



# Torq-App Operating Manual

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Torq-App Operating Manual

*CONCEPT MEASUREMENT INC.*

*iOS and Android application*



## *Important Notes*

*Before using the Torq device be sure to fully charge the battery inside it before starting your job. The battery voltage range should be 3.1V-4.2V (single battery cell) or 6.2-8.4V (2 cells in series/ value displayed from the app).*

*Do not use a pair of differently charged batteries in the Torq-Device. Doing so can permanently reduce the life of the battery.*

*Do not discharge the batteries under 6.2V combined, or 3.1V individually.*

*Only use identical "18650" batteries with a non-protruding/flat top "+" terminal.*

*Do not use any tools or objects to pry batteries from the battery holder.*

*Do not store batteries at low temperature; a noticeable reduction of operational time will occur. Bringing batteries back to room temperature will resolve that issue.*

*Do not store the batteries which are lithium-ion below -25 Celsius (-13F) degrees as they will freeze.*

*Do not pressure wash the Torq device as this will void the warranty.*

*The default WiFi password of the Torq device is: CMI12345*



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## ○ *Starting the application*

Tap the icon of the app on the screen to start the application. When the application starts up the Monitor screen will be shown:

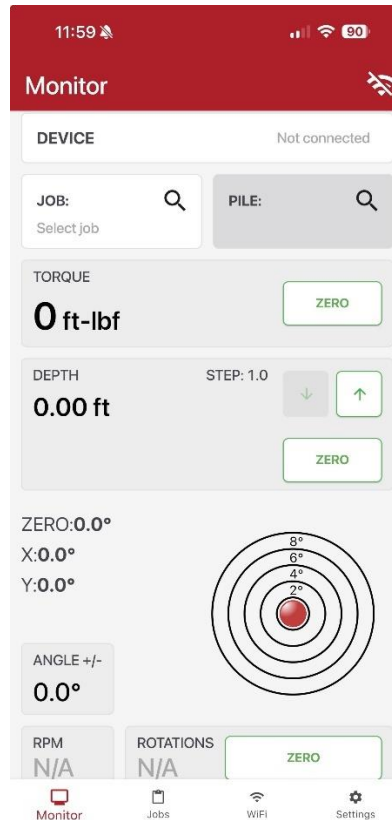


Figure 1. Starting Monitor screen

At this point, the app is not connected to any Torq device.

The operation of the app is arranged in 4 screens:

- Monitor
- Logs
- WiFi
- Settings

Tap their icon on the bottom to navigate to one of them. These screens are described in the below sections.



### ○ ***Connect to the Torq device via WiFi***

Power up the WiFi Torq device before trying to establish connection with it. The device will require a few seconds to create the WiFi Access Point to which the smartphone can connect via WiFi.

It is possible to make the WiFi connection directly from the WiFi settings of the smartphone. Look for the Torq device name appearing on the list of available SSID networks, E.g., 91-1283 and connect to it. It is necessary to enter the password the first time the connection is made. The default password is: CMI12345

It is possible to navigate to the WiFi settings menu of a smartphone from the app: go to the "WiFi" page using the icon on the bottom and tap "Go To WiFi Settings". When the connection is established, navigate back to the app.

The app does connect automatically to the Torq device. When the connection is established, the name of the connected Torq device can be read on the top of the WiFi screen.

When connecting for the first time to the device, the phone may drop the WiFi connection as there is no internet connection available via this WiFi network. If the phone shows a warning message that there is no internet connection available, select "Stay connected", and "Do not ask me again", if applicable.

When the connection is made, an info message will pop up stating the name and serial number of the connected device.

If you struggle with any WiFi issues do the following:

- Hard Reset / Force Restart
- Forget network / Rejoin network
- Manually enter your WiFi Network SSID (your serial number XXXX-XXXX)
- Reset network settings

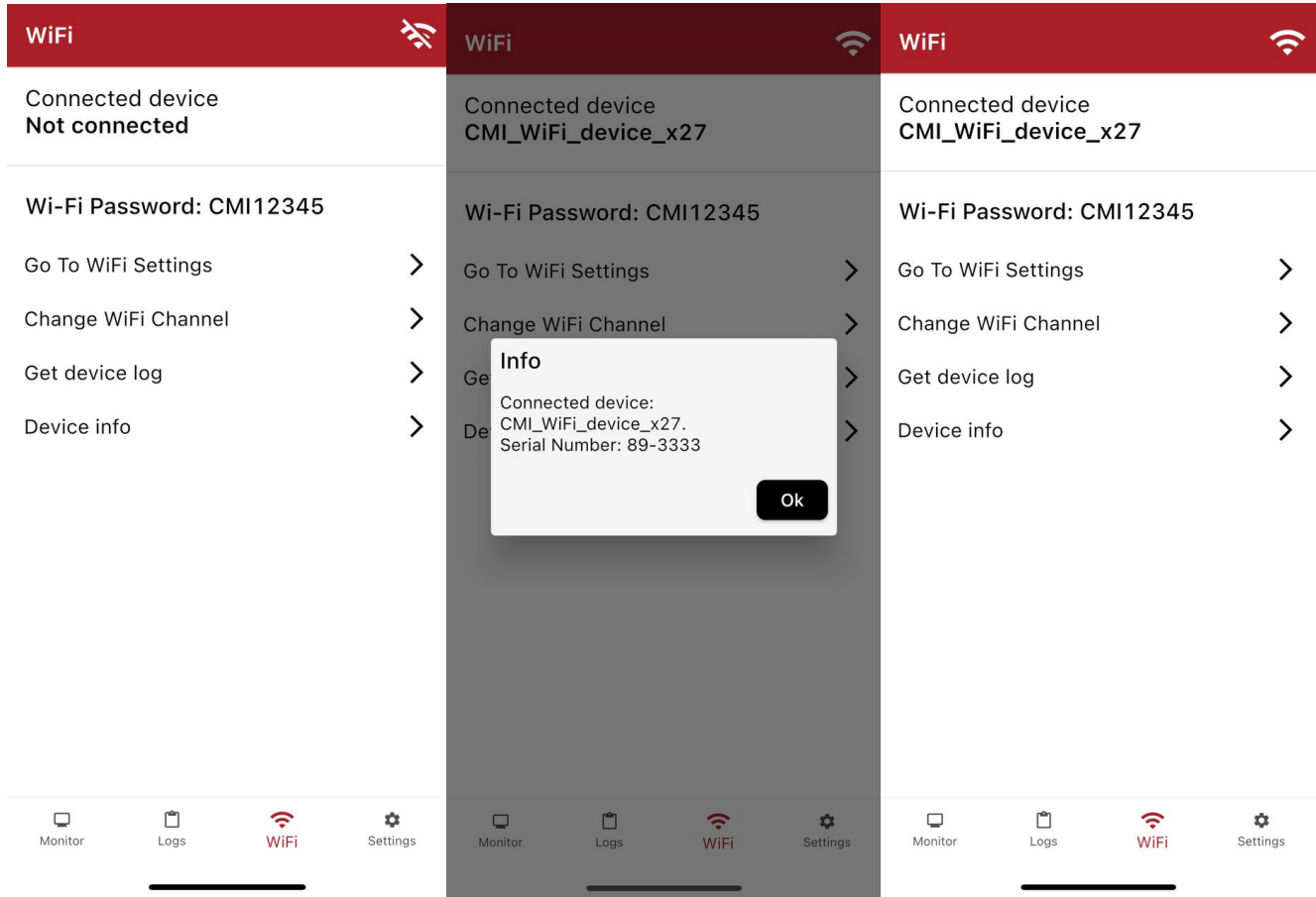


Figure 2. WiFi configuration screen before and after connection establishment

## ○ *Monitor screen*

The Monitor screen displays the following information:

