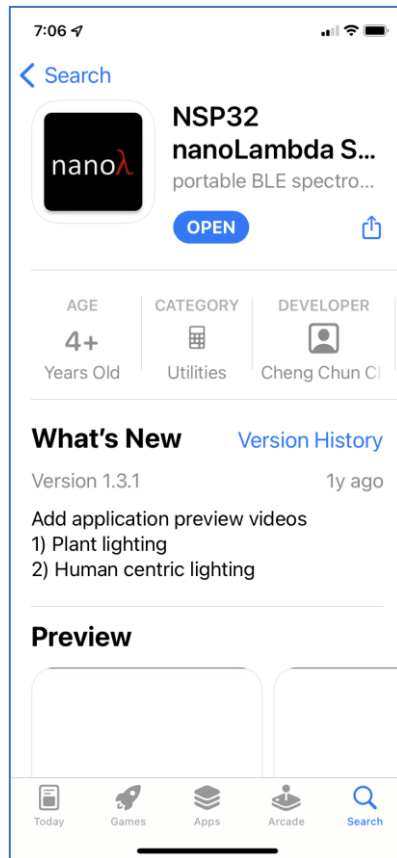
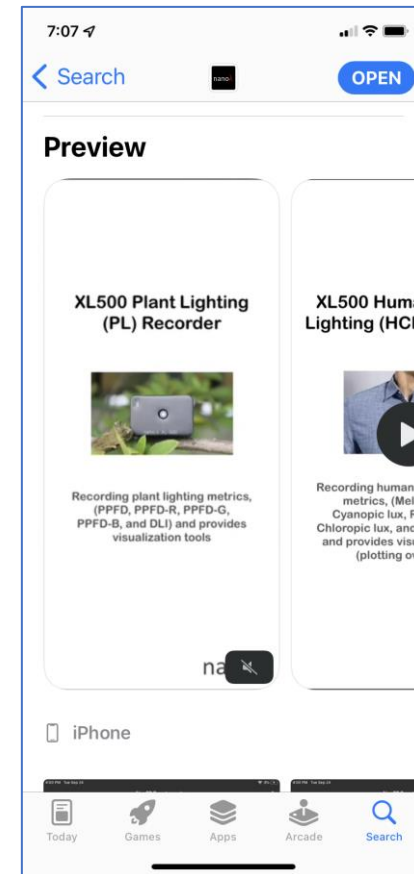


1. Go to the IOS App Store online and Install the NSP32 nanoLambda App on your I-phone, or I- Pad

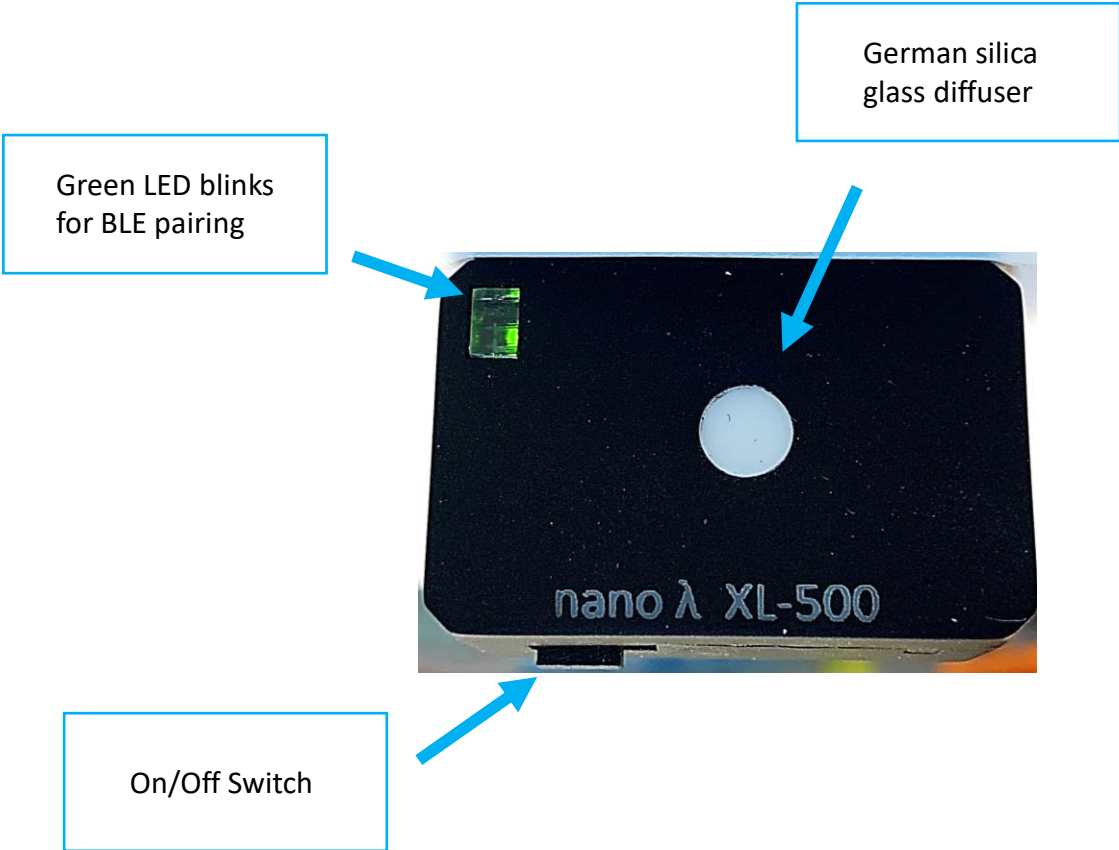
*Example procedures are based on the IOS download



Please Note:
You must be running IOS software on your phone or tablet/i-Pad newer than 14.5.1



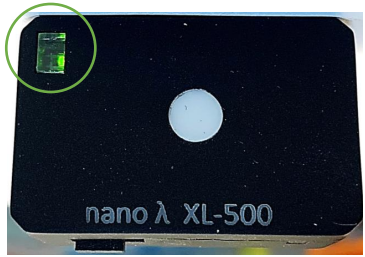
2. The Nano XL-500



Communication with the Nano XL-500 is achieved wirelessly through your phone, pad or tablet.

