RBR

Welcome, the RBR Webinar will begin shortly…

RBR

rbr-global.com

Using the Ruskin Mobile app with Wi-Fi to view data and map your cruise

Candace Smith

Technical Sales Manager

Outline

1. Why use Wi-Fi?
2. How to connect a device to a logger
3. Ruskin Mobile overview
4. Ruskin Mobile features
    - Quick data view
    - Controlling sample rate
    - Sharing data
    - GPS tagging location
    - Plotting cruise track
5. Summary

RBR

Wi-Fi on Standard Loggers

Wi-Fi
ONBOARD

Standard Loggers

Lightweight, Low-Power

Customizable from 1-10 channels (RBRconcerto C.T.D|wifi)

Twist Activation ALWAYS included (ie start sampling)

Wi-Fi Onboard (turned on using Twist Activation)

RBR

Why Use Wi-Fi?

- Download data without opening logger
  - Avoid moisture getting inside logger
  - Process cast data on cruise
  - Get months of data off logger
- See data in real-time/quickly
  - Citizen science groups
  - Fisheries
- Flexible
  - Can use Wi-Fi with Ruskin Mobile app (phone, tablet, iOS, Android)
  - Can use Wi-Fi with Ruskin Desktop (Mac and PC)

RBR

How to Connect a Device to a Logger

Ruskin v2.9.9.202004061613

Navigator

- Instruments
  - simRBRconcerto³ 902735
- MLM
- Datasets

simRBRconcerto³ 902735

Configuration | Information | Calibration | Parameters

Schedule

Status: Not enabled

Clock: 2020-04-28 14:34:49-03:00 UTC Local

Start: 2020-04-28 2:00 PM Now

End: 2020-06-22 54.5 days +251 days

Power

Battery: Lithium thionyl chloride Fresh

External: None Fresh

Extended battery endcap

Sampling

Mode: Continuous

Speed: Rate 2Hz

Gate: None

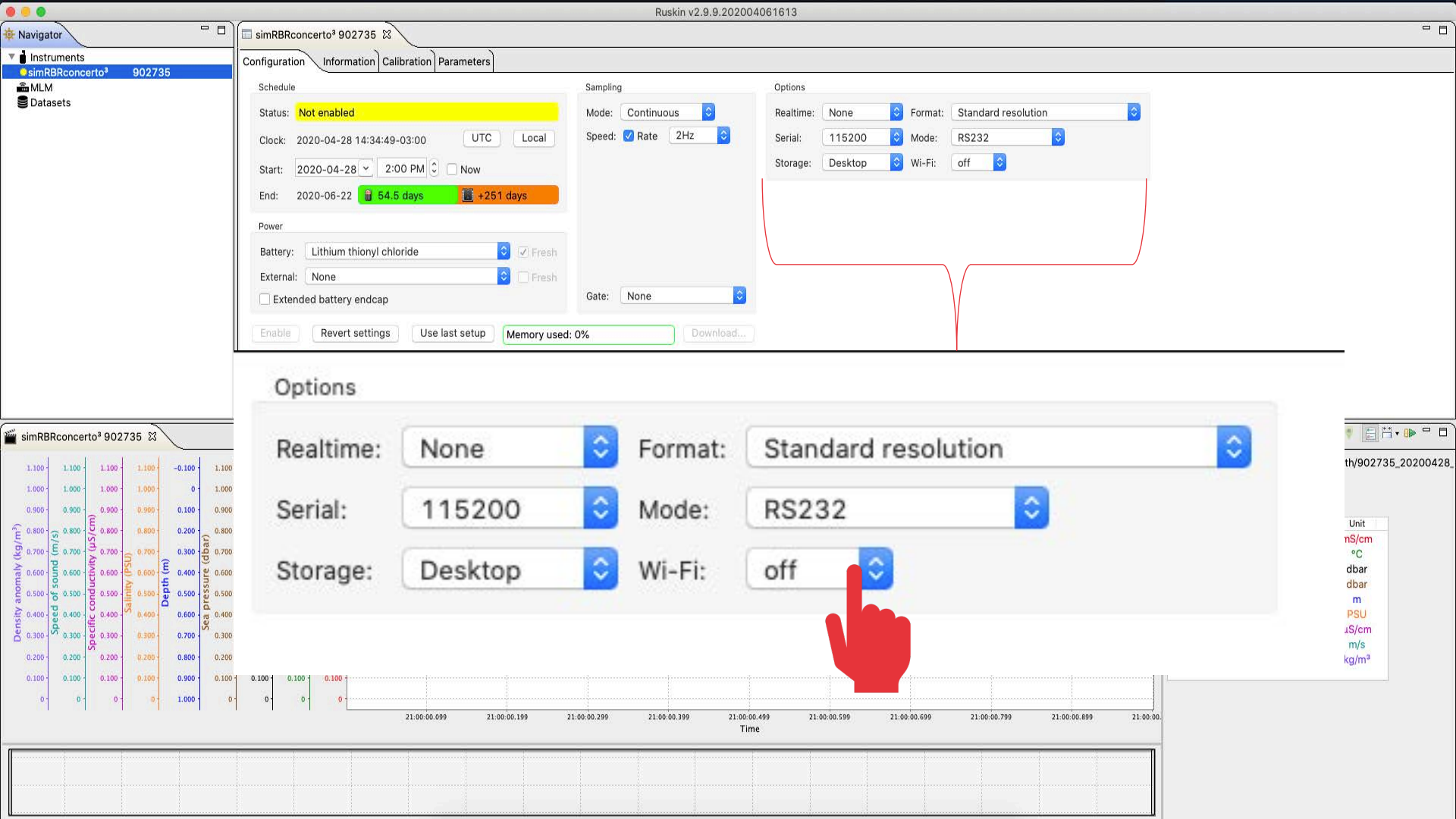
Options

Realtime: None Format: Standard resolution

Serial: 115200 Mode: RS232

Storage: Desktop Wi-Fi: off

Enable | Revert settings | Use last setup | Memory used: 0% | Download...



simRBRconcerto³ 902735

Density anomaly (kg/m³) | Speed of sound (m/s) | Specific conductivity (µS/cm) | Salinity (PSU) | Depth (m) | Sea pressure (dbar)

Time

21:00:00.099 21:00:00.199 21:00:00.299 21:00:00.399 21:00:00.499 21:00:00.599 21:00:00.699 21:00:00.799 21:00:00.899

th/902735_20200428_

Unit
nS/cm
°C
dbar
dbar
m
PSU
µS/cm
m/s
kg/m³

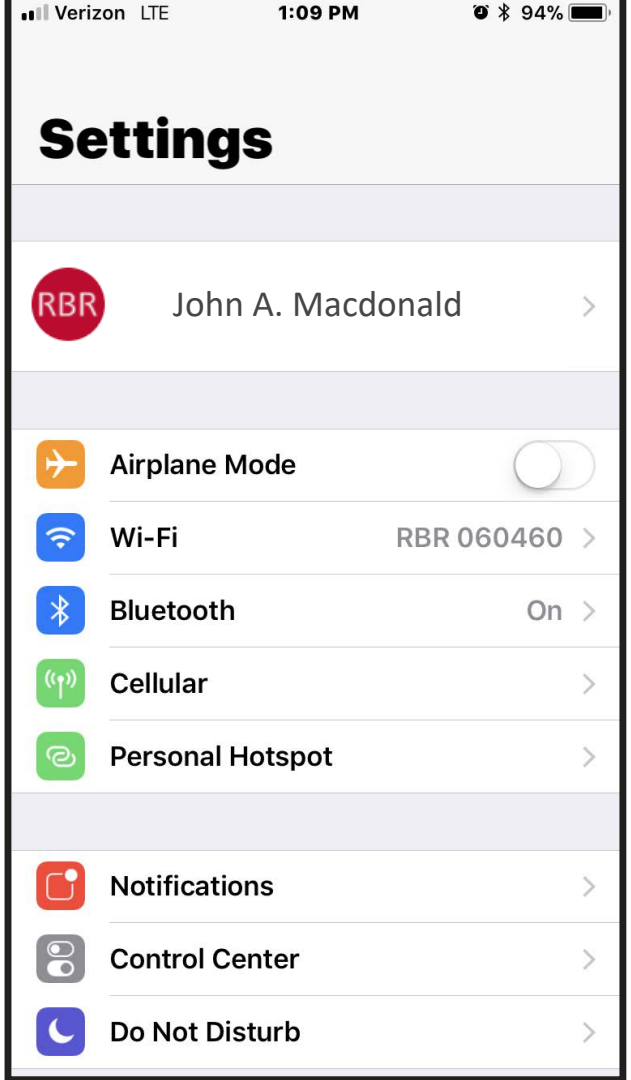
How to Connect

- Twist red end-cap from “Pause” to “Run”
- The Wi-Fi turns on for 1 minute – need to connect in that time
- Every time you Twist to/from “Run”/”Pause”, the Wi-Fi is turned on

RBR

How to Connect

- Twist logger from “Pause” to “Run”
  - Logger will VIBRATE
  - Logger creates its own SSID network which will appear under Wi-Fi networks on your device
  - Your device will no longer be connected to your Wi-Fi network
  - Logger/ Ruskin Mobile are not using a Wi-Fi tower, the logger is the router point, so you don’t need to be close to the shore

