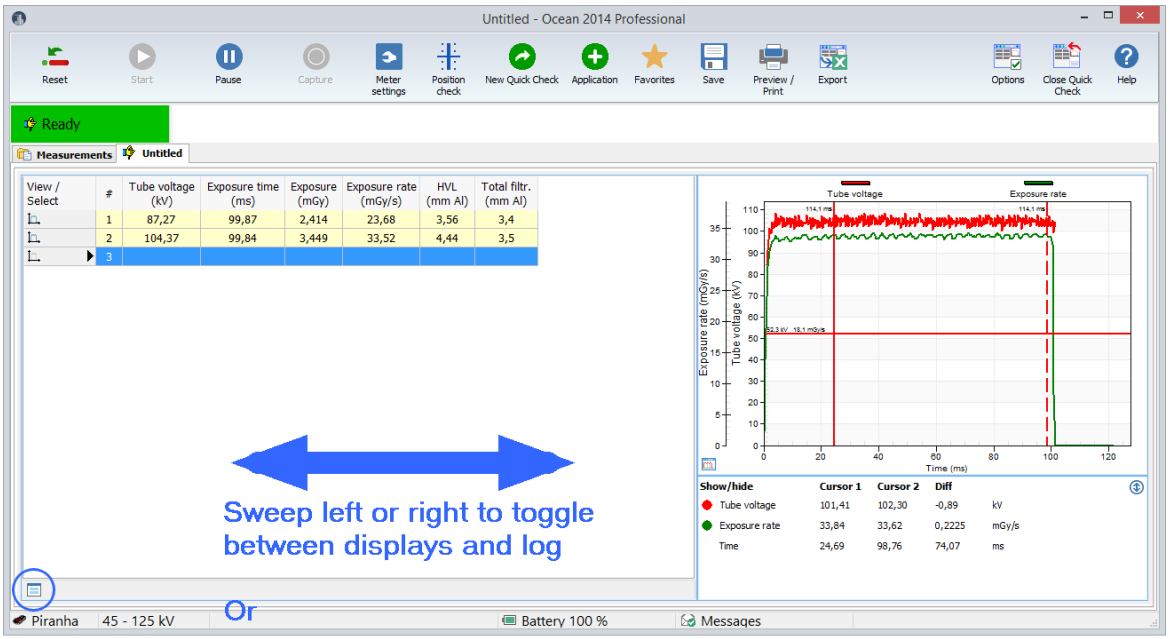
Switch between display and list with exposures

Click on the button in the lower left corner or sweep on the display area of the screen.



Click on the button to toggle between displays and log

The log is shown and you can see all the measurements you have done during this Quick Check session.

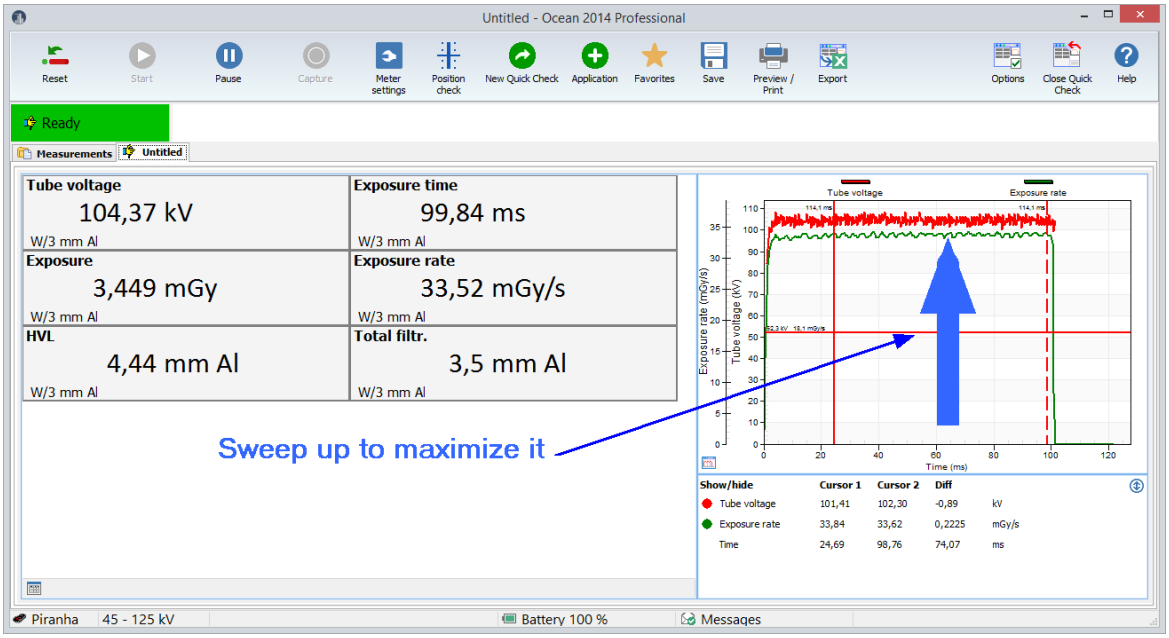


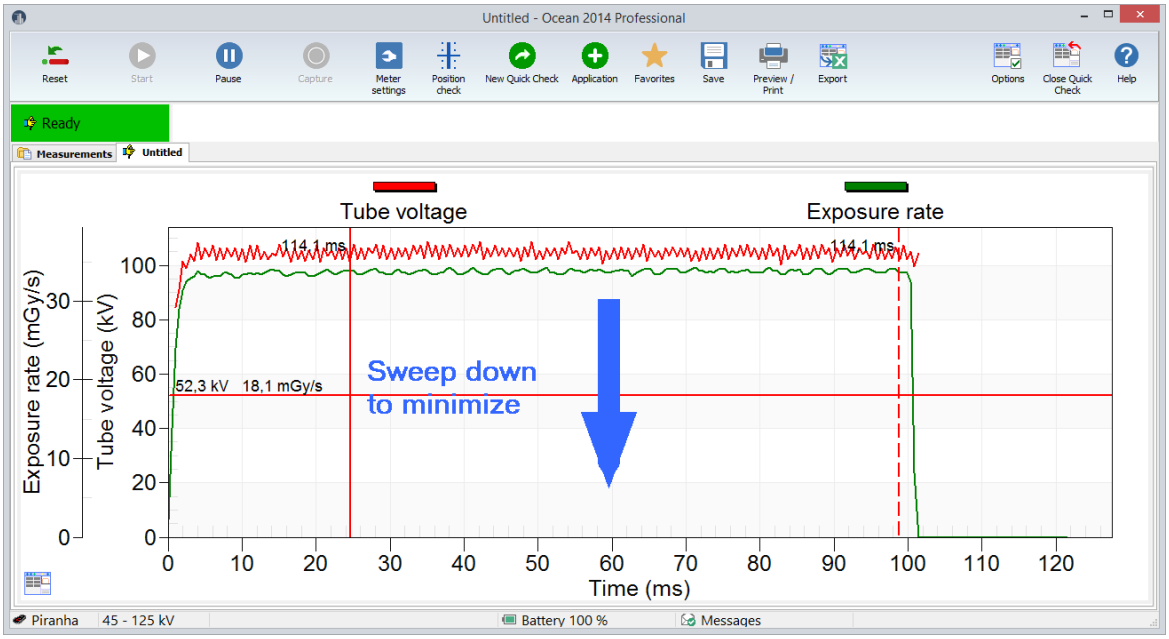
Click on the button to toggle between displays and log

Sweep or click on the button to go back to the displays.

Enlarge the waveform

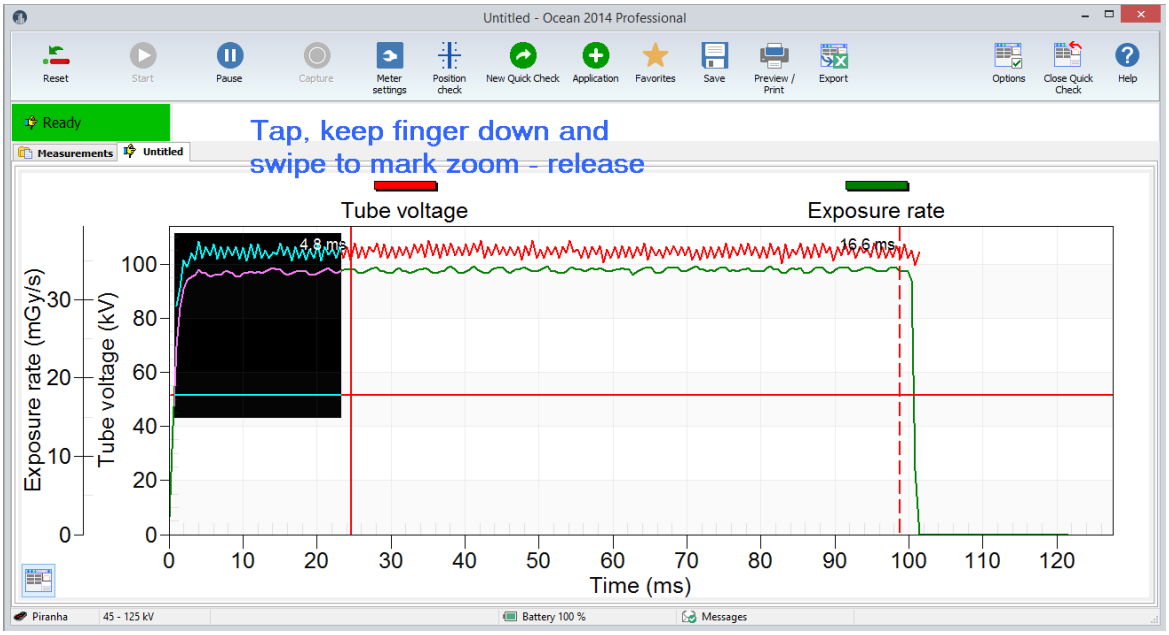
You can maximize the waveform by double-clicking (tap twice) on it.



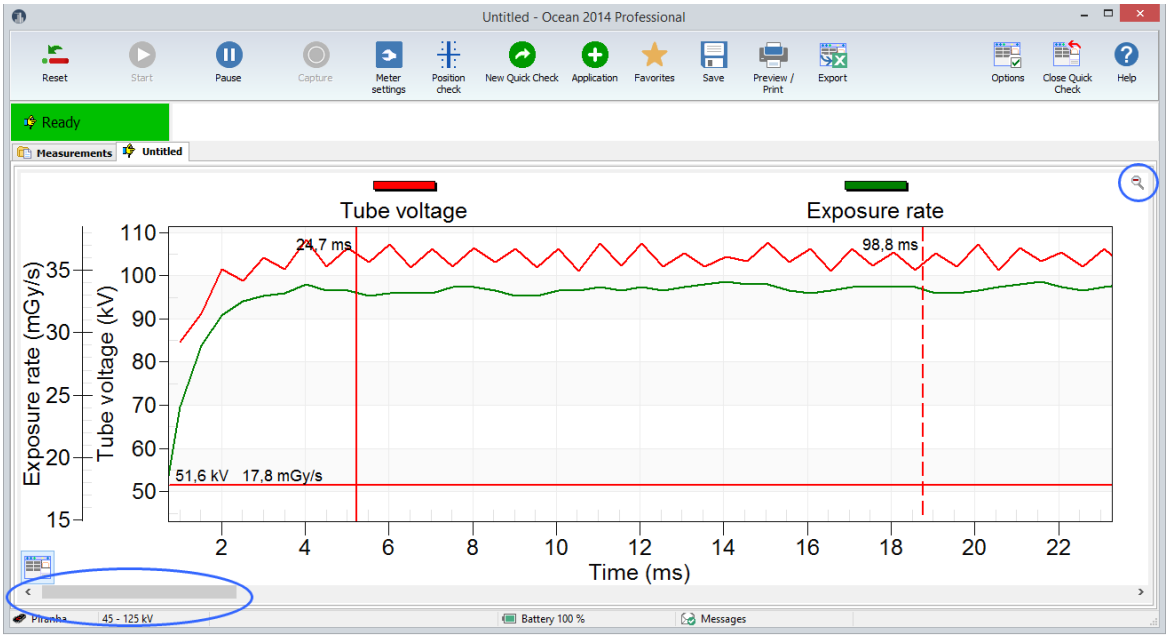


Zoom the waveform

Tap on the waveform and move finger (or right-click, hold down and move mouse pointer) to mark the zoom.



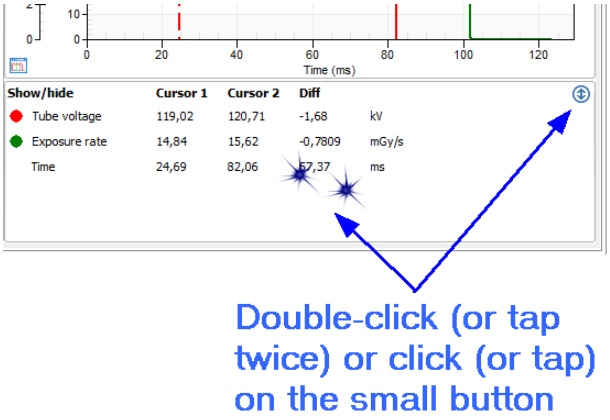
The zoomed waveform is shown when you release and you can now see details.



The current zoom state is now automatically locked and the waveform will be saved in this way. If a new row is automatically created, the new row inherit the zoom state.
You can use the scroll bar to "move" backward and forward. Click on the button in the right upper corner to go back to full view.

