

# Guidelines for using HOBO MX1101 loggers to monitor temperature and humidity levels in collection storage locations

Preservation Committee, Dalhousie Libraries

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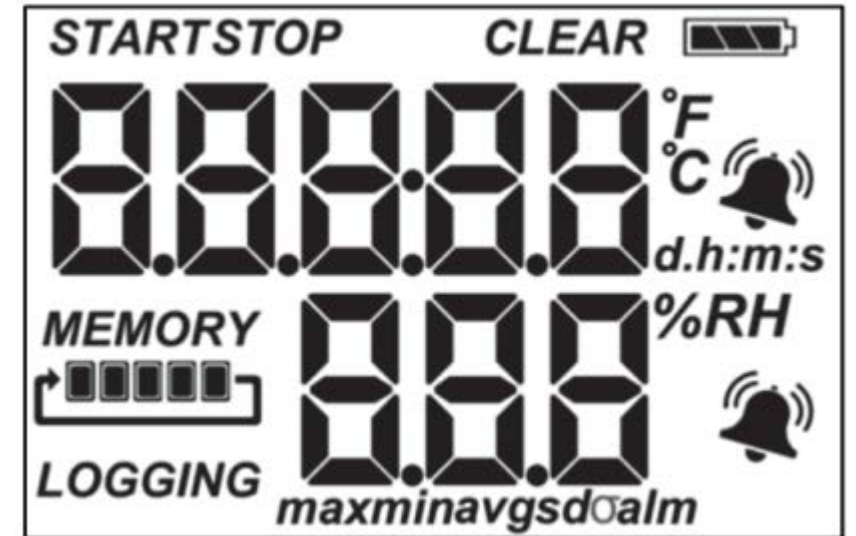
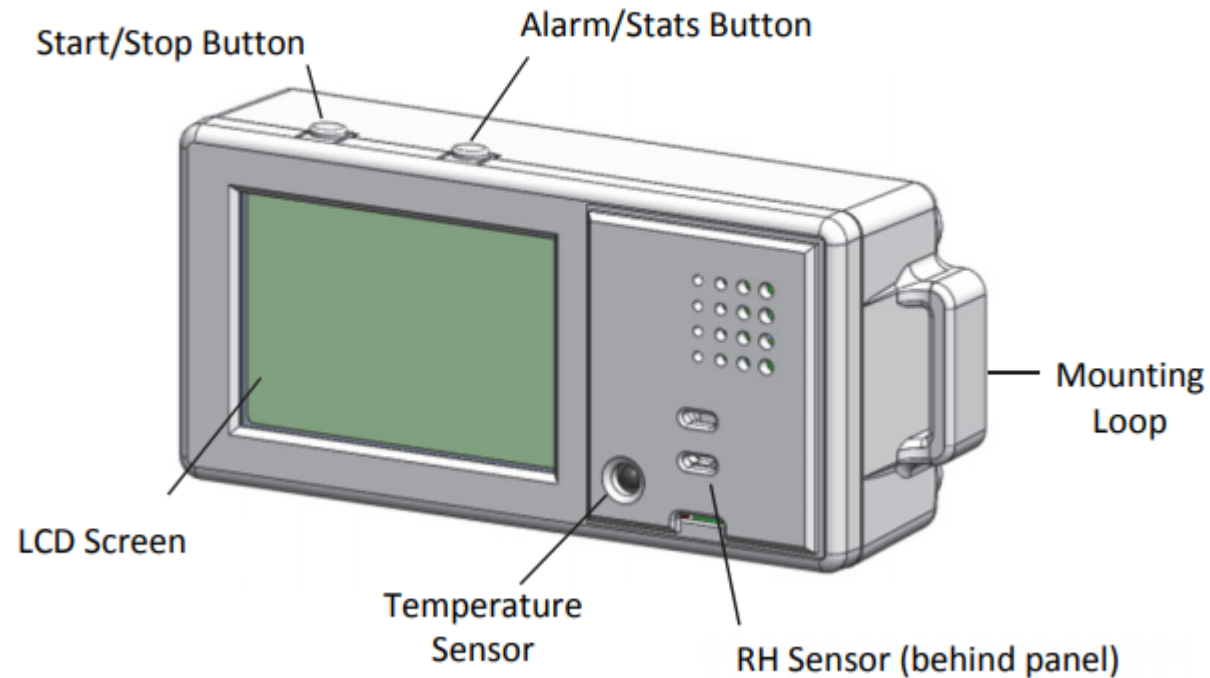
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# Part 1 – Introduction to HOBO MX1101