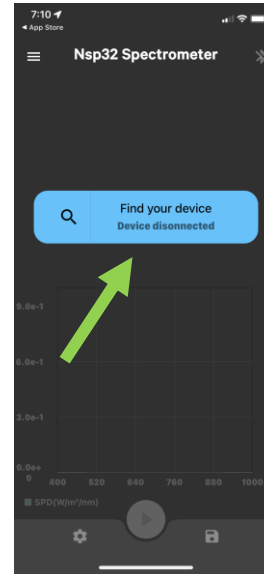
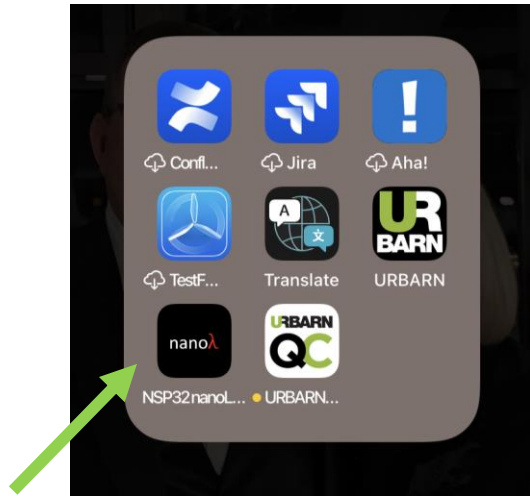
3. Start Up Basics

Turn on the XL-500



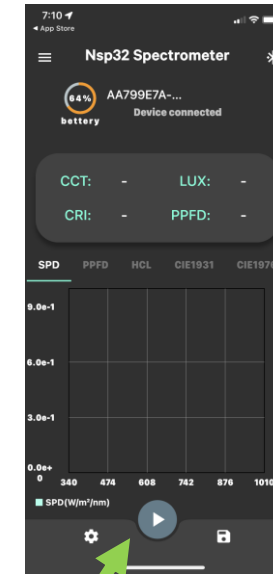
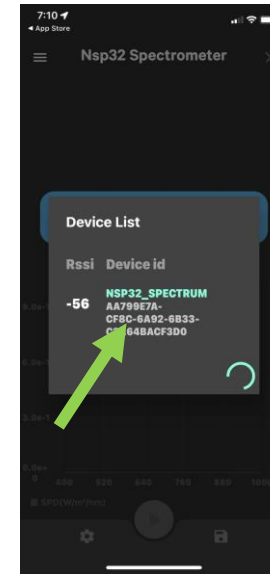
Green LED blinks for BLE (Bluetooth) pairing

Run the App



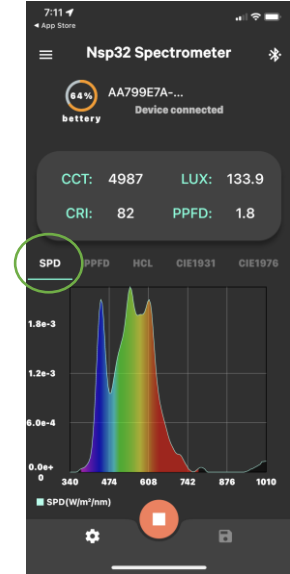
Opening Screen

Select Nsp32-Spectrometer

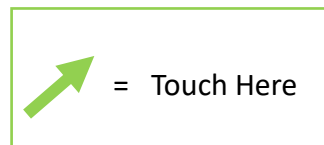


Start

Live Spectrum



“SPD”
Total Spectral
Power Distribution



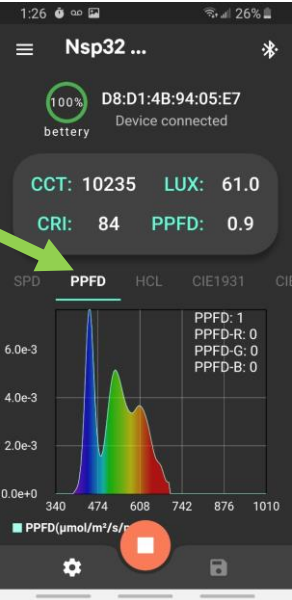
4. Different Screens Show Values

(access screens by sliding your finger horizontally across the screen or touching the screen name itself)

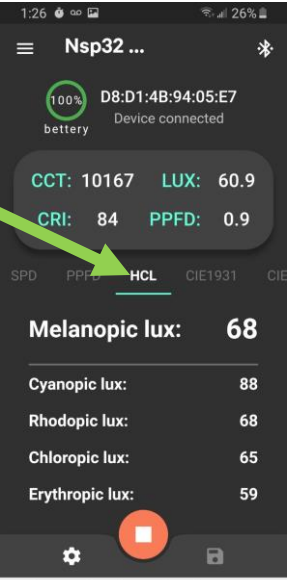
SPD
(Spectral Power Distribution)



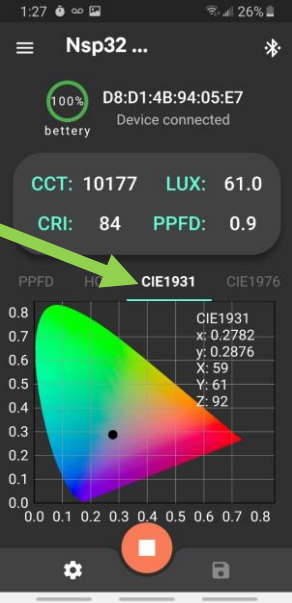
PPFD for Agriculture
(Photosynthetic Photon Flux Density 400-700nm)



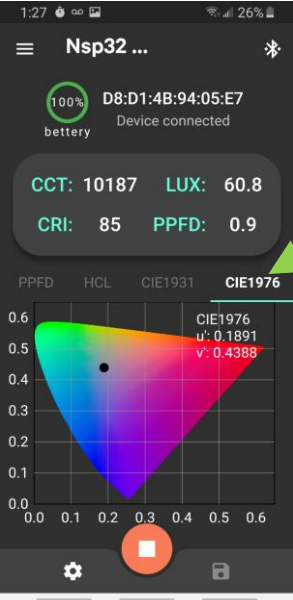
5 Different Lux Values
for HCL
(Human Centric Lighting)