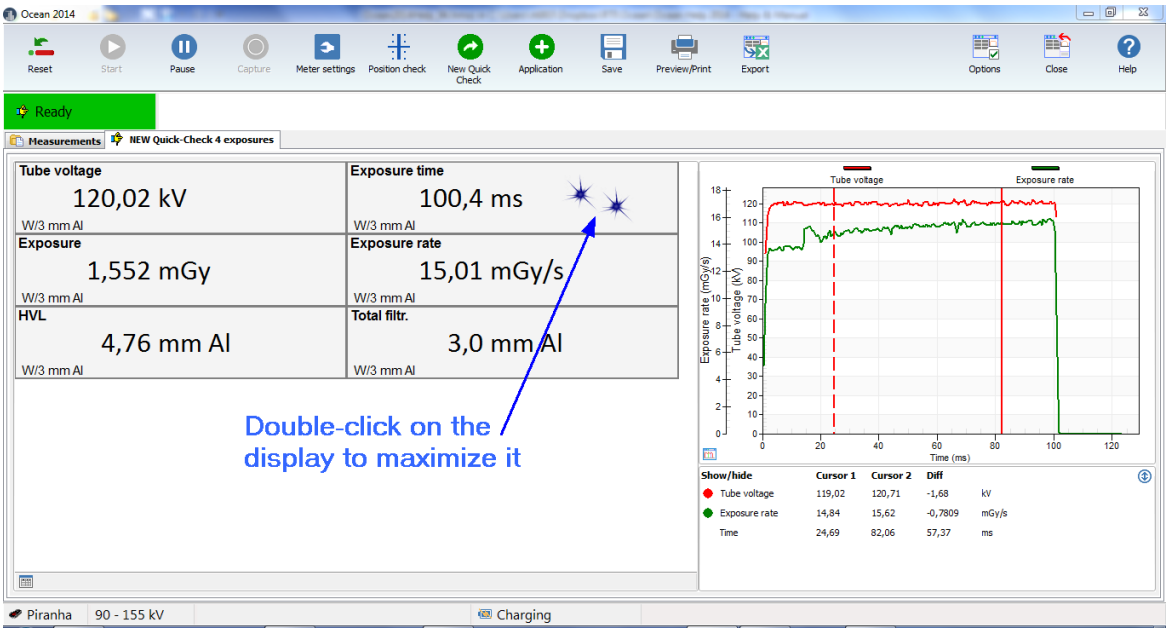
Waveform data and cursors

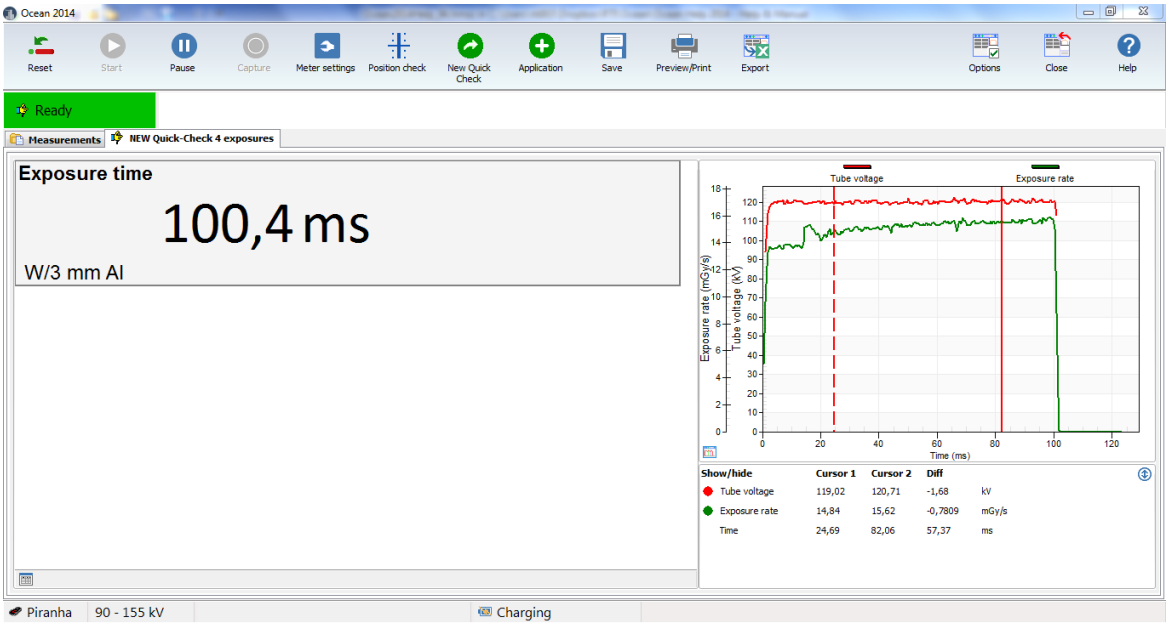
The waveform data is shown under the display (when it is minimized). You can switch between "cursor values" and "value between cursor", use double-click (or tap twice) to change. Values for the two vertical cursors are shown. Cursor data for the horizontal cursor is only shown in the graph.



Single display

If you just want to see one value, you can maximize just that display. Double-click (tap twice) on the display you want to see.

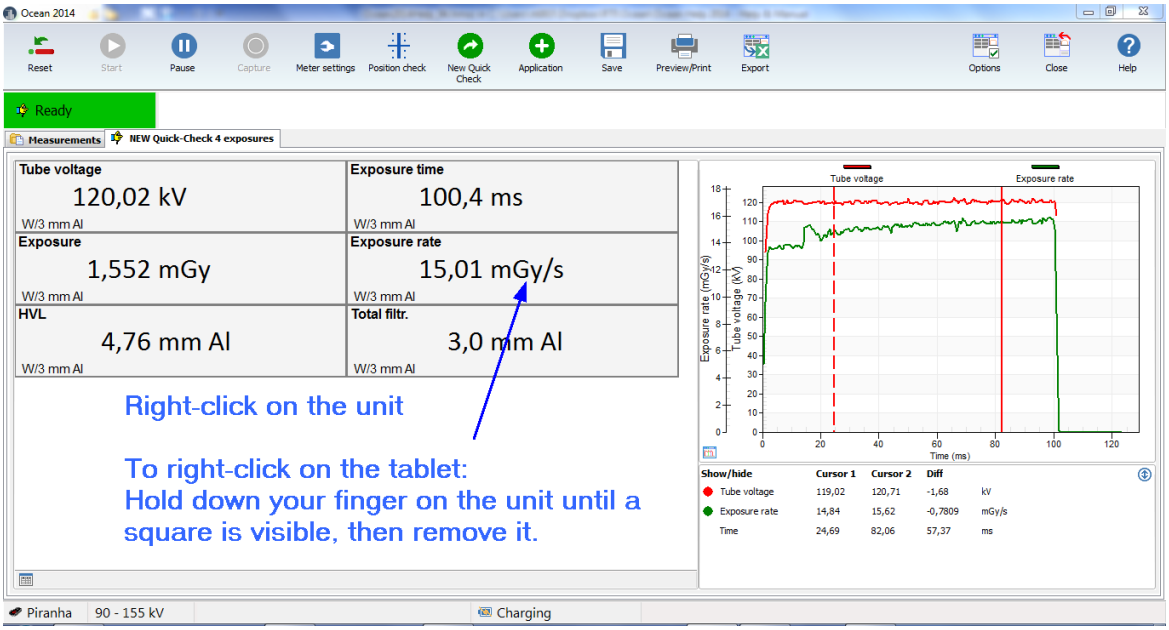


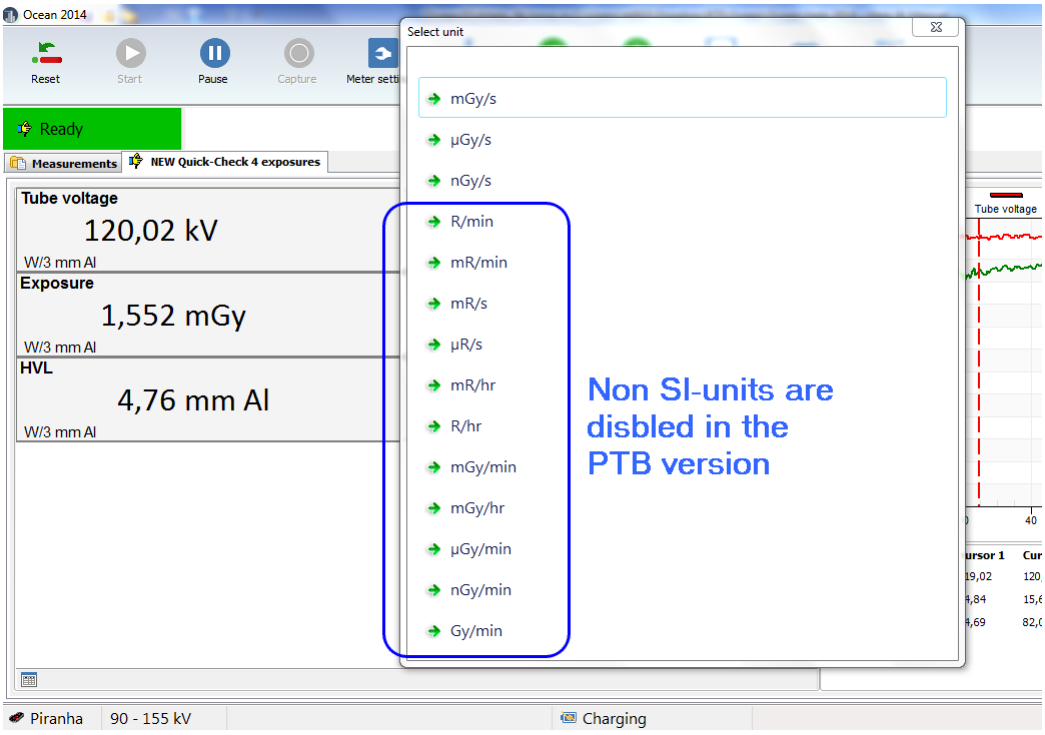


Double-click on the display to go back to smaller displayes.

Change unit of measure

You can change unit of measure by right-clicking on the unit:

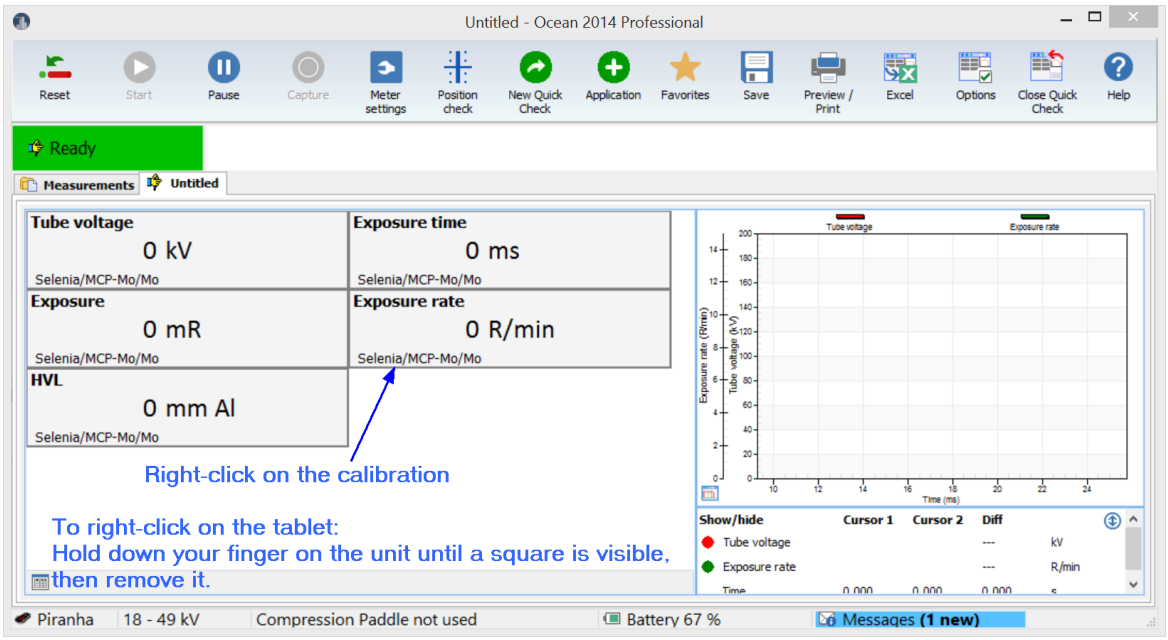




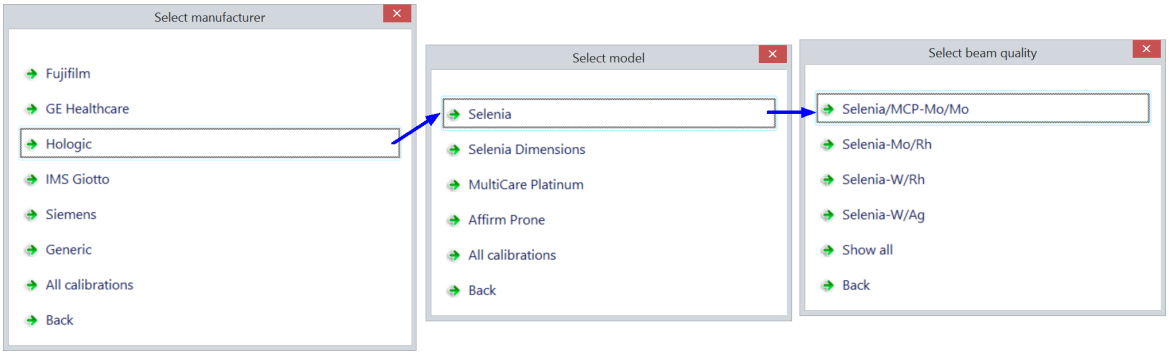
Select a new unit.

Change calibration

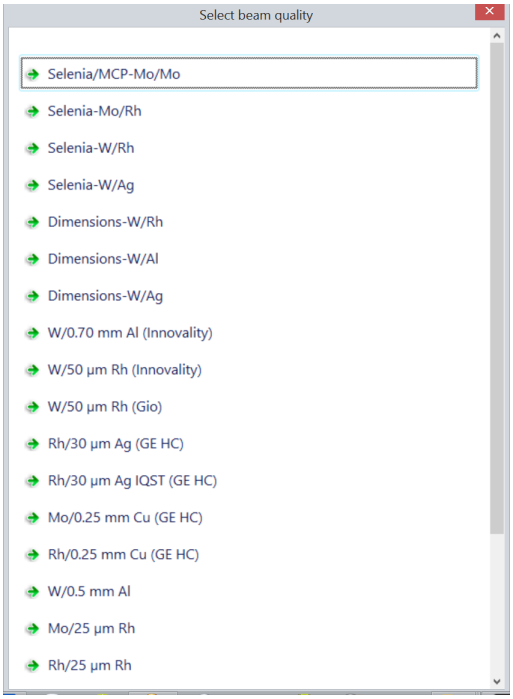
It is possible to change calibration by right-clicking in the display. This is not applicable for radiography, fluoroscopy and dental since for these modalities only one calibration (W/Al) is required.



For mammography selection of calibration may look i two different ways; either as a list of manufacturer and models with specific calibrations or as a list of all available calibrations. The list with manufacturer may look like this when you start a new Quick Check:



The list with all calibrations may look like this (the exact look depends on actual calibrations available in the meter):

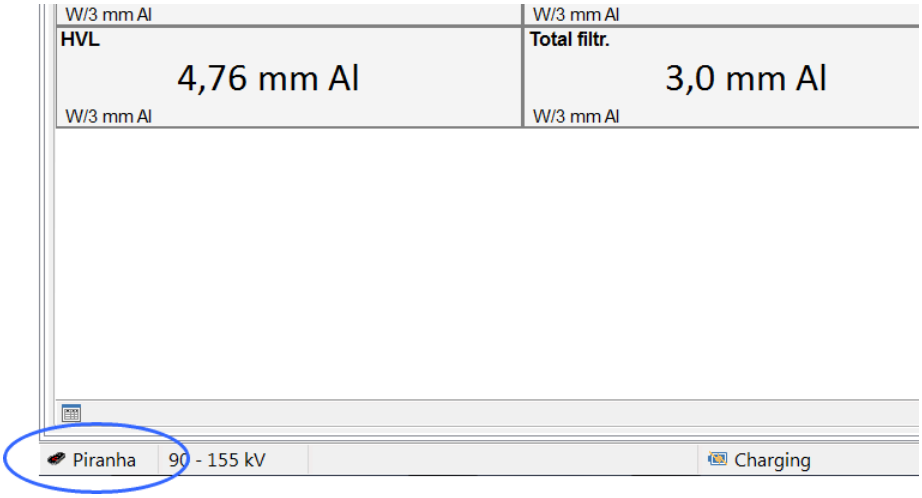


Change number of decimals

You can change number of decimals in the same way by right-clicking on the numeric value in a display.

1.4 Change Meter Settings

Piranha and Cobia have slightly different meter settings but the way you access and change them is the same. Cobia has less settings, since it has auto-range and is a less advanced meter than Piranha. Quick Check will recognize which meter you use and what its capabilities are and adapt to it. You will only see what you can use and you can without any changes switch between Piranha and Cobia.