- Device: the name of the connected Torq device and its Voltage
- Job (and Available jobs)
- Pile
- Torque: actual measured torque, the measurement unit can be set in the Settings section
- Depth: the depth unit and depth step can be set in the Settings section
- Bullseye diagram with angle information: this part can be disabled in the Settings section. By long pressing the diagram you can set next settings:

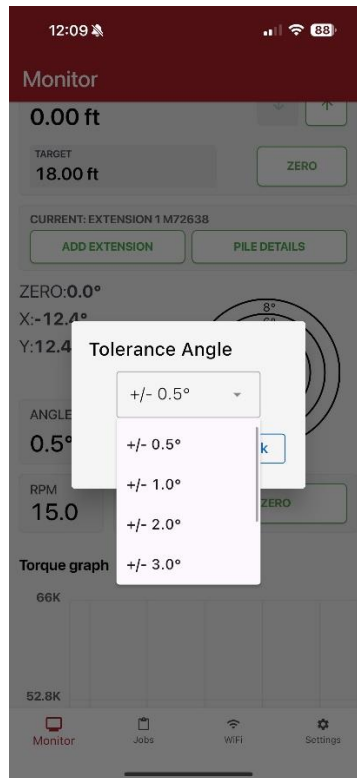


Figure 3. Bullseye diagram with angle information

- Rotations per minute (RPM)
- Rotations: the total number of rotations of the device
- Line Chart preview (scroll down to view)
- Device errors

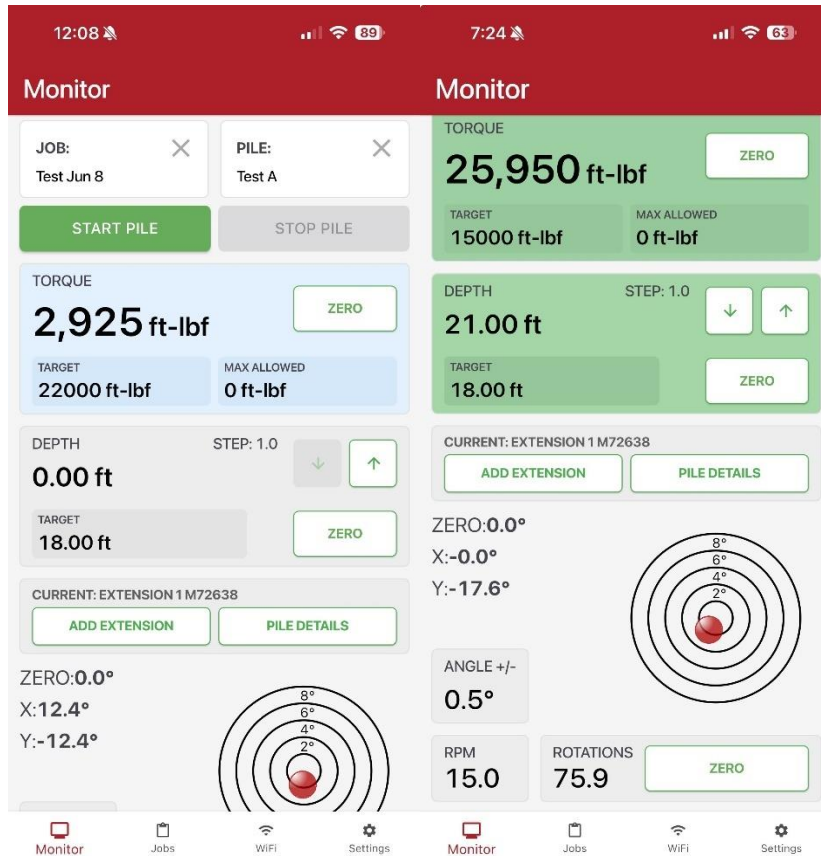


Figure 3.1. Monitor screen displaying measured data – second screen scrolled down

The Torque and Depth values can be zeroed by tapping their respective “Zero” buttons and a Target value can also be set for both. The torque target can be set by tapping the lightly shaded Target value box below the measured torque value. The depth target can also be adjusted by tapping the lightly shaded box below the Depth value. The depth step can be set in Settings. If the torque or depth value is over the set target, the background of the field will turn green. When it is below the limit the background is light blue.



## PDF Torque Graph Preview

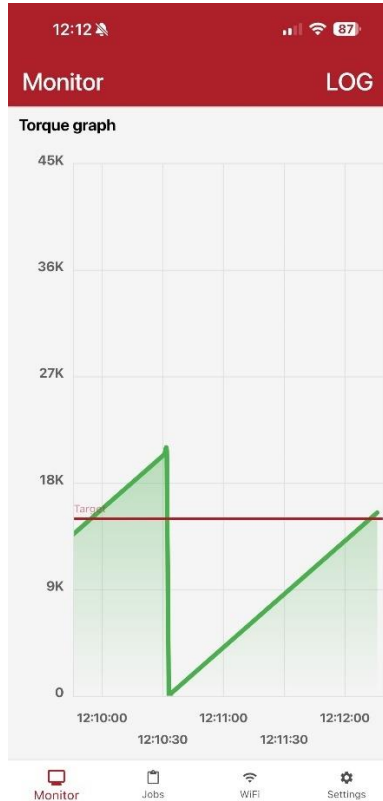


Figure 3.2 Torque Graph Preview

Scrolling down further on the Main Monitor Page will expose a live preview of all data points recorded for the current pile. Swipe left and right to scroll through this data.