COLOR
CIE1931 XYZ, xy

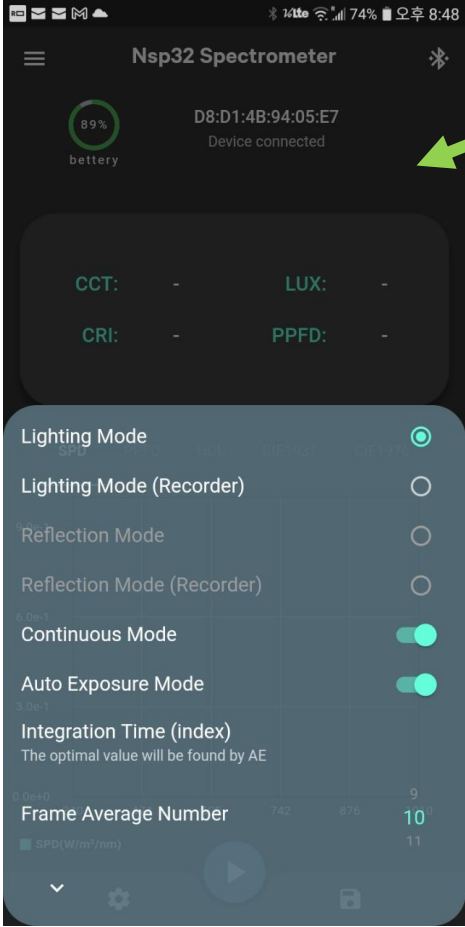
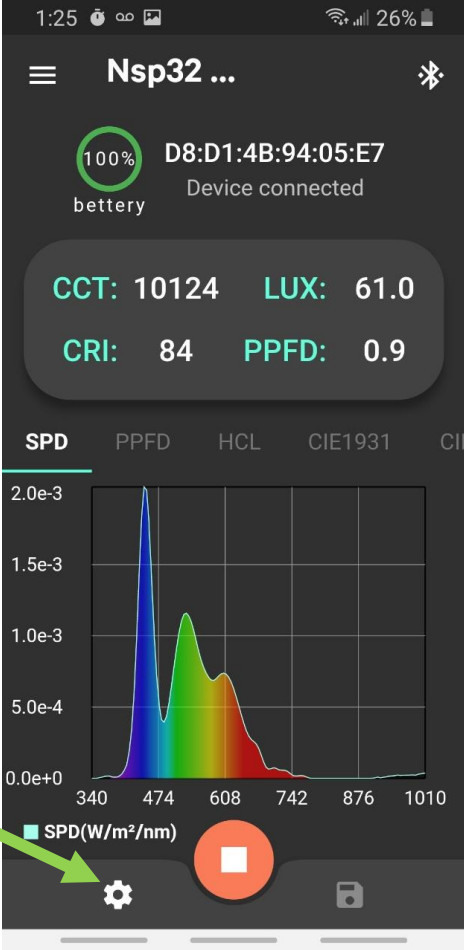


COLOR
CIE1976 u' v'



➔ = Touch Here

4. Settings: Using the Nano for "Continuous Recording"



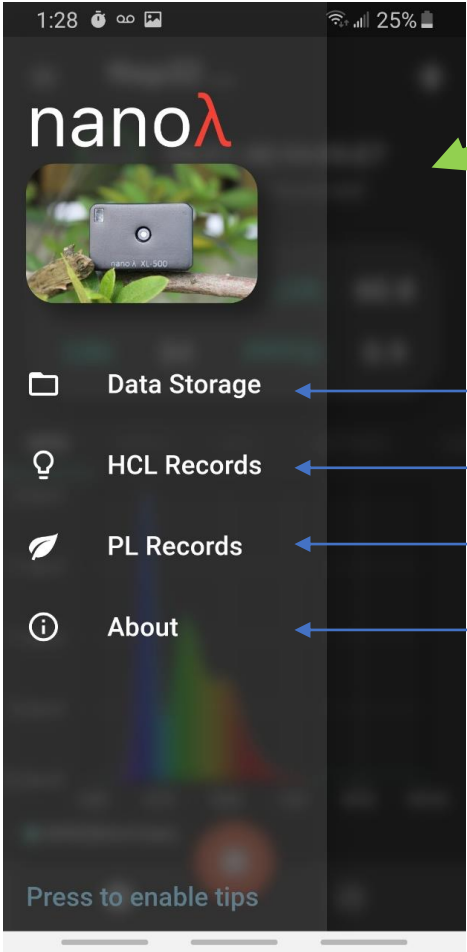
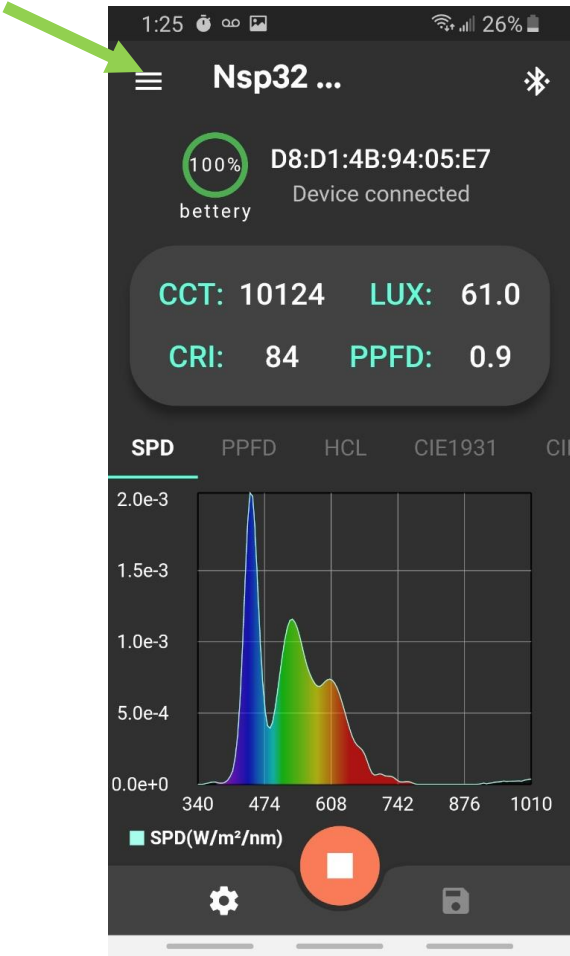
Touch, then going back to previous screen

- ← Normal Measurement
- ← Recording Function [Start Time, End Time, Interval]
- ← Reserved For future [Reflection Measurement]
- ← Reserved For future [Reflection Recording]
- ← ON: Continuous Measurement OFF: One Time Measurement
- ← ON: Auto Exposure OFF: Manual Integration Time Setting
- ← Integration Time [Level] Setting
- ← Frame Average Setting [for stable measurement]