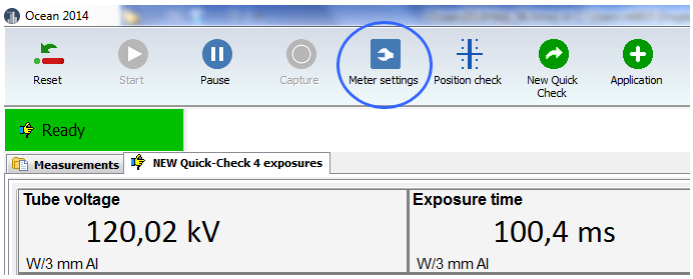


Currently meter is shown in the lower left corner. Quick Check can be directly used with both Piranha and Cobia, just connect to the meter you want to use.

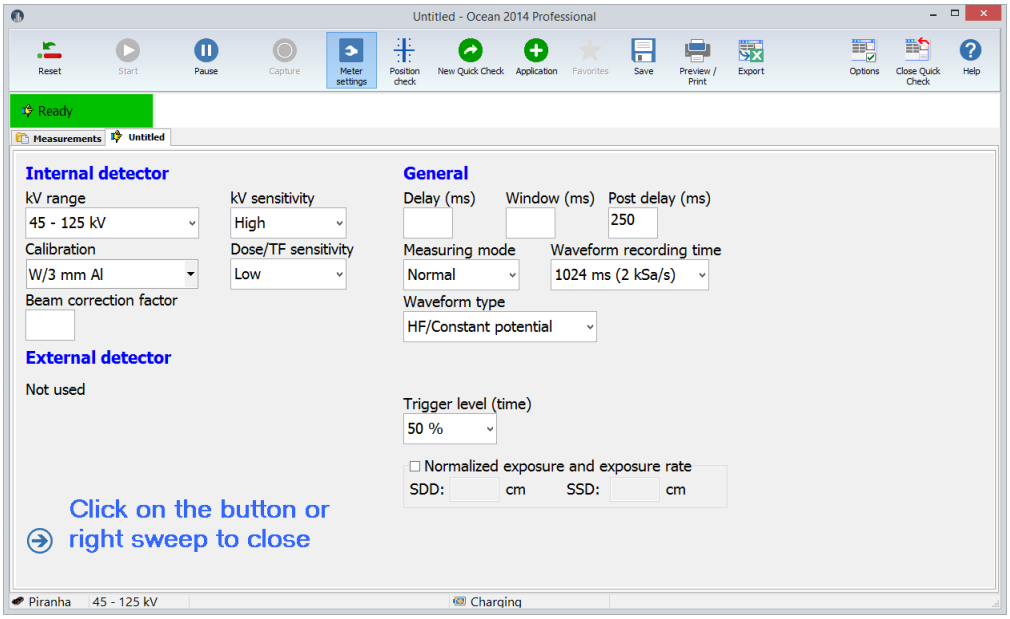
Note: You can use the same Ocean 2014 templates for both Piranha and Cobia, a template built for Piranha can be used with Cobia and vice verse. It is recommended, if you intend to use your templates with both Piranha and Cobia, that you build your templates for Piranha. The reason for this is that Piranha has more settings and you can in this way setup the templates to work in the best way with Piranha. f you do the opposite (you build it for Cobia), Ocean 2014 will when you use it with Piranha select default settings for the Piranha when a set value is missing (due to it doesn't exist for the Cobia). If you build templates without a meter connected and intend to use it with both Piranha and Cobia; go to program options and select default "Meter type" in the Preference section.

1.4.1 Piranha

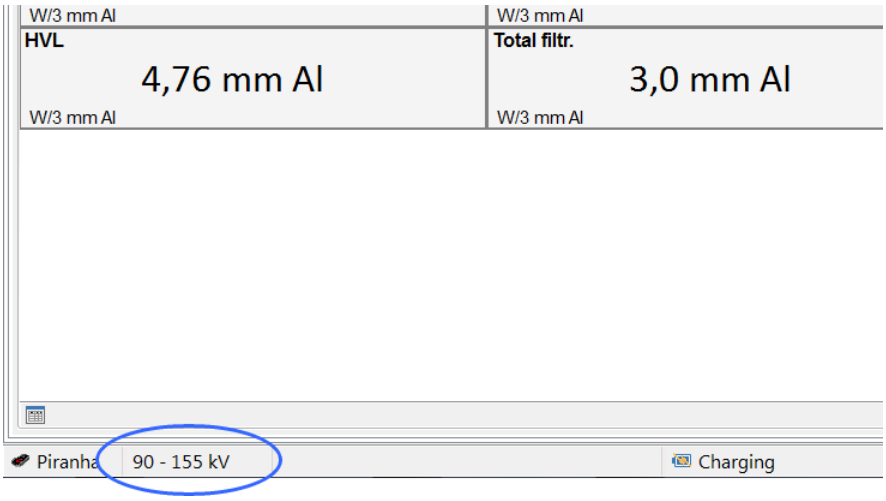
There are several ways to change meter settings. All meter settings are available if you click on the "Meter adjust" button:



When you click on the button the Meter settings are shown (this screen may look different depending on model and selected detectors):

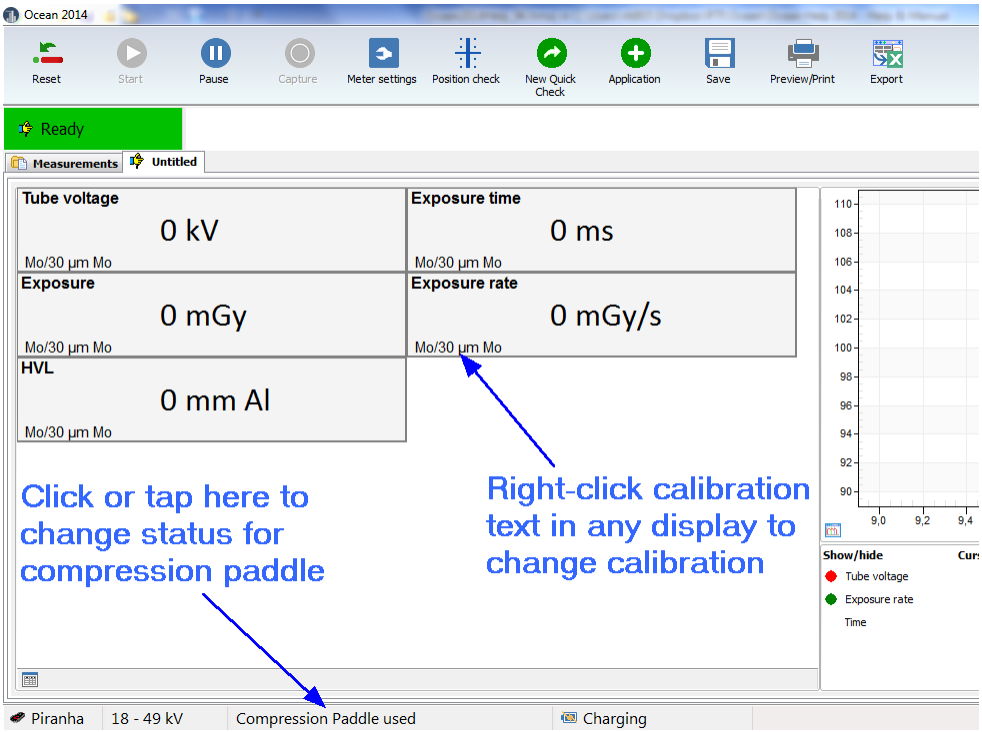


There are also some short cuts to change some of the set values. You can click (or tap) on the kV range indication at the bottom to change kV range:



When you click or tap here, a menu is shown that allows you to quickly select a different kV range.

When you measure on mammography you might want to change calibration and/or status for the compression paddle:



The following meter settings are available in Quick Check:

Meter setting	Description and use
Delay	Add a delay after the detection of trig before measurement of kVp starts. This will delay the kVp measurement, it doesn't affect dose, mAs or time measurements.
Window	If a time is specified, kVp is measured during the window time (starts after the delay)
Post delay	This is the time the meter waits after trig off before it assumes that the exposure is finished. The post delay must be set to a time longer than any dead time in the radiation.
kV range	Current kV range. You need to change this for radiography/fluoroscopy and CT, mammography and dental have only one range.
Calibration	Available calibrations for the internal (kVp and exposure) used. See table below that describes usage of the different calibrations.
kV sensitivity	Sensitivity setting for the kVp detector (internal detector). Hi = High sensitivity - for low dose rate Lo = Low sensitivity - for high dose rate
Dose/TF sensitivity	Sensitivity setting for the dose and total filtration measurement (internal detector). Hi = High sensitivity - for low dose rate Lo = Low sensitivity - for high dose rate
Sensitivity (External)	Sensitivity setting for the external probe Hi = High sensitivity - for low signals Lo = Low sensitivity - for high signals
Beam Correction factor	General (user-defined) correction factor used for all exposure related parameters measured with the internal detector.
Beam Correction factor (External)	General (user-defined) correction factor used for all exposure related parameters measured with the external detector.

Meter setting	Description and use
Calibration (External)	Calibration for the external probe
Measuring mode	You can select between Normal, Timed or Free run Normal =use this measuring mode for exposures and fluoroscopy Timed = meter measures during a time you specify Free run = meter measures continuously without use of any trig levels (for more information see table below)
Measurement time (Timed mode only)	Measuring time when Timed mode is used.
Waveform recording time	Select the waveform recording time. Use the shortest time to see details in the waveform. If you use a longer time, you lose details in the waveform. This setting doesn't influence on the accuracy.
Waveform type	This is the waveform type for the X-ray generator. It is normally HF/DC. Sometimes for older X-ray units and for dental you must use 1-phase. Be careful to select the correct waveform type for maximum accuracy. Note that there is a special selection for AMX-4.
Total filtration (External) (R/F, dental only)	The filtration used the external RTI Dose Probe to do energy compensation.
Added filtration (mammography only)	Added filtration used for the internal detector do do energy compensation and kV compensation.
Added filtration (External) (mammography only)	Added filtration used for the external RTI Dose Probe do do energy compensation.
Compression paddle (mammography only)	Select here if compression paddle is used or not used.
Compression paddle thickness(mm) (mammography only)	Specifies the thickness of the compression paddle in equivalent mm Al. Default is 0.12 mm.
Trigger level (time)	This is the level used for the time measurement. You can use this if you want for example to avoid pre-pulses to be included in the exposure time.
Normalized exposure and exposure rate	The square-law is used to normalize the dose and dose rate to a distance (SSD) different from the measuring distance (SDD) when the box is checked.

How to use the different calibrations:

Code	Calibration	Usage
R1 C1	**W/3 mm Al**	General radiography, fluoroscopy, dental and CT
C3	**Straton (Siem1)**	Suitable for Siemens CT with Straton tube
C4	**GECT (7°)**	Suitable for GE CT tubes with a 7° anode angle as well as for other manufactures CT tubes and replacement tubes with a 7° anode angle
C5	**Aquillion 64-**	Suitable for Toshiba Aquillion 64-320 CT
C6	**GECT (10.5°)**	Suitable for GE CT tubes with a 10.5° anode angle
C7	**GECT (Cardiographe)**	Suitable for GE CT Cardiographe
M1	**Mo/30 µm Mo**	General mammography
M3	**Mo/25 µm Rh**	General mammography
M4	**Rh/25 µm Rh**	General mammography
M6	**W/50 µm Rh**	General mammography - suitable for Hologic Selenia Dimensions and Fujifilm Amulet
M7	**W/0.50 mm Al**	General mammography - suitable for Philips MicroDose (Sectra)
M8	**Mo/1 mm Al**	General mammography
M10	**W/50 µm Ag**	General mammography - suitable for Hologic Selenia Dimensions and Fujifilm Amulet
M11	**W/75 µm Ag**	General mammography
M12	**W/50 µm Rh (Gio)**	Suitable for Giotto Mammography
M15	**W/0.70 mm Al**	General mammography - suitable for Hologic Selenia Dimensions and Fujifilm Amulet
M16	**W/50 µm Ag (Sel)**	Suitable for Hologic Selenia
M17	**W/50 µm Rh (Sel)**	Suitable for Hologic Selenia
M18	**W/0.30 mm Cu**	General mammography - Suitable for Hologic Selenia Dimensions and Fujifilm Innovality/Cristalle
M19	**W/0.70 mm Al (Inno/ Crist)**	Suitable for Fujifilm Innovality/Cristalle
M20	**W/50 µm Rh (Inno/ Crist)**	Suitable for Fujifilm Innovality/Cristalle
M21	**Mo/25 µm Rh (Sel)**	Suitable for Hologic Selenia
M22	**Rh/30 µm Ag (GE HC)**	Suitable for GE Senographe Prestina
M23	**Rh/30 µm Ag IQST (GE HC)**	Suitable for GE Senographe Prestina
M24	**Mo/0.25 mm Cu (GE HC)**	Suitable for GE Senographe Prestina
M25	**Rh/0.25 mm Cu (GE HC)**	Suitable for GE Senographe Prestina
M26	**Mo/30 µm Mo (GE HC)**	Suitable for GE Senographe Prestina
M27	**Affirm Prone W/Ag**	Suitable for Hologic Affirm Prone
M28	**Affirm Prone W/Al**	Suitable for Hologic Affirm Prone

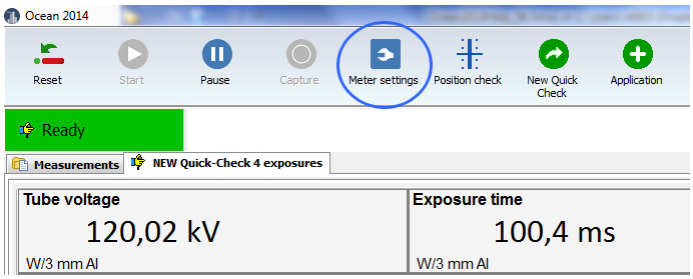
There are three different measuring modes available using the Piranha. They are as follows:

Measuring mode	Description and use
Normal	The Normal mode is used for short and long (fluoro) exposures. In this mode, your meter will automatically sense if there is a signal and when it is above a certain trigger level. If the exposure is long, the displays/grid will be updated with new data every 2 seconds. If the exposure is short, the results are displayed as soon as the trigger is off.
Free run	The free run mode has no trigger level. As soon as the meter is told to begin measuring, it starts to measure even if there is no signal. This measuring mode is useful when the signal you want to measure is very low. Free run is recommended for light measurements, especially when measuring "ambient" light (when no shutter is present).
Timed	The Timed mode setting measures during a pre-defined time period. Measurements in Timed mode must be started manually. This measuring mode is very useful when you want to measure a very low signal. You can use the "very high" sensitivity setting in Timed mode and it will further improve the meter's capability to measure very low signals.

