

# Instructions

## Connecting for the First Time

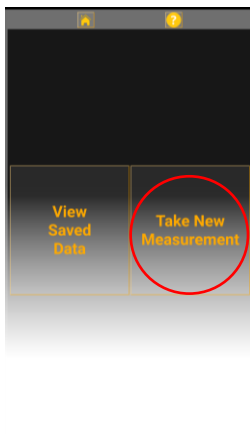
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1. Connect the spectrometer to the phone  
Ensure On The Go cable is connected to the phone and the standard microUSB is connected to the spectrometer
2. Connect the phone to the internet  
The phone must be connected via WiFi or a data connection in order to download the calibration file for the spectrometer
3. Open the app
4. Calibration files download  
The correct calibration file will automatically be downloaded from the cloud onto the phone

## Take a Measurement

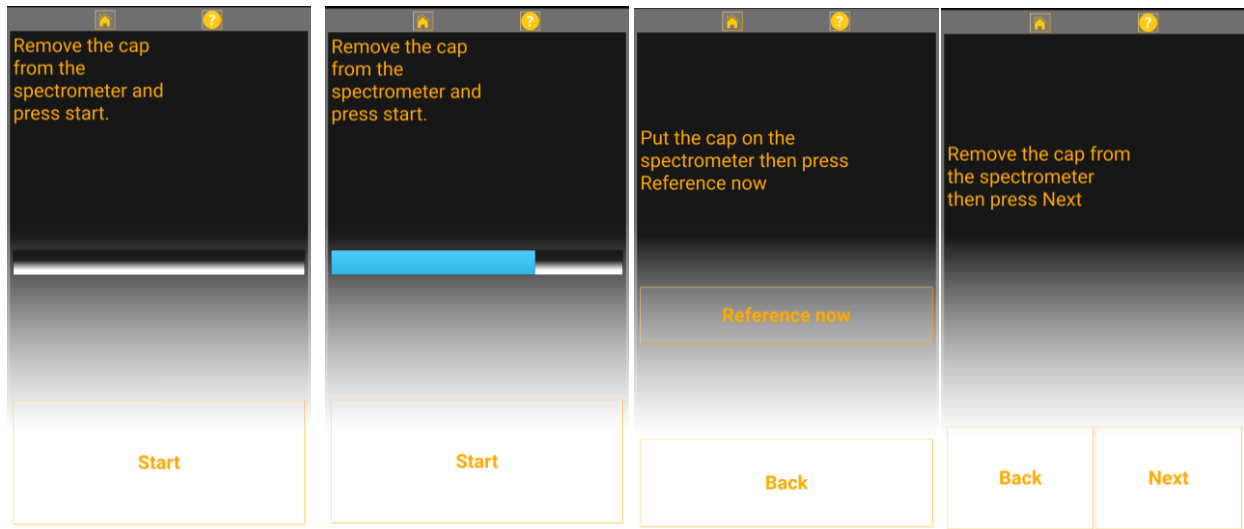
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5. Connect the spectrometer to the phone  
Ensure On The Go cable is connected to the phone and the standard microUSB is connected to the spectrometer
6. Open the App
7. Select Take New Measurement



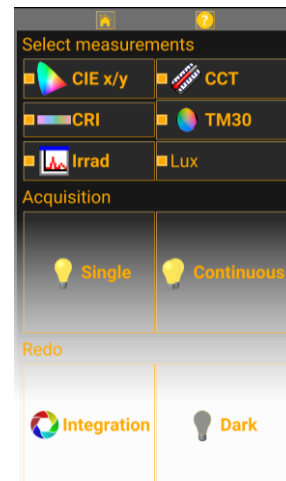
## 8. Integration Time and Dark Calibration