↗ = Touch Here

- AE is recommended for typical measurement
- Frame Average > 10 is recommended

5. The Main Menu




Touch to return to to previous screen

Saved Measurement Data

Saved HCL(Human Centric Lighting) Data

Saved PL(Plant Lighting) Data

About XL-500

 = Touch Here

6. How to Record and Save Each Measurement Data Result

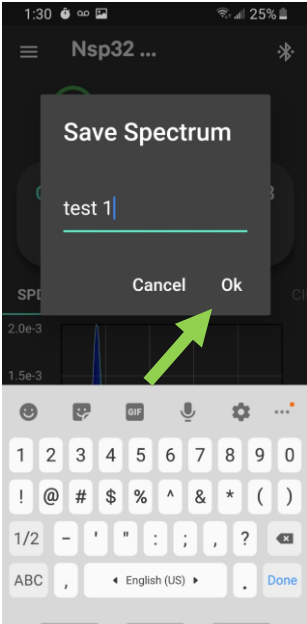
STOP



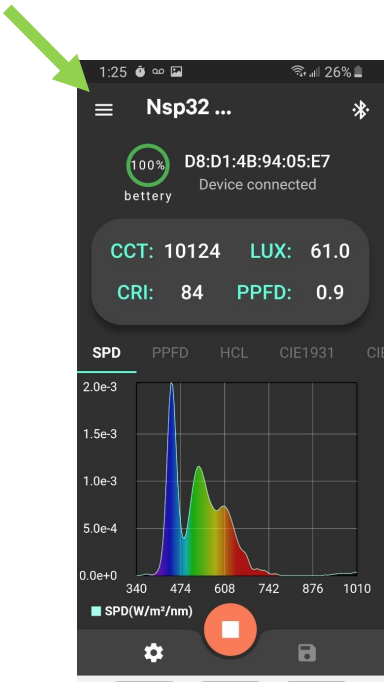
SAVE



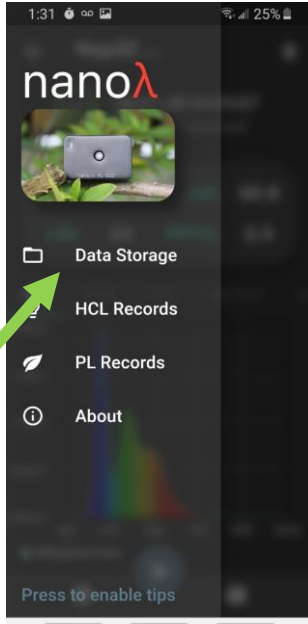
Type File Name



MENU




Data Storage



File stored



 = Touch Here

When you click the file, the data will show the graph and data for all 5 screens

6. Recording Data Over a Period of Time: Using the Preset Value Setting

Settings Icon

Lighting Mode (Recorder)

Recording Mode Start

Setting Recording Time Duration & Interval

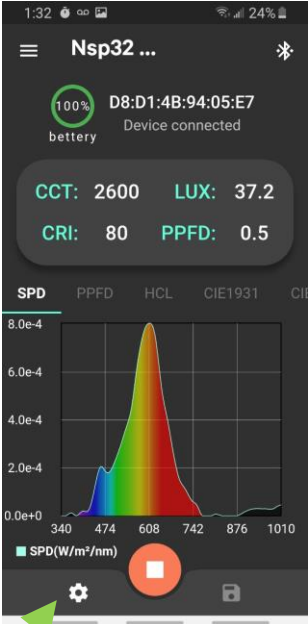
Recording in Progress

Maximum number of recorded files on the unit is 8192 over a session. Be sure to save recorded data as a new session will over-write existing data

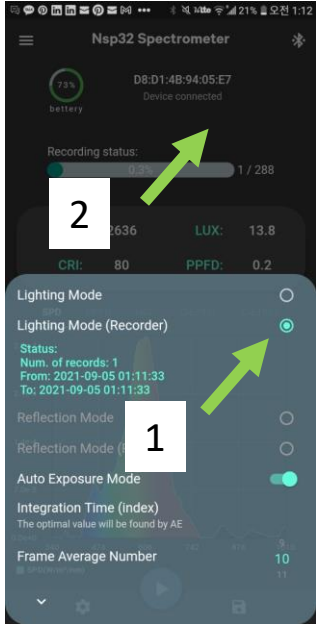
= Touch Here

7. Recording : Using a Custom Value Setting (Frequency Measured in Seconds) Step 1

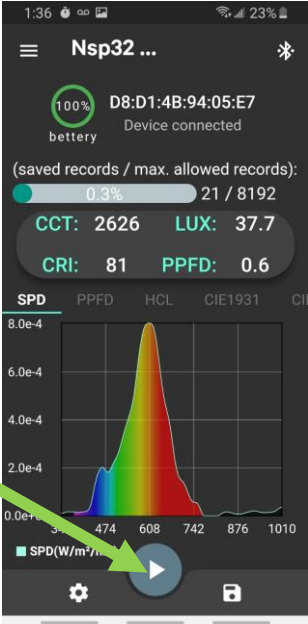
Settings Icon



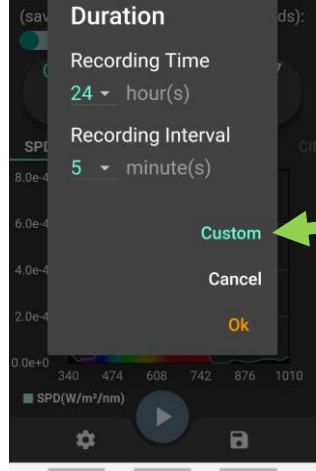
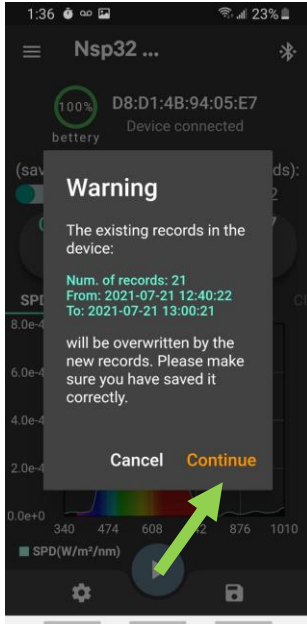
Lighting Mode (Recorder)



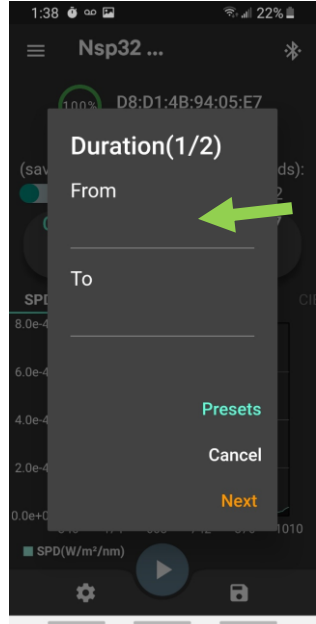
Recording Start



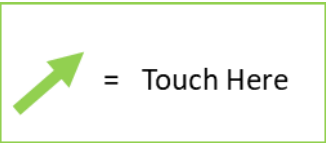
Select Custom Setting (able to measure frequency of snapshot in blocks of seconds)



Duration (see next slide)



Maximum number of recorded files on the unit is 8192 over a session. Be sure to save recorded data as a new session will over-write existing data