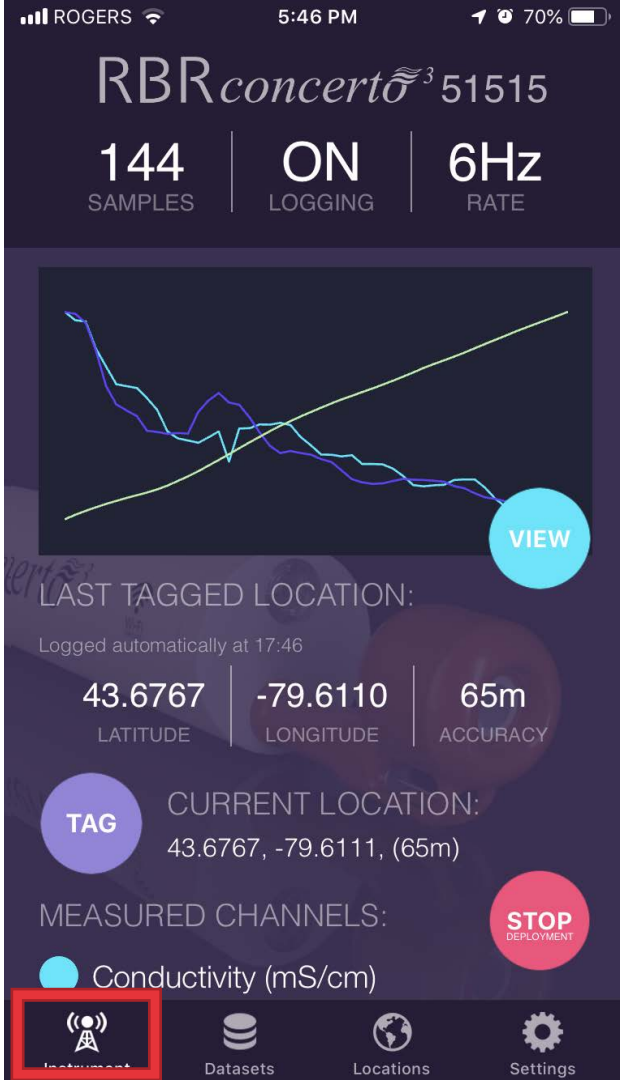


RBR

Ruskin Mobile Overview

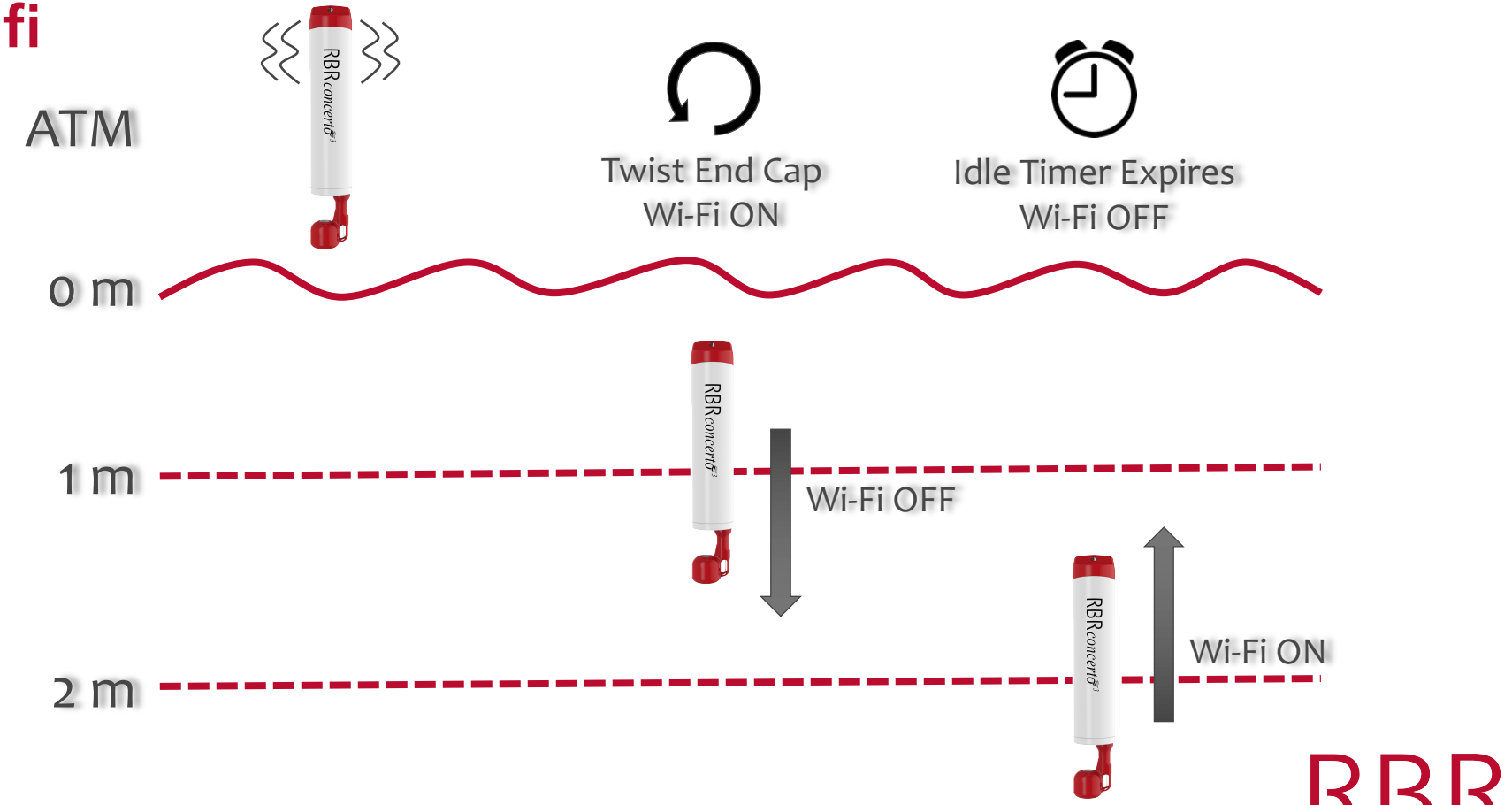
Ruskin Mobile

- Open Ruskin Mobile
- Ruskin Mobile automatically:
  - Connects to logger
  - Downloads any data from logger
  - ALWAYS has most recent data on device (constantly synching)
  - Defaults to the instrument tab



RBR

|wifi


ATM
RBR concerto
Twist End Cap
Wi-Fi ON
Idle Timer Expires
Wi-Fi OFF
0 m
1 m
Wi-Fi OFF
2 m
Wi-Fi ON

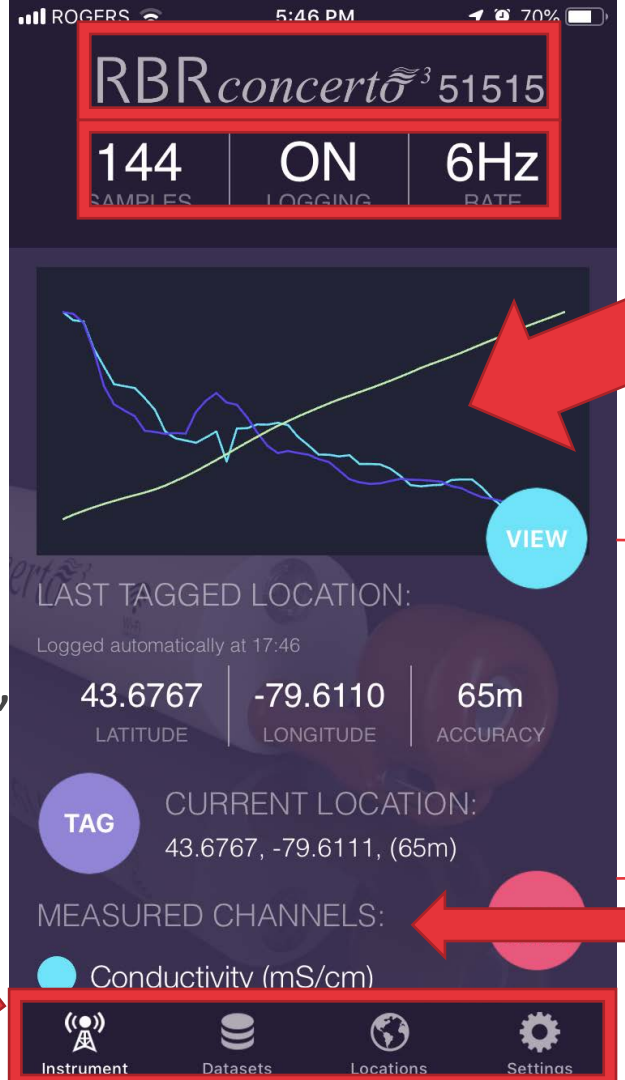
RBR

Overview of Ruskin Mobile

Instrument serial number

Logger details (number of samples, logging on or paused, sample rate)

Tabs



Plot of parameters

GPS details

Measured channels

RBR

Ruskin Mobile Features: Case Study 1

Fishermen determining whether to fish at this location and upload data to researchers