- The Preservation Committee recommends that staff in each library monitor collection storage areas for temperature and humidity levels
- These guidelines explain how to use a HOBO MX1101 data logger to monitor collection storage areas
- The HOBO MX1101 data logger is a Bluetooth device that connects with iOS and Android devices via a free HOBOmobile app

# Part 1 – Introduction to HOBO MX1101

## Logger Components and Operation



# Part 1 – Introduction to HOBO MX1101

- HOBO MX1101 quick start guide:  
<https://www.onsetcomp.com/manuals/17839-man-qsg-mx1101>
- HOBO MX1101 user's manual: <https://www.onsetcomp.com/node/24391>
- HOBOmobile user's guide for iOS:  
<https://www.onsetcomp.com/manuals/17841-hobomobile-users-guide>
- HOBOmobile user's guide for Android:  
<https://www.onsetcomp.com/manuals/18854-hobomobile-users-guide-android>
- MX1101 data logger data sheet:  
<https://www.onsetcomp.com/support/manuals/mx1101-data-sheet>

# Part 1 – Introduction to HOBO MX1101

- Onset's HOBO MX1101 temp/RH Data Logger:  
<https://www.youtube.com/watch?v=AegTkY0czg>
- How to connect to a HOBO MX1101 data logger:  
[https://www.youtube.com/watch?v=qrSVotK\\_QHA](https://www.youtube.com/watch?v=qrSVotK_QHA)
- How to configure and start a HOBO MX1101 data logger using HOBOmobile:  
<https://www.youtube.com/watch?v=TFg9iROJ2iE>
- How to download and view your data in HOBOmobile:  
<https://www.youtube.com/watch?v=bA0ju9yiQwU>
- How to share/export your data using HOBOmobile:  
<https://www.youtube.com/watch?v=61zzSMdDs98>
- Configure and start time saving features:  
<https://www.youtube.com/watch?v=5sITtCWgcOQ>
- Share multiple data files: <https://www.youtube.com/watch?v=LWoIG9zGt10>

## Part 2 – Determine schedule for monitoring temperature and humidity

- Each Library should determine a schedule for rotating the HOBO MX1101 throughout collection storage areas
- Considerations include, but are not limited to:
  - Storage areas with controlled environmental conditions (e.g., cold storage)
  - Storage areas known to have undesirable environmental conditions
  - Storage areas known to have collections of significance
  - Storage of microform, magnetic tape, film, newsprint, etc.
  - Monitoring open stacks vs. closed stacks
- Contact the Preservation Committee for guidance, if necessary