8. Recording : Using a Custom Value Setting ... (Frequency Measured in Seconds) Step 2

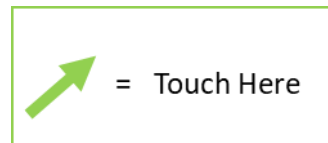
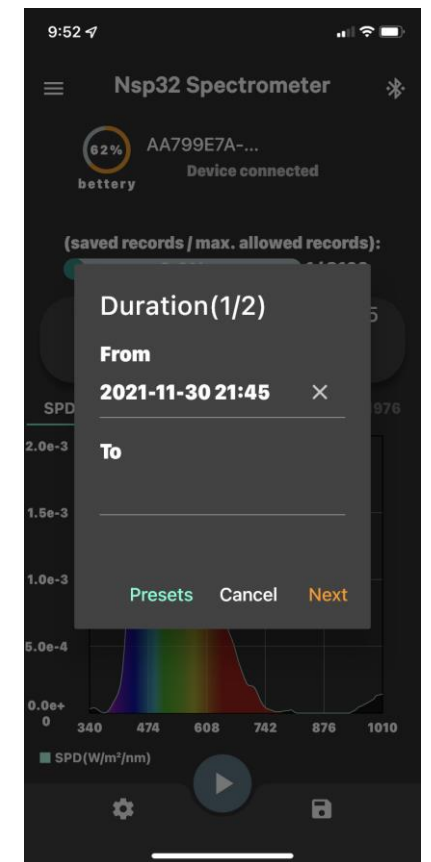
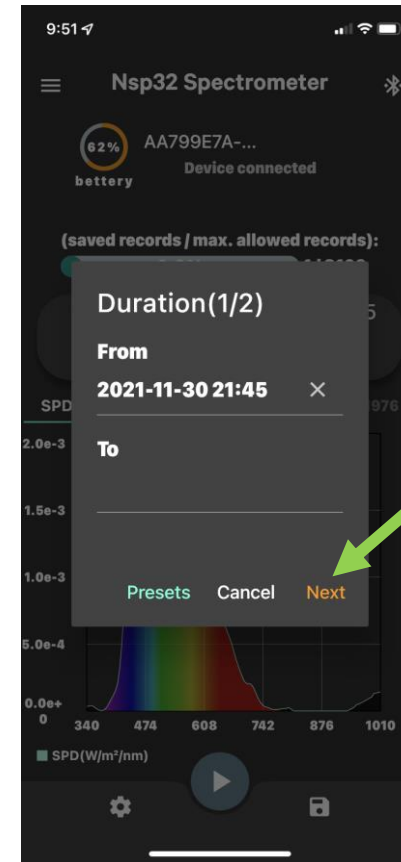
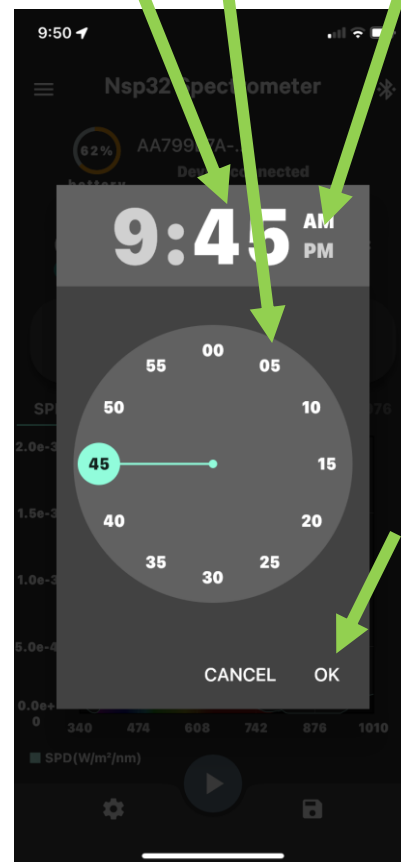
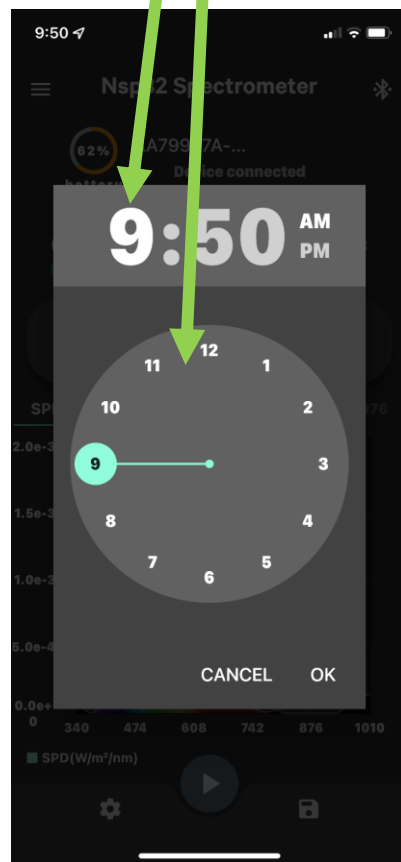
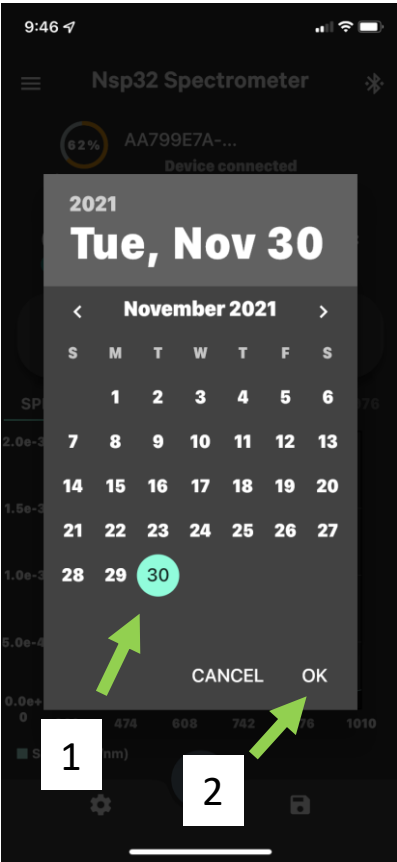
Touch Start Date then "OK"

Touch "Hour" and adjust

Touch "Minute" and adjust

Touch "AM or PM" and then "OK"

Touch "Next"



8. Recording : Custom Time Setting (Frequency Measured in Seconds) Step 3

Touch Start Date then "OK"