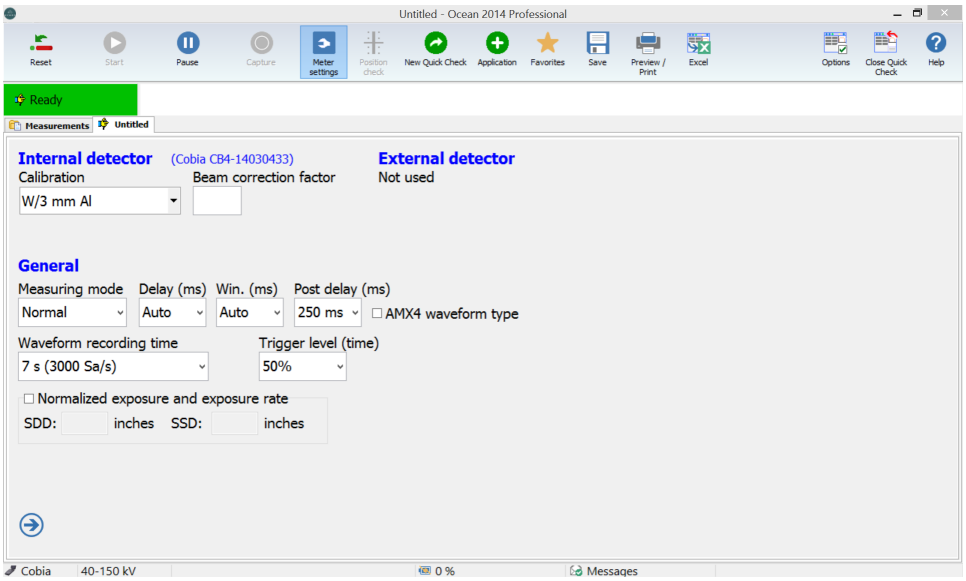
You can read more about meter settings for Piranha in the topics Meter Adjust and Different measuring modes.

1.4.2 Cobia

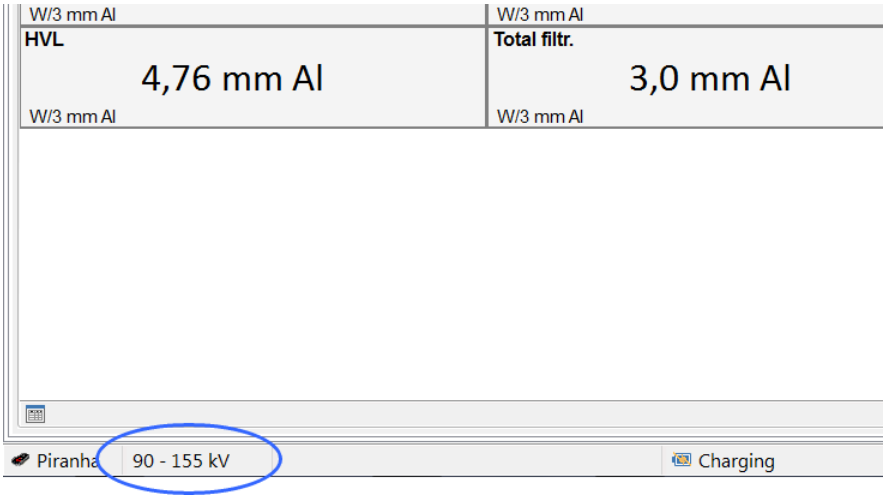
There are several ways to change meter settings. All meter settings are available if you click on the "Meter adjust" button:



When you click on the button the Meter settings are shown:

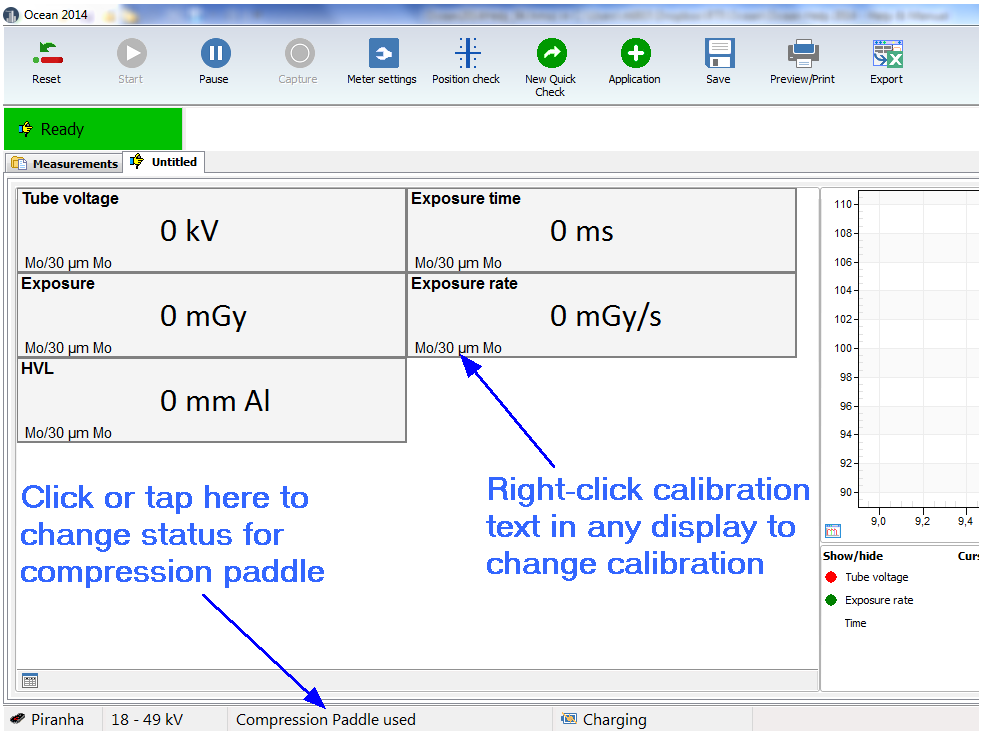


There are also some short cuts to change some of the set values. You can click (or tap) on the kV range indication at the bottom to change kV range:



When you click or tap here, a menu is shown that allows you to quickly select a different kV range.

When you measure on mammography you might want to change calibration and/or status for the compression paddle:



The following meter settings are available in Quick Check:

Meter setting	Description and use
Delay	Add a delay after the detection of trig before measurement of kVp starts. This will delay the kVp measurement, it doesn't affect dose, mAs or time measurements.
Window	If a time is specified, kVp is measured during the window time (starts after the delay)
Post delay	This is the time the meter waits after trig off before it assumes that the exposure is finished. The post delay must be set to a time longer than any dead time in the radiation.
Calibration	Calibration for the internal probe.
Beam Correction factor	General (user-defined) correction factor used for all exposure related parameters measured with the internal detector.
Beam Correction factor (External)	General (user-defined) correction factor used for all exposure related parameters measured with the external detector.
Calibration (External)	Calibration for the external probe.
Measuring mode	You can select between Normal or Timed Normal =use this measuring mode for exposures and fluoroscopy Timed = meter measures during a time you specify (for more information see table below)
Measurement time (Timed mode only)	Measuring time when Timed mode is used.
AMX-4 Waveform type	Check this box when you measure on a GE AMX-4.
Total filtration (External) (R/F, dental only)	The filtration used the external RTI Dose Probe to do energy compensation.
Trigger level (time)	This is the level used for the time measurement. You can use this if you want for example to avoid pre-pulses to be included in the exposure time.
Normalized exposure and exposure rate	The square-law is used to normalize the dose and dose rate to a distance (SSD) different from the measuring distance (SDD) when the box is checked.

How to use the different calibrations (only one calibration is available for Cobia):

Code	Calibration	Usage
R1	**W/3 mm Al**	General radiography, fluoroscopy and dental

There are two different measuring modes available using the Cobia. They are as follows:

Measuring mode	Description and use
Normal	The Normal mode is used for short and long (fluoro) exposures. In this mode, your meter will automatically sense if there is a signal and when it is above a certain trigger level. If the exposure is long, the displays/grid will be updated with new data every 2 seconds. If the exposure is short, the results are displayed as soon as the trigger is off.
Timed	The Timed mode setting measures during a pre-defined time period. Measurements in Timed mode must be started manually. This measuring mode is very useful when you want to measure a very low signal. You can use the "very high" sensitivity setting in Timed mode and it will further improve the meter's capability to measure very low signals.

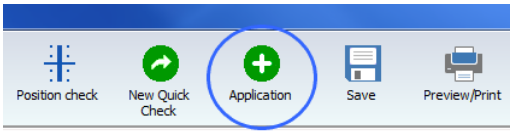
You can read more about meter settings for Cobia in the topics Meter Adjust and Different measuring modes.

1.5 Applications with analysis

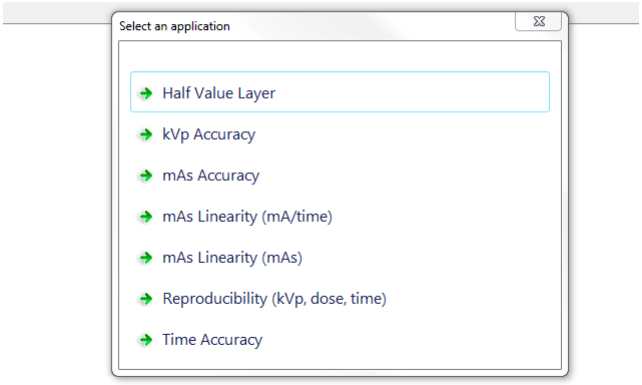
There are also a number of applications available in Quick Check. An application is a predefined measurement where your data are analyzed, it might also include pass/fail criteria. The applications available in Quick Check are not possible to modify in any way. If you have more needs, use Ocean Professional. You can then create tests with user-defined calculations and pass/fail criteria. You will find applications for:

- Accuracy
- Reproducibility
- mA linearity
- HVL
- CTDI

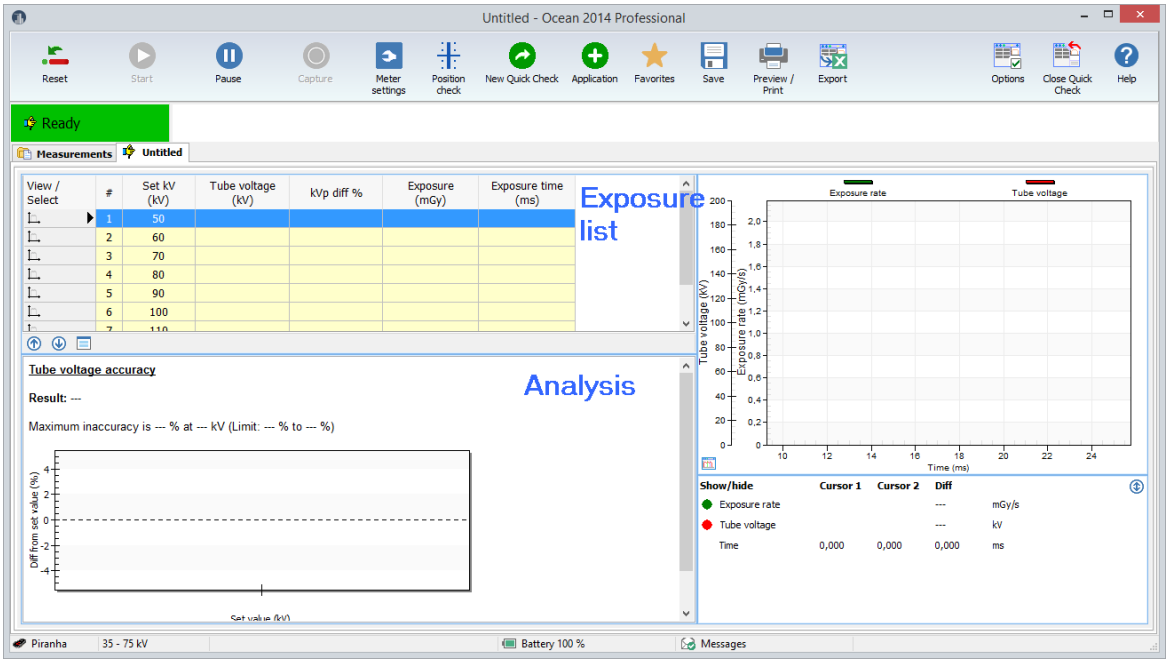
1. You start an application by clicking on the Application button (if the button is not enabled, no applications are available for current mode):



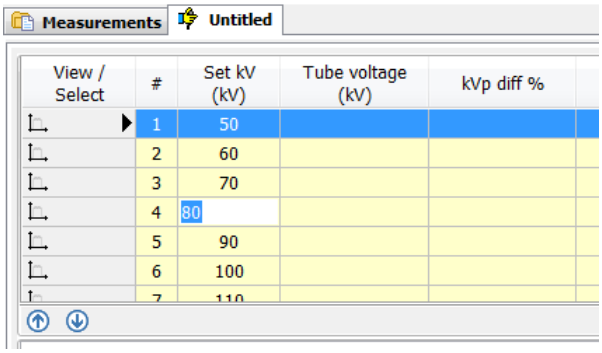
2. A menu showing available applications is shown:



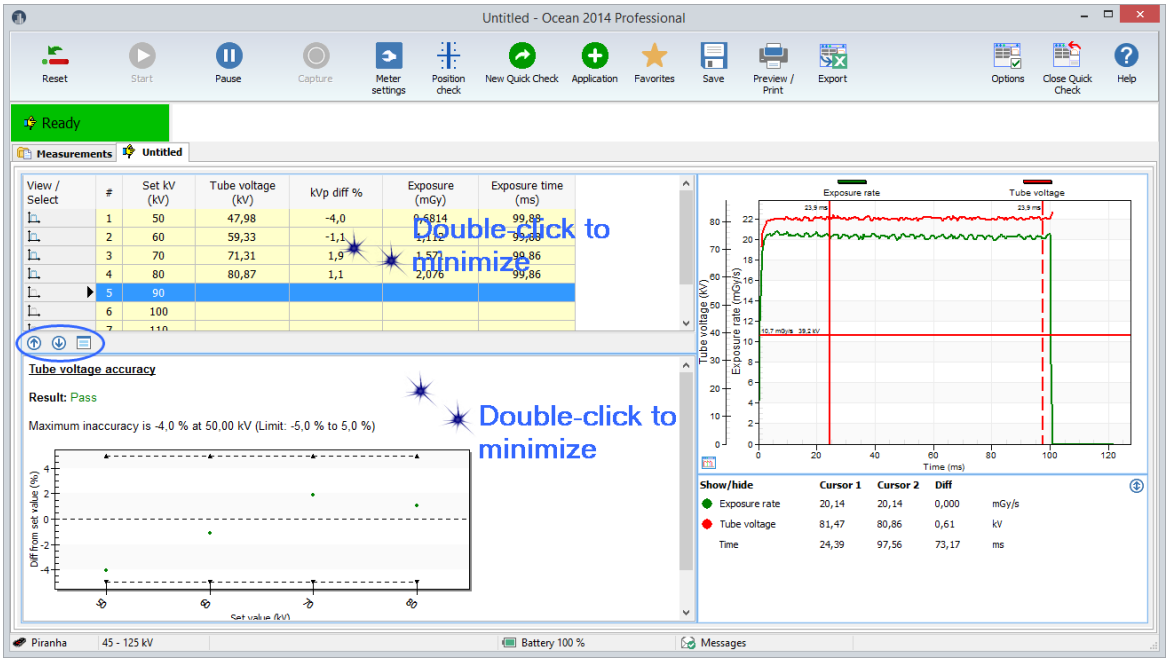
3. Chose an application, for example kVp Accuracy. The screen layout is different for the application compared to a standard Quick Check measurement. In this case there are no displays only grid (exposure list) is shown. There is also an analysis that perform some kind of calculation (in this case kVp accuracy) on your measured data.