Follow the on-screen instructions



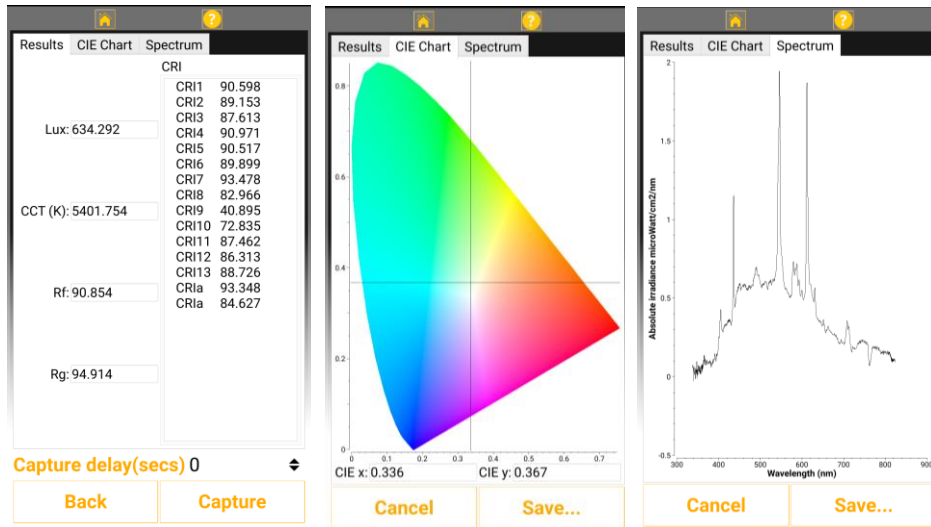
9. Choose Measurements to calculate  
Select measurements by clicking the check boxes  
Note – further measurements can be added when reviewing the data later

10. Choose Single or Continuous  
Capture a single measurement or see measurements updating continuously



## 11. View Measurement

- Single Mode  
(Optional) type the number of seconds for a delay in capture  
Select Capture  
Results will appear
- Continuous Mode  
Results appear and update automatically. This will be faster in brighter light and slower in lower light.  
(Optional) Type the number of seconds for a delay in capture  
Select Capture to view a snapshot – stops continuous recording



## Save or send a Measurement

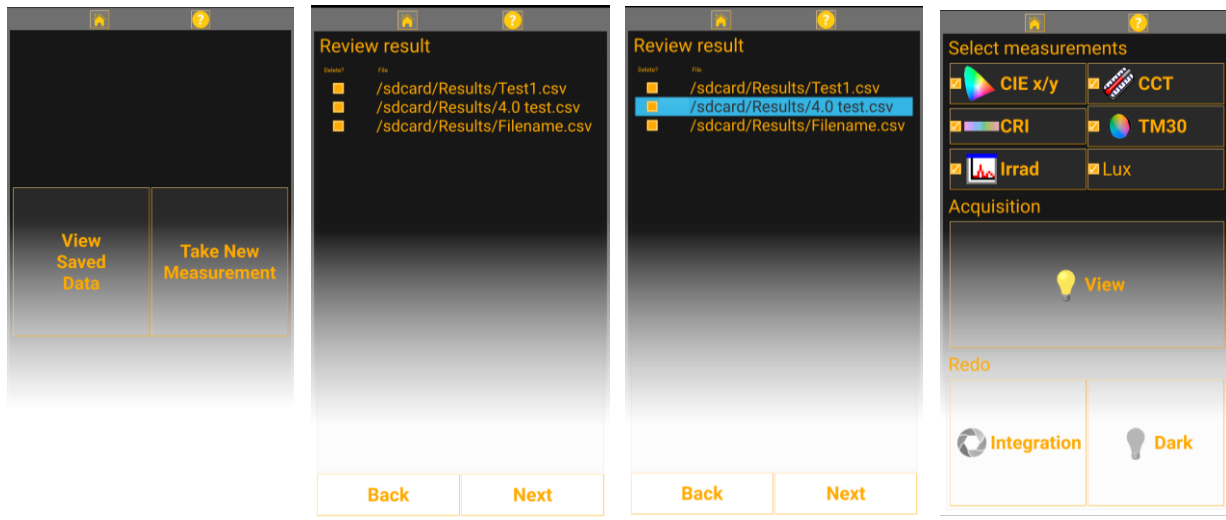
1. Choose Save...
2. Add details  
Add in optional notes and filename to identify the measurement
3. Add an email address (Optional)  
Type an email address and choose whether to send raw result and/or pdf report  
Ensure there is an email app on the phone with an account signed in, and that the phone is connected to the internet
4. Click Save

The figure shows a 'Notes' dialog box with the following fields and options:

