

Using ScubaLink app with ScubaMobile



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1) ScubaLink and ScubaMobile

“ScubaLink” is the user-interface (mobile) app that operates the family of multiprobes (Scuba, and Scuba Trimeter). The app lets you capture instant or continuous data, configure sensors and parameters, manage logged data, calibrate sensors, organize GPS functions such as Geofencing, email data files, and much more.

ScubaLink works with “ScubaMobile”, which is a rechargeable, lithium battery with a built-in, Bluetooth transceiver. The battery powers the multiprobe, while the Bluetooth feature allows the Scuba to talk to your phone or tablet.

2) Different Types of Data Display Devices

ScubaMobile works with different types of Apple and Android smart phones, tablets, and similar devices — many of which have different screen sizes and shapes. The screen illustrations in this manual are examples (using an Apple phone) to help you understand how everything works — your specific screens will likely be slightly different, and might vary depending on whether you have rotated your device’s screen. This manual does not show every one of the scores of different screens that might pop up in ScubaLink unless their meaning is not intuitive.

Keep in mind that the simplicity of ScubaLink means you can explore all the menus and screens on your device in just a few minutes.

3) Where do I get ScubaLink?

You can find ScubaLink in the Google Play Store or the Apple App Store, and download ScubaLink to your display device just as you would download any other app.

4) Connecting Your Display Device to a Multiprobe

Connect the top connector (9-pin) of your multiprobe’s underwater cable (or data cable) to the ScubaMobile and connect the lower connector (6-pin) of the cable to your multiprobe.

When you press the ScubaMobile’s power button, the button’s indicator light will flash blue, and the five, green fuel gauge (battery-charge status indicator) lights will show the charge level of the ScubaMobile’s battery (five green LED’s indicate a full charge; one red LED indicates discharge). If the fuel gauge shows insufficient charge, disconnect the multiprobe and connect the ScubaMobile charger to the ScubaMobile’s 9-pin connector.

Launch the ScubaLink app by tapping the app’s icon (a lower case “e” in an orange crown) on your device screen. When the app launches, you will see the spinning icon that tells you that something is happening, and the brief message “Auto Connecting ...”. That means ScubaLink is listening for any ScubaMobiles available (i.e., that are turned on, have ample power, and are within Bluetooth range). If it finds the ScubaMobile that was most recently connected to your device, it will automatically connect to that ScubaMobile. Be aware that the Scuba app will not automatically connect the ScubaMobile to your device if the ScubaMobile is already connected to your device. In that case, disconnect the ScubaMobile from your device and connect automatically via the ScubaLink app.



Once a ScubaMobile is connected to a device, i.e., has established a Bluetooth connection, the ScubaMobile's blue light will turn from blinking to solid.

If there is a multiprobe connected to that ScubaMobile, you will see its scrolling data. If the device does not automatically connect to a ScubaMobile, or if you don't want to talk to the connected ScubaMobile, tap the Connect button at the screen's top center and select the one you want to connect to (the serial numbers of the multiprobes found by ScubaLink are shown).

Should the ScubaMobile move out of your device's Bluetooth range, data will stop scrolling and the Connect button will appear. Move the ScubaMobile and your device closer together, tap Connect, and choose the desired ScubaMobile to re-establish the connection.

5) Home Screen

The Home screen (Screen 1) is the screen that appears on your device when it connects to a ScubaMobile. At the top of the Home screen are the five "hot buttons": Snap, AutoSnap, Clean, Connect, and Logging On/Off. If the ScubaMobile is connected to a multiprobe, you will see that multiprobe's rolling data as they are updated by the connected multiprobe.

At the bottom of the screen are the four "menu buttons": Home, Files, Calibrate, and Settings. Tap one of these to see its first screen.

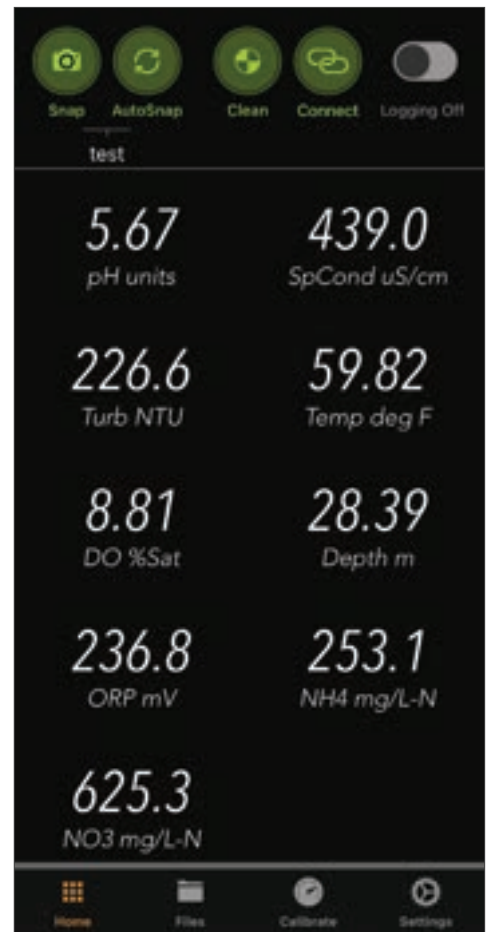
6) Home Screen — Snap

"Snap" is short for Snapshot, which is one line of data (date, time, parameter readings) that is logged into your display device's Snapshot file. Snapshot is useful when you want to save a single line of data, while profiling a lake, collecting data site to site, running a lab experiment, etc.

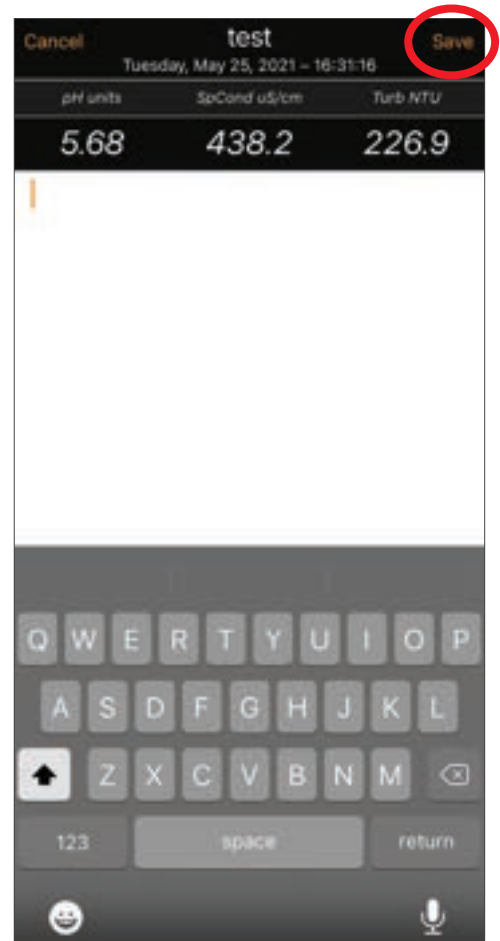
Tap Snap, and then Save (Screen 2), to record the most recent line of data. This data is recorded to the active Snap File (Snap File name appears at the top of the Home Screen). If you wish to tag a note (annotation) to a line of data, type that note with the keyboard (which appears automatically) and then tap Save.

Please see Files — Snapshot (topic 13) to learn more about Snapshot files.

You can remember multiprobe data three ways. First, it can log data into the Snapshot file with the Snap or AutoSnap feature — that data resides in your display device, not in the multiprobe. Second, if it has a power source, the multiprobe can autonomously log data into a file in its internal memory — that data resides in the multiprobe. Third, your multiprobe can be connected to third-party devices, such as dataloggers, and programmed to store data in that datalogger.



Screen 1



Screen 2

7) Home Screen — AutoSnap

“Autosnap” is simply the Snap feature that has been automated. AutoSnap is useful when you want to automatically record data for short periods when you have something else to do.

Tap AutoSnap (Screen 3) to start recording lines of data; you’ll see the little rotating arrows that indicate that AutoSnap is running. You’ll also see how many Snapshots (lines of data) have been recorded in your display device since you tapped AutoSnap. Tap AutoSnap again to cease recording.

See Topic 20 — Screen 39 if you wish to change that interval. Note that this is the same interval between lines of rolling data.