## Part 3 – Deploy MX1101 data logger

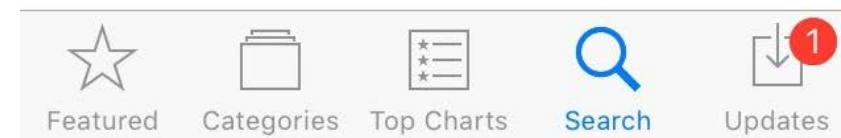
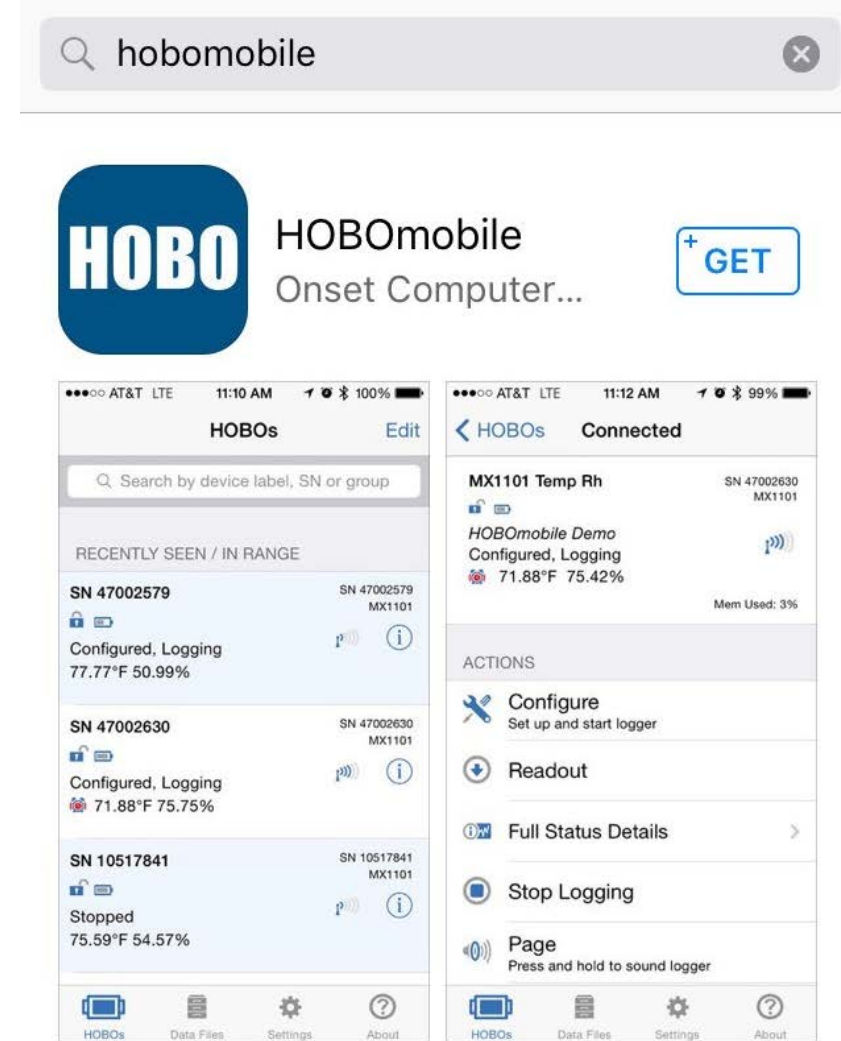


- Open the battery door on the back of the logger.
- Insert two AAA batteries.
- Reinsert the battery door and snap it back into place.
- Deploy the logger using the magnets on the back of the logger case or the mounting materials included.



# Part 4 – Install HOBOMobile app

- Open App Store or Google Play
- Search for HOBOMobile
- Click on “Get” button to install the app
- Provide your personal Apple ID or Google ID if necessary
- Close the App Store or Google Play once the HOBOMobile app is installed



# Part 5 – Configure MX1101 data logger

- Open HOBOMobile app
- Tap the HOBOS icon on the bottom menu
- Tap on a row in the “IN RANGE” list to connect to the logger
- Tips:
  - Make sure logger is within range of mobile device, within sight if possible
  - If you cannot connect to a logger that appears to be in range, close HOBOMobile, turn off the mobile device, and turn it back on

The screenshot displays the HOBOS mobile application interface. At the top, there is a search bar with the text "Search by device name, SN, group or model". Below this, a section titled "IN RANGE" shows details for a specific device: "SN 20427973" (with a lock icon) and "SN 20427973 MX1101" (with a battery icon). The device status is "Stopped (Power Reset)" with a signal strength icon and an information icon. The temperature is "83.91°F" and the battery level is "44.70%". Below the "IN RANGE" section is a "GROUPS" section with a list of categories: "Favorites" (0 HOBOS Found), "Ungrouped" (1 HOBOS Found), "All" (2 HOBOS Found), and "Killam Library" (1 HOBOS Found). At the bottom, there is a navigation bar with four icons: "HOBOS" (a blue device icon), "Data Files" (a blue folder icon), "Settings" (a blue gear icon), and "About" (a blue question mark icon).

# Part 5 – Configure MX1101 data logger

- Once connected, tap on Configure.






The screenshot displays the HOBOS mobile application interface. At the top, there is a navigation bar with a back arrow, the text 'HOBOS', and the status 'Connected'. Below this, the device information is shown: 'SN 20427973' and 'MX1101'. The status is 'Stopped (Power Reset)' with a battery level of '83.33°F 38.04%'. A signal strength indicator is visible on the right. Below the status bar, there is a section titled 'ACTIONS' with a light gray background. The actions listed are: 'Configure' (with a wrench and screwdriver icon) with the description 'Set up and start logger'; 'Readout' (with a downward arrow icon) with the description 'Not configured'; 'Full Status Details' (with an information icon and a right-pointing arrow); 'Start Logging' (with a play button icon) with the description 'Reconfigure to start'; and 'Page' (with a speaker icon) with the description 'Press and hold to sound logger'. At the bottom, there is a navigation bar with four icons: 'HOBOS' (device icon), 'Data Files' (stack of files icon), 'Settings' (gear icon), and 'About' (question mark icon).