4. You can modify set values in the grid (exposure list). Click in a cell to change set values. For example, you may want to change the kVp set value for exposure #4 from 80 to 81 kV.

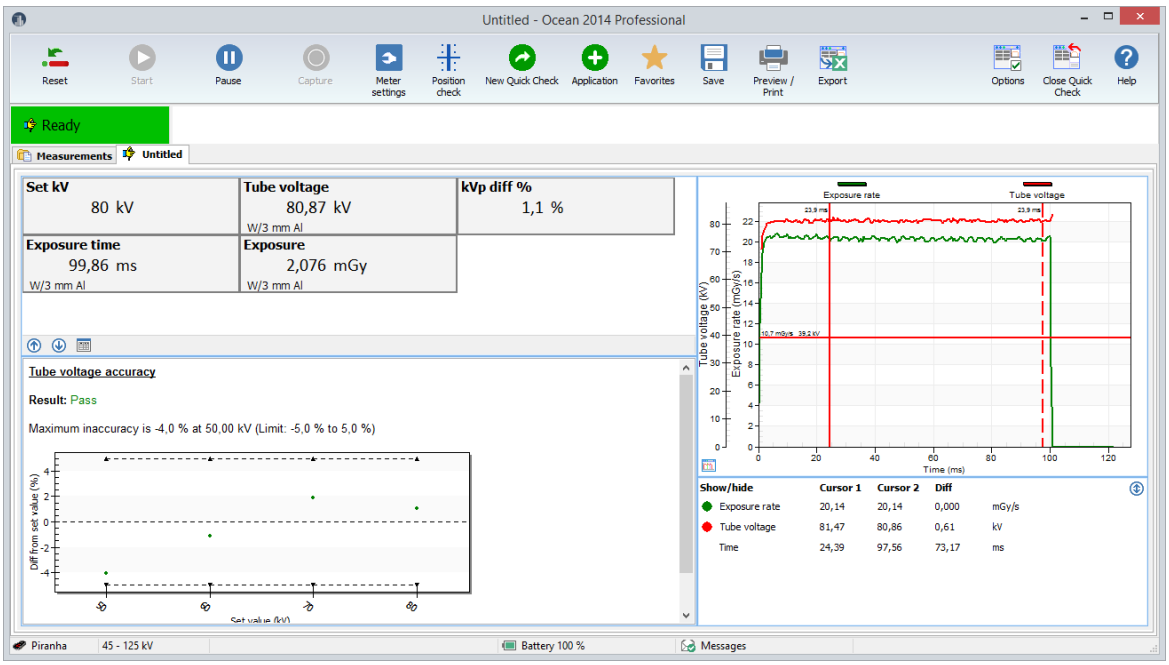


5. Now make the exposures.

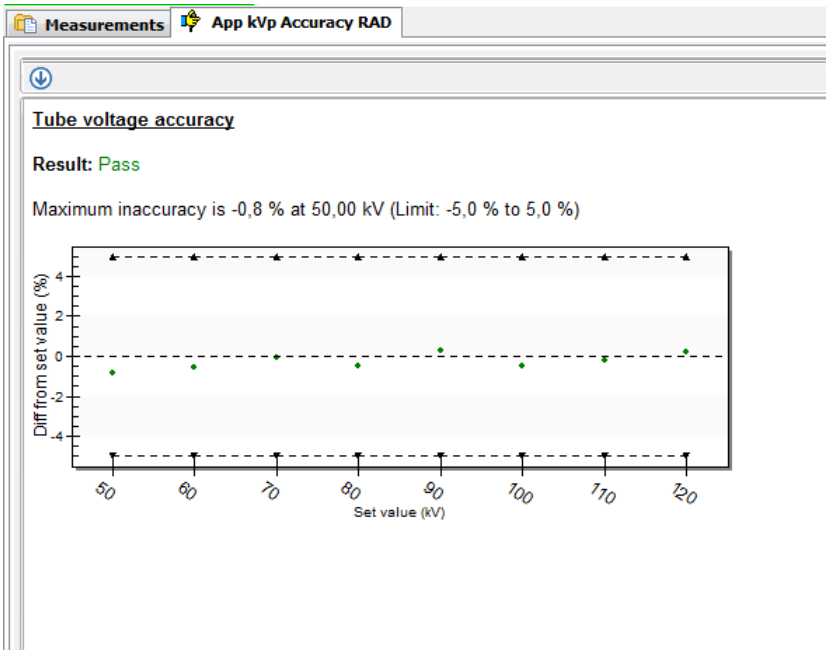


You can maximize/minimize the exposure list section and the analysis section with double-click or by clicking on the buttons  .

If there is both displays, grid and analysis present the button  is shown. Click here to toggle between displays and the grid.



The analysis part will now show the result.



6. Click on Preview/Print to print your report.

This analysis is fixed and you can not change its structure. If you have more needs and want to customize your analysis, change pass/fail criteria, use your own calculations and so on; then use Ocean 2014 Professional. The topic Analysis (Definitions) describes which analysis that are available in Ocean 2014.

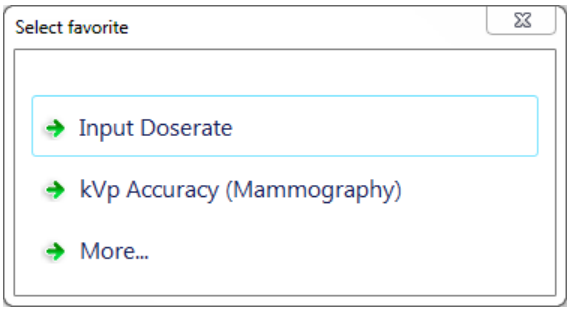
You can open any Quick Check measurement as a Real-time display and in that way modify and extend its capability. See topic Open an old measurement.

1.6 Quick Check Favorites

The Favorites function in Quick Check is an optional way for you to customize the use of Quick Check. It allows you to use and quickly access templates that performs specific measurements. You use Ocean 2014's template design functions to create your own templates and you store them in a specific folder to make them available in Quick Check.

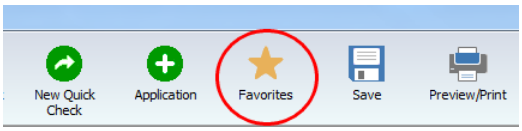
By default, no Favorites are available in Quick Check. You can create your own Favorites to be used in Quick Check by using Ocean 2014's template design capability. The section Create Quick Check Favorites describes how this is done.

If you have stored one or more favorites in the Favorite folder (in the Library) the Favorite list is shown when you start Quick Check. The list shows the Favorites you have stored in the folder.



In this case are two favorites stored in the Favorites folder. If you select one, it loads and you can start to measure directly. If you click on "More...", the normal Quick Check setup procedure starts.

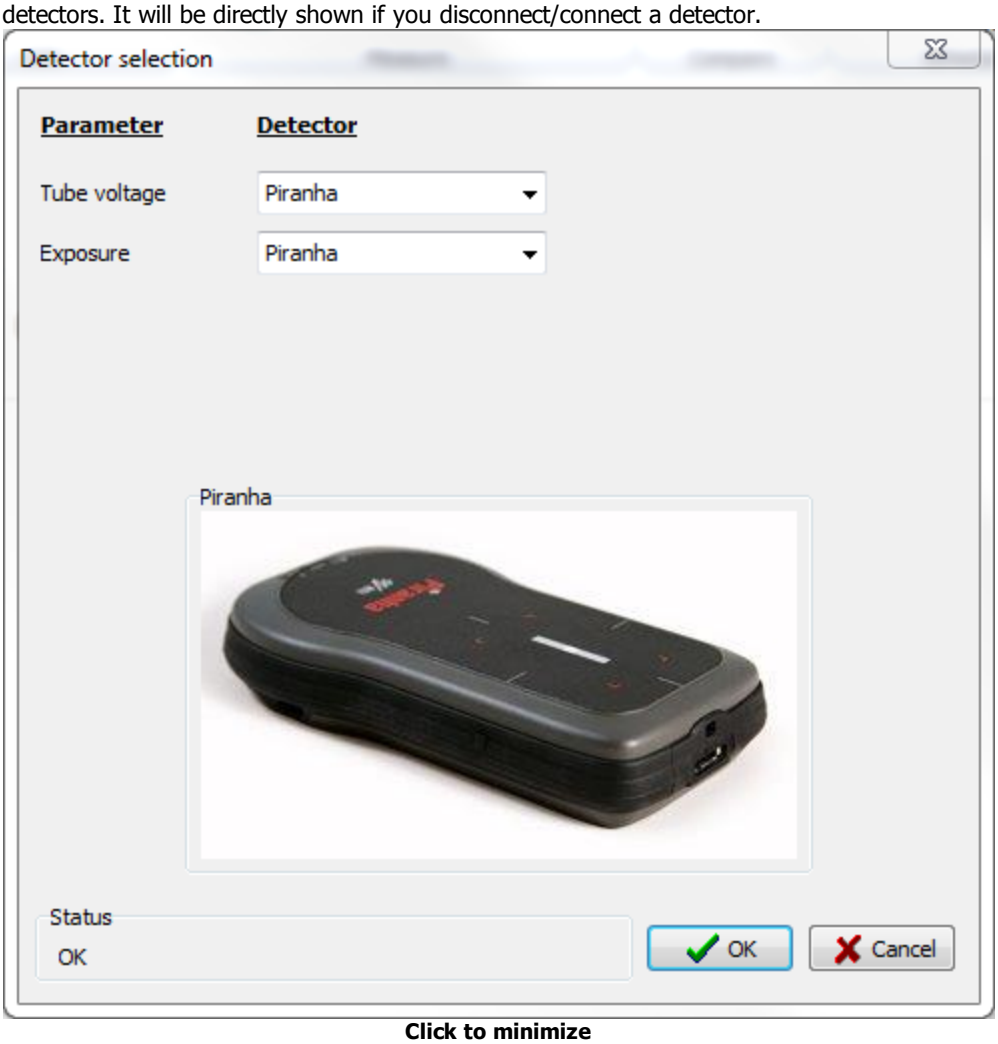
You can go to the Favorite list whenever you are using the Quick Check by clicking on the Favorites button.



The Favorite list will be shown and you can quickly select a another favorite.

1.6.1 Detector selection

When you load a Favorite the required detectors are checked when it loads. If a detector specified, or a compatible one, isn't available in the template, the Detector Selection window is shown. It will shown available detectors. It will be directly shown if you disconnect/connect a detector.



Click to minimize

Select the appropriate detector and click OK.

You have two choices if you for some reason isn't able to select a detector:

Do not use: In this case is the corresponding measured parameter(s) skipped.

Keyboard: In this case is a dialogue shown after each exposure that allows you to enter a value manually.

1.6.2 Create Quick Check Favorites

Perform the following steps to use Favorites in Quick Check:

1. Quick Check uses Real-time Display templates. You need to use Ocean 2014's template design function to create templates for you favorite measurements. This is described in the Design section.

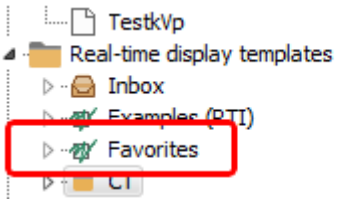
2. Your templates can be ordinary "displays" or have analysis/calculations (you must have Professional to create this type) like the Quick Check Applications. The following design rules apply for Quick Check:

- To create a "display" favorite: design the Real-time display template with displays and no analysis.

- To create a favorite that is shown as an "Application": design the Real-time display template without displays and include an analysis.

- The template title you specify is shown in the Favorites list.

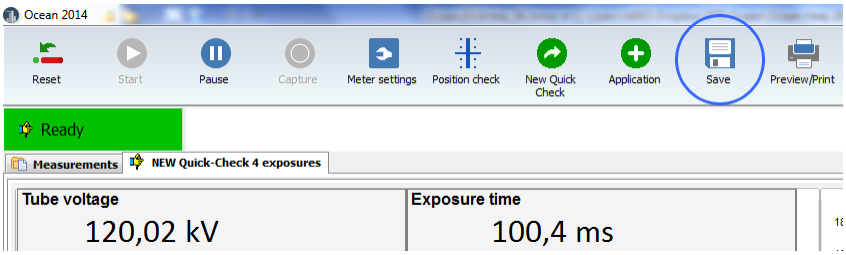
3. Copy or store the favorite templates to the The Favorites folder. It is located in the Library.



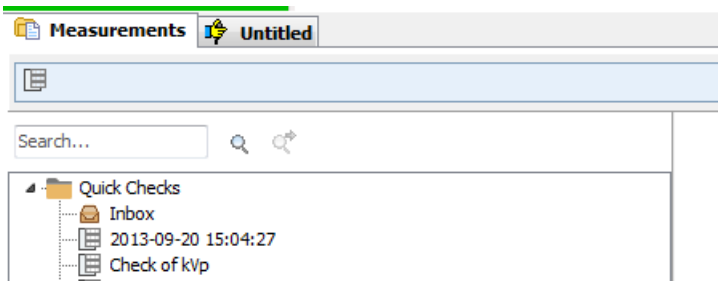
You can, if you have many Favorites of different types, create sub folders. Name the sub folders and store your favorites according to the way you have chosen to categorize them. The sub folders name will be shown in the Favorite list.

1.7 Save a measurement

Quick Check will not ask you if you want to save your data, you must yourself decide if you want to save. Click on the Save button in case you want to save your measured data.



When you click on the Save button you are asked to enter a name for your data. Your data will be saved in the "Quick Check" folder in the Measurement database.



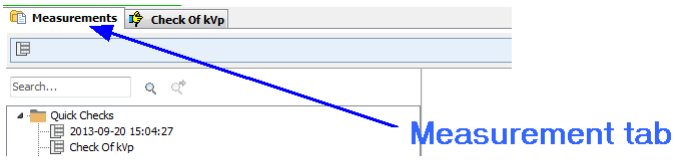
Once you have saved your data the first time, Quick Check will ask you before it discards any data.

1.8 Open an old measurement

You can re-open a Quick Check measurement that you have saved. You can open it if you want to continue to measure or if you want to print it. From Ocean 2014 you can also open a Quick Check measurement in off-line mode (no meter connected) to review or print the measurement.