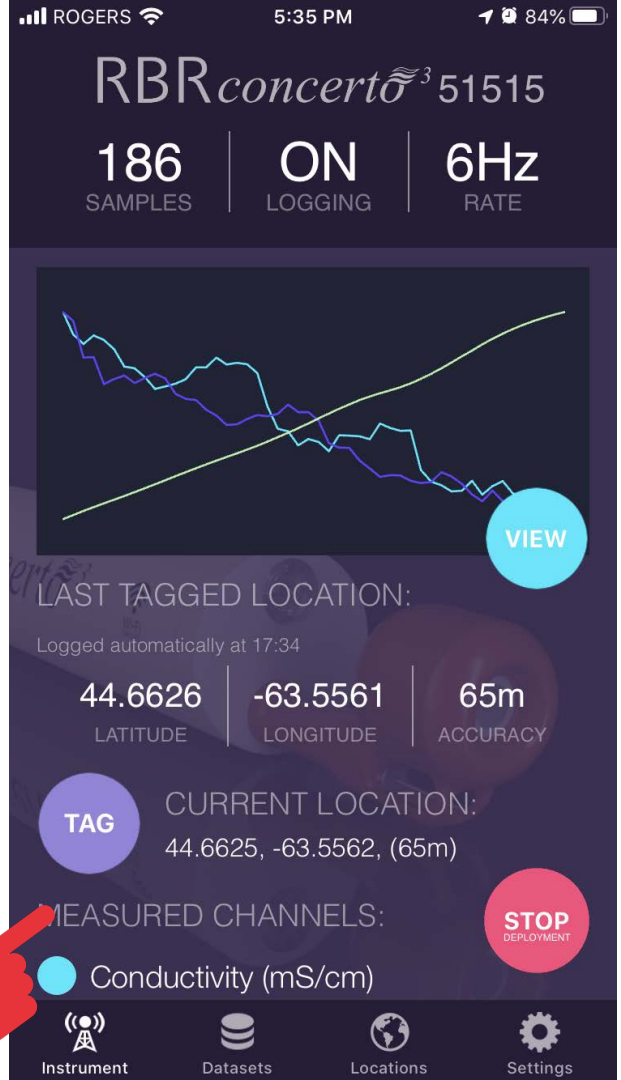
Case Study 1: Fishermen

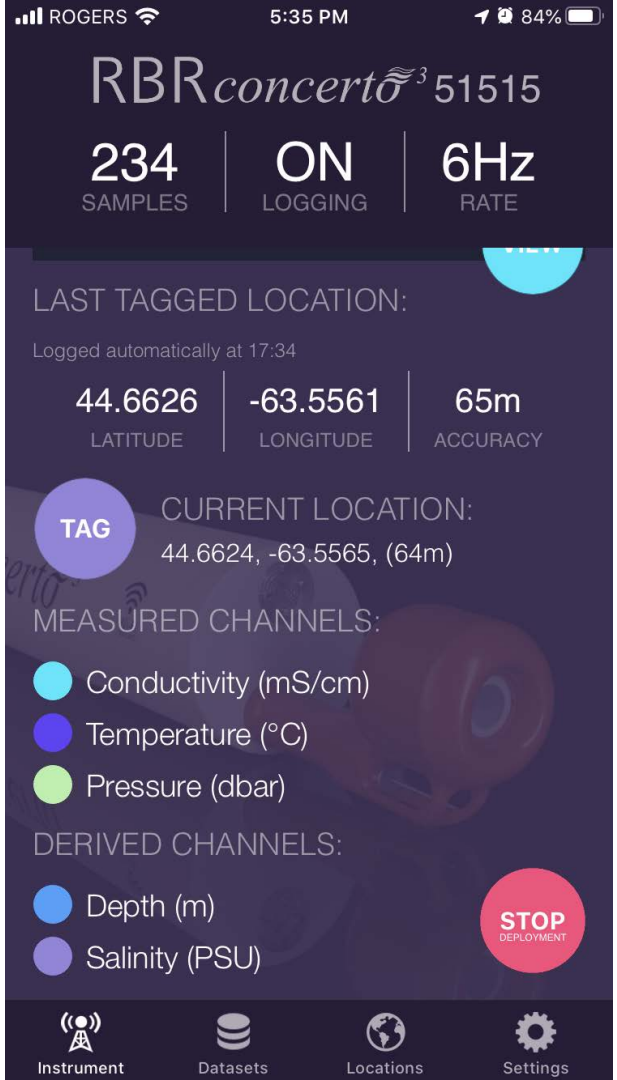
1. Want to view data in real-time to determine where to fish
   - Specifically, they want to look at salinity data
2. Want to change the sample rate
   - There are multiple users, and some fishermen hand-lower the CTD (ie slower sample rate) while others use a winch to deploy the CTD (ie faster sample rate)
3. Want to upload their data to share with the scientist