SN 20427973  
MX1101

Stopped (Power Reset)  
83.33°F 38.04%

Mem Used: Unknown

ACTIONS

-  **Configure**  
Set up and start logger
-  **Readout**  
Not configured
-  **Full Status Details** >
-  **Start Logging**  
Reconfigure to start
-  **Page**  
Press and hold to sound logger

HOBOS Data Files Settings About

Cancel

Configure

Start

# Part 5 – Configure MX1101 data logger


- Configure seven options:
  - Deployment Info
    - Group: use name of library (e.g., Killam Library)
  - Logging setup
    - Logging interval: every 15 minutes
    - Start logging: start logging at beginning of an hour
    - Stop logging: Never (wrap when full)
  - Logging mode
    - Select “Fixed interval logging”
    - Select “Normal”
  - Statistics
    - Select all four options (maximum, minimum, average, standard deviation)

## DEPLOYMENT INFO

 Name 20427971 >

 Group >

 Location 44°38'14" N 63°35'29" W >

 Deployment Number 0

## LOGGING SETUP

 Logging Interval 1m >

 Logging Duration ~27.1 days 


 Start Logging Now >

 Stop Logging When memory fills >

# Part 5 – Configure MX1101 data logger – add to group

- Tap on the “Group” option in the “Deployment Info section”
- Tap on the “Create New Group...” option
- Create a group named after the library (e.g., Killam Library, Sexton Library)
- Group names must be twenty characters or less
- Tap on the “Done” button to return to the Configure screen


Cancel Group Done

 Add to Favorites

SELECT A GROUP...

 Create New Group... >

Cancel Group Done

 Add to Favorites

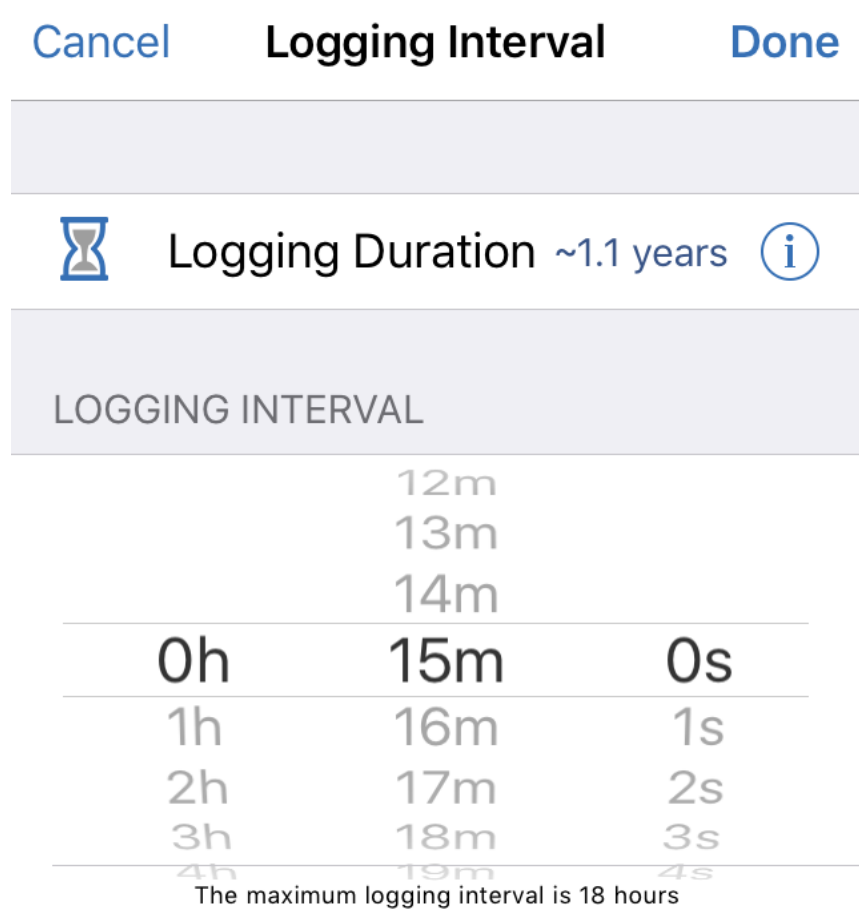
SELECT A GROUP...