- Notes specific to this measurement (text area)
- Filename: Filename
- Email result to: e@example.com
- Send raw result (checkbox)
- Send report (checkbox)
- Buttons: Cancel, Save

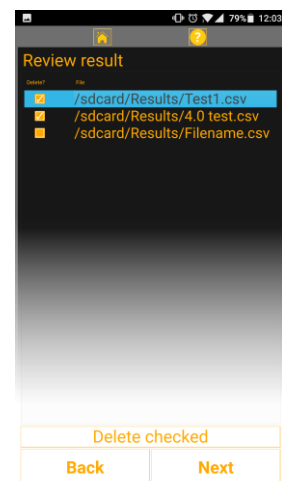
## View a Saved Measurement

1. Select View Saved Data
2. Select Result to View
3. Select Next
4. Select Measurements to View
5. Select View



## Delete Saved Measurement(s) from phone

1. Select View Saved Data
2. Select check box(es)  
Select the box(es) in the Delete column next to the result(s) to be deleted
3. Select Next



## Redo Dark Measurement

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**Recommended every 10 measurements or if the spectrum looks noisy**

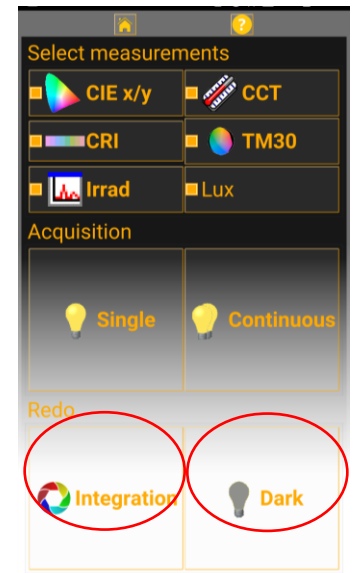
1. Select Dark  
From the measurement choice menu
2. Follow on-screen instructions

## Redo Integration Time Measurement

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**Recommended every time light intensity changes significantly to give most accurate results**

1. Select Integration  
From the measurement choice menu
2. Follow on-screen instructions  
Complete the auto integration time measurement and dark measurement



# Troubleshooting

## Take New Measurement button doesn't appear

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- **Calibration files have not been downloaded:** phone must be connected to the internet before the first use to allow calibration files to be accessed
- **Calibration files are not available on Wave Server:** If using an existing spectrometer then contact Ocean Optics for details on how to use the app with an existing compatible spectrometer

## Integration time doesn't complete

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- **Insufficient light:** The light source is insufficient – increase the light reaching the spectrometer
- **Cap is still on the spectrometer:** The cap must be removed for the integration time measurement to complete
- **Connection between phone and spectrometer has been lost:** Close the app [recent apps button then swipe app from screen] , disconnect and reconnect the spectrometer then try again

## Measurement takes a long time

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- **Calculating unnecessary values:** TM30 involves a lot of calculation, to speed up calculation time try unchecking the TM30 option if it's not needed – it can be viewed from saved data if needed later
- **Integration time is too long:** ensure the spectrometer is close to the desired measurement position when taking the integration time
- **Light levels are low:** if the light source is not very bright then the integration time has to be longer and therefore the measurement takes longer

## No readings appear

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- **Measurements not chosen:** ensure the measurements required have been selected before choosing measurement type
- **Connection between phone and spectrometer has been lost:** Close the app [recent apps button then swipe app from screen], disconnect and reconnect the spectrometer then try again

## Emailed results didn't send

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- **No email client on phone:** There must be an email app installed on the phone with an account signed in for the email to send
- **Phone not connected to internet:** The phone must be connected to the internet, if not the email will be placed in the outbox of the email account until there is an internet connection
- **Data to send not chosen:** Ensure the check boxes for which type of data to send are selected
- **Email mistyped:** Ensure email address is correctly entered

## Spectrum is Very Noisy

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- **Not enough light is reaching the spectrometer:** Redo the integration time measurement from the measurement menu page
- **Dark calibration is incorrect:** Redo the dark measurement from the measurement menu page, ensure cap is properly in place during dark measurement

## No CCT Reading

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- **Light source is not suitable:** CCT can only be calculated for light sources that approximate black body sources, it does not work for some lights such as coloured LEDs