To open a Quick Check measurement:

1. Click on Measurement tab.

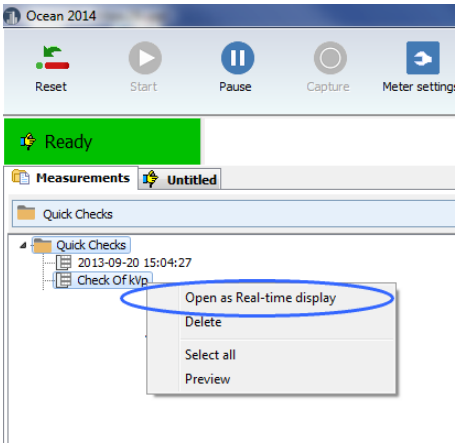


2. Go to the "Quick Checks" folder, double-click on the measurement you want to re-open.

You can also open a Quick Check measurement as an Real-time display in Ocean 2014 if you want to modify it. To open as a real-time display:

1. Open the measurement folder.

2. Right-click on the Quick Check measurement you want to open as a real-time display.

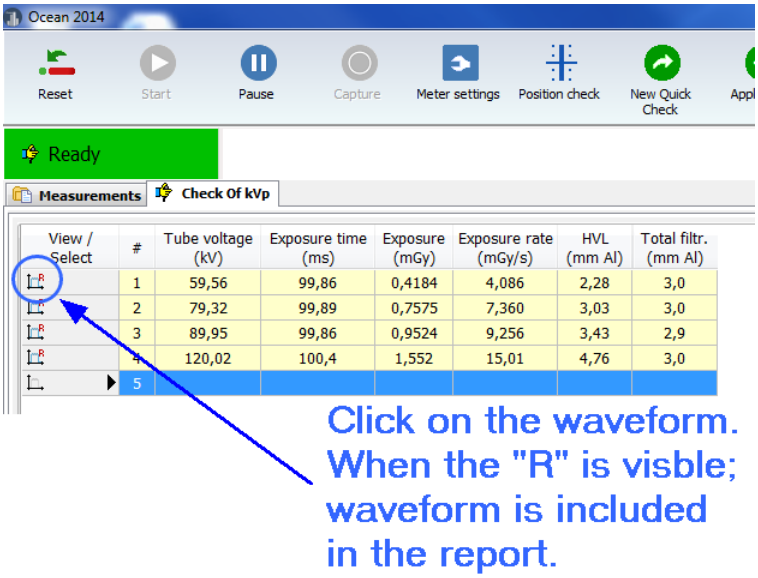


3. The measurement will open in Ocean 2014 as a real-time display. You can now modify the measurement, what you can do depends on the license level you have. If you open a Quick Check measurement that has analysis with only Connect license, the analysis will not be visible.

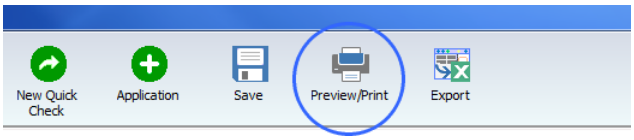
1.9 Print

You can print your measured data (or create a PDF file). By default no waveform are included in the report. To include waveforms do the following:

1. Go to the list view.

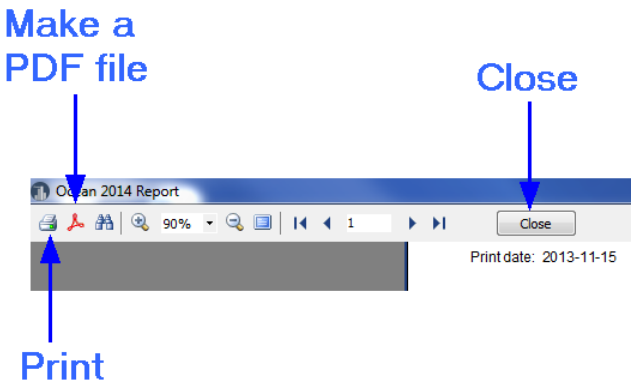


2. Now click on the Preview/Print button.



3. A preview is now shown.

4. You can now just preview the report and return, save it as a PDF file or print it.



Report template

You may want to change the report layout, for example, use you own logo. You can make you own report layout and assign it as default for Quick Check. You can do this in Program Options and you can find instructions in section Create a report template.

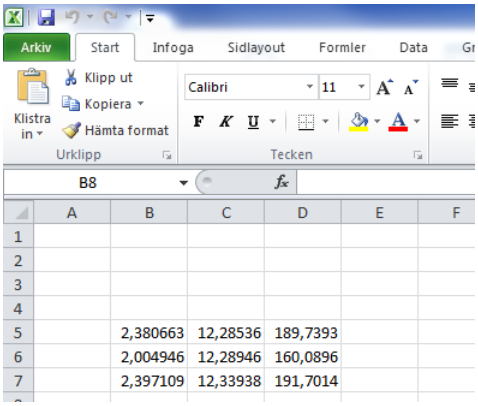
1.10 Transfer data to Excel

You can transfer data from Quick Check to Excel in three different ways:

- Connect to an Excel workbook. Measured data, are for each exposure, transferred to Excel starting in active cell. Used template determine data format.
- Connect to an Excel workbook. Measured data, are for each exposure, transferred to Excel starting in active cell. Use a fixed data format (compatible with Excel templates used with Xi and X2 View).
- Send current measured data to Excel. The data dump starts in active Excel cell.

Connect (Standard mode)

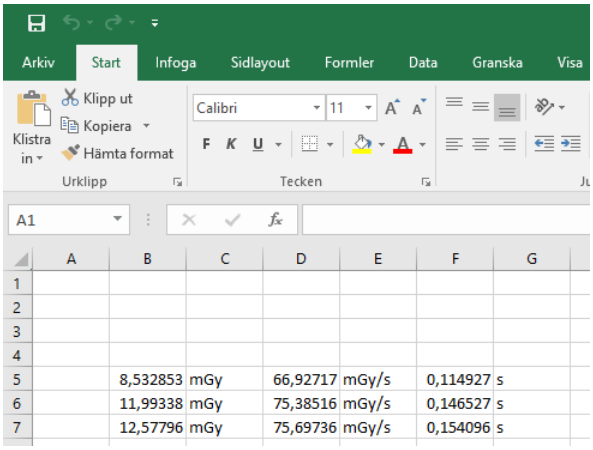
When this mode is used, data are transferred to Excel in the same order as the columns are appearing in the template. Only numerical values are sent to Excel, no units or waveforms.



Data are send according to how columns appear in the template.

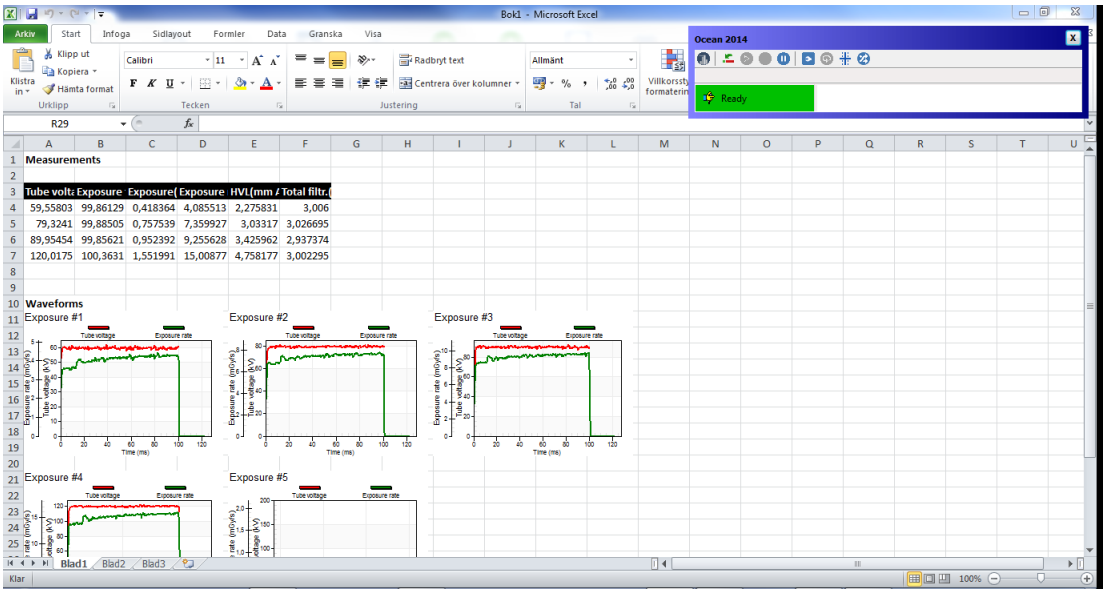
Connect (Fixed format mode)

This is same as "Standard mode" but data is sent in a different format. The format is compatible with the format used with Xi and X2 View from RaySafe. Same Excel templates can be used with none or minimal modifications. This mode is only available in Quick Check. It is activated by checking "Fixed format (Excel connect)" on the Option page (in Quick Check). The format is described in the section Connect (Fixed format).



Send

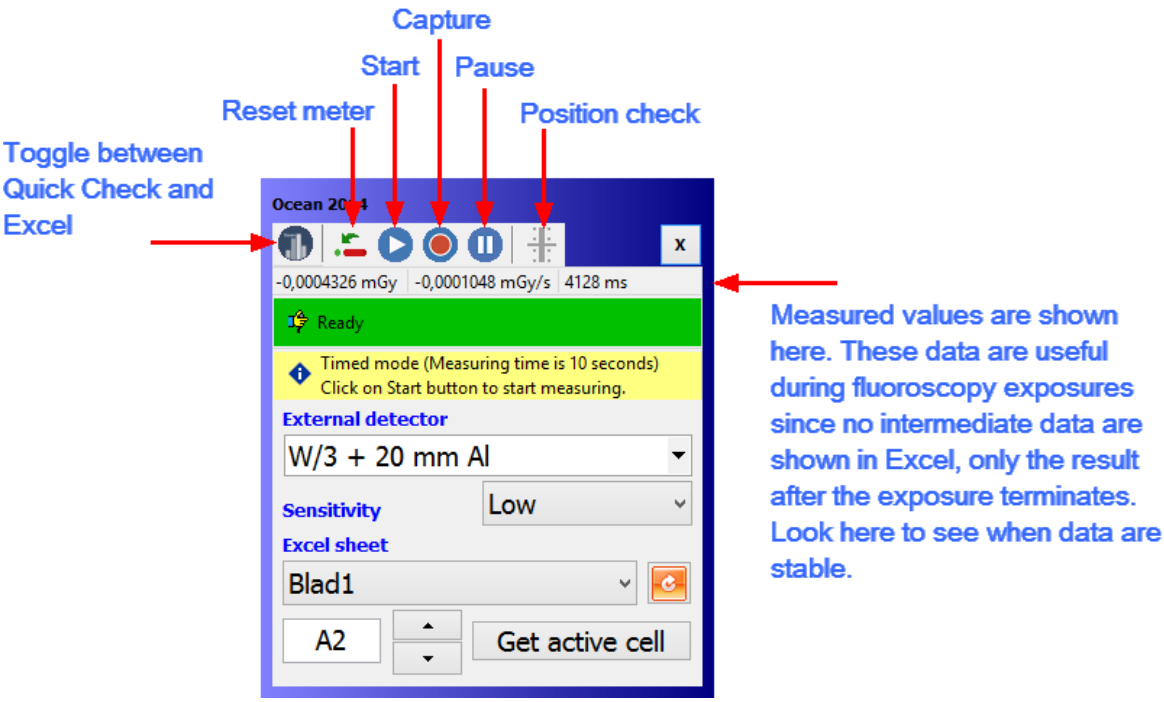
In this mode the entire content in the template is dumped to Excel.



Read the coming sections for detailed information about the different Excel modes.

1.10.1 Excel control window

When data is transferred to Excel a small Excel control window is shown to simplify the interaction between Quick Check and Excel. The exact content in the window is depending on mode (send or connect) and/or used detectors.



The most common meter settings are available (depending on used detector(s).

To close the Excel connection, click "x" in the upper right corner of the Excel control window. Both the window and the used Excel workbook will be closed. If necessary, you are asked to save.

1.10.2 Connect (Fixed format)

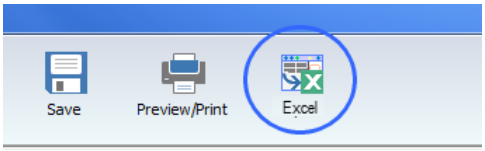
Data is sent to Excel using a fixed format that is compatible with the format used in Excel workbooks used with Xi and X2 view. The format is described in detail below.

To connect to the workbook:

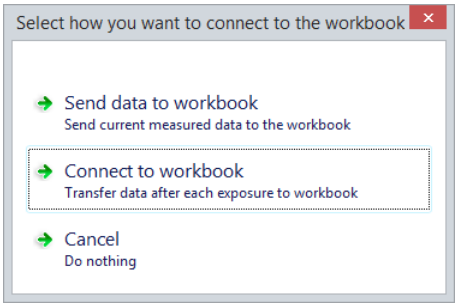
First go to Options in Quick Check and make sure that the checkbox "Fixed format (Excel connect)" is checked.

1. Activate a Quick Check display.

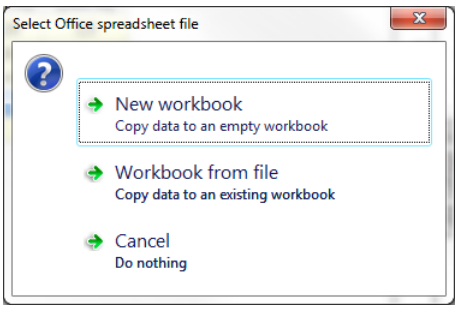
2. Click on the Excel button.



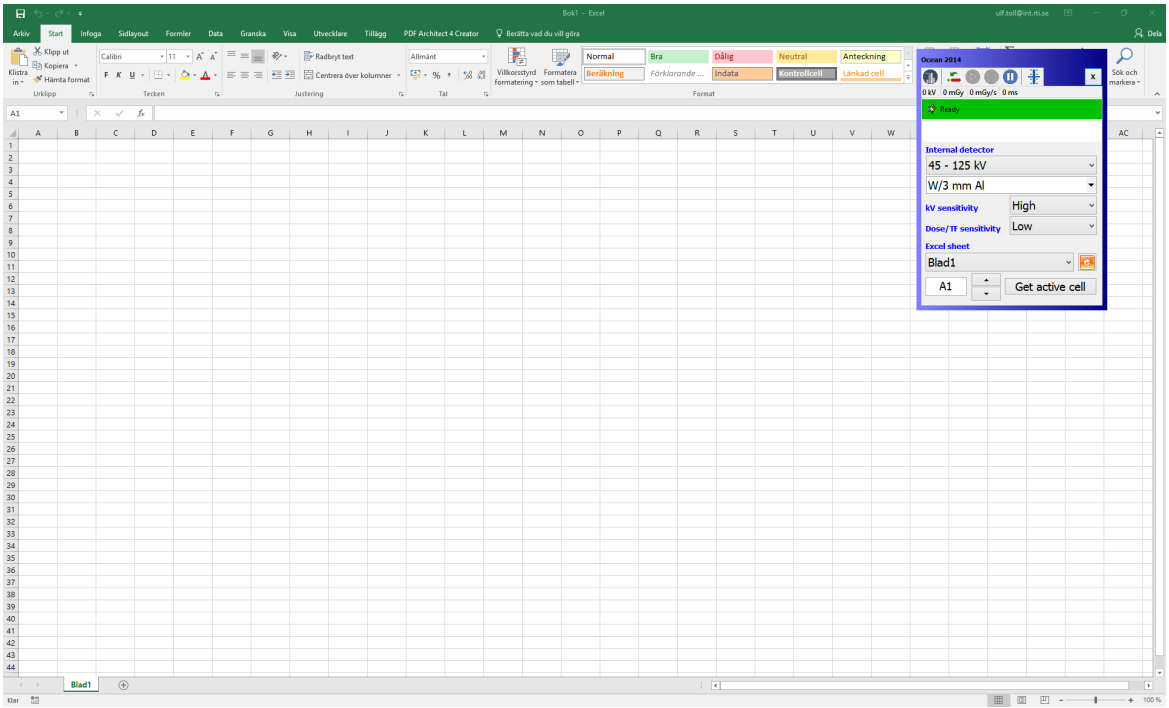
3. A dialogue is shown, select "Connect to workbook".