 Killam Library ✓

 Create New Group...

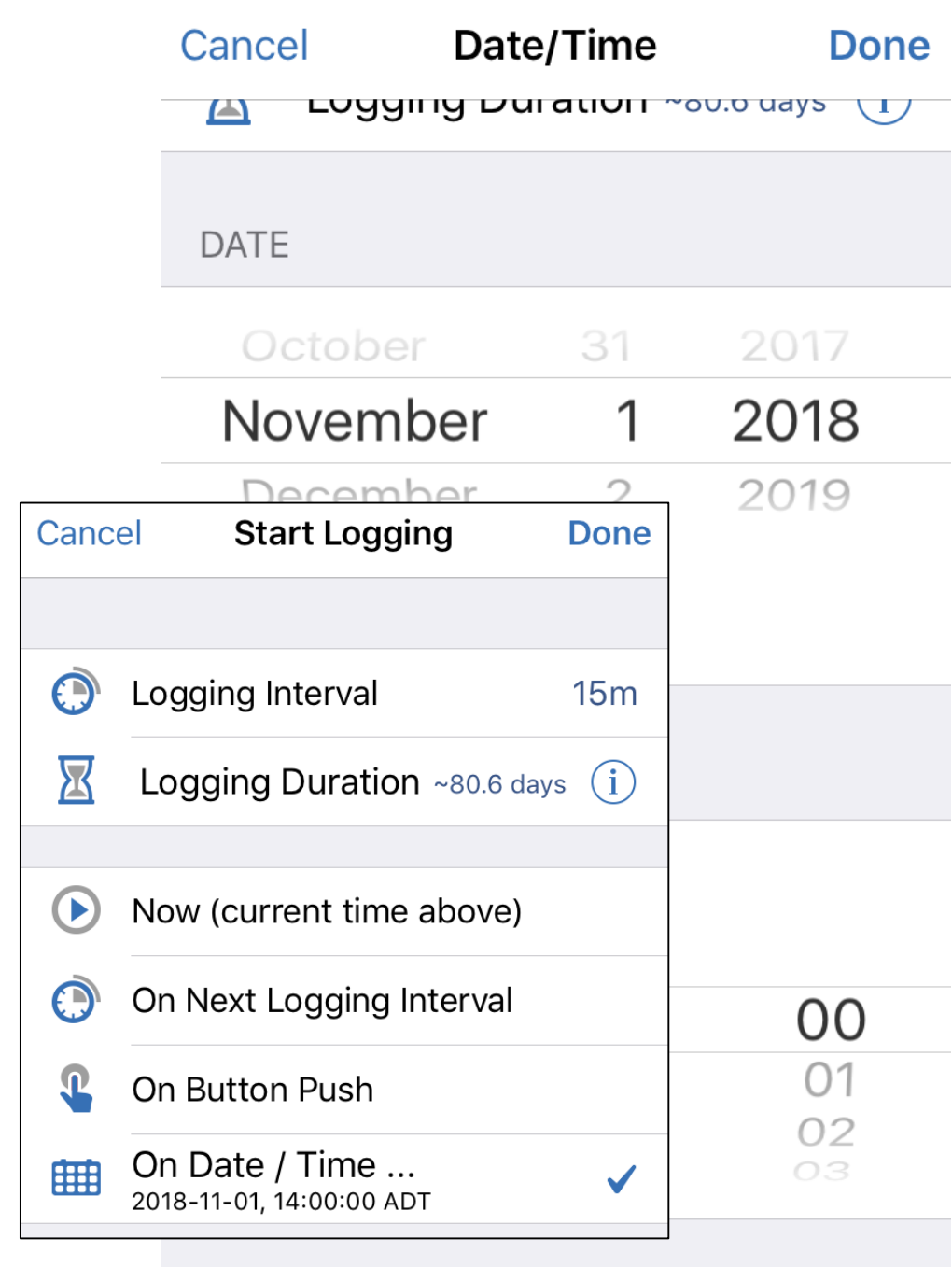
# Part 5 – Configure MX1101 data logger – logging interval

- Tap on the “Logging Interval” option in the “Logging Setup” section
- Set the logger to collect data every 15 minutes
- Tap on the “Done” button to return to the Configure screen