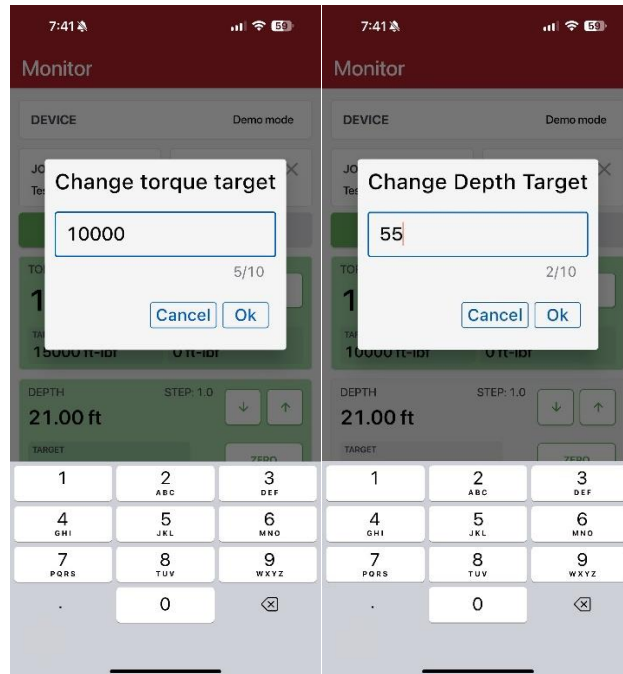


Figure 4. Changing the torque target and depth target

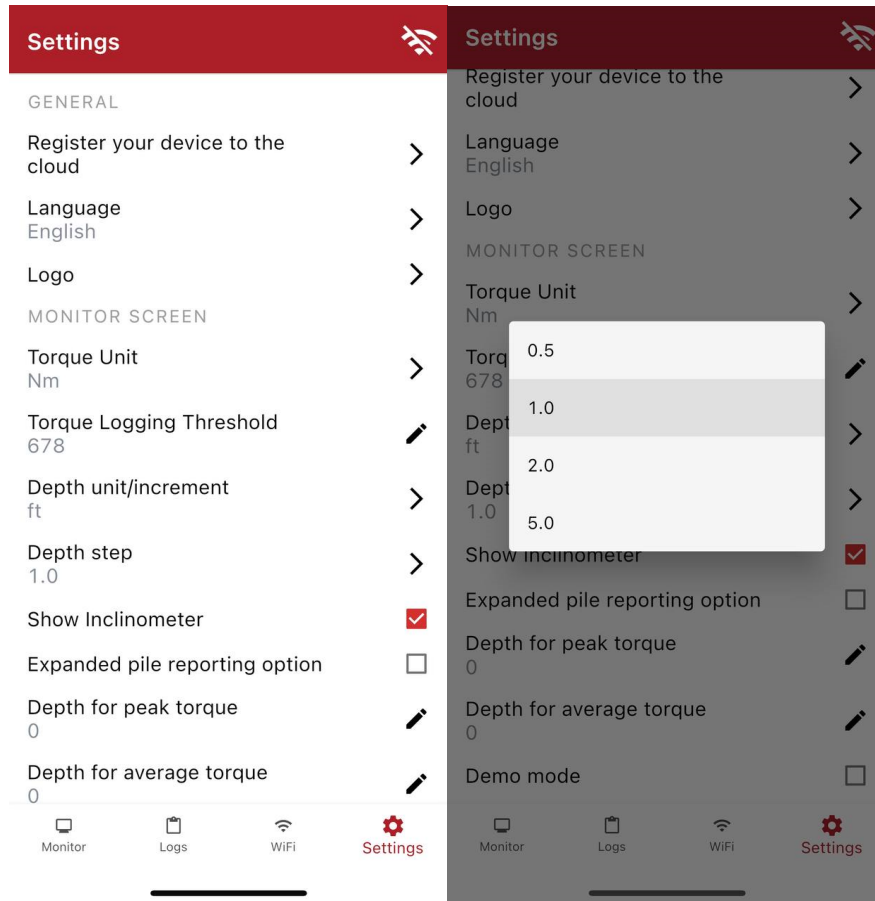


Figure 4.1. Changing depth step values

The Depth value can be increased and decreased by the up and down arrows. The unit of depth can be “ft” or “m” and is configured in the Settings screen (tap the gear icon on bottom right).

- **Logs screen**

On the Logs screen it is possible to record the measured values into log entries, called pile logs. Navigate to the Jobs screen by tapping the clipboard icon on bottom any screen. Tap the black “New Job” button to create a new job folder to hold the pile logs then enter the name of the Job and tap “Create”. The new Job folder will appear in the list.