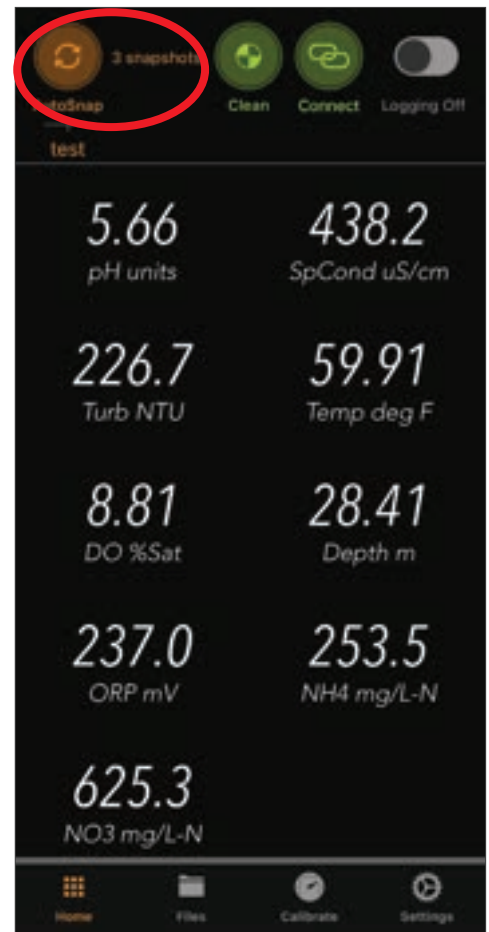
The default interval between lines of data is one second.

8) Home Screen — Clean

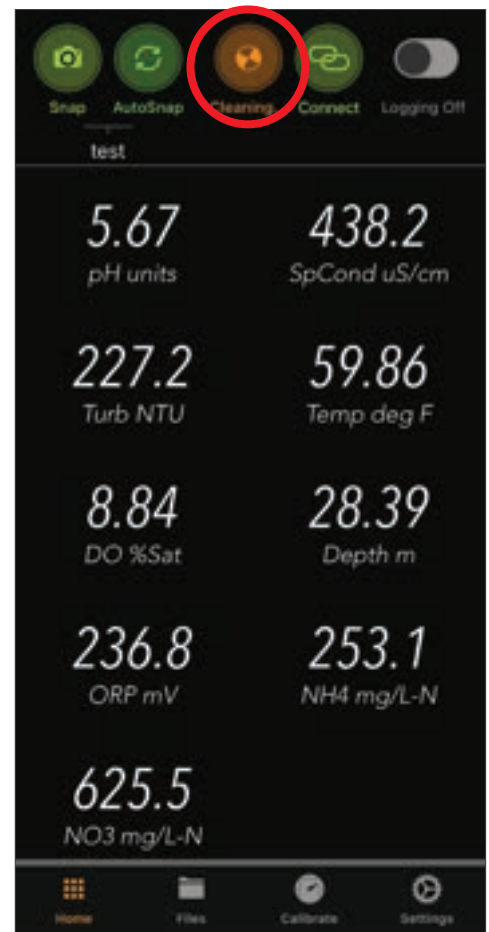
Many of our multiprobes have a cleaning brush (turbidity sensor with a wiper, a turbidity sensor with a wiper and an extended brush, or a MiniCleaner). Normally, the brush only activates when the multiprobe is first powered up, and only runs one cleaning cycle. If you wish to run a cleaning cycle at any other time, tap the Clean button to tell the brush to perform one cleaning cycle.

(Screen 4)

This feature is often used just before calibrating sensors, or when the multiprobe is logging with continuous power (i.e., the multiprobe never powers down).



Screen 3



Screen 4

9) Home Screen — Connect

Please see “Connecting Your Display Device to a multiprobe” (topic 4).

10) Home Screen — Logging On/Off

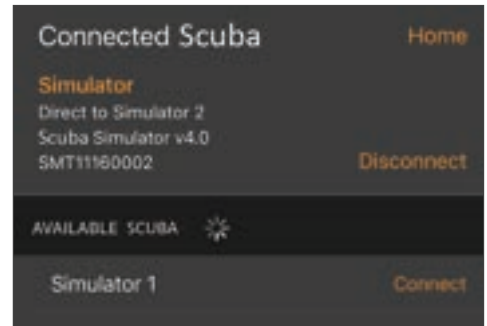
Tap the Logging button at the top-right corner of the screen to change from On to Off or Off to On.

When first toggled to On, the Logging Interval screen appears (Screen 6) to let you set data logging interval (how often you want the multiprobe to automatically log data). Swipe up or down on the hours and minutes buttons to set the desired interval, and tap Done to return to the Home screen.

Just below the Logging button you will see the name of the file where your data is logged in the multiprobe’s memory (Screen 7). If you have not yet created your own logging files, you will see “DEFAULT.LOG”. Multiple files may be created in a multiprobe.

Please see Topic 16 — Files — Log to learn more about Log files.

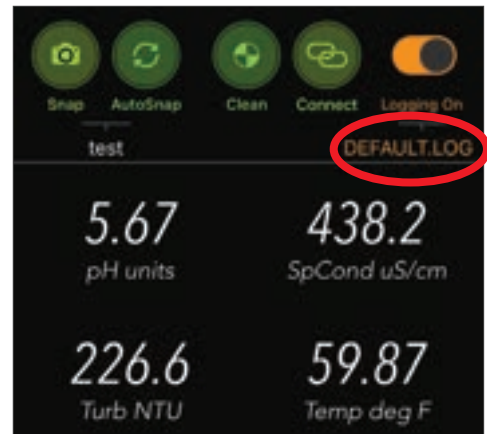
If you intend to deploy the multiprobe for unattended logging, Logging must be turned “On” prior to exiting the ScubaLink program — otherwise no data will be collected. When you get to the field to deploy the multiprobe for a logging run, the red LED inside the multiprobe will blink five times upon power-up to tell you that Logging is On.



Screen 5



Screen 6



Screen 7

11) Home Screen — Rolling Data

The data from the connected multiprobe scrolls in the middle of the Home screen (Screen 8). Please see Topic 21 — Home Screen — Settings to learn how to change the scrolling interval (time between readings).

12) Home Screen — Files

When you tap the Files button, two new buttons, Snapshot and Log (camera and fish) appear just above the Files button. Tap Snapshot for the Snapshot Files screen; tap Log for the Log Files screen (Screen 9).

A file is either “Active” or “Available”. An Active file is the file you are using for logging, exporting, etc.; only one file at a time can be Active. An Available file is inactive but can be made the Active file by tapping Change and tapping the Available file that you want to make your Active file (Screen 9).

Remember — Snapshot files are stored in your display device’s memory, while Log files are stored in the multiprobe’s memory.

13) Files › Snapshot File

ScubaLink lets you select and record data — Snapshots — in your device either manually (one-by-one) or automatically. Snapshot files reside in the device’s memory. They can be found by tapping the Snapshot button after tapping the Files button at the bottom of most screens.

When you tap the Snapshot button — in the Files menu at bottom of the screen — the Snapshot screen shows you the active Snapshot file (that’s the file where Snapshot and AutoSnap data are sent) and any other files that you have used as Snapshot files and haven’t deleted. You can change the active Snapshot file to one of the other files on the list by tapping the Change button and then tapping the file you wish to become the active Snapshot file (Screen 9).

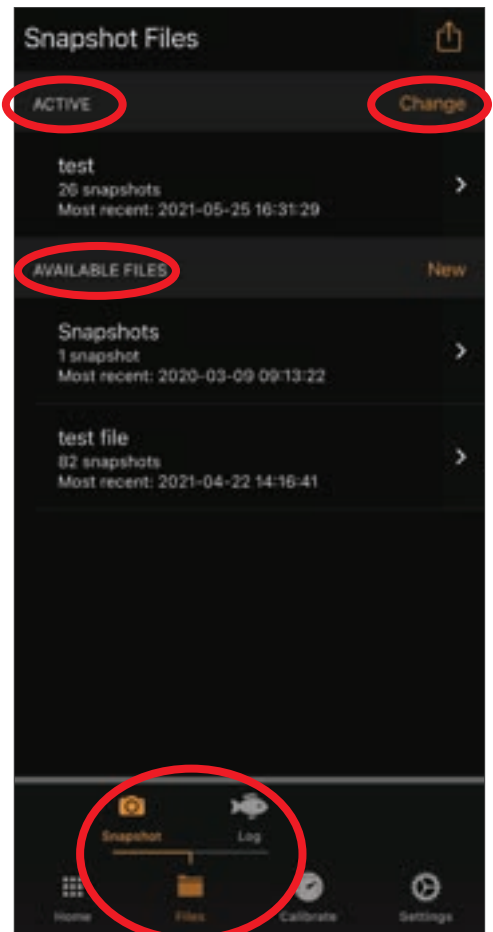
If you wish to see the contents of a file, tap the name of that file (Screen 10). You will see the file’s data, tagged with Time and Date. Use your finger to slide the screen left/right or up/down to view more data.

To clear or delete a file, swipe the file name to the right to see the Clear and Delete buttons. Clearing a file erases the data in a file, but keeps the file for future use (Screen 10). Deleting a file erases the data in the file without keeping the file for future use (Screen 11).

To export a file(s), tap the Share button at the upper-right of the Snapshot File screen. Please see Topic 14 — Exporting Snapshot Files and Log Files for information on transferring and emailing data.