PACIFIC SALMON FOUNDATION'S GALIANO ISLAND CITIZEN SCIENCE TEAM.
PHOTO CRED: ONC

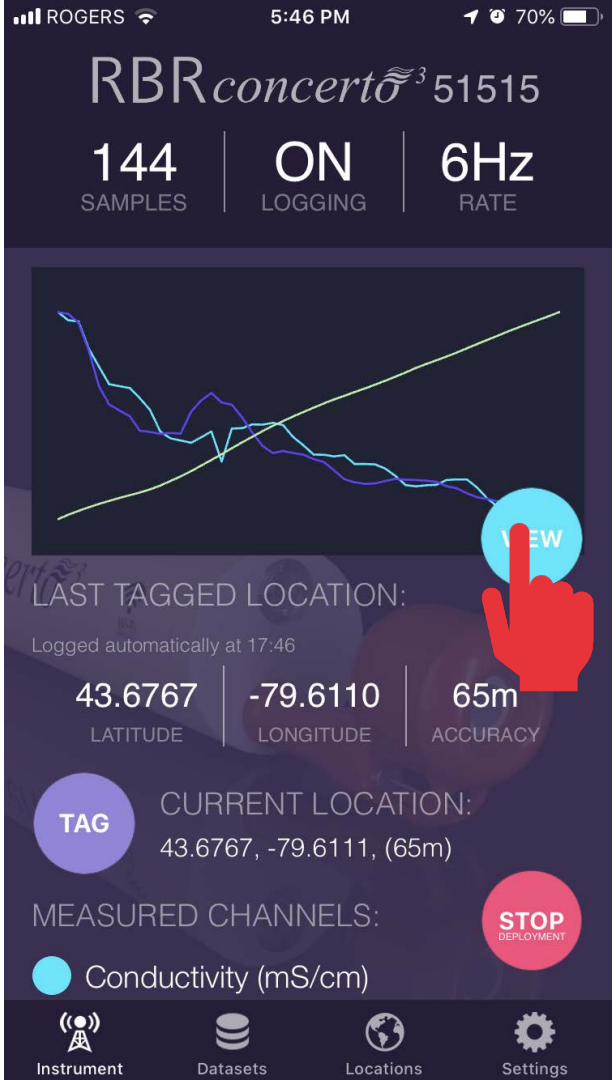
RBR

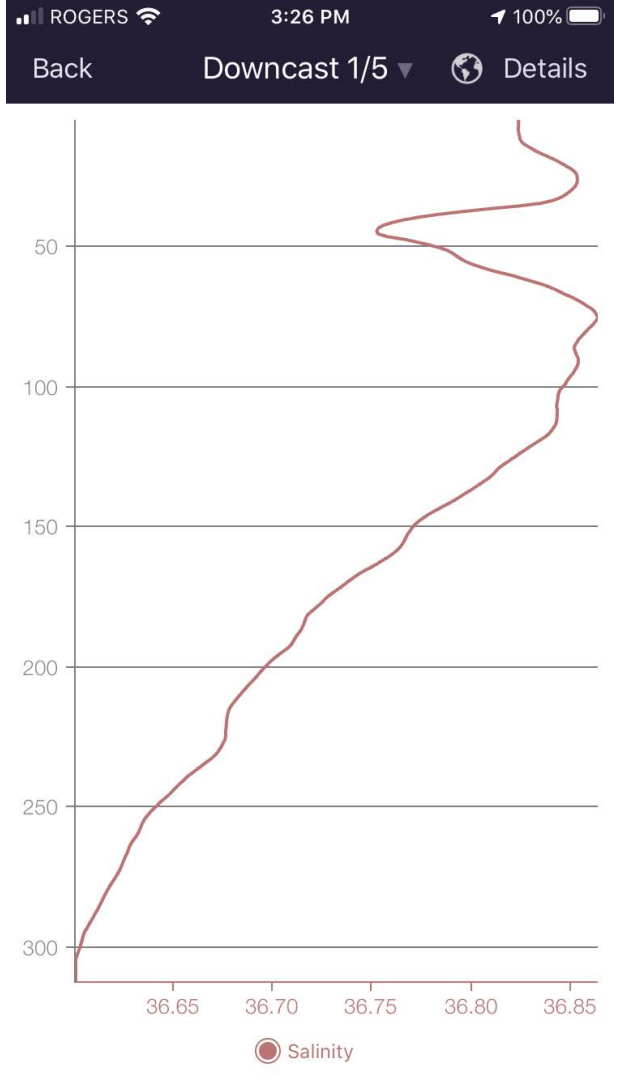
1. View data immediately

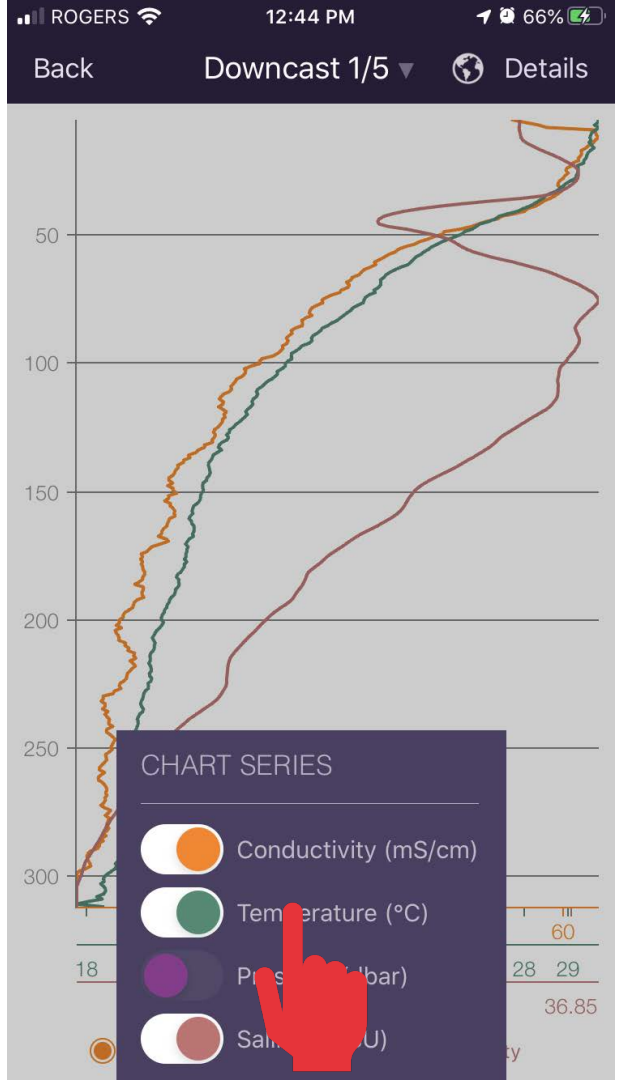


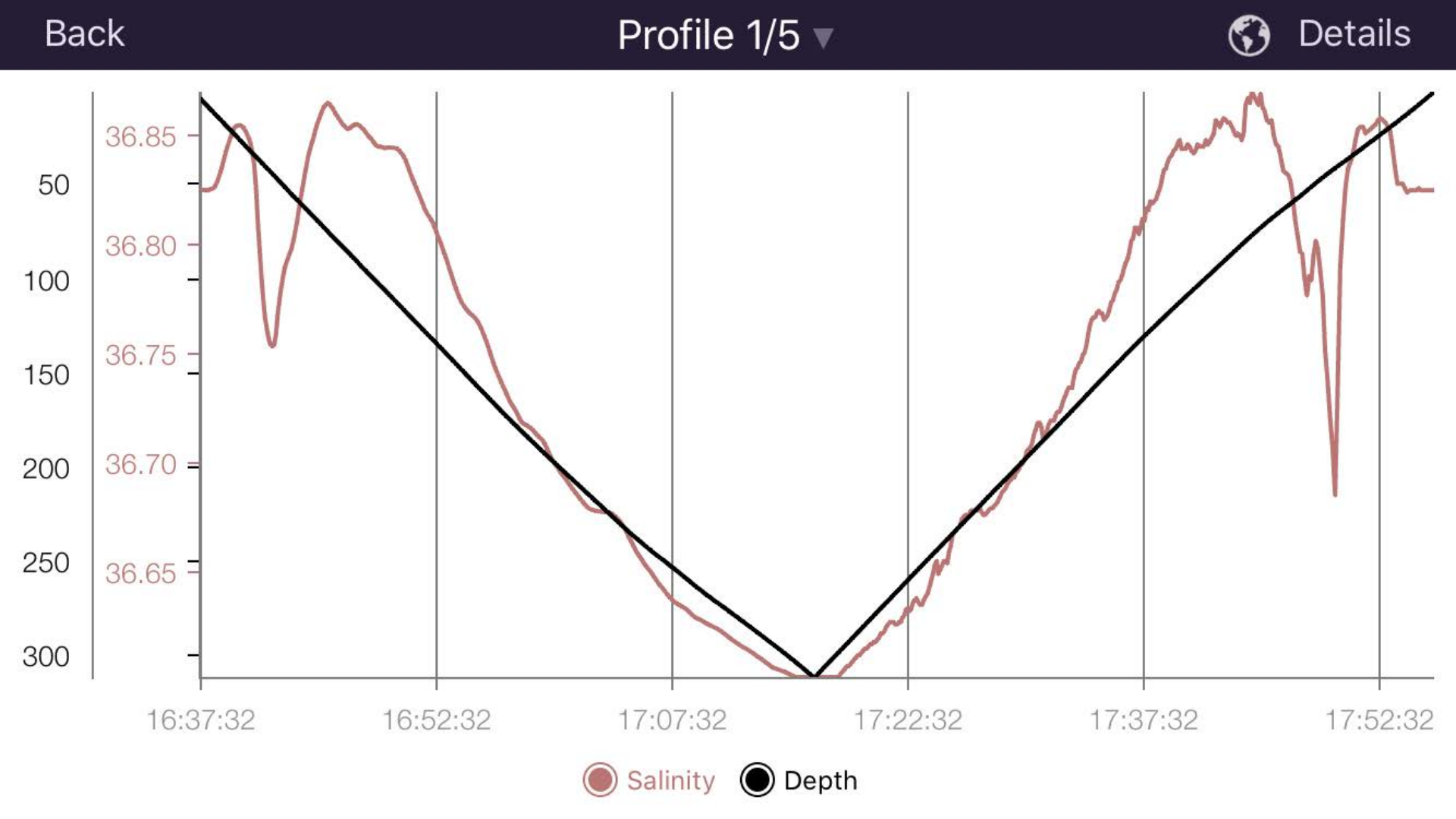


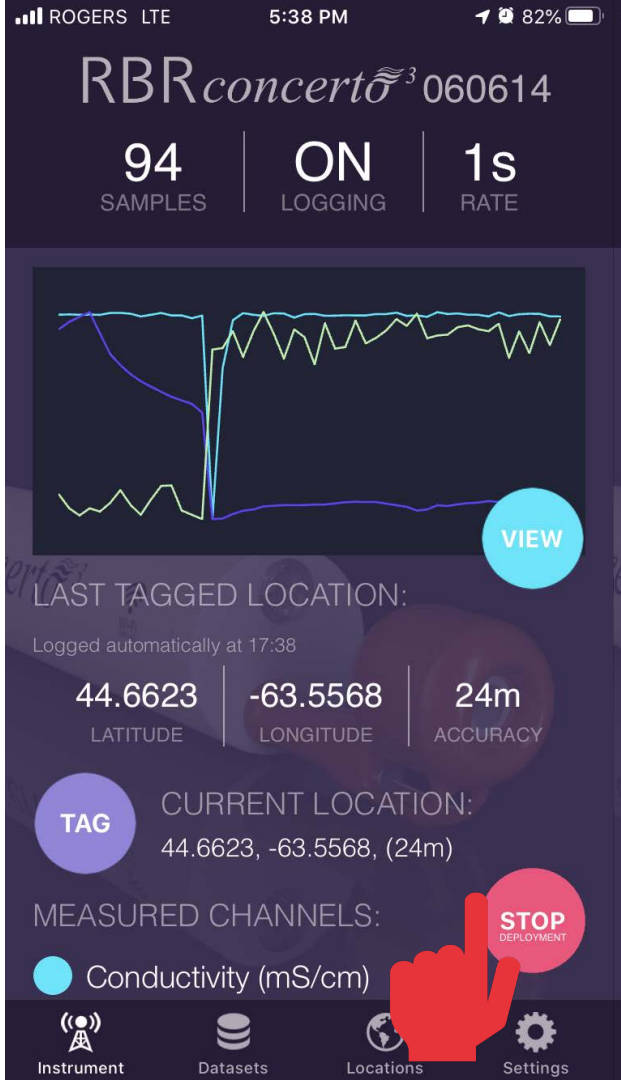
RBR

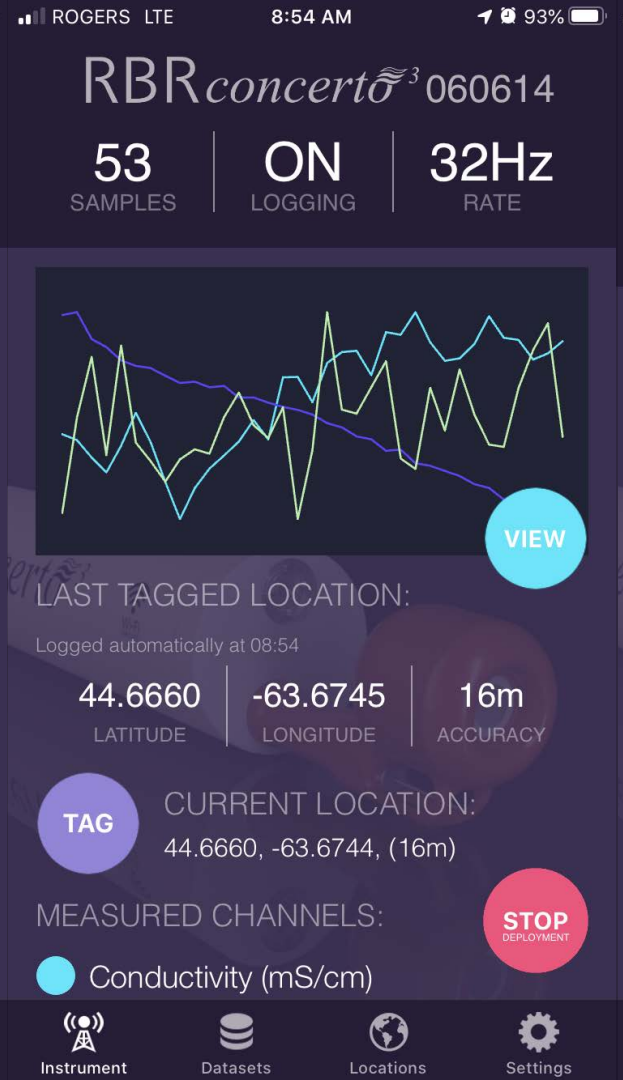

ROGERS
5:46 PM
70%
RBR concerto³ 51515
144
SAMPLES
ON
LOGGING
6Hz
RATE
VIEW
LAST TAGGED LOCATION:
Logged automatically at 17:46
43.6767
LATITUDE
-79.6110
LONGITUDE
65m
ACCURACY
TAG
CURRENT LOCATION:
43.6767, -79.6111, (65m)
MEASURED CHANNELS:
STOP
DEPLOYMENT
Conductivity (mS/cm)
Instrument
Datasets
Locations
Settings

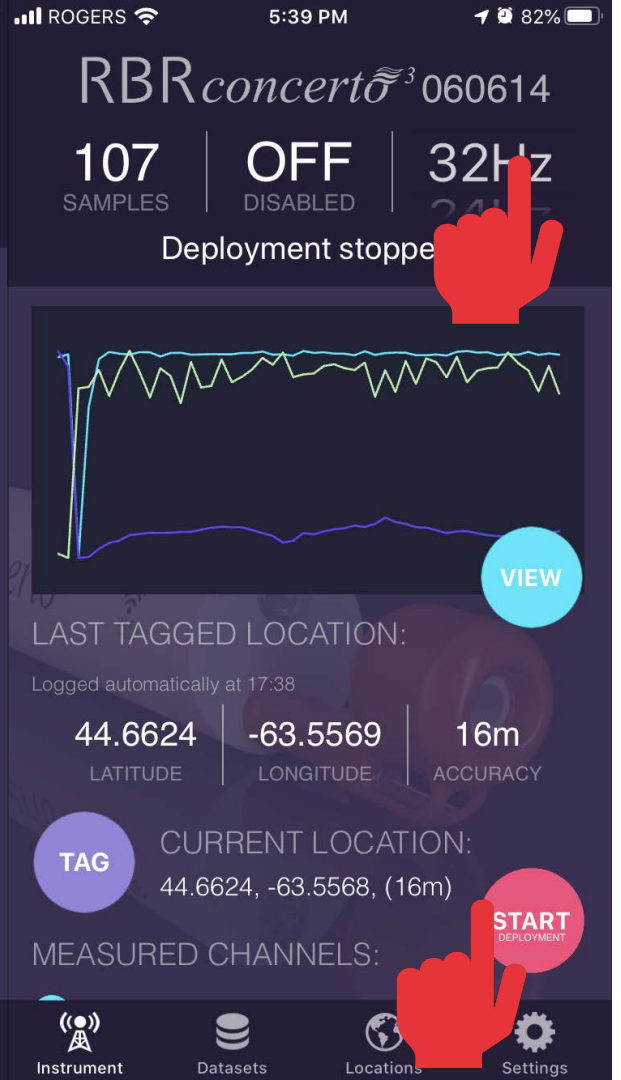

ROGERS
3:26 PM
100%
Back
Downcast 1/5