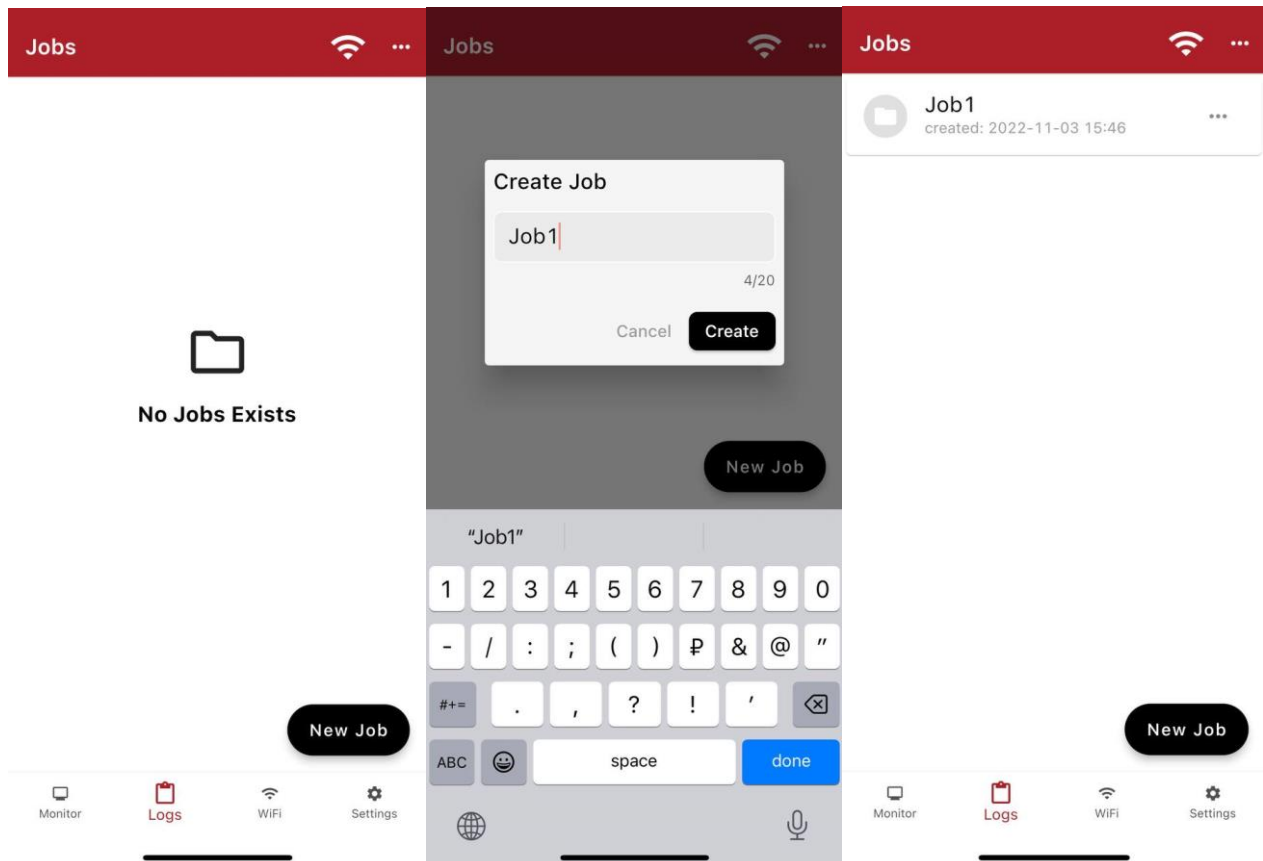


Figure 5. Creating a Job folder

To create a new pile log, navigate into the job folder by tapping its name and in the folder tap the “New Pile” button. Enter the name of the new pile log and tap “Create”. The new entry will appear in the list.

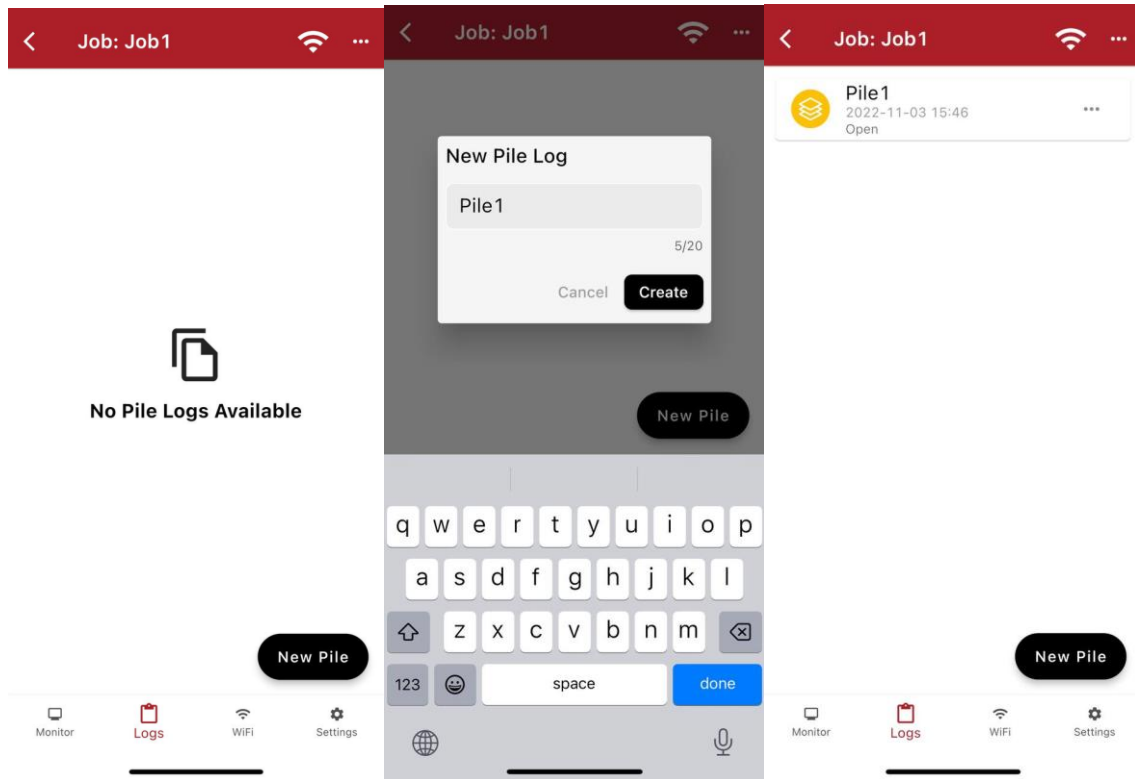



Figure 6. Creating a new pile log entry for recording

To start logging into the created pile log entry, navigate into it by tapping its name and then tap the black “Start Pile” button. Alternatively, tap the pile’s  icon and select “Start pile” in the pile’s context menu.

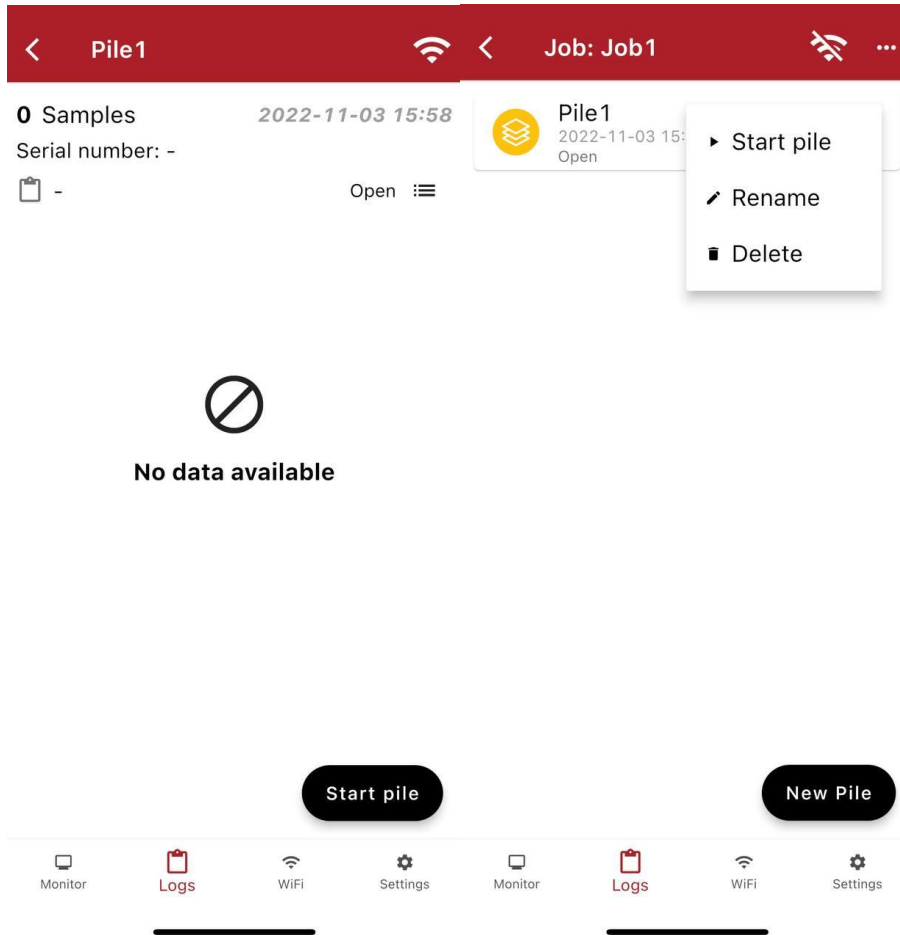


Figure 7. Starting of pile logging

You can also use buttons “Start pile” on the Monitor screen for more convenience - choose an available Job, then select an available Pile and press the “Start pile” button.