Screen 8



Screen 9

If you wish to create a new Snapshot file, go to the Snapshot Files screen, tap New, and type in the name of the new file (Screen 13). Tap Save to go back to the Snapshot Files screen, where you will see the name of your new file in the list of Available Files. Use the Change button to select the new file as the active file if desired (Screen 14).

Time	pH units	SpCond uS/cm
2021-05-25 16:31:29	5.68	438.8
2021-05-25 16:31:28	5.66	438.2
2021-05-25 16:31:27	5.66	438.2
2021-05-25 16:31:26	5.66	438.2
2021-05-25 16:31:25	5.66	439.1
2021-05-25 16:31:24	5.68	438.2

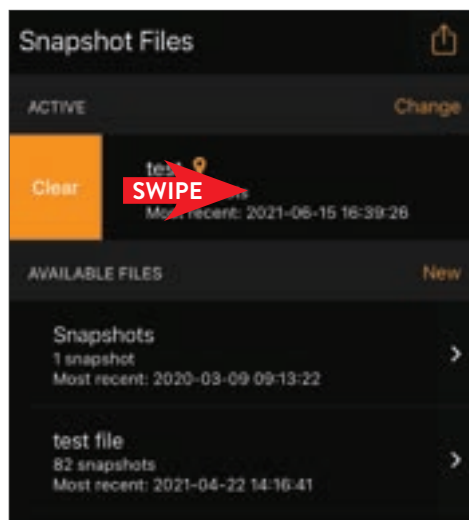
Screen 10

Before creating a new Snapshot file, always make sure that the parameters you need to record are Active and that they are in the desired order (see Topic 19 — Settings — Parameters). If you make changes to Active parameters, create a new Snapshot file.

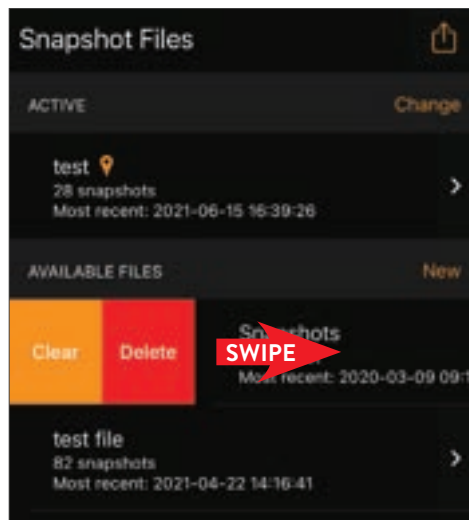
Many users find it handy to have a folder named for each monitoring site regularly visited. (You'd be surprised how many folks don't get this.)

There are two ways to Clear or Delete a file. You can swipe to the right the file name, and tap Clear or Delete. If you want to Clear or Delete multiple files quickly, tap the Share button at the upper right and, on the following screen, select all the files to be cleared or deleted by tapping the file name.

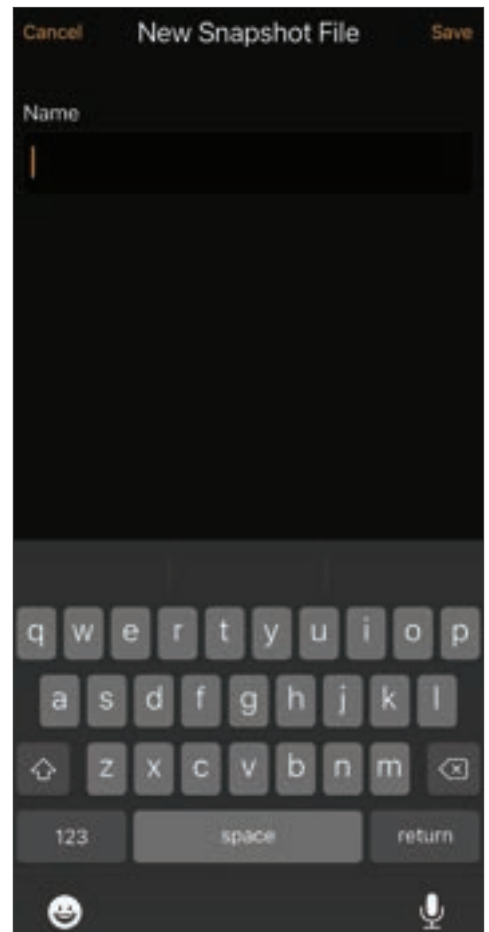
Once data is cleared or deleted, it is not recoverable. The Active file may be cleared, but not deleted.



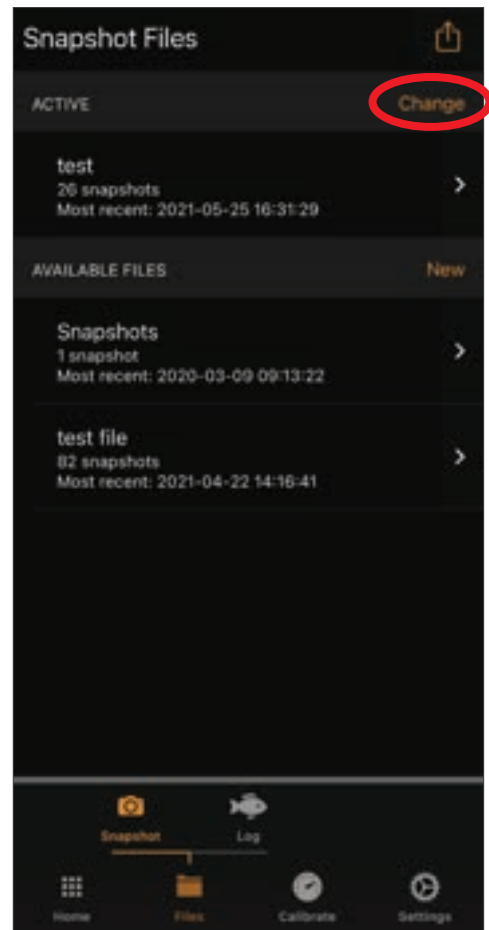
Screen 11



Screen 12



Screen 13

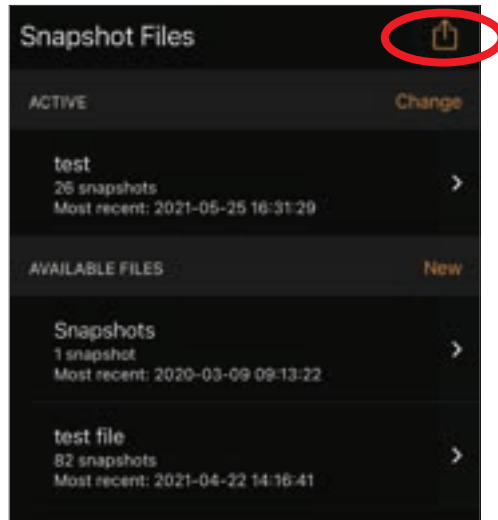


Screen 14

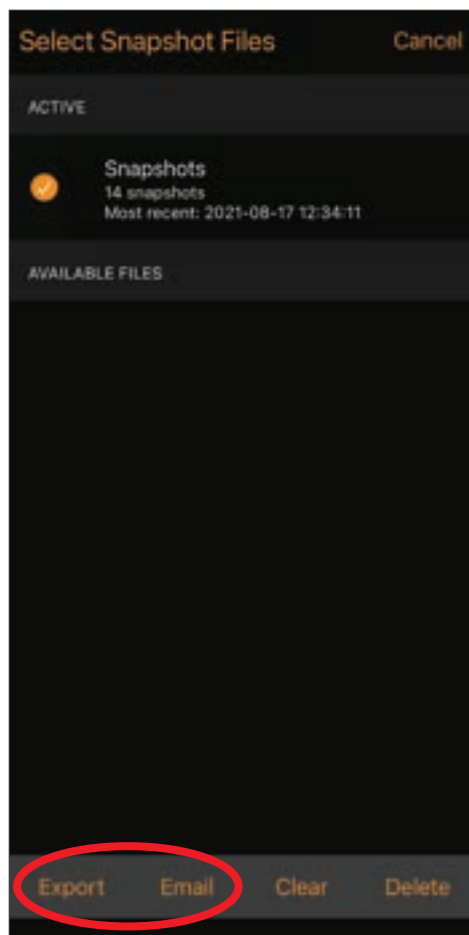
14) Exporting Snapshot Files and Log Files

When you tap the Share button in the upper-right corner (Screen 15) of the Snapshot Files or the Log Files screen, the resulting screen shows you the files that are available for export. You can “export” Snapshot files and Log files two ways (Screen 16). The first is sending the file to your device’s file system so it can later be transferred from your device’s file system (usually via a USB cable) to a laptop or desktop computer (see Topic 28). The second is emailing the selected file(s) to one or more recipients (Screen 17).