# Part 5 – Configure MX1101 data logger – start logging

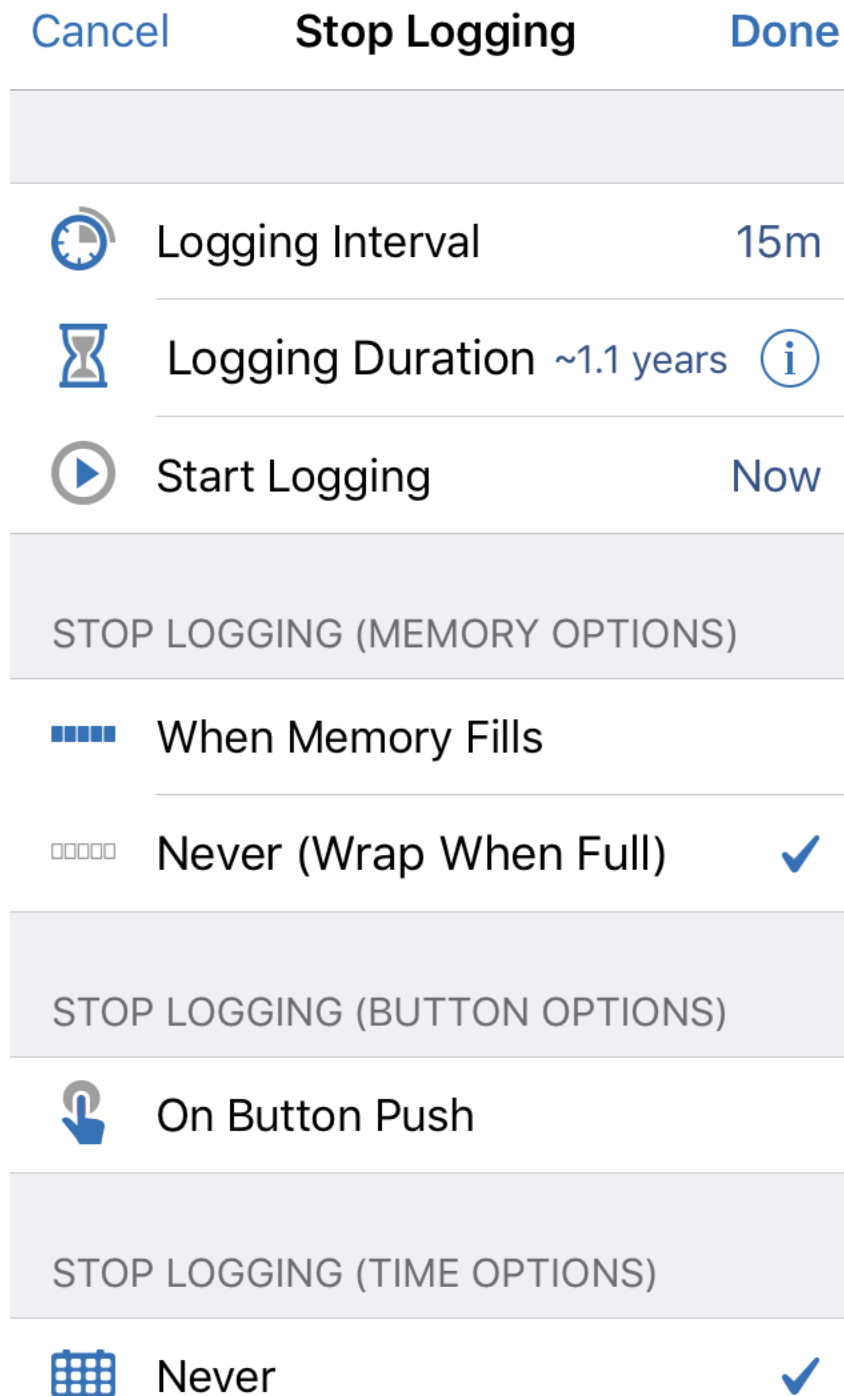
- Tap on the “Start Logging” option in the “Logging Setup” section
- Tap on the “On Date / Time ...” option
- Set the logger to start collecting data on a desired date and time.
- Always start collecting data at the beginning of an hour
- Tap on the “Done” button to return to the “Start Logging” screen
- Tap on the “Done” button to return to the Configure screen