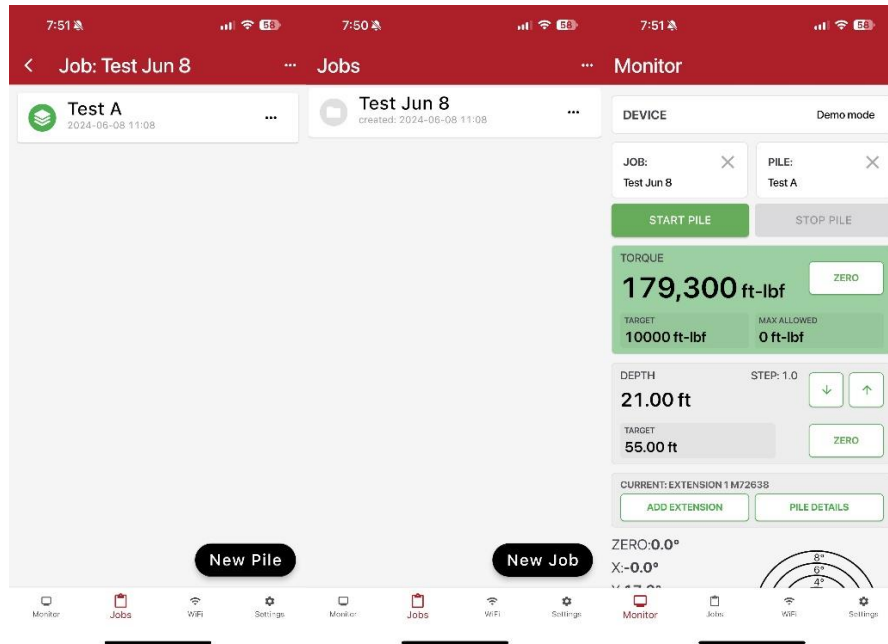


Figure 7.1. Starting of pile logging from the Main Monitor screen

When the logging starts, you can navigate to the Monitor screen which will show the job and pile name at the top. To navigate to the running pile or its job folder, tap the pile's name or the job's name.

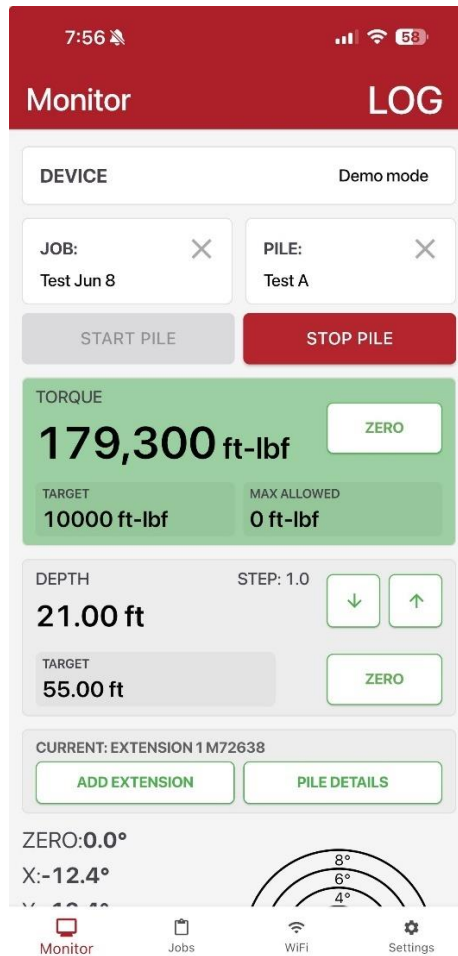


Figure 8. Monitor screen during pile logging

During logging, the icon “LOG” notification is blinking at the top of the screen.



To stop logging, press the “Stop pile” button on the pile log screen or on the pile’s context menu or on the Monitor screen.

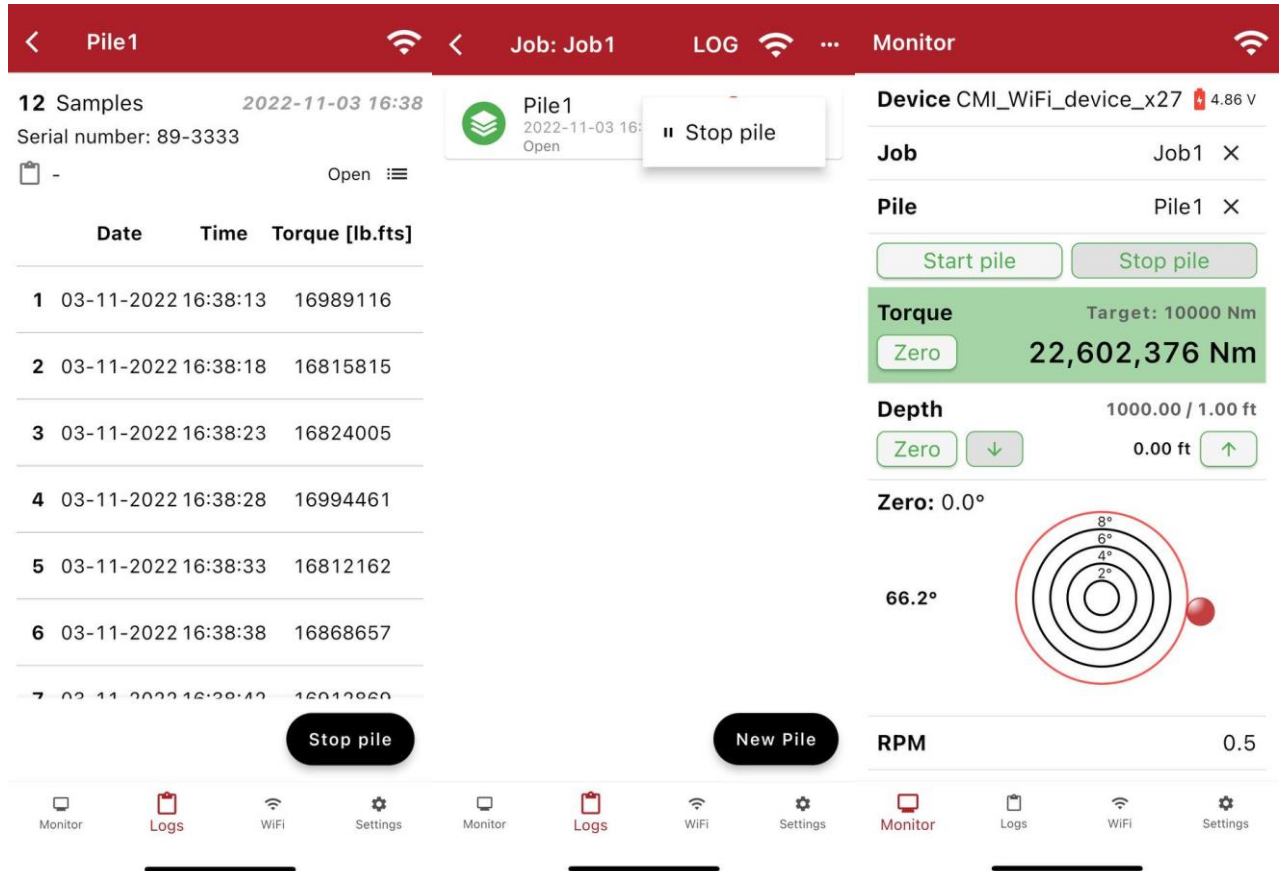





Figure 9. Stopping a pile log

When the pile log is empty, it will have the  icon before its name. When it already holds data, the icon will change to .