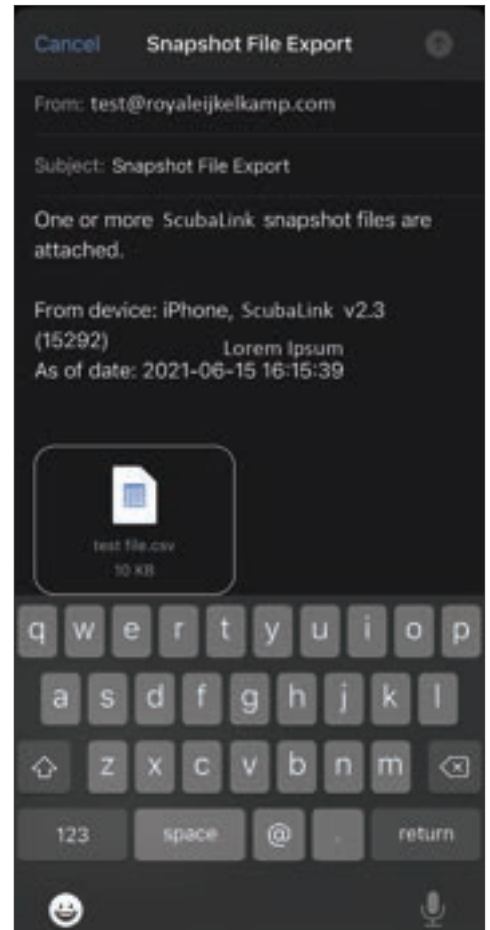
If you wish to email a Snapshot file, your device must be able to send emails.



Screen 15



Screen 16



Screen 17

15) Files — Log

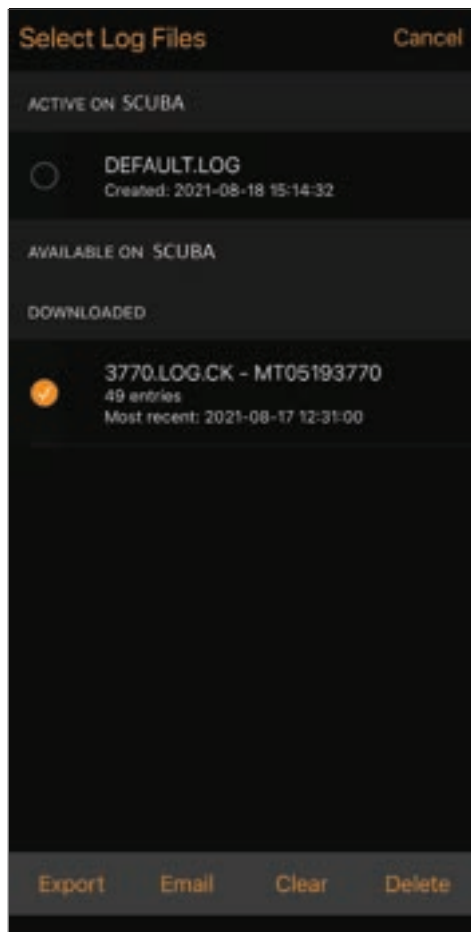
ScubaLink lets you program a multiprobe to log data autonomously if powered by a battery pack or connected via cable to an external power source. Log files initially reside in the multiprobe's memory, but can be uploaded to your device's memory. They can be found by tapping the Log button after tapping the Files button at the bottom of most screens.

Log File control functions are similar to those of Snapshot files except that Log files must first be downloaded from the multiprobe to your display device before they can be viewed, exported, or emailed.

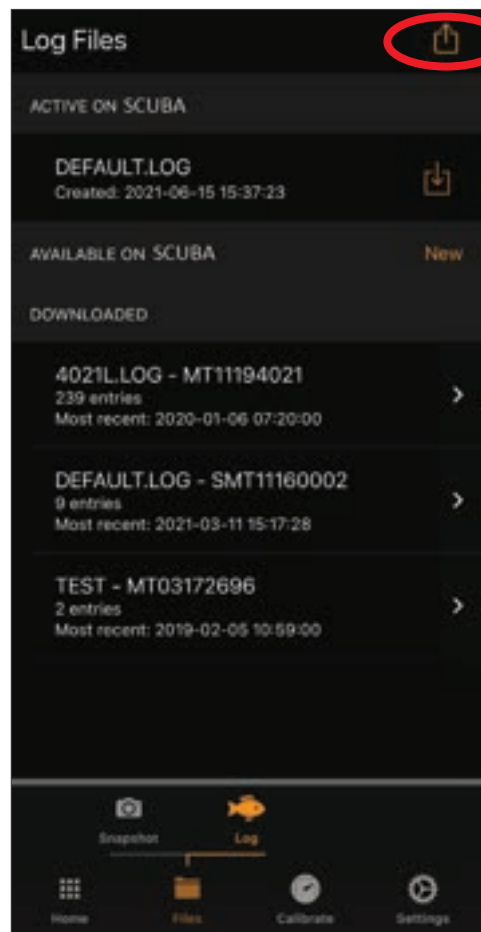
When you tap the Log button in the Files menu (at bottom of the screen), the Log screen shows you the Active, Available and Downloaded Log files. The Active file is the file currently set to store logged data inside the connected multiprobe's memory. Available files are other log files stored in the connected multiprobe, and Downloaded files are those that have been downloaded to your display device from any multiprobe (Screen 18 & 19) . Each Downloaded file name includes the serial number of the multiprobe that was the source of the file.

Tap the download icon next to the Active file or any of the Available files to download that log file into your device (Screen 20). It will then appear in the Downloaded file list. Tap any of the Downloaded Log files to see the scrollable contents of that file.

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Screen 18



Screen 20

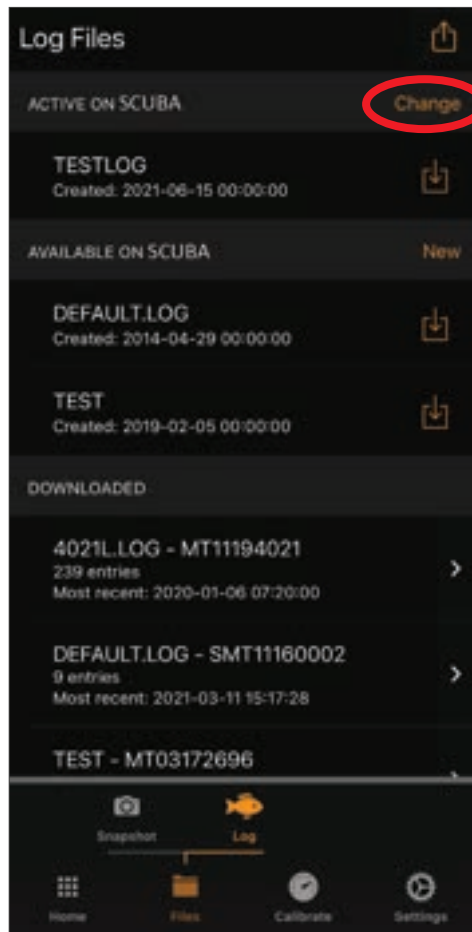


Screen 19

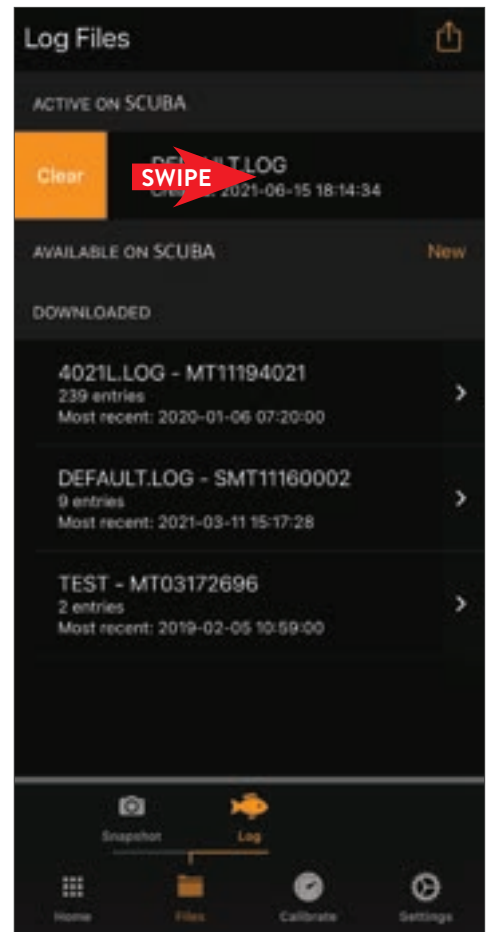
You can change the active Log file to one of the other files on the list by tapping the Change button (Screen 21) and then tapping the file you wish to become the active Log file.

If you wish to see the contents of a file, tap the name of that file. You will see the file's data, tagged with Time and Date (Screen 22). Use your finger to slide the screen left/right or up/down to view more data.

To clear or delete a file, swipe the file name to see the Clear and Delete buttons (Screen 23 & 24).