Details
50
100
150
200
250
300
36.65
36.70
36.75
36.80
36.85
Salinity


ROGERS
12:44 PM
66%
Back
Downcast 1/5
Details
50
100
150
200
250
300
CHART SERIES
Conductivity (mS/cm)
Temperature (°C)
60
18
28
29
36.85

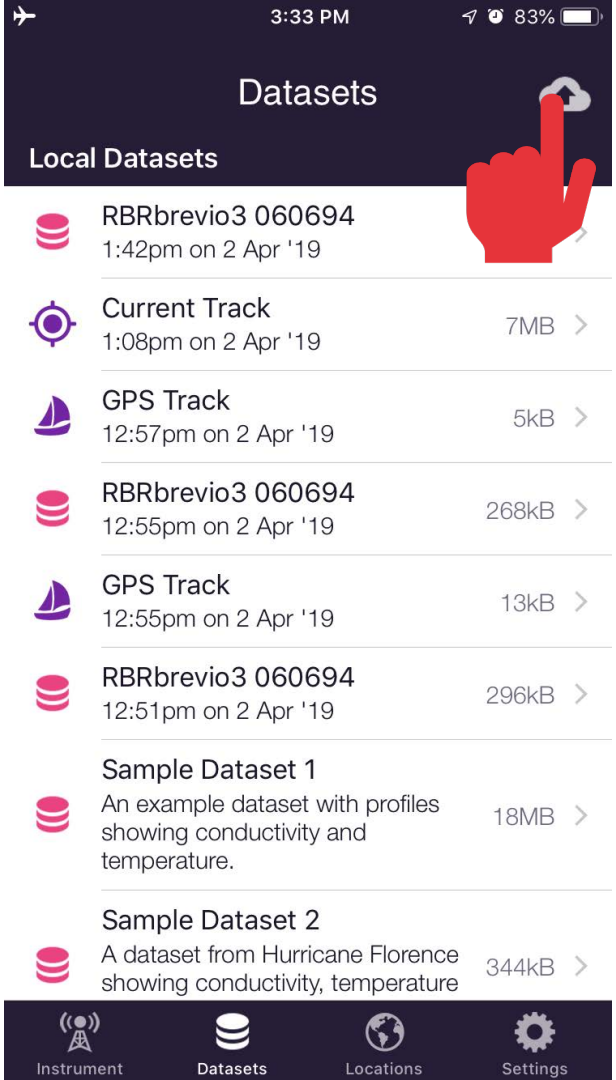

Back
Profile 1/5
Details
36.85
36.80
36.75
36.70
36.65
50
100
150
200
250
300
16:37:32
16:52:32
17:07:32
17:22:32
17:37:32
17:52:32
Salinity
Depth

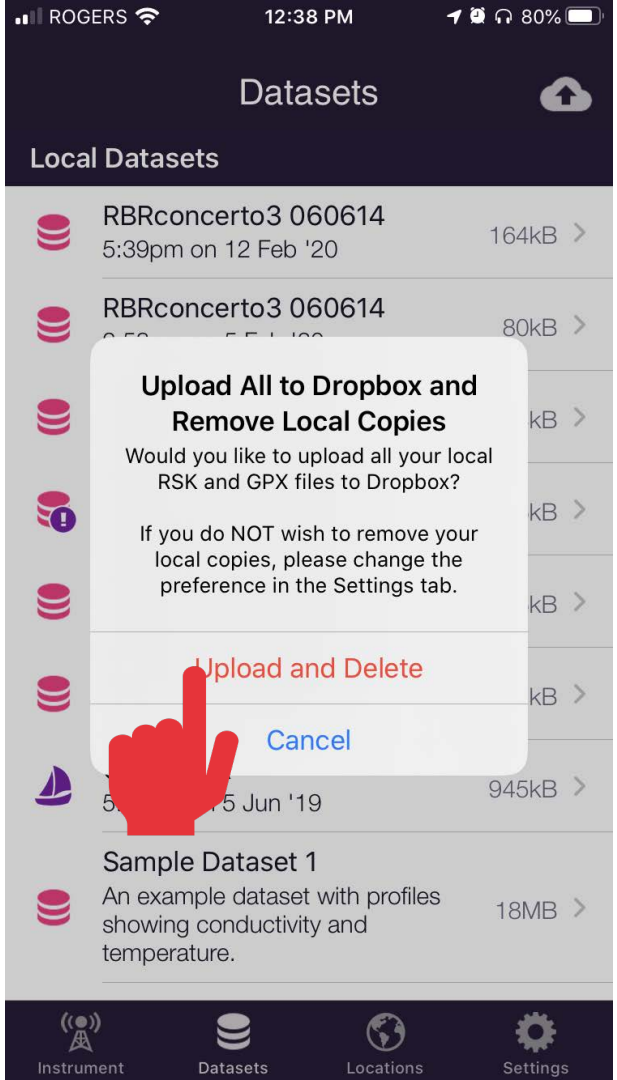

ROGERS LTE 5:38 PM 82%
RBR concerto³ 060614
94 SAMPLES
ON LOGGING
1s RATE
VIEW
LAST TAGGED LOCATION:
Logged automatically at 17:38
44.6623 LATITUDE
-63.5568 LONGITUDE
24m ACCURACY
TAG
CURRENT LOCATION:
44.6623, -63.5568, (24m)
MEASURED CHANNELS:
STOP DEPLOYMENT
Conductivity (mS/cm)
Instrument
Datasets
Locations
Settings