4. Next you have to chose a workbook. You can chose a new workbook or one you already have on your computer. In this case select "New workbook".

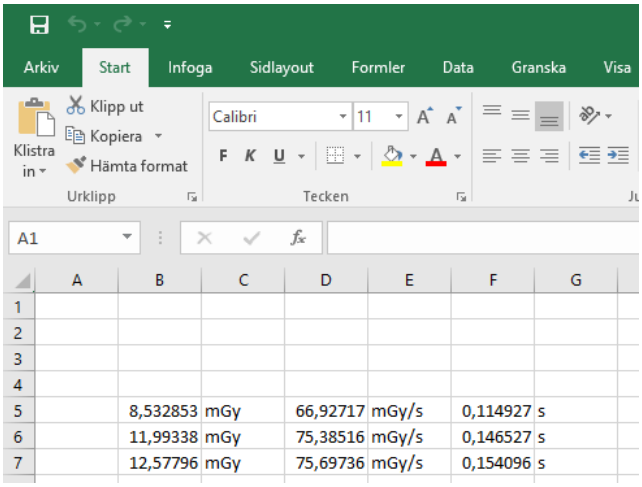


Excel starts and an empty workbook is loaded.



5. Activate the cell, for example B5, where you want measured data to start. You can do that by entering B5 into the cell field in the Excel control box or select cell B5 in the Excel spreadsheet and click on "Get active cell".

6. Make a couple of exposures.



7. Measured data are transferred to Excel for each exposure. You can use the small minimize Excel window to control your measurement procedure while having Excel on the screen. You can change basic meter settings and the left most button is used to switch between Quick Check and Excel. Data are arriving in a fixed format (compatible with tyhe format used by Xi and X2 View). The fixed format is defined below.

Definition of the fixed format

There are four different detector combinations that each has its own fixed format:

- Multi-detector (internal detector) with an optional external detector
- Only an external radiation detector (Dose Probe, CTDP, T20, Ion chamber of any type)
- Only the Light detector
- Only a mAs probe

Multi-detector (internal detector)

Tube voltage
unit
Dose
unit
Dose rate
unit
Exp. time
unit
Pulses
unit
Empty
Empty
Pulse rate
unit
Dose/pulse
unit
HVL
unit
Tube mAs
unit
Tube mA
unit
TF
unit
Dose (ext.)

unit
Dose rate (ext.)
unit

Units are defined by Defult units in Program options in Ocean 2014 (not available in Quick Check).

Only external radiation detector

Dose
unit
Dose rate
unit
Exp. time
unit
Pulses
unit
Empty
Empty
Pulse rate
unit
Dose/pulse
unit

Units are defined by Defult units in Program options in Ocean 2014 (not available in Quick Check).

Only light detector

Lumunance or Illuminance
unit

Units are defined by Defult units in Program options in Ocean 2014 (not available in Quick Check).

Only mAs probe

Tube mAs
unit
Tube mA
unit
Exp. time
unit

Units are defined by Defult units in Program options in Ocean 2014 (not available in Quick Check).

1.10.3 Connect (Standard mode)

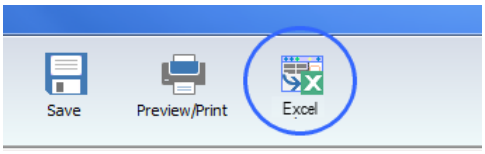
Data is sent to Excel using a fixed format that is compatible with the format used in Excel workbooks used with Xi and X2 view. The format is described in detail below.

To connect to the workbook:

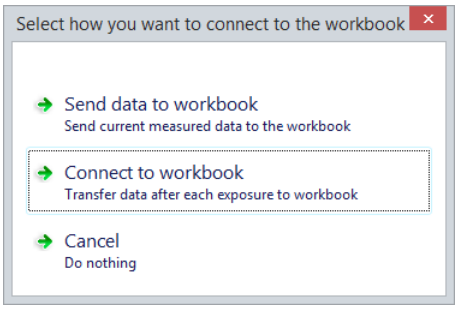
First go to Options in Quick Check and make sure that the checkbox "Fixed format (Excel connect)" is unchecked. This ensures that standard mode is used and data transferred is defined by the actual template used in Quick Check.

1. Load a Quick Check or an Application.

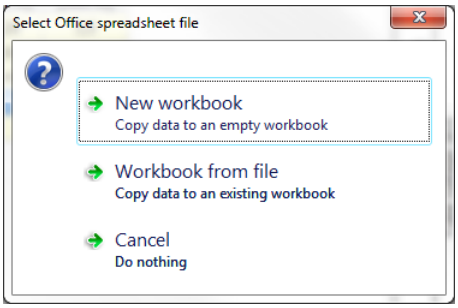
2. Click on the Excel button.



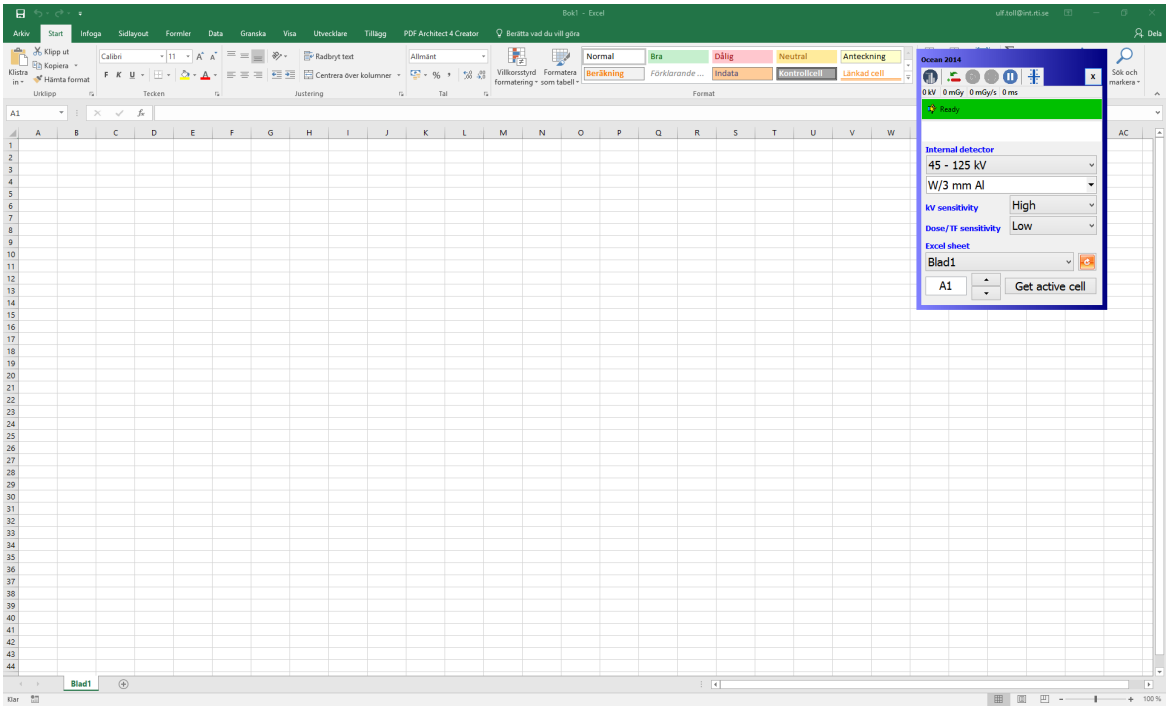
3. A dialogue is shown, select "Connect to workbook".



4. Next you have to chose destination. You can chose a new workbook or one you already have on your computer. In this case select "New workbook".

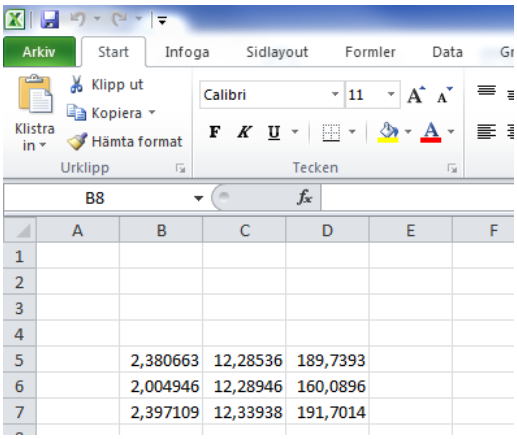


Excel starts and an empty workbook is loaded.



5. Activate the cell, for example B5, where you want measured data to start. The measured values appears in the same order as the columns in the active template. No units are sent, only the numeric values. (If you want a fixed format and units; use the "Fixed format" option described in the next section).

6. Make a couple of exposures.

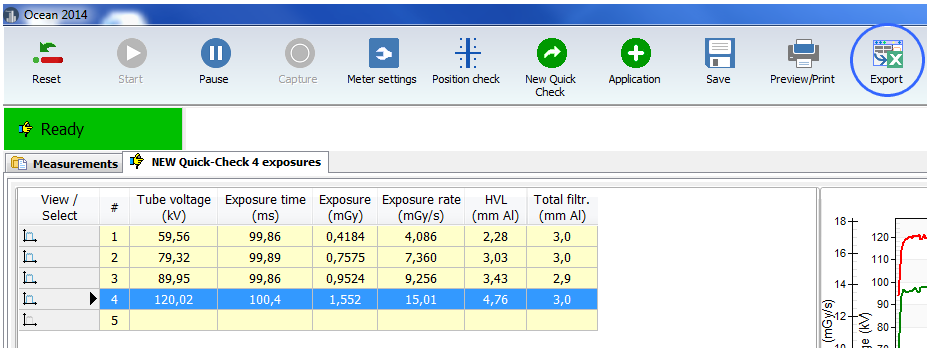


7. Measured data are transferred to Excel for each Exposure. The data transferred and the order of data is determined by the column present in the template used in Quick Check. You can use the minimized Excel window to control your measurement procedure while having Excel on the screen. The left most button is used to switch between Quick Check and Excel.

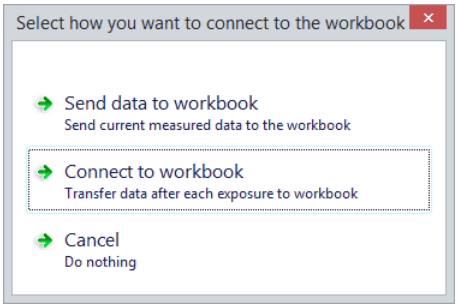
1.10.4 Send data to Excel

This is used when you want dump your current data to Excel. You have a choice to include or exclude waveforms (waveform are exported as pictures).

1. Assume that you have done a number of exposures and you want to dump all the measured values to Excel and that you want waveforms.

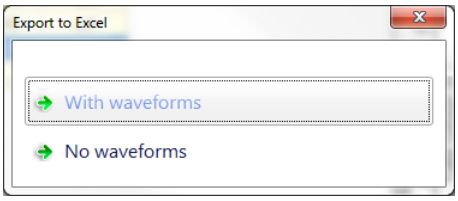


2. Click on the Export button. A dialogue is shown:

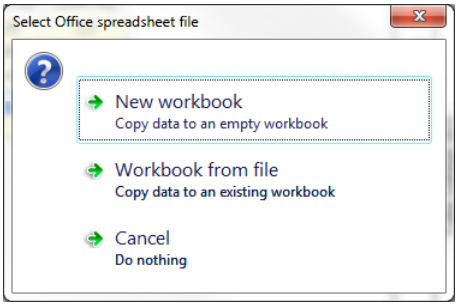


Select "Send data to workbook"

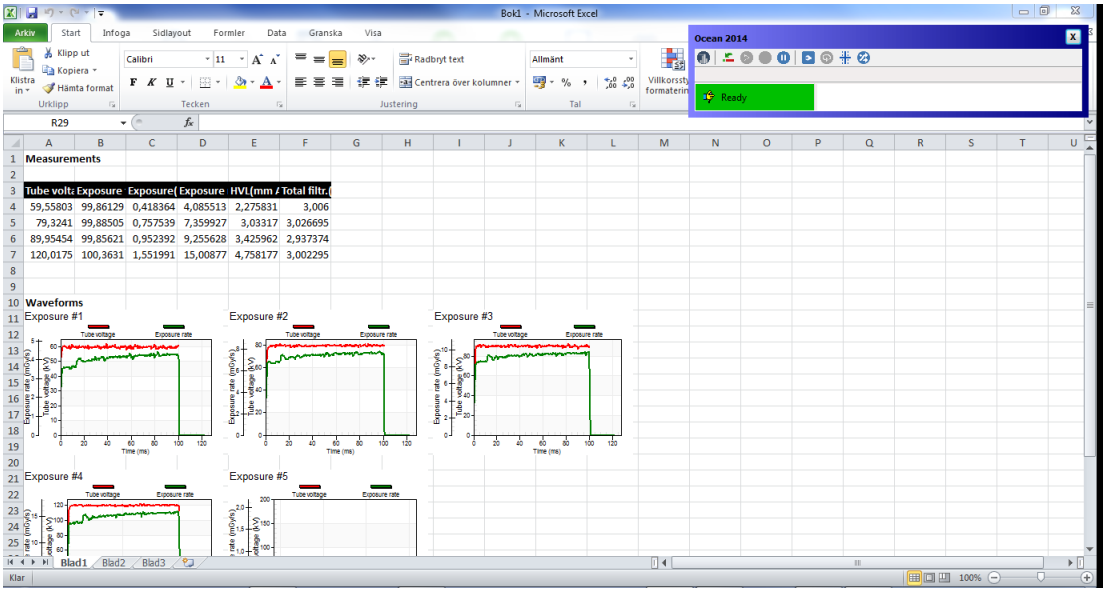
3. A new dialogue is shown where you can chose if you want waveforms or not. In this case select "With waveforms".



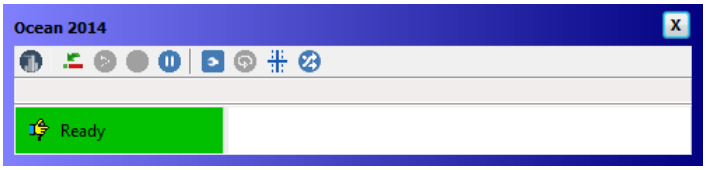
4. Next you have to chose destination. You can chose a new workbook or one you already have on your computer. In this case select "New workbook".



5. Ocean 2014 starts Excel and opens the workbook you selected. All you measured and in this case including waveforms are transferred to Excel.



6. You will also see a minimized Ocean 2014 window that is shown. This window provides help when you work with Excel.



The left most button is used to switch between Quick Check and Excel. See topic Data link to get more information about this window. You can also read Send data to Excel to see how you can use this feature in Ocean 2014.

7. You can save your Excel workbook and further process your measured data.

1.11 Import/export

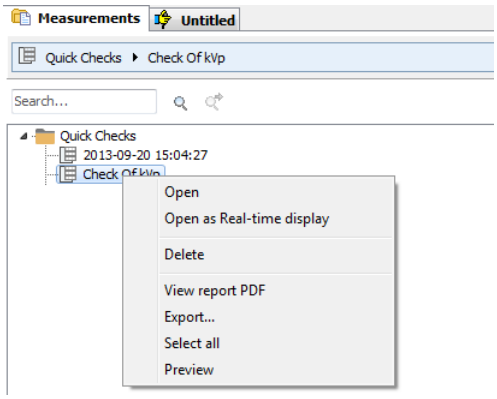
If you want to move measured data from one computer to another, an export and import function is available to you. However, only Export is available from the Quick Check mode. To use the Import function; you must go to Ocean 2014 main screen.