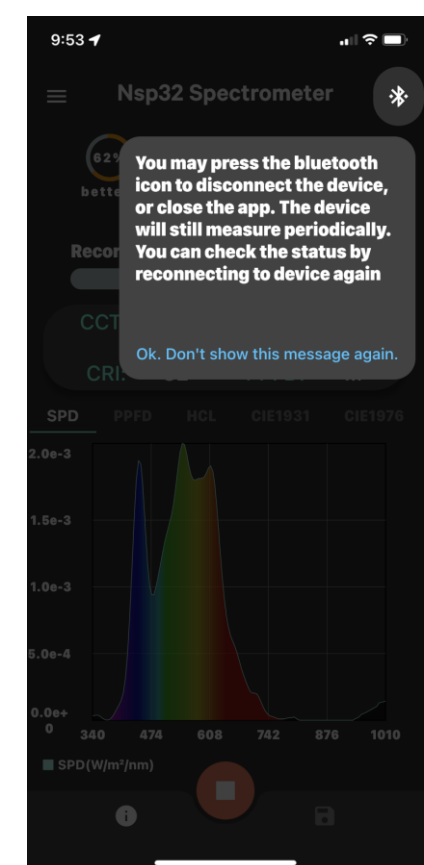
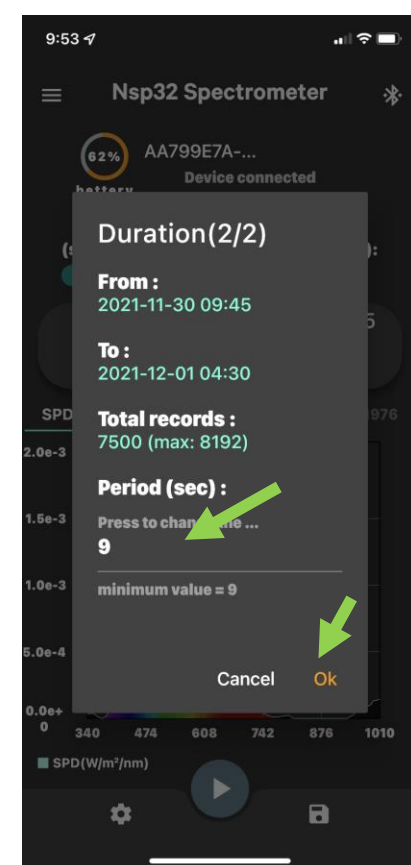
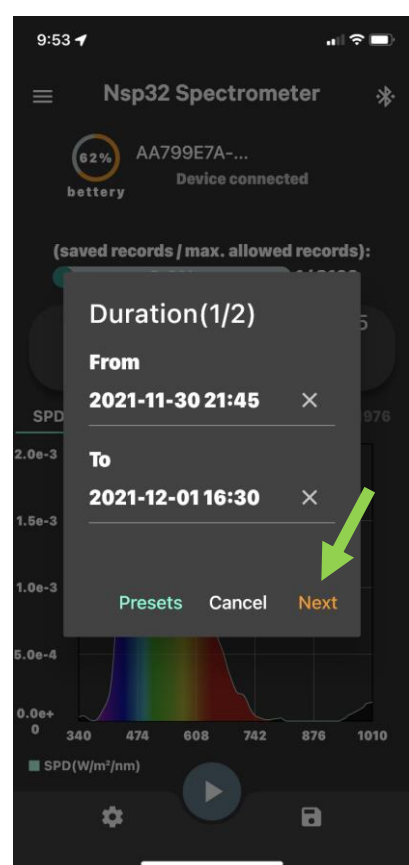
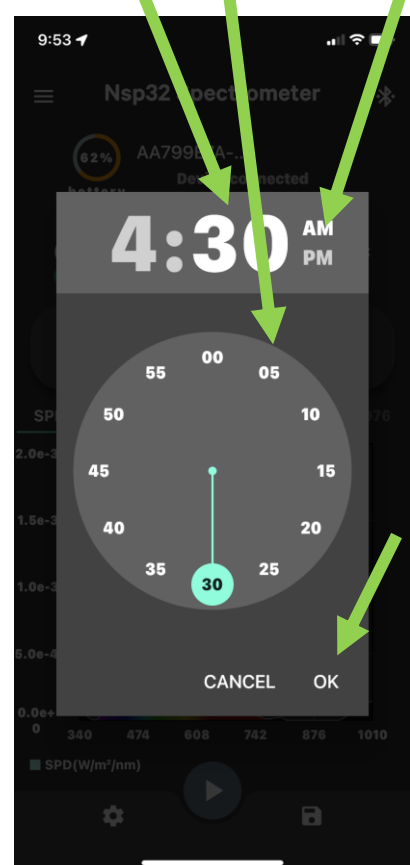
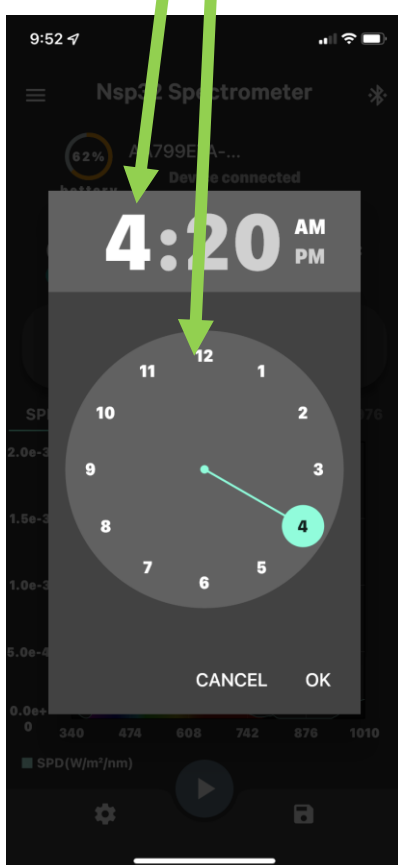
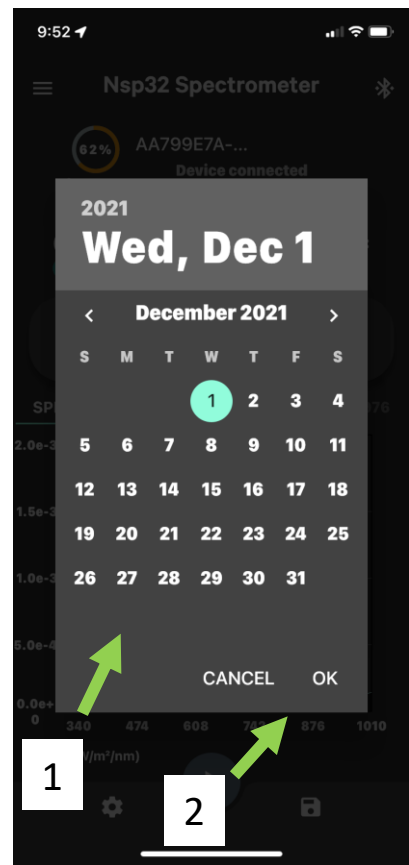
Touch "Hour" & adjust


Touch "Minute" & adjust

Touch "AM or PM" and then "OK"

Touch "Next"

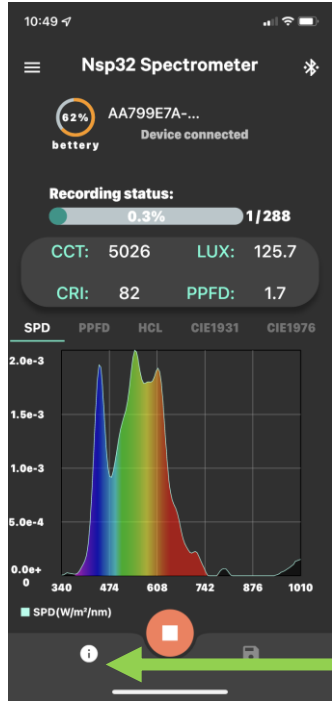
Adjust Frequency Period



 = Touch Here

9. Recording and Saving Records

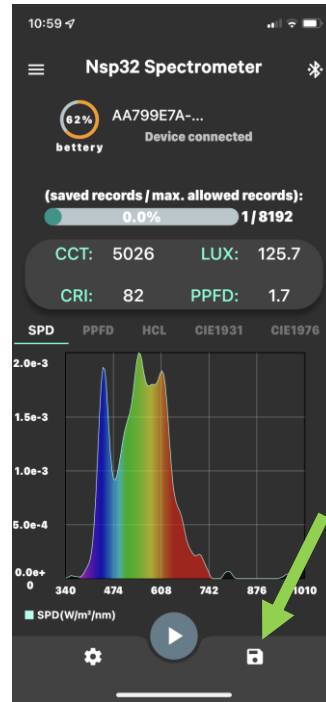
Recording ...