2018-11-01, 14:00:00 ADT

# Part 5 – Configure MX1101 data logger – stop logging

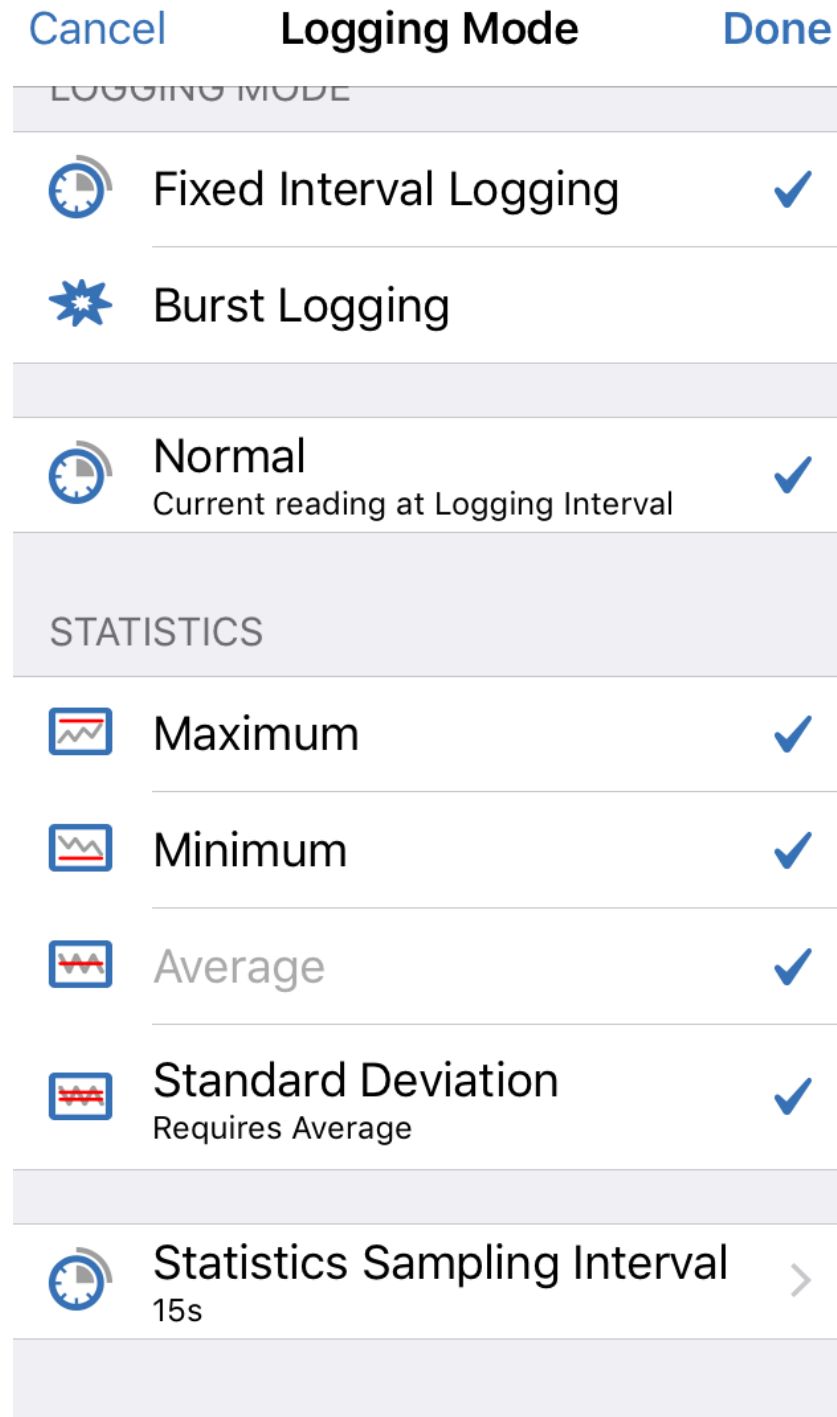
- Tap on the “Stop Logging” option in the “Logging Setup” section
- Tap on the “Never (Wrap When Full)” option
- Tap on the “Done” button to return to the Configure screen