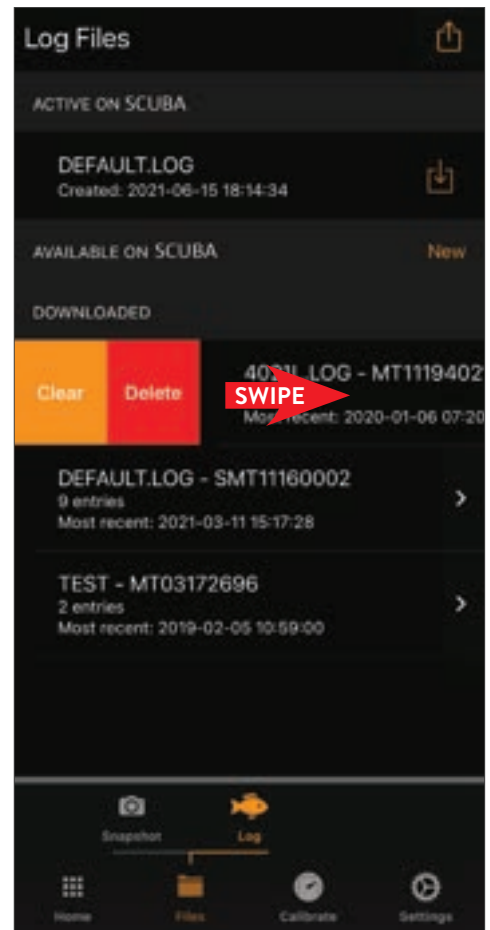
Screen 21



Screen 23

Time	pH units	SpCond uS/cm
2020-01-06 07:20:00	7.94	288.6
2020-01-06 07:10:00	7.94	288.6
2020-01-06 07:00:00	7.94	288.6
2020-01-06 06:50:00	7.94	288.6
2020-01-06 06:40:00	7.95	288.6
2020-01-06 06:30:00	7.95	288.6
2020-01-06 06:20:00	7.95	288.6
2020-01-06 06:10:00	7.95	288.6
2020-01-06 06:00:00	7.95	288.6
2020-01-06 05:50:00	7.95	288.6

Screen 22



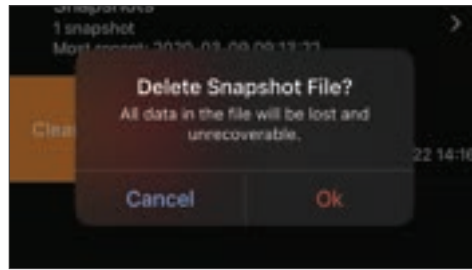
Screen 24

Clearing a file erases the data in a file, but keeps the file for future use. Deleting a file erases the data in the file without keeping the file for future use (Screen 25).

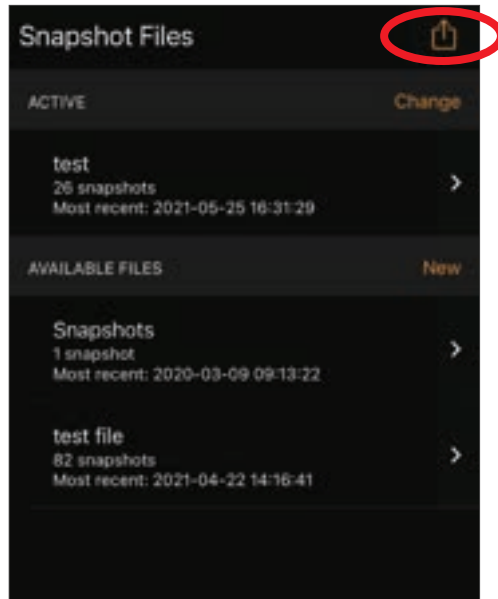
To export a file(s), tap the Share button at the upper-right of the Log File screen (Screen 26, 27 & 28). Please see Topic 14 — Exporting Snapshot Files and Log Files for information on transferring and emailing data.

If you wish to create a new Log file, go to the Log Files screen (Screen 29), tap New, and type in the name of the new file. Tap Save to go back to the Log files screen; you'll see the name of your new file in the list of Available Files. Use the Change button to select the new file as the active file if desired.

Log File control functions are similar to those for Snapshot files. The difference is that Log files must first be downloaded from the multiprobe to your device, before exporting or emailing.