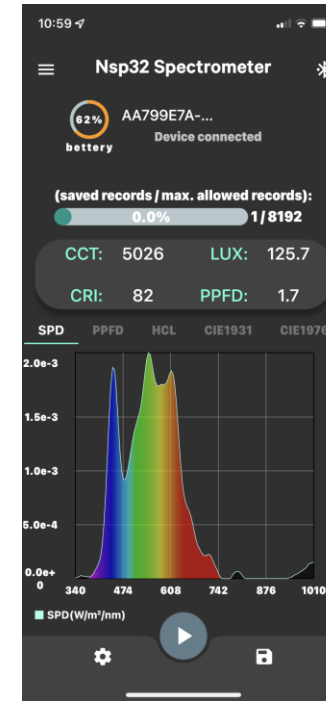
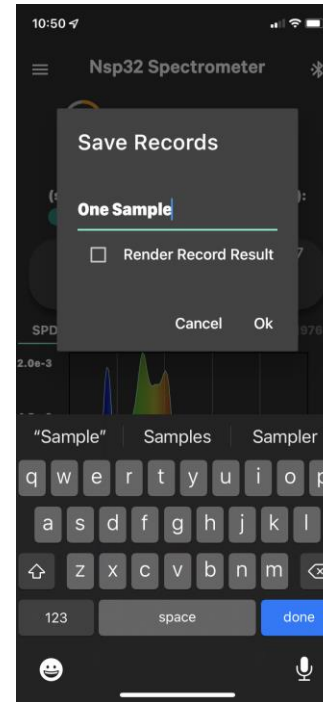
Recording Progress




Recording Finished
Touch Save Button



Save Records Enter
File Name and Press
"OK"

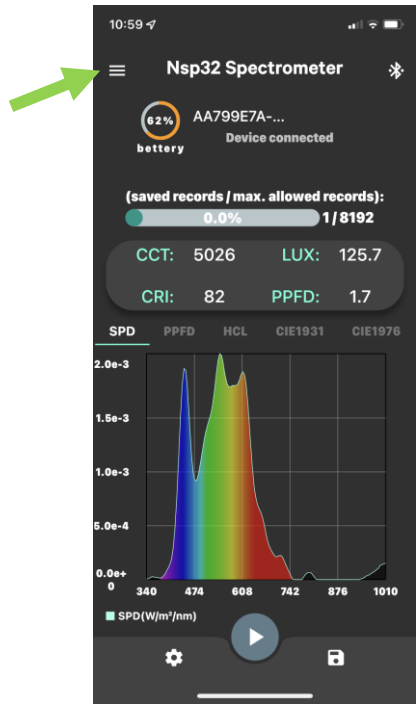


 = Touch Here

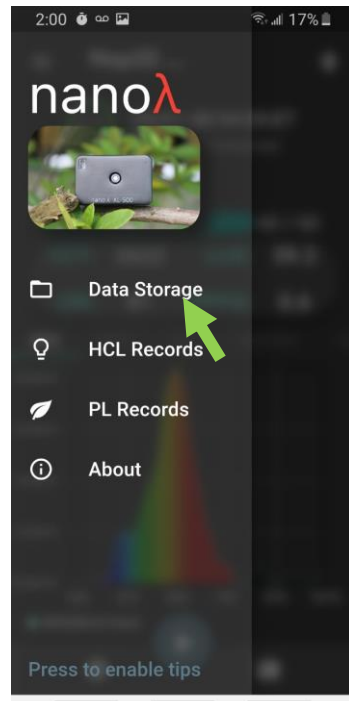


10. See Data and Data Export

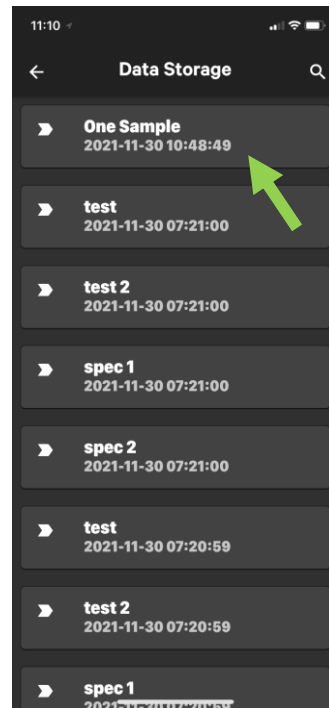
Touch Menu



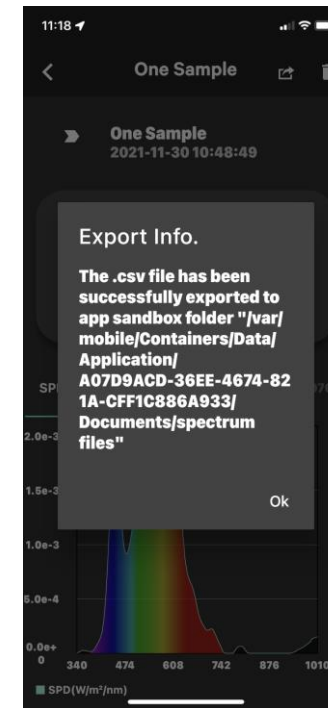
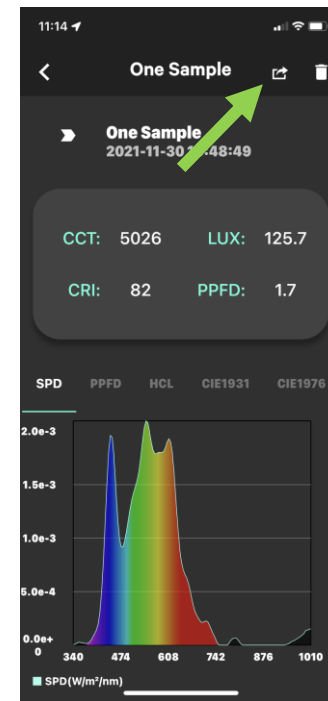
Touch Data Storage