It is possible to continue a once stopped pile log by starting it again. The logging of data will be paused if the torque value is below the “Torque logging threshold”, adjustable in the Settings.

Each pile has a note field which is editable before, during or after pile logging. To access it, tap the  icon at the top of the pile log. Also you have an option to choose a pile status (the options are: Open, Ready for verification, Verified and Canceled (snapped pile etc.)).

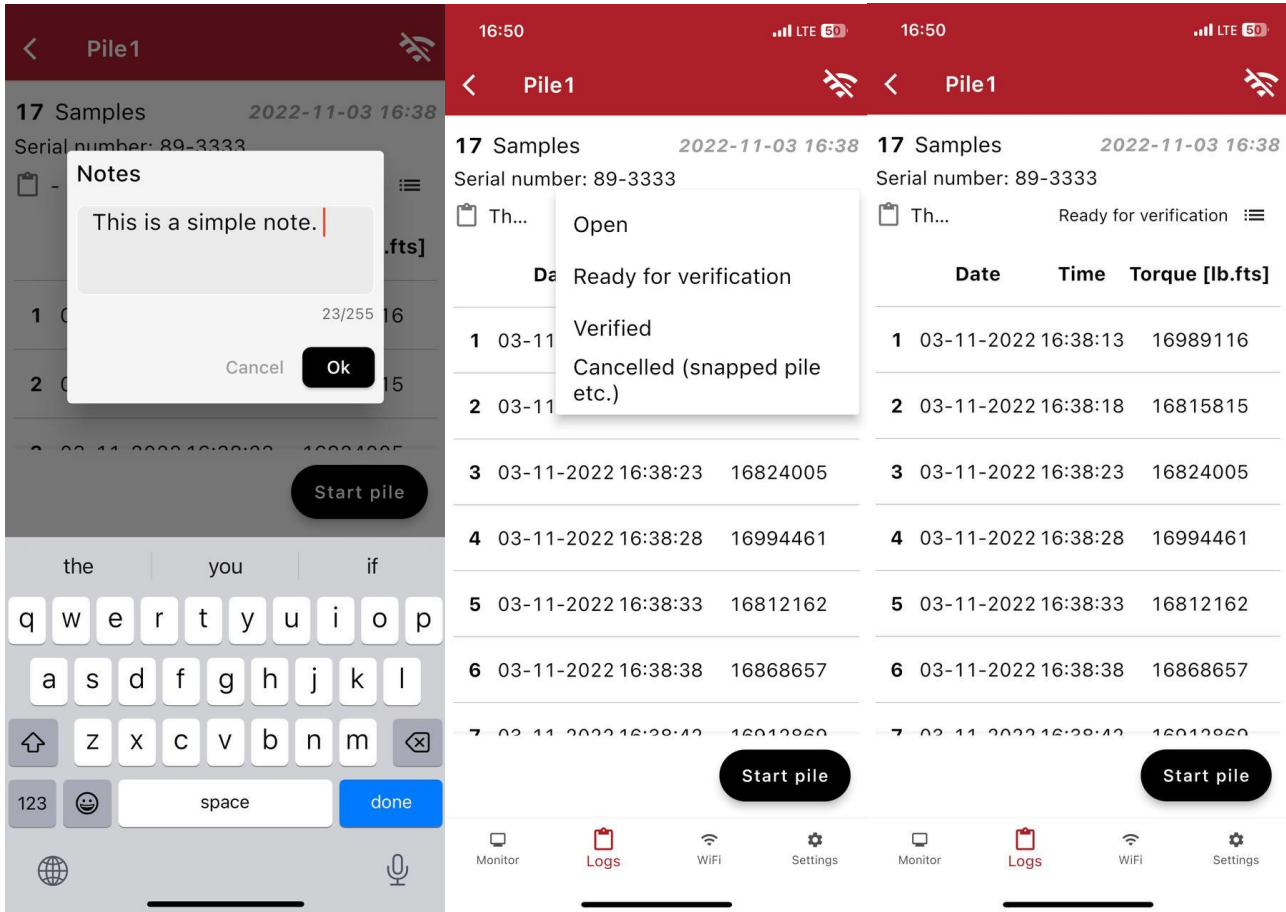



Figure 10. Adding a note to the pile log, choosing a pile status

Tapping the  icon of the job entry screen it is possible to access the context menu with the following operations:

- Rename a job
- Delete a job
- Export a complete job to CSV file
- Export a complete job to PDF file
- Send PDF and CSV report files via email
- Enter Job Details (Expanded Reporting Setting shown below- right)

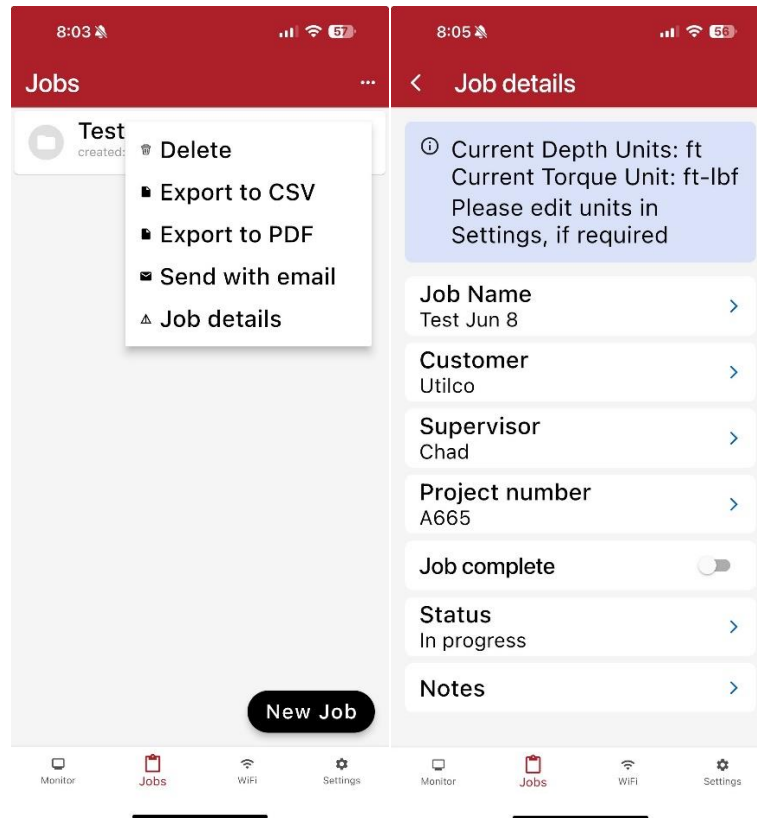


Figure 11. Operations possible with a job

The context menu of a pile log enables the user to:

- Start/Stop pile logging
- Delete a pile log
- Enter pile details

Deletion of multiple pile logs at the same time is possible by long tapping on the pile name first and then selecting the other pile logs to be deleted.