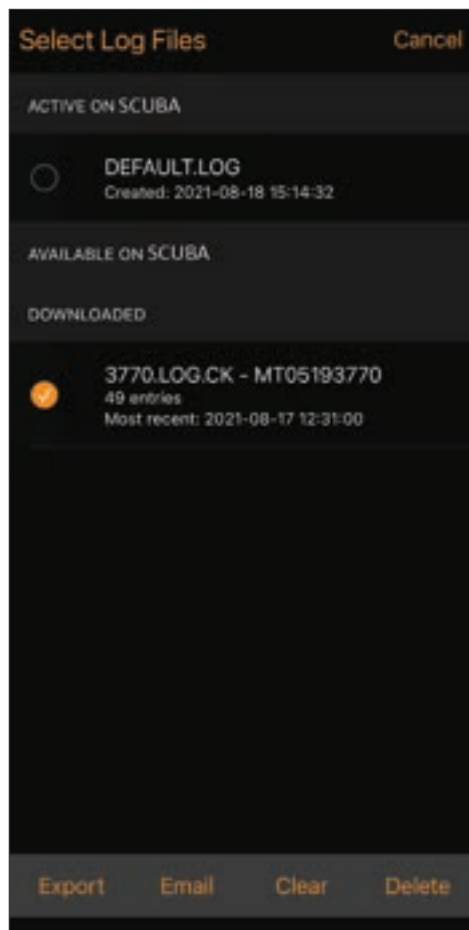
Screen 25



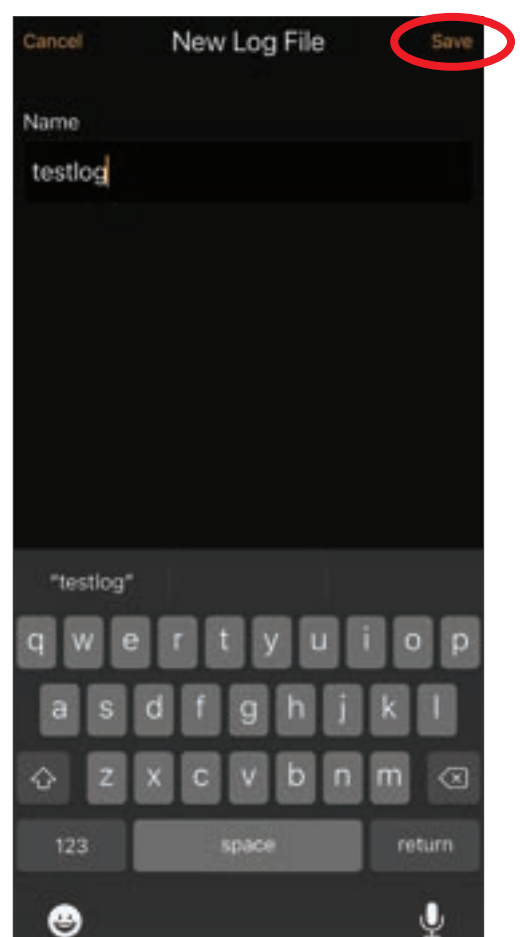
Screen 26



Screen 28



Screen 27



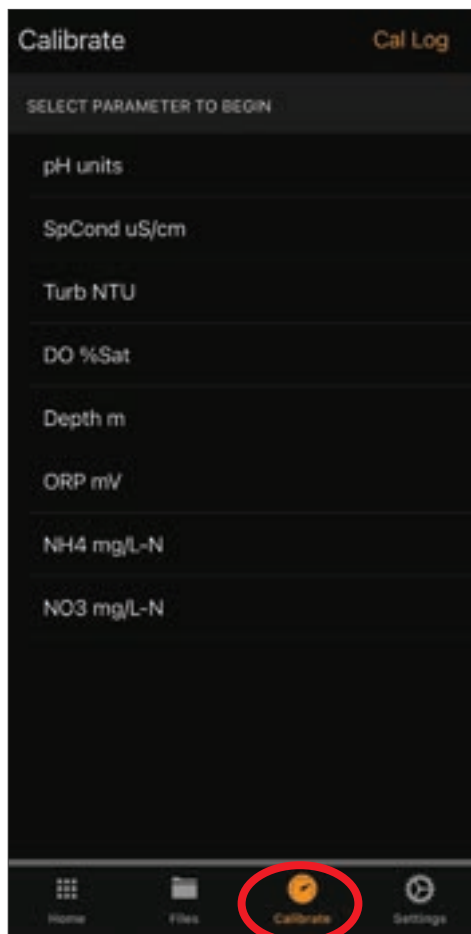
Screen 29

16) Calibrate

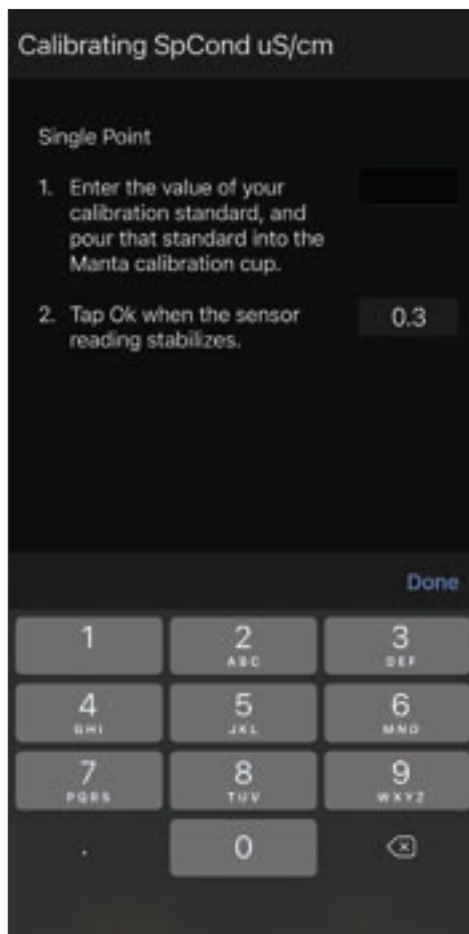
Tap Calibrate to see the list of calibratable parameters for the connected multiprobe (Screen 30).

Because the calibration screens are quite repetitive, only the calibration routine for SpCond is shown here. The sequence begins by tapping Calibrate, and then SpCond (Screen 31). Tap the blank, white space to produce the keyboard (Screen 32), and type in the value of your calibration solution. Hit OK when the reading is stable to produce the SRF screen (Screen 33); follow the instructions to accept, or cancel, this calibration.

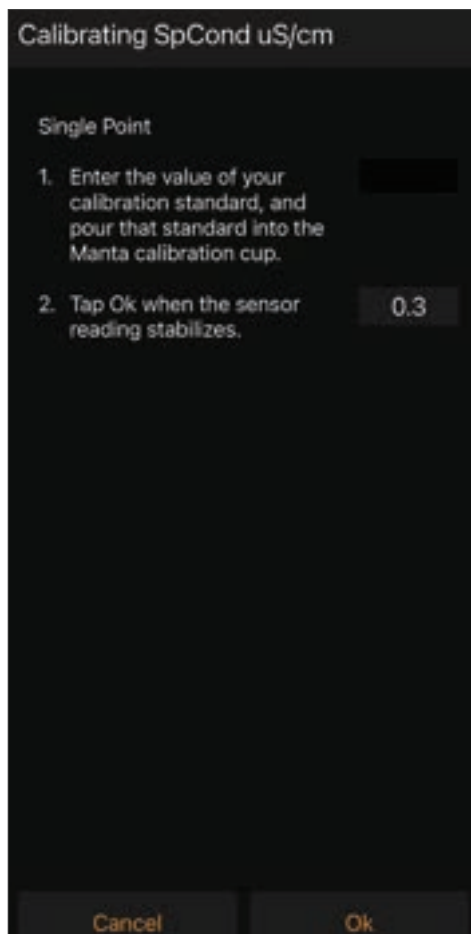
For complete instructions and calibration tips for all of Scuba's sensors, please consult the Scuba multiprobe manual.



Screen 30



Screen 32



Screen 31



Screen 33

17) Calibrate — Cal Log

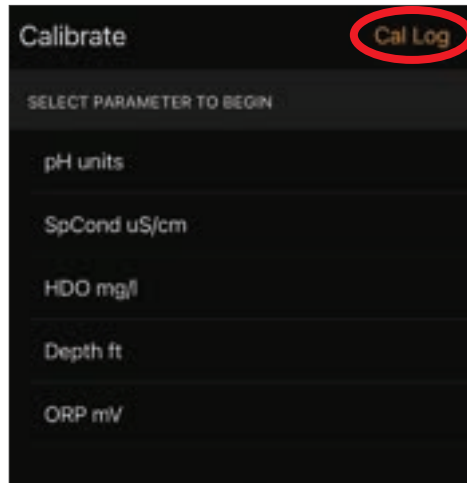
From the Calibrate screen, tap Cal Log (Screen 34) to produce the Calibration Logs screen, where you see a list of Cal Logs stored in your device for the connected multiprobe and any Cal Log that has been downloaded from other multiprobes to the memory in your display device. From there you can download the Cal Log from a connected multiprobe by tapping the download icon adjacent that file name. You can see the contents of the already-downloaded Cal Log by tapping the adjacent arrow (Screen 35).

If you tap the Share button in the upper right you may Share/Export any downloaded Cal Logs the same way you do Snapshot and Log files. Note that the Serial Number of the probe is the Cal Log name (Screen 36).

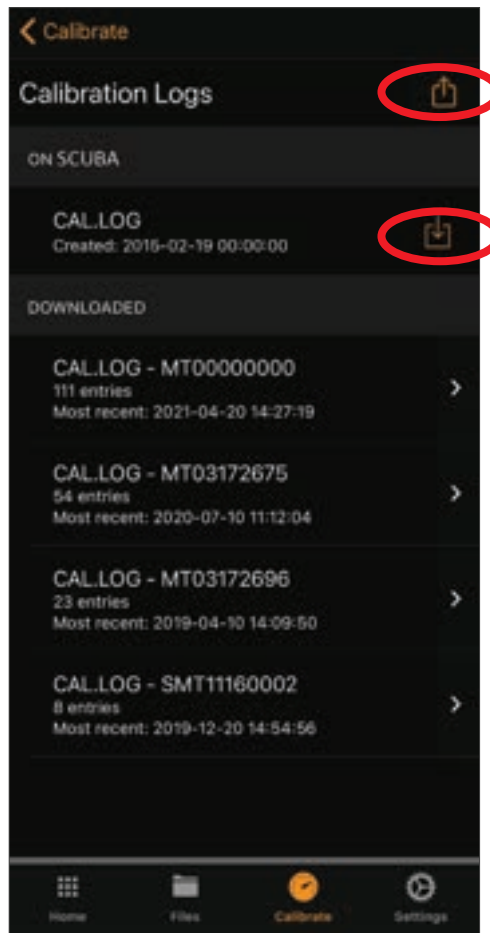
The Cal Log is a running record of all sensor calibrations, stored in the memory every Eureka Multiprobe. It cannot be altered or erased.

18) Settings

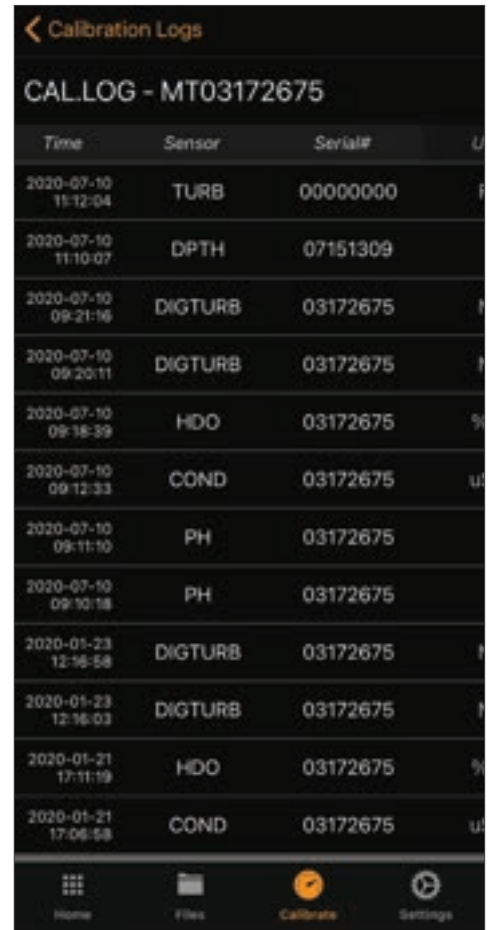
Access the various settings for your display device by tapping Settings at the bottom of the screen (most screens). This produces the three Settings submenus: Parameters, Display, and Other.