ROGERS LTE 8:54 AM 93%
RBR concerto³ 060614
53 SAMPLES
ON LOGGING
32Hz RATE
VIEW
LAST TAGGED LOCATION:
Logged automatically at 08:54
44.6660 LATITUDE
-63.6745 LONGITUDE
16m ACCURACY
TAG
CURRENT LOCATION:
44.6660, -63.6744, (16m)
MEASURED CHANNELS:
STOP DEPLOYMENT
Conductivity (mS/cm)
Instrument
Datasets
Locations
Settings


ROGERS 5:39 PM 82%
RBR concerto³ 060614
107 SAMPLES
OFF DISABLED
32Hz
Deployment stoppe
VIEW
LAST TAGGED LOCATION:
Logged automatically at 17:38
44.6624 LATITUDE
-63.5569 LONGITUDE
16m ACCURACY
TAG
CURRENT LOCATION:
44.6624, -63.5568, (16m)
START DEPLOYMENT
MEASURED CHANNELS:
Instrument
Datasets
Locations
Settings

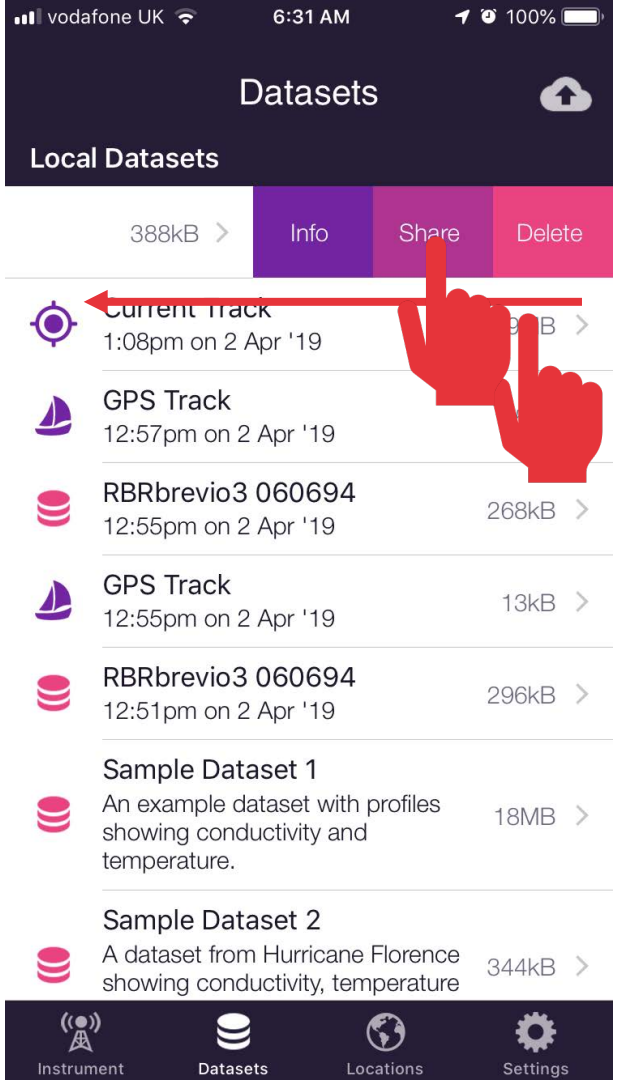
3. Upload data to Dropbox

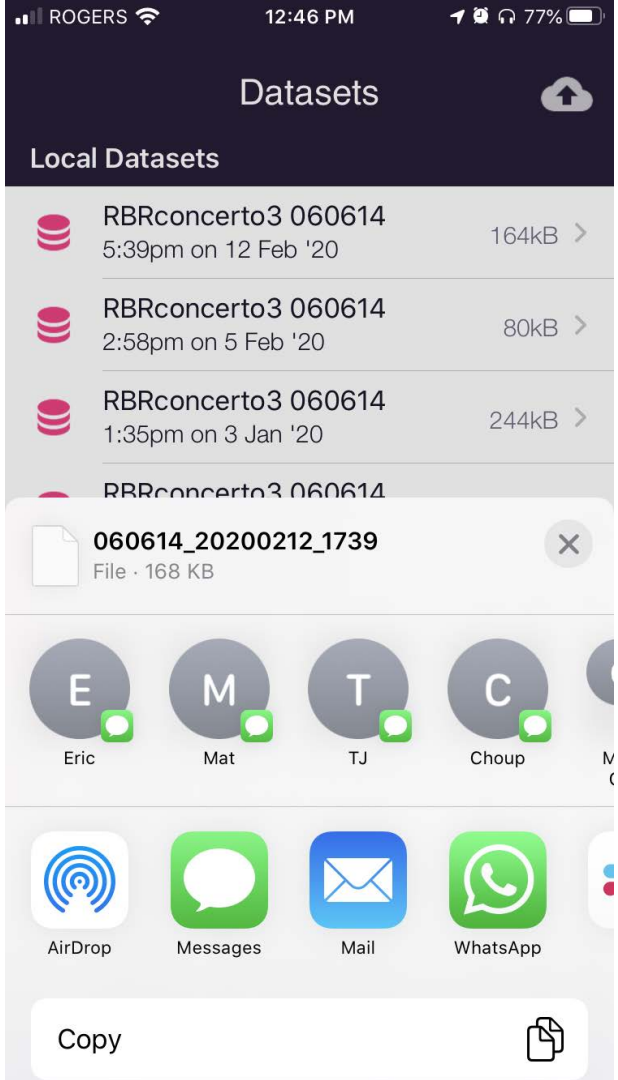




RBR

3. Share a dataset





RBR

Downloading Data: Cabled vs Wi-Fi

- CTD profiled to 100m, sampling at 8Hz and descending at 0.5m/s
- Takes 400s (6.6 minutes), to go down and up (per channel 3200 samples)

Mode	Rate (bytes/s)	Download time (sec)
RS-232 (external connector)	11,520	5.5
Wi-Fi	16,000	4.0
USB (opening up logger/external connector)	130,000	0.5

- Rule of thumb is Wi-Fi download time takes approximately 1sec per 1min of CTD data collection at 8Hz