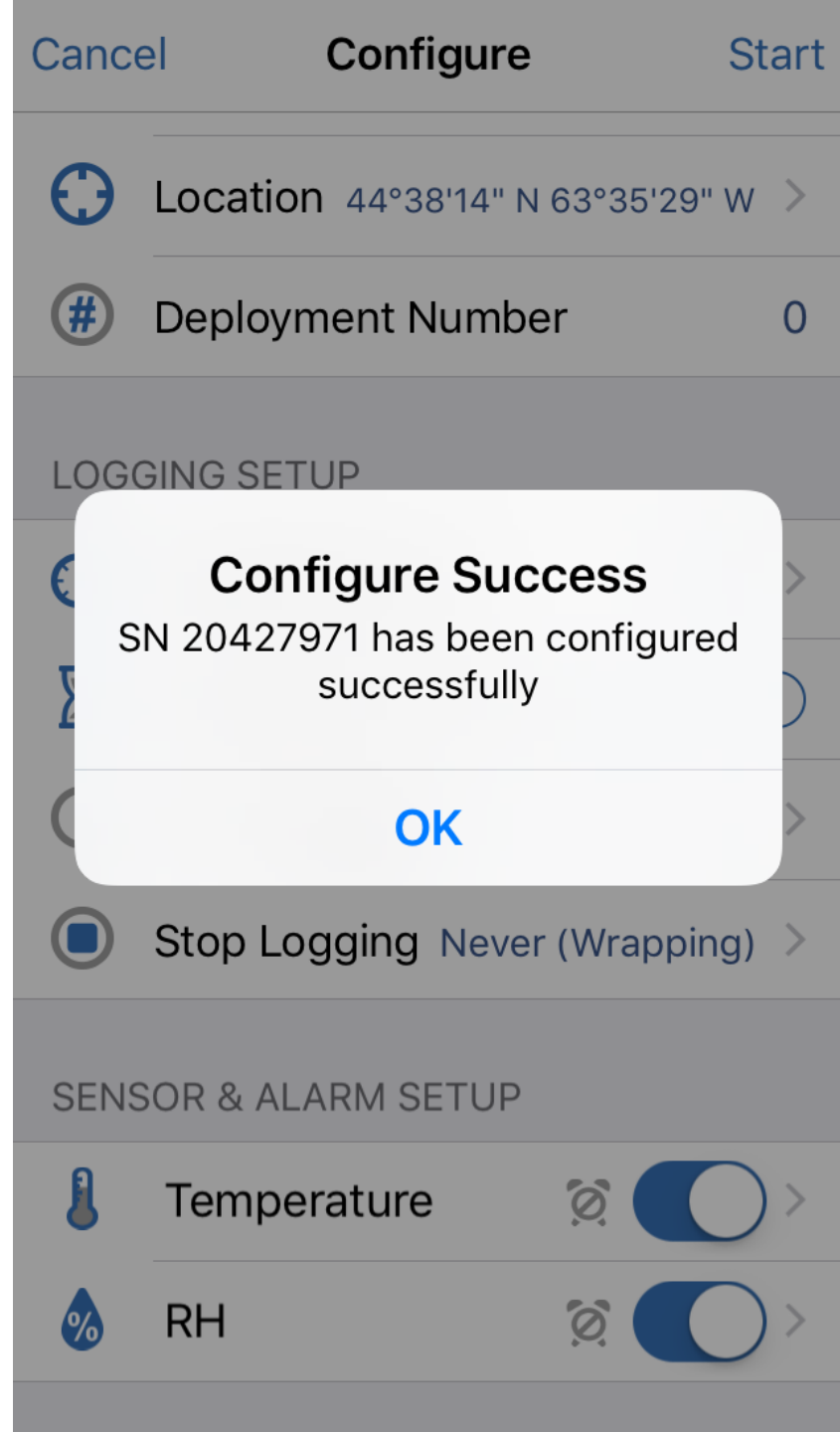
# Part 5 – Configure MX1101 data logger – Logging mode and statistics

- Select the following options in the “Logging Mode” and “Statistics” sections:
  - Fixed Interval Logging
  - Normal
  - Maximum
  - Minimum
  - Average
  - Standard Deviation
- Leave the Statistics Sampling Interval at 15 seconds
- Tap on the “Done” button to return to the Configure screen



# Part 5 – Configure MX1101 data logger – start logging

- Review all of the settings on the Configure screen
- Tap on the “Start” button to configure the logger
- Receive the “Configure Success” pop-up window
- Tap on the “OK” button to close the pop-up window



# Part 6 – Capture data from MX1101 data loggers

- Coming soon

# Part 7 – Collate data from multiple MX1101 data loggers

- Coming soon