Screen 34



Screen 35



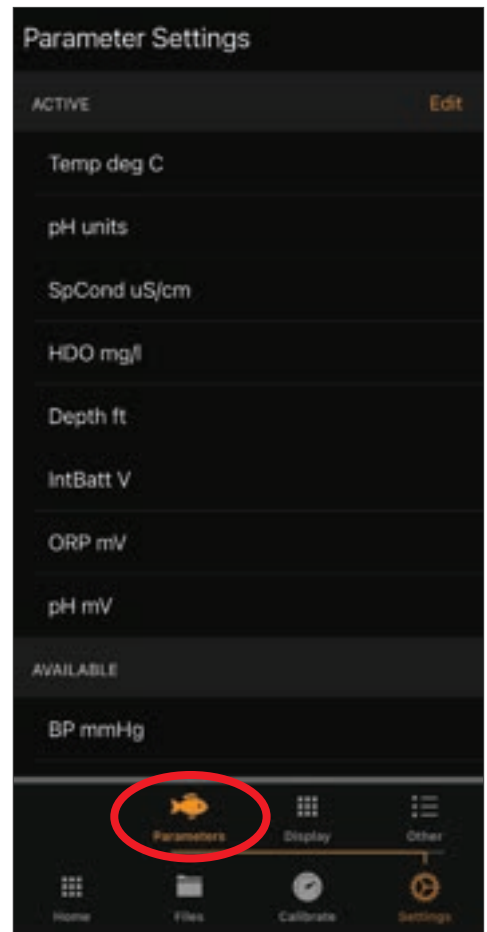
Screen 36

19) Settings — Parameters

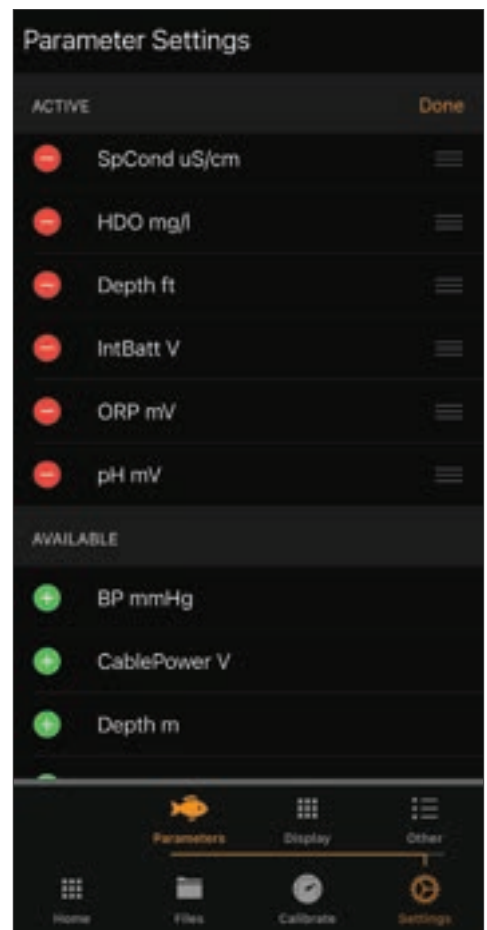
The Parameter Settings screen shows all the parameters available in your multiprobe, divided into Active parameters and Available (but not Active) parameters. Only Active parameters are displayed in the rolling data or stored by the Snapshot, AutoSnap, and Log functions (Screen 37).

You can move a parameter to the Active list from the Available list, or make an Available parameter Active, by tapping Edit at the top of the screen (Screen 38). Tap the red button adjacent the Parameter you wish to remove from the Active list, then tap Done. Note that the deactivated parameter will appear in the Available list. If you wish to add an Available parameter, tap Edit at the top of the screen, tap the green button next to the desired Available parameter. Tap Done and that parameter will appear in the Active list.

You can change the order in which the parameters appear by tapping Edit, touch the three-line icon adjacent the Active parameter you wish to move, and drag it to the position in the Available list you wish the parameter to occupy. Then tap Done. This parameter order applies to what you see in rolling data, Snapshot data, and Log data.



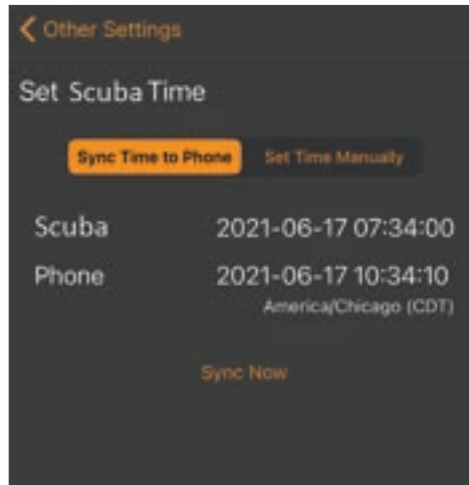
Screen 37



Screen 38

22) Settings — Other — Scuba time

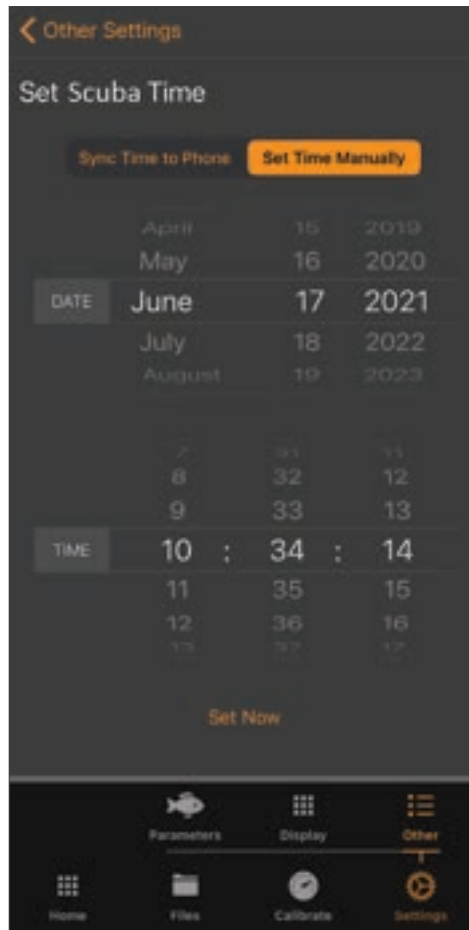
Scuba time is the time and date recorded with each data line during Logging (Log files inside the multiprobe's log memory). Your device time is the time and date recorded with each line of data in Snapshot files (Snapshot files stored in your display device). To manually set the probe's time, swipe up or down to select the desired date and time (Screen 43 & 44).



Screen 43

23) Settings — Other — Show Hidden Sensors

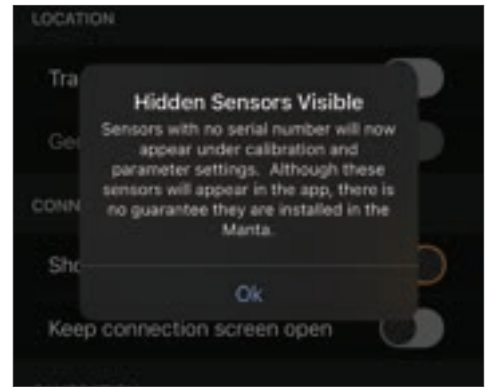
You can turn “Show hidden sensors” on and off by tapping the On/Off switch to the right (Screen 45). When Show Hidden Sensors is toggled ON, additional sensor parameters appear in the Settings — Parameters section under Available. These are sensors with no serial numbers, for example virtual parameters like Salinity which is derived from the SpCond (specific conductance). There may also be other sensors that appear that are not installed on your multiprobe. If you are unsure exactly what sensors are installed, check your manual, or contact sales@eijkekamp.com.



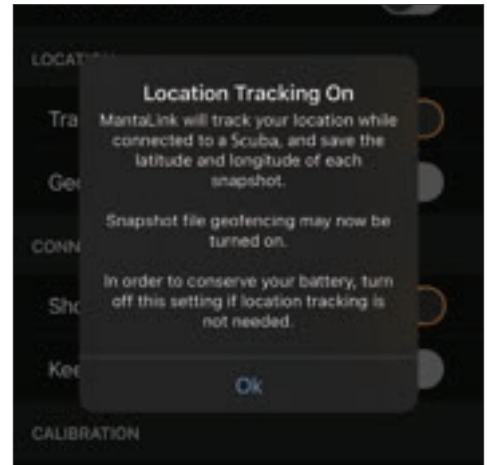
Screen 44

24) Settings — Other — Location

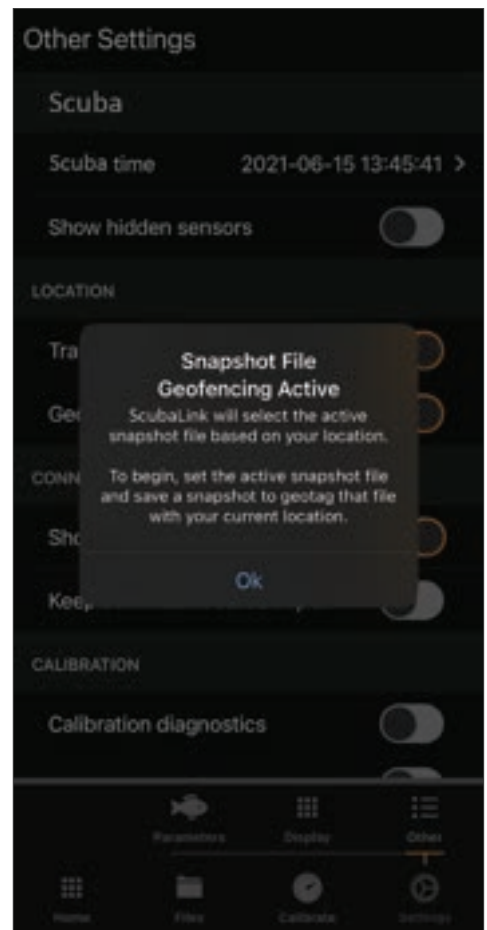
You can turn “Track Location” on and off by tapping the On/Off switch to the right (Screen 46). When Track Location is toggled ON, the device's location's