RBR

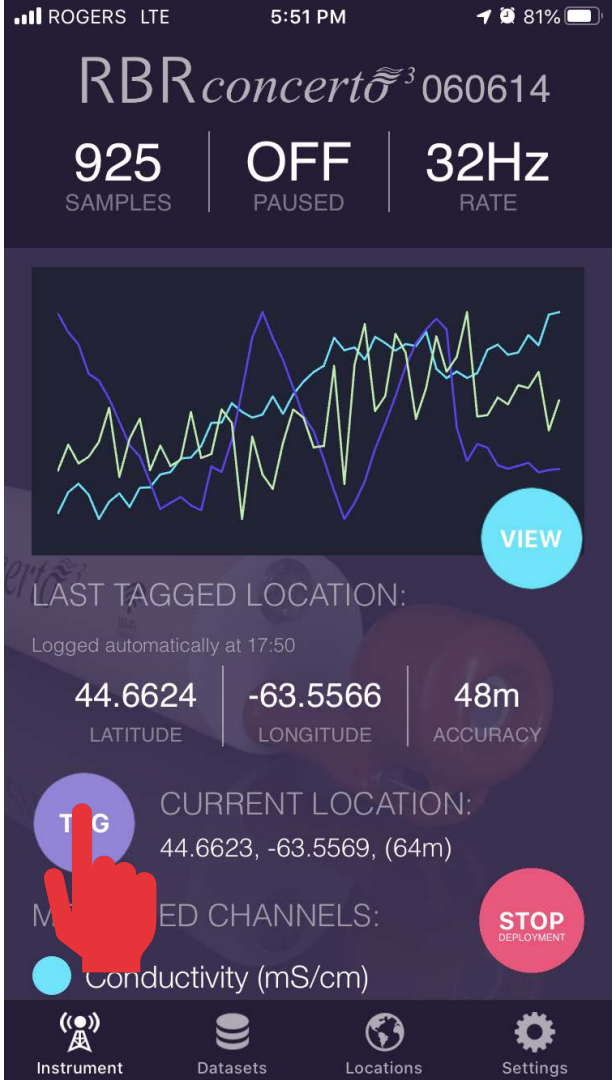
Ruskin Mobile Features: Case Study 2

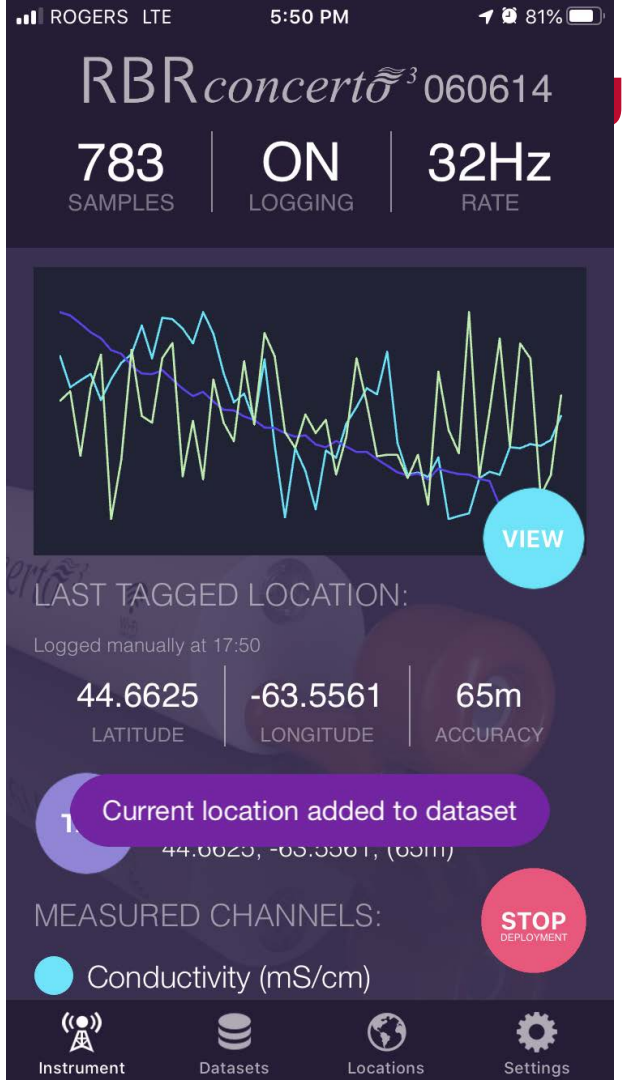
Researchers on scientific cruise want to add GPS to CTD dataset

Case Study 2: Scientific Cruise

1. Want to add a manual GPS point
   - Weekly sampling regime, with 1 CTD profile
   - Want to tag/note an interesting ocean feature (ex: front, school of fish)
2. Want to add full GPS track
   - On a cruise with multiple profiles

RBR

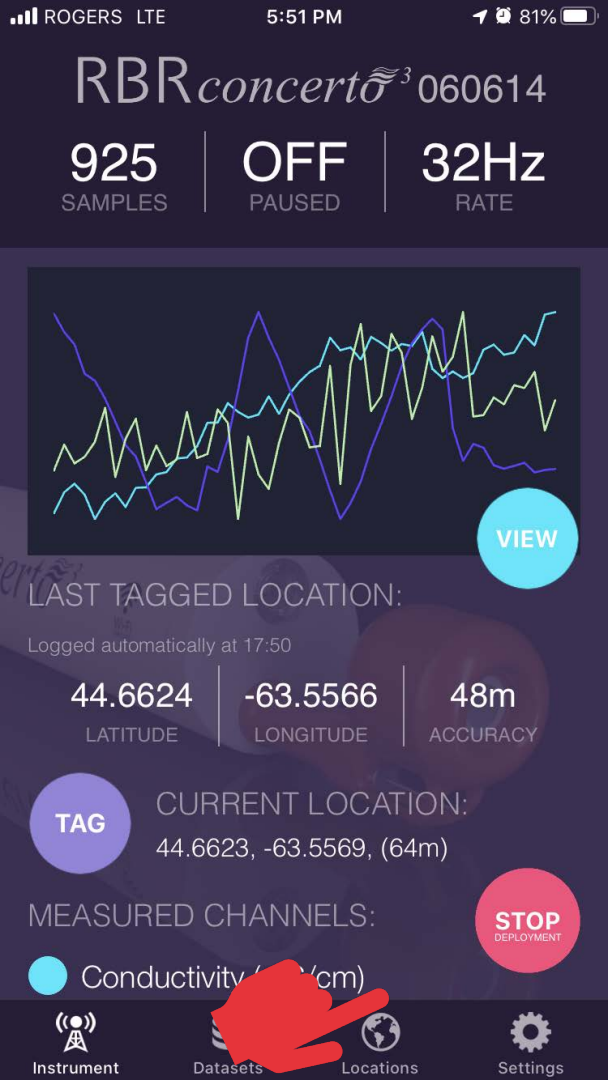

ROGERS LTE
5:51 PM
81%
RBR concerto³ 060614
925
SAMPLES
OFF
PAUSED
32Hz
RATE
VIEW
LAST TAGGED LOCATION:
Logged automatically at 17:50
44.6624
LATITUDE
-63.5566
LONGITUDE
48m
ACCURACY
CURRENT LOCATION:
44.6623, -63.5569, (64m)
STOP
DEPLOYMENT
Conductivity (mS/cm)
Instrument
Datasets
Locations
Settings

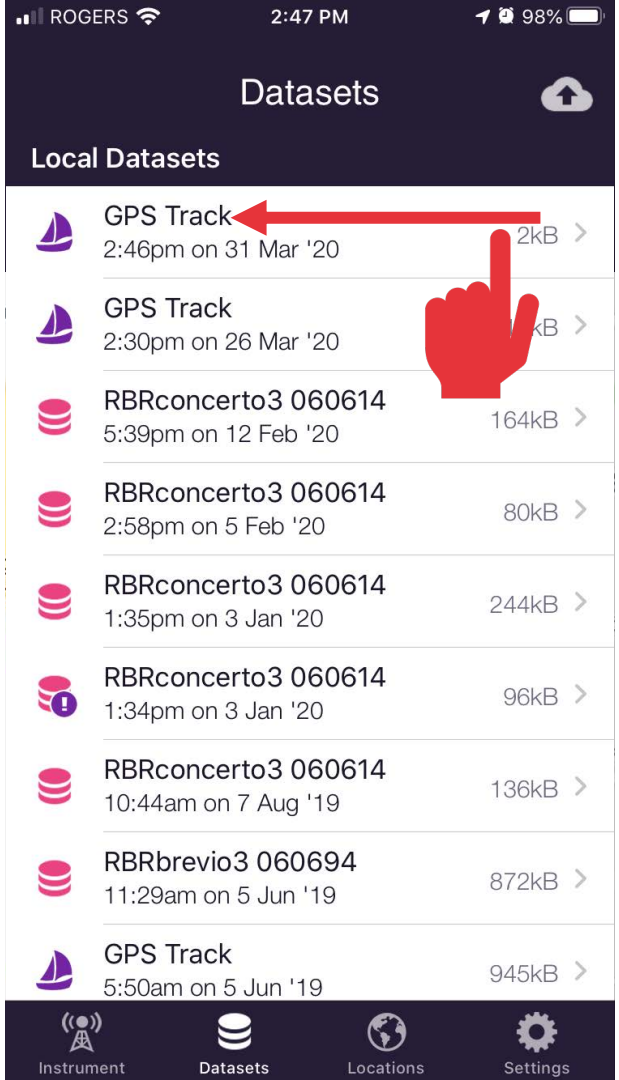

ROGERS LTE
5:50 PM
81%
RBR concerto³ 060614
783
SAMPLES
ON
LOGGING
32Hz
RATE
VIEW
LAST TAGGED LOCATION:
Logged manually at 17:50
44.6625
LATITUDE
-63.5561
LONGITUDE
65m
ACCURACY
Current location added to dataset
MEASURED CHANNELS:
STOP
DEPLOYMENT
Conductivity (mS/cm)
Instrument
Datasets
Locations
Settings