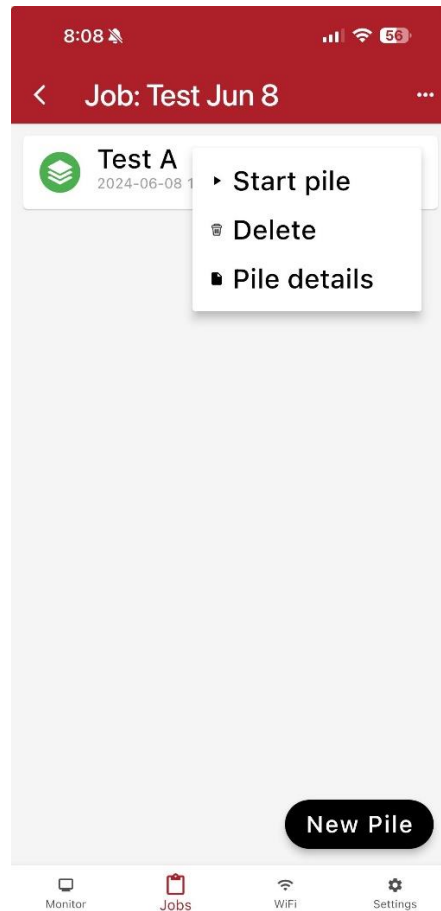


Figure 12. Operations possible with one or multiple pile log entries

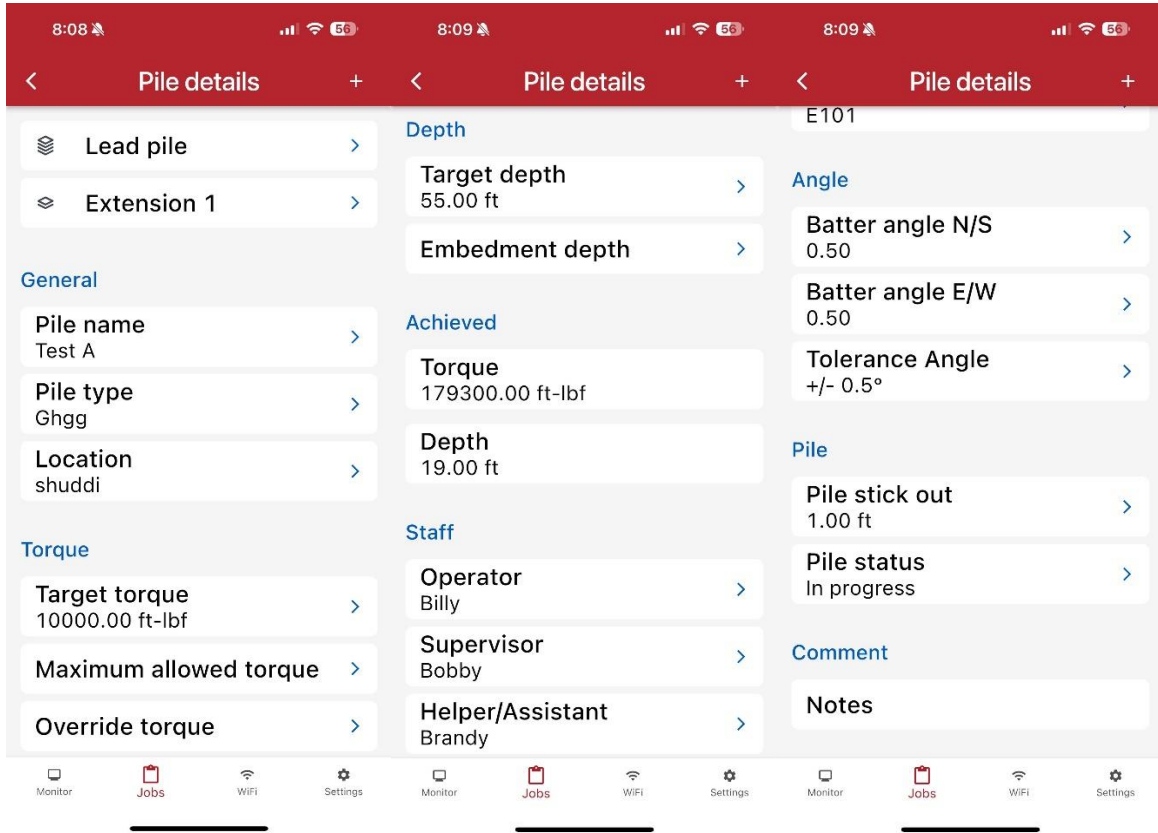



Figure 12.1 Pile Detail Data Entry

Jobs and piles can be sorted using the context menu accessible via the  icon in the top right corner. The following sorting methods are available:

- Sort by time ascending
- Sort by time descending
- Sort by name ascending
- Sort by name descending

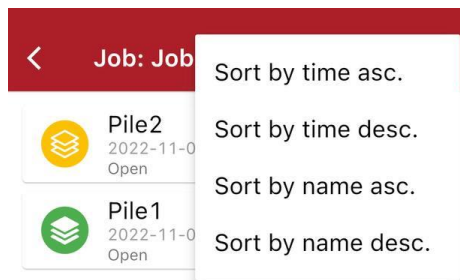


Figure 13. Operations possible with one or multiple pile log entries

## ○ **WiFi configuration screen**

On the WiFi configuration screen, the name of the connected Torq device and default Wi-Fi password can be read. See Figure 2.

The following operations can be executed:

- Go to the WiFi setting of the Android or iOS device
- Change the WiFi SSID, the visible network name of the Torq device
- Change the WiFi channel to be used by the Torq device. This is a useful feature if multiple WiFi networks are available in the area, and they may interfere with each other on the same channel.
- Change the WiFi password in the Torq device. The default password is: CMI12345
- Read the Torq device log and save it in local storage. This log file can be used in troubleshooting of a problematic Torq device.
- Read the device info from the Torq device.