Screen 45



Screen 46



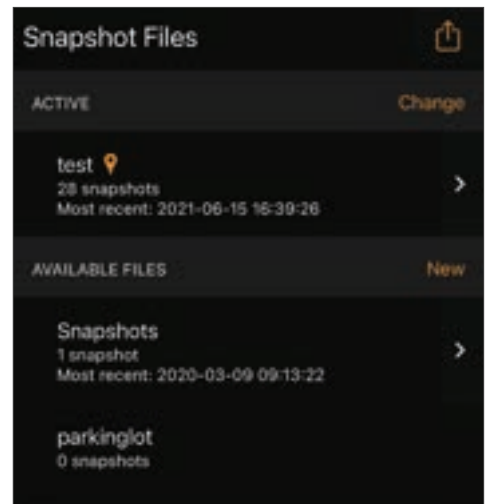
Screen 47

latitude and longitude will be recorded within each Snapshot or AutoSnap data record. Turn off this setting if location tracking is not needed, to conserve the device's battery.

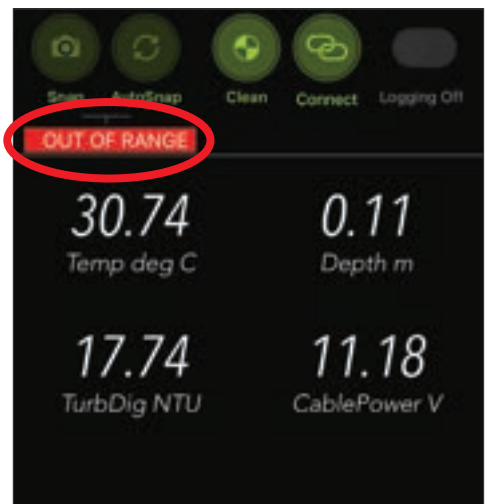
You can turn "Geofence Snapshot Files" on and off by tapping the On/Off switch to the right (Screen 47). (location accuracy is better if your display device is cellular-capable). Toggle On Track Location and tap OK. Next toggle ON Geofence Snapshot files and tap OK. Note that when you toggle OFF Track Location, this also turns off Geofencing as it needs the GPS signal to work. Geofencing will automatically select and switch to the correct Active Snapshot file within range of that file's pinned geolocation, but first you must pin the Snapshot location. At the site where you are collecting water quality data, turn ON Geofence Snapshot files. Record a line of data using the Snap feature. The active Snapshot file is now tagged with the geolocation. Note that you will see a Pin icon next to the Active Snapshot file name signifying that the location has been successfully tagged (Screen 48). The Geofence feature eliminates the need to remember to select the Active Snapshot file when moving from site to site, which is especially useful when you are collecting data at multiple sites each day.

Note if you are out of range of any Snapshot file's geolocation and try to take a Snapshot, you will see the OUT OF RANGE message (Screen 49).

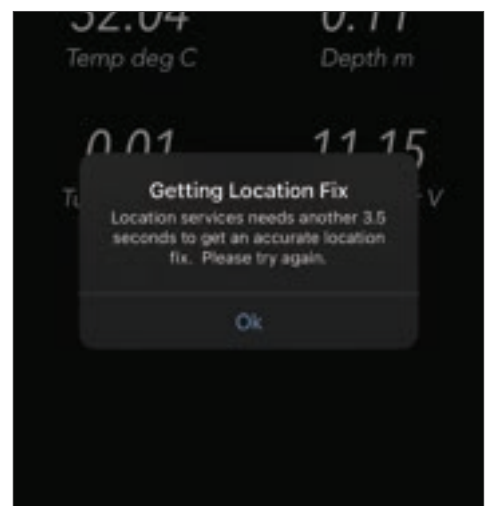
When tagging locations, you may also see a Getting Location Fix message (Screen 50) which indicates that the satellite location service needs additional time to get an accurate location fix. Wait a few seconds and try again.



Screen 48



Screen 49



Screen 50

25) Settings — Other — Show Scuba Simulators

You can turn “Show Scuba simulators” on and off by tapping the On/Off switch to the right (Screen 51). When ON, multiprobe simulators will appear in the list of multiprobes available for connection. Not all ScubaLink functionality is present for simulators, but it does allow the user to become familiar with the ScubaLink program without having a multiprobe connected and communicating via the ScubaMobile Bluetooth device. This is useful for training and demos.

26) Settings — Other — Connection

You can turn “Keep connection screen open” on and off by tapping the On/Off switch to the right (Screen 52). After connecting to a multiprobe, the “Connected Scuba” screen will remain showing, rather than automatically returning to the Home screen. Tap the Home button to close the Connection screen and return to the Home screen to see live scrolling data. This feature is useful when working with multiple multiprobes in range, making it easy to switch between multiprobes that appear in the Available Scuba list.

27) Settings — Other — Calibration

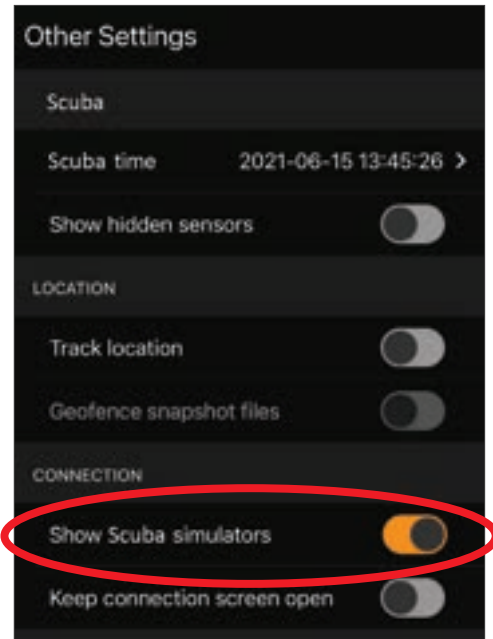
You can turn “Calibration Diagnostics” on and off by tapping the On/Off switch to the right (Screen 53). When ON, the ScubaLink App will record each calibration step. When diagnostics are available, you will be prompted to export the diagnostic report via email. This feature is useful for calibration troubleshooting.

You can turn “Calibration Learning” on and off by tapping the On/Off switch to the right (Screen 54). Buttons shown during a parameter calibration procedure will be highlighted if they need to be selected for learning. The goal is to tap all buttons at least once and have no highlighted buttons once the selected sensor parameter has been successfully calibrated. This feature is especially useful for first time users.

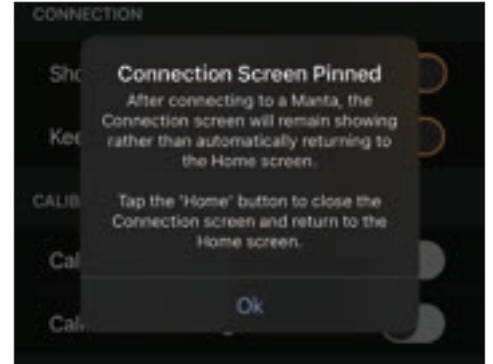
28) Settings — Other — App

Export to File System — When you are in the share screen of Snapshot Files or Log Files and tap Export at the bottom of the screen, the selected file(s) is exported to the device’s Files app. To retrieve files from the device’s Files app, you will connect the device to a computer via the USB (Lightning/charging) cable and perform normal file transfer operations via iTunes. You will need to download iTunes first if do not have it. Once the device is connected to your computer, in iTunes, you will click Files, then click ScubaLink and you can then view/copy/move files normally.

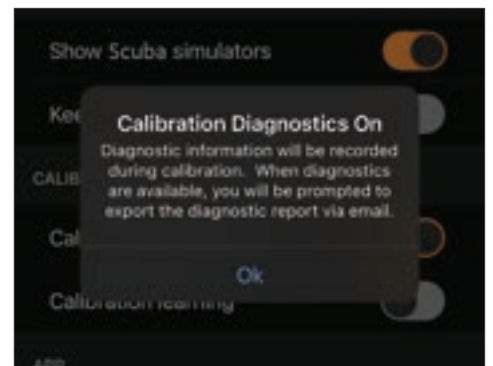
ScubaLink software version: This screen also shows the display device’s ScubaLink software version number at the bottom of the screen.



Screen 51



Screen 52



Screen 53



Screen 54



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