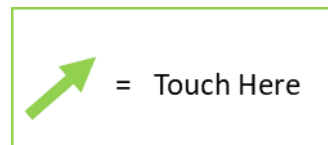
Find Data File



Look at Stored Data and Export

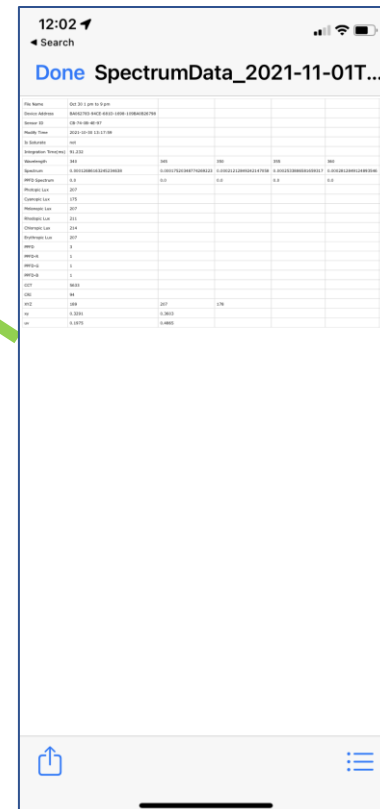
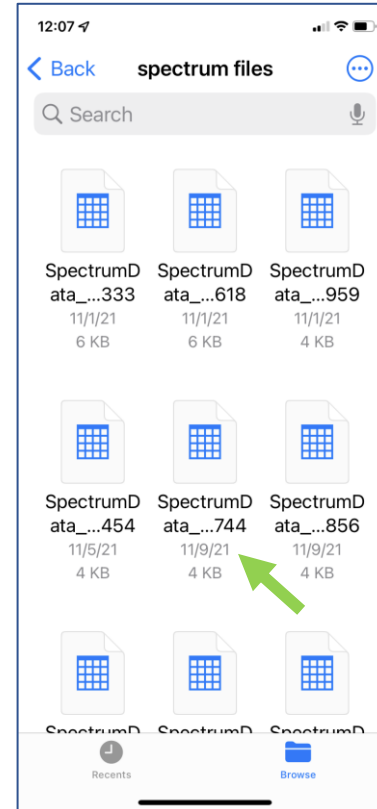
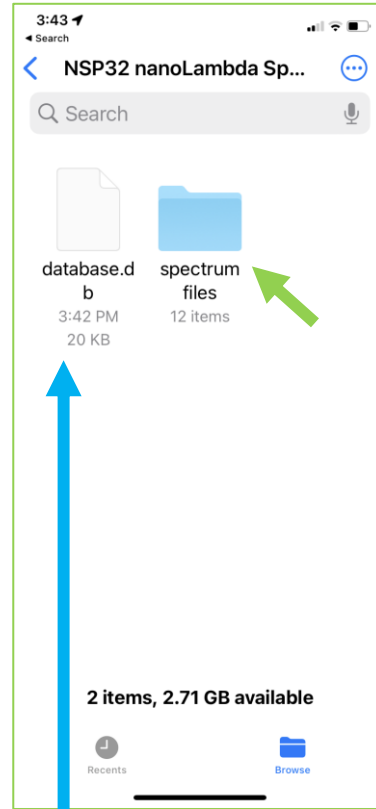
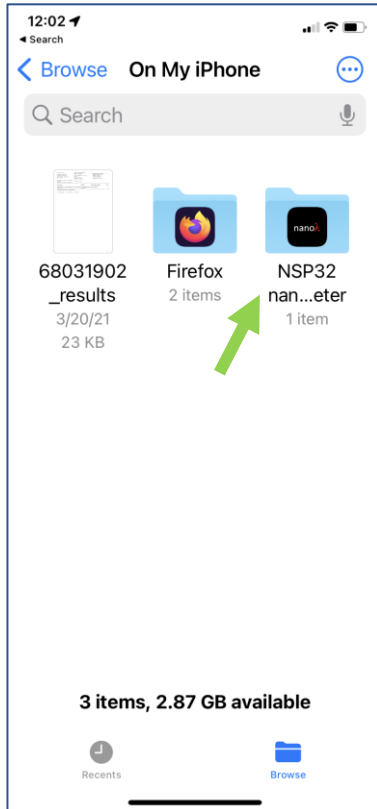
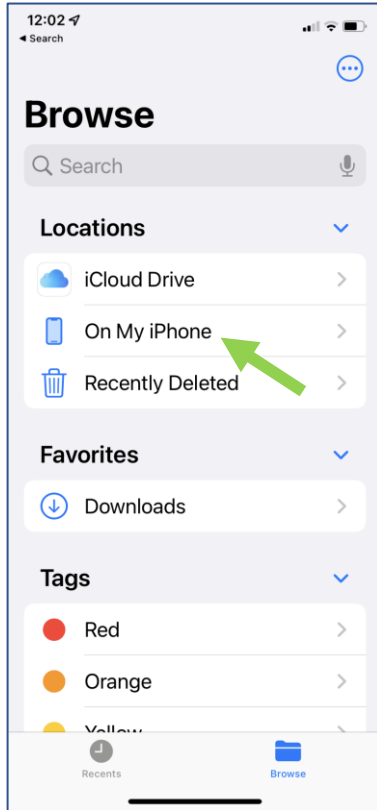
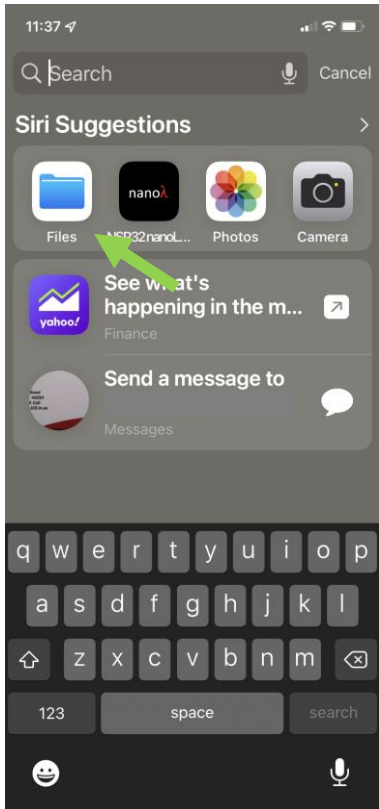



• File location in IOS



10. Find Exported File in IOS File System

Find File Manager

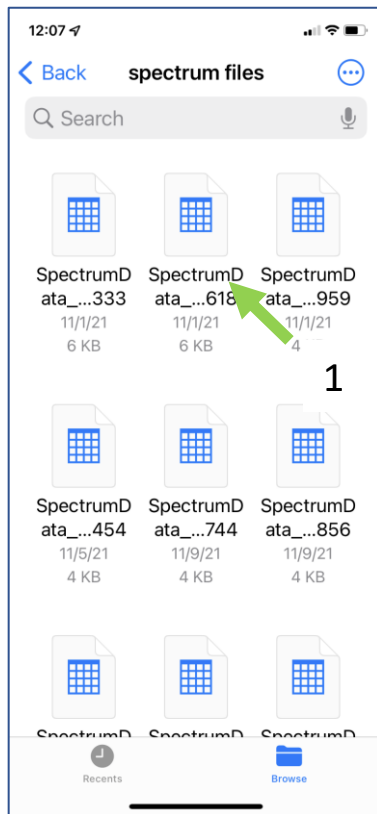


 = Touch Here

WARNING: Do not delete this Database index file before exporting spectrum files to a computer or you will lose your data

11. Send/Share a File

Select File to Share



Share File using email or other method