Export

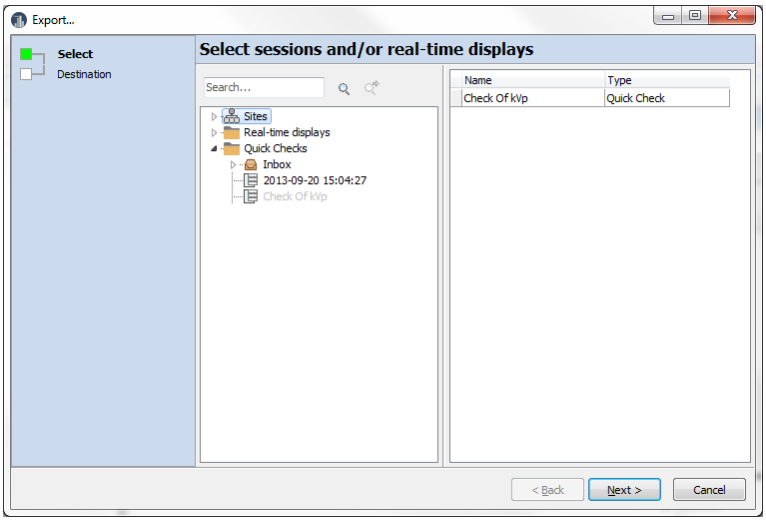
To export one or several measurements:

1. Go to the Measurement tab.

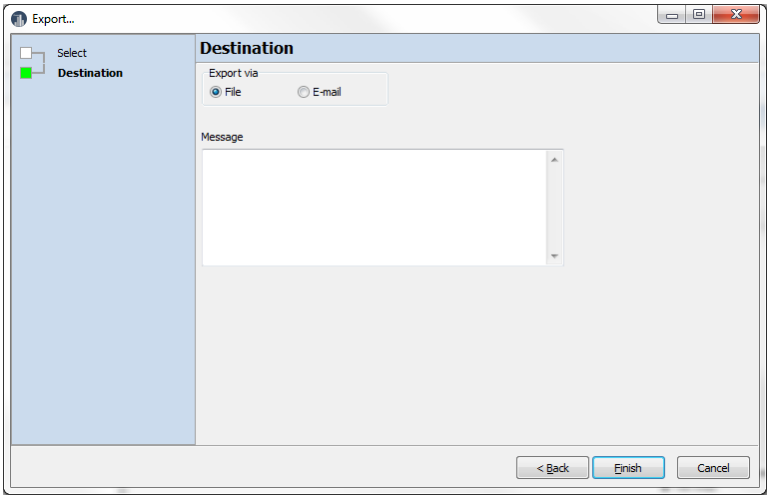
2. Right-click on the measurement you want to export.
You can first make a multiple selection by using the Ctrl- and Shift key and then right-click to directly select more than one measurement for export.



3. Select Export. A new window is shown that allows you to here select more measurements to export. The measurements you include are shown on the right side.



4. Click on Next when you have included all measurements.



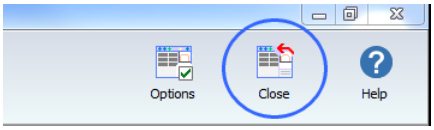
6. You can chose between "File" and "E-mail". If you have an e-mail program, you can send the file directly if that is what you want. Otherwise select "File". Select a file name and destination to finish.

You can now use the file you have created to move your measurements to another computer with Ocean 2014.

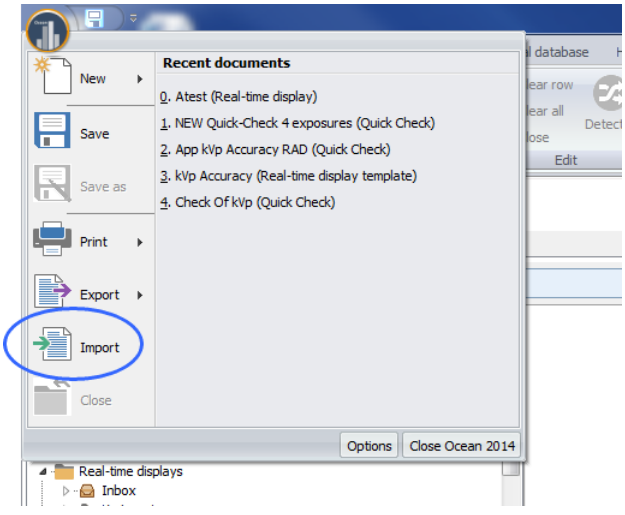
Import

You can import data, but you must then close Quick Check to go to Ocean 2014 main screen and the application button.

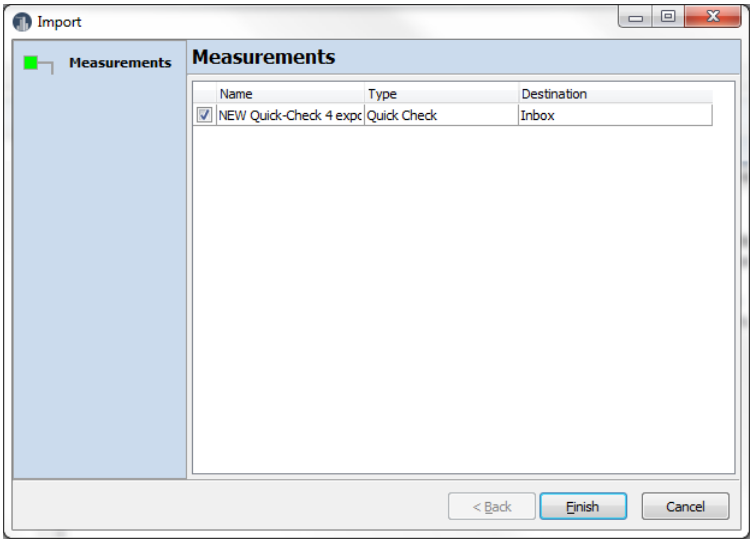
1. Click on the Close button.



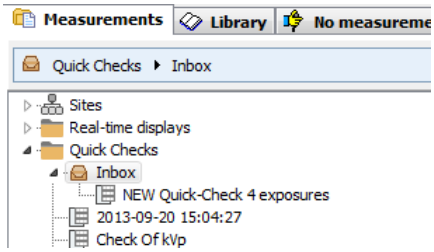
2. Ocean 2014 main screen will now appear. Click on the Application button and select Import.



3. Locate the file you want to import and select it.



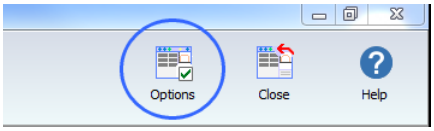
4. The dialogue shows all measurements that will be imported. You will find them in the Inbox after the import is finished.



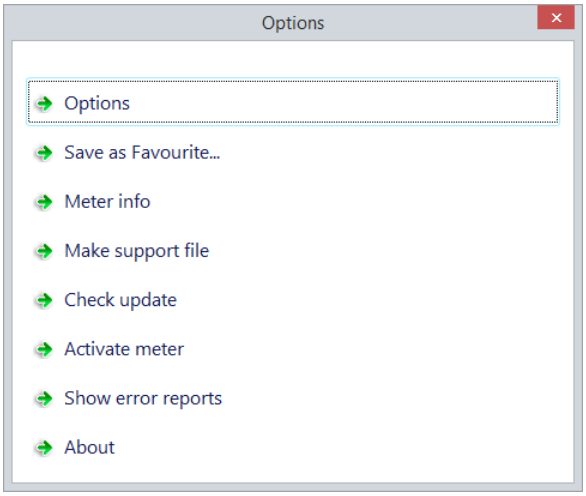
You can read more about Import and Export in the topics Import and Export.

1.12 Options

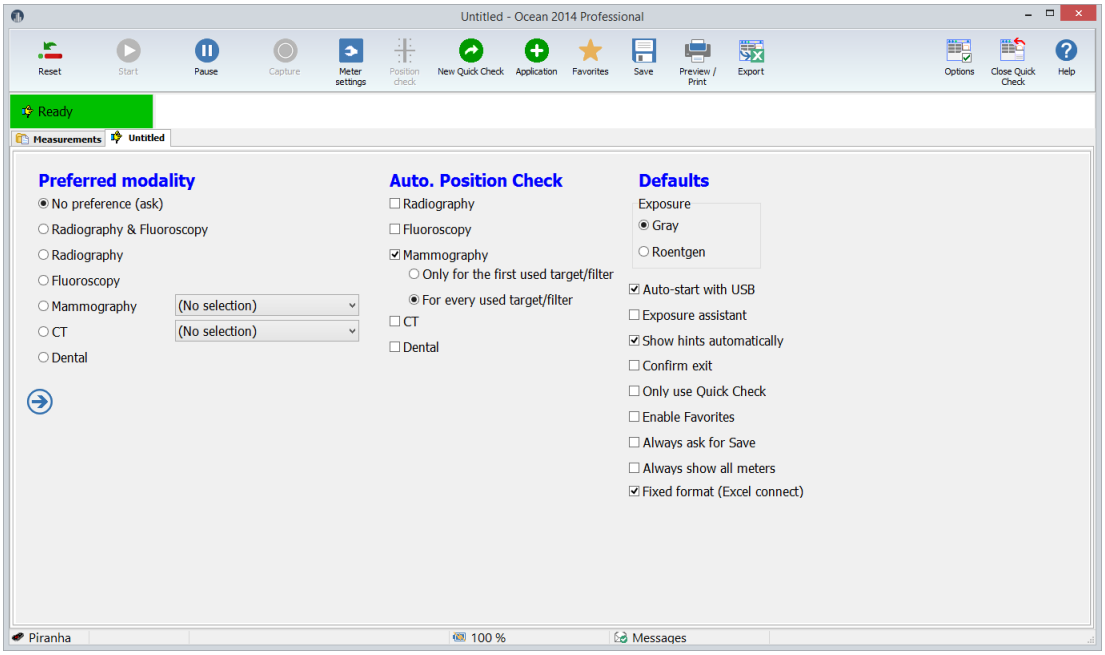
If you click on the options button a menu is shown.



You will have several options here:



Select "Options".



There are three sections here:

Preferred modality

You can use this if you have a meter that covers many modalities but you don't want to see all choices in the Quick Check.

Auto Position Check

Specify in which situations you want Quick Check to automatically suggest a Position Check.

Defaults

Various settings that controls how Quick Check works.

Exposure unit: Select Gray or Roentgen

Language: select the language you want for the Quick Check.

Auto-start with USB: If this is checked, Ocean 2014 and Quick Check starts automatically as soon as the meter is connected with USB. Quick Check also terminates automatically when the meter is disconnected or powered off.

Exposure assistant: Turn on or off the Exposure assistant.

Show hints automatically: If a Quick Check template has a hint attached to it, the hint is shown automatically if this checkbox is checked.

Confirm exit: If you check this a dialogue is shown when you quit Ocean 2014. It give you three alternatives:

- Quit Ocean 2014 and return to Windows
- Quit Ocean 2014 and turn off computer
- Resume Ocean 2014

Only use Quick Check: If you check this box, Ocean 2014 main window is hidden and you will only see the Quick Check. Ocean only starts if meter is available.

Close the Options screen by sweeping right if you use a tablet or click on the close button.

Enable Favorites: When this box is checked and at least one template is stored in the Favorites folder, the Quick Check Favorite list is shown at start up of Quick Check.

Always ask for Save: When this box is checked Quick Check always asks if you want to save your measurements before starting a new measurement or closing.

Always show all meters: When this box is checked a list with available meters to connect to is shown. If unchecked, Ocean 2014 directly tries to connect to the last used meter.

Fixed format (Excel connect): Check this box if you want to use fixed format when connecting to Excel.

Save as Favourite...
Save current measurement as a Favourite. The name given will be shown in the list when the Favourite button is clicked.

Meter Info
Shows meter information.

Make support file
If you want to report a problem, you may use this.

Check update
Look if there is a later version of Ocean 2014.

Activate Meter
Use this if you want to upgrade from Connect to Professional. You will be asked to enter the license code.

Show error report
All error reports that are generated are saved in a folder on your computer. Directly when one is generated, you are always asked if you want to send it to RTI. You may not be able to do that and it will be available in this folder. Click on this button to open the folder.

About
See version information.

You can read more about Ocean 2014's program options in the topic Program options.

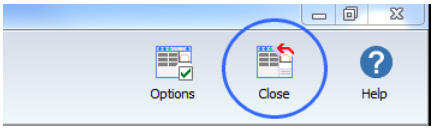
1.13 Close Quick Check

You can close Quick Check in two different ways:

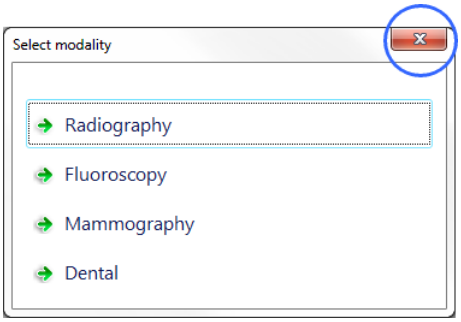
- Close and go back to Ocean 2014's main screen
- Close and quit Ocean 2014 at the same time

Close Quick Check and go back to Ocean 2014's main screen

Click on the close button:

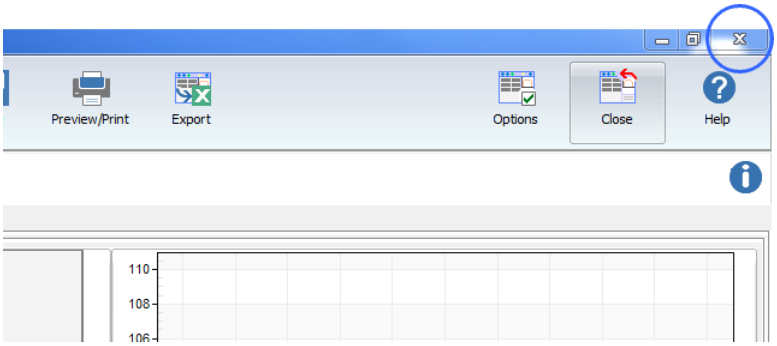


You can also close any of the menus shown in Quick Check. This will also take you back to Ocean 2014's main screen:



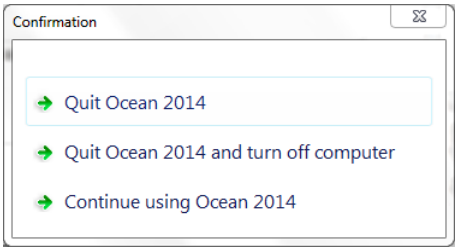
Close and quit Ocean 2014

If you want to close Ocean 2014 directly from Quick Check, click on the close button in the upper right corner of the Quick Check screen:



Remember that Quick Check will not ask you if you want to save data unless you already have saved them once.

If you have enabled "Confirm exit" i Options, a dialogue is shown (otherwise Ocean 2104 quits directly):



You can chose to go to Windows, turn off the computer or go back to Ocean 2014.