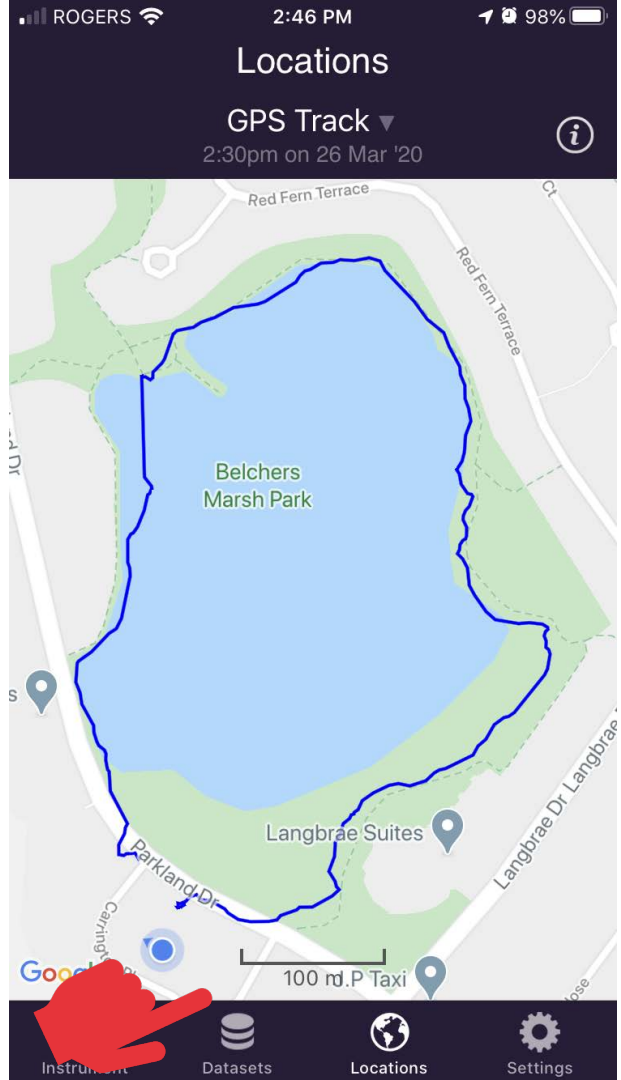
RBR

How Manual GPS Tags are Shown in Ruskin Desktop

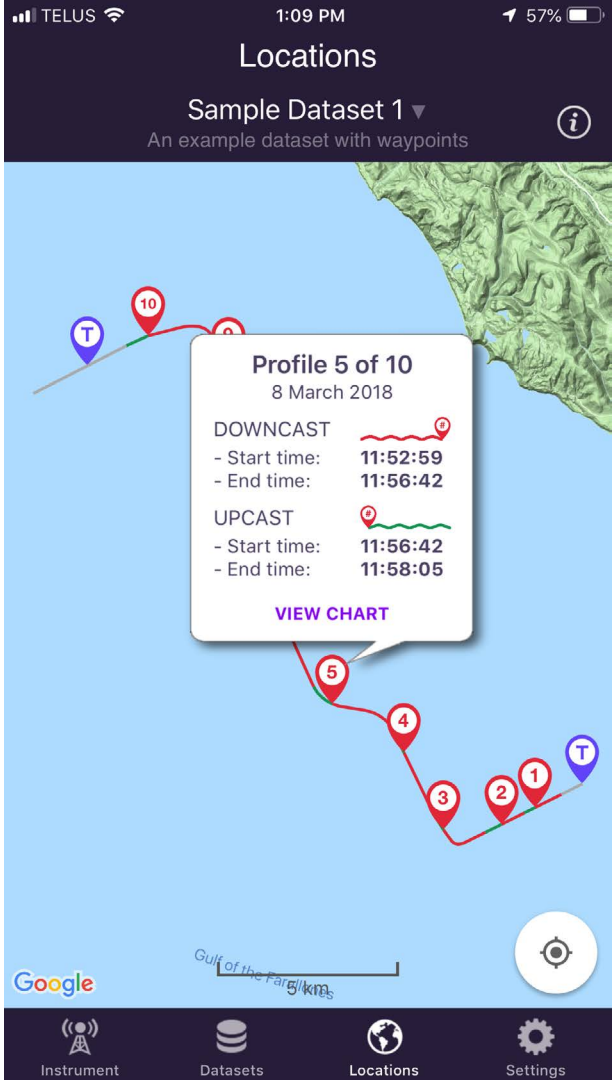
RBR


ROGERS LTE
5:51 PM
81%
RBRconcerto³ 060614
925
SAMPLES
OFF
PAUSED
32Hz
RATE
VIEW
LAST TAGGED LOCATION:
Logged automatically at 17:50
44.6624
LATITUDE
-63.5566
LONGITUDE
48m
ACCURACY
TAG
CURRENT LOCATION:
44.6623, -63.5569, (64m)
MEASURED CHANNELS:
STOP
DEPLOYMENT
Conductivity
Instrument
Datasets
Locations
Settings


ROGERS
2:47 PM
98%
Datasets
Local Datasets
GPS Track
2:46pm on 31 Mar '20
2kB
GPS Track
2:30pm on 26 Mar '20
RBRconcerto3 060614
5:39pm on 12 Feb '20
164kB
RBRconcerto3 060614
2:58pm on 5 Feb '20
80kB
RBRconcerto3 060614
1:35pm on 3 Jan '20
244kB
RBRconcerto3 060614
1:34pm on 3 Jan '20
96kB
RBRconcerto3 060614
10:44am on 7 Aug '19
136kB
RBRbrevio3 060694
11:29am on 5 Jun '19
872kB
GPS Track
5:50am on 5 Jun '19
945kB
Instrument
Datasets
Locations
Settings


ROGERS
2:46 PM
98%
Locations
GPS Track
2:30pm on 26 Mar '20
Red Fern Terrace
Belchers
Marsh Park
Langbrae Suites
Parkland Dr
Langbrae Dr
100 m
Taxi
Datasets
Locations
Settings


TELUS
1:09 PM
57%
Locations
Sample Dataset 1
An example dataset with waypoints
T
10
9
8
7
6
5
4
3
2
1
T
Google
5 kms
Instrument
Datasets
Locations
Settings


TELUS
1:09 PM
57%
Locations
Sample Dataset 1
An example dataset with waypoints
Profile 5 of 10
8 March 2018
DOWNCAST
- Start time: 11:52:59
- End time: 11:56:42
UPCAST
- Start time: 11:56:42
- End time: 11:58:05
VIEW CHART
Google
5 kms
Instrument
Datasets
Locations
Settings

RBR

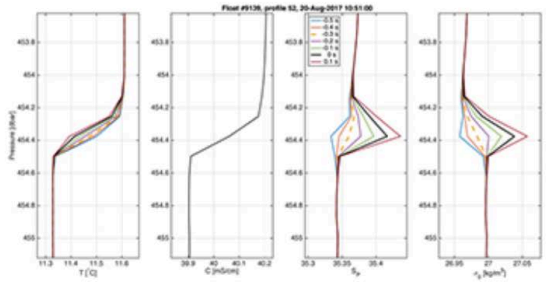
Summary

- Wi-Fi is useful to easily get data off logger without opening it up
- Wi-Fi is flexible (phone, tablet, PC and Mac)
- Easy to activate using Twist
- Awesome to quickly view data and to check channels to ensure the data looks good
- Easily upload to Dropbox, Airdrop, or email
- GPS tag (manual) and GPS tracking is super useful to append to the instrument dataset

RBR

Upcoming Webinars

Future Webinars



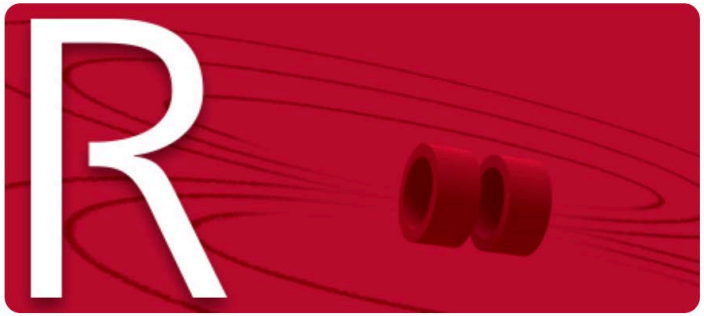
CTD dynamic performance and correction through gradients

Mark Halverson

May 6, 2020 at 12PM EDT

Learn how RBR is helping customers improve data quality when profiling through strong thermoclines with vertical profiles, Argo floats, and gliders.

Register for the Webinar



Ruskin Software Pro Tips

Greg Johnson

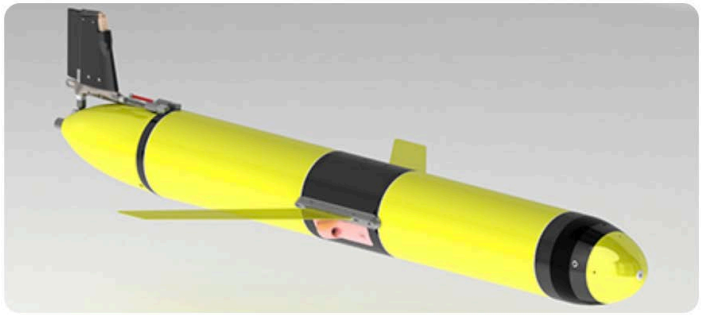
May 13, 2020 at 12PM EDT

Learn about the full capability of the Ruskin software, including simulating different instrument configurations, automatic cast detection, wave processing, and editing calibration coefficients.

Register for the Webinar

RBR

Future Webinars



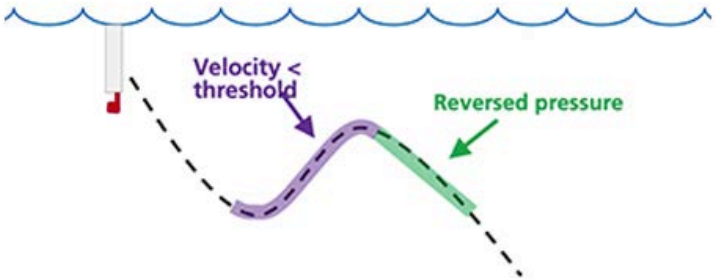
Development and evaluation of the RBRlegato CTD on glider platforms

Eric Siegel

May 20, 2020 at 12PM EDT

Learn how customers are using the new RBR*legato* glider CTD to extend glider missions, improve data quality, and enable more measurements.

Register for the Webinar



RSKtools: a free toolbox for CTD post-processing and data visualization

Greg Johnson

June 3, 2020 at 12PM EDT

Learn more about the many functions in the the free post-processing toolbox and how it can improve your CTD data quality.

Register for the Webinar

RBR

Future Webinars

CTD and sensor calibrations

Tekai Akuetteh

June 10, 2020 at 12PM EDT

Learn about the RBR calibration procedure for conductivity, temperature, pressures, and other sensors, and how you can maintain, verify, and calibrate some sensors in the field.

Register for the Webinar

Wave measurements for ocean, coastal, and transient wave studies

Eric Siegel (RBR) & Curt Storlazzi (USGS)

June 17, 2020 at 12PM EDT

Expand your understanding of wave measurements, learn how to optimize your deployment settings, and review Ruskin wave processing methods

Register for the Webinar

RBR

Thank You

Contact Us

RBR
rbr-global.com
info@rbr-global.com
+1 613 599 8900

RBR