The following information can be read from a Torq device:

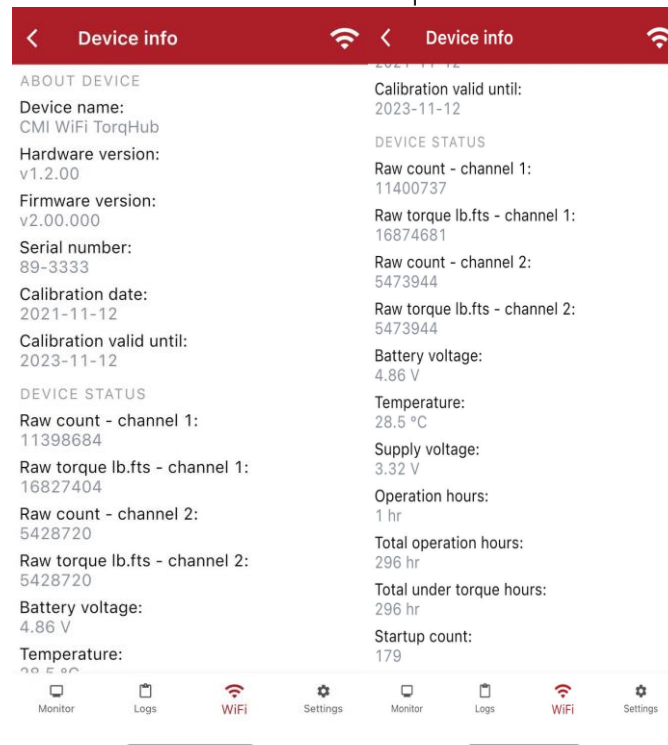
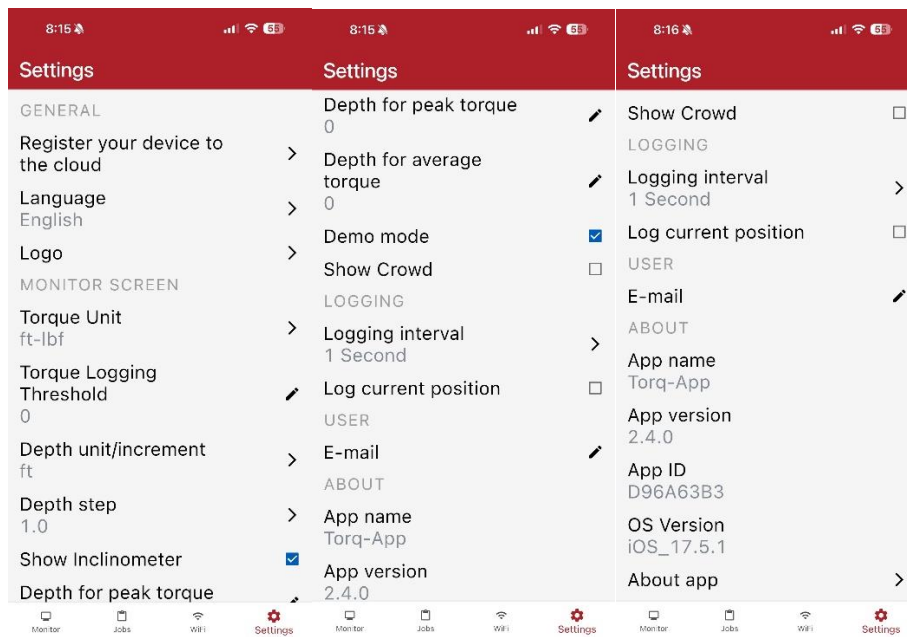


Figure 14. Device info – second screen scrolled down

## ○ *Settings screen*

On the Settings screen the followings can be set:

- Register your device to the cloud. The goal of cloud connectivity is to be able to upload pile logs to the cloud and download predefined jobs (including predefined piles) from the cloud. The app log and collected device logs could be also uploaded on demand.
- Language: the app is available in English, Portuguese, French and German. When changing the language, the app will restart.
- **Logo.** You can add a logo to the PDF report, so that you can understand that report issued by your company. Allow access to your photos and choose an image (up to 1 mb). After uploading the logo all your new reports will have a logo.



*Figure 15 – Settings Screen Options/ Information*



- **Register to Cloud**

Users can choose to connect to the CMI Cloud service to back up files, pre-populate job and pile data (ie; enter job and pile details on a PC at home base, which can be assigned to an operator – saving them considerable time in the field) and remotely download job/ pile data (ie; a user at home base can download data from a recently completed field job).

The preferred method (and required for multiple recording devices – phones/ tablets) is to download our CMI Reporting software and set up a corporate account (with one or more users selected as Administrator). See image below – enter the code issued by our Windows 10 CMI Reporting software package (available on [www.concept-cmi.com](http://www.concept-cmi.com) website).

CMI Reporting download here: <http://conceptdownloads.com/cmireporting/Publish.html>  
CMI Reporting manual here: [https://www.concept-cmi.com/download\\_file/view/c2b6243d-c003-4488-af0a-5d777182d941/227](https://www.concept-cmi.com/download_file/view/c2b6243d-c003-4488-af0a-5d777182d941/227)

For users who plan to remain “single user only” – selecting “If you do not have corporate account...” button will allow entry of an email address, which will receive a code directly (without the need for CMI Reporting).

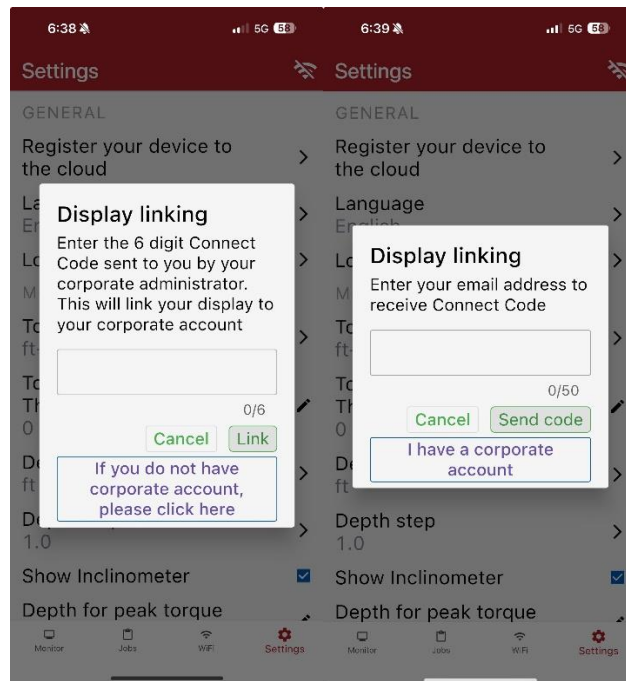


Figure 16. CMI Cloud Sync (single user option on right)

○ *Add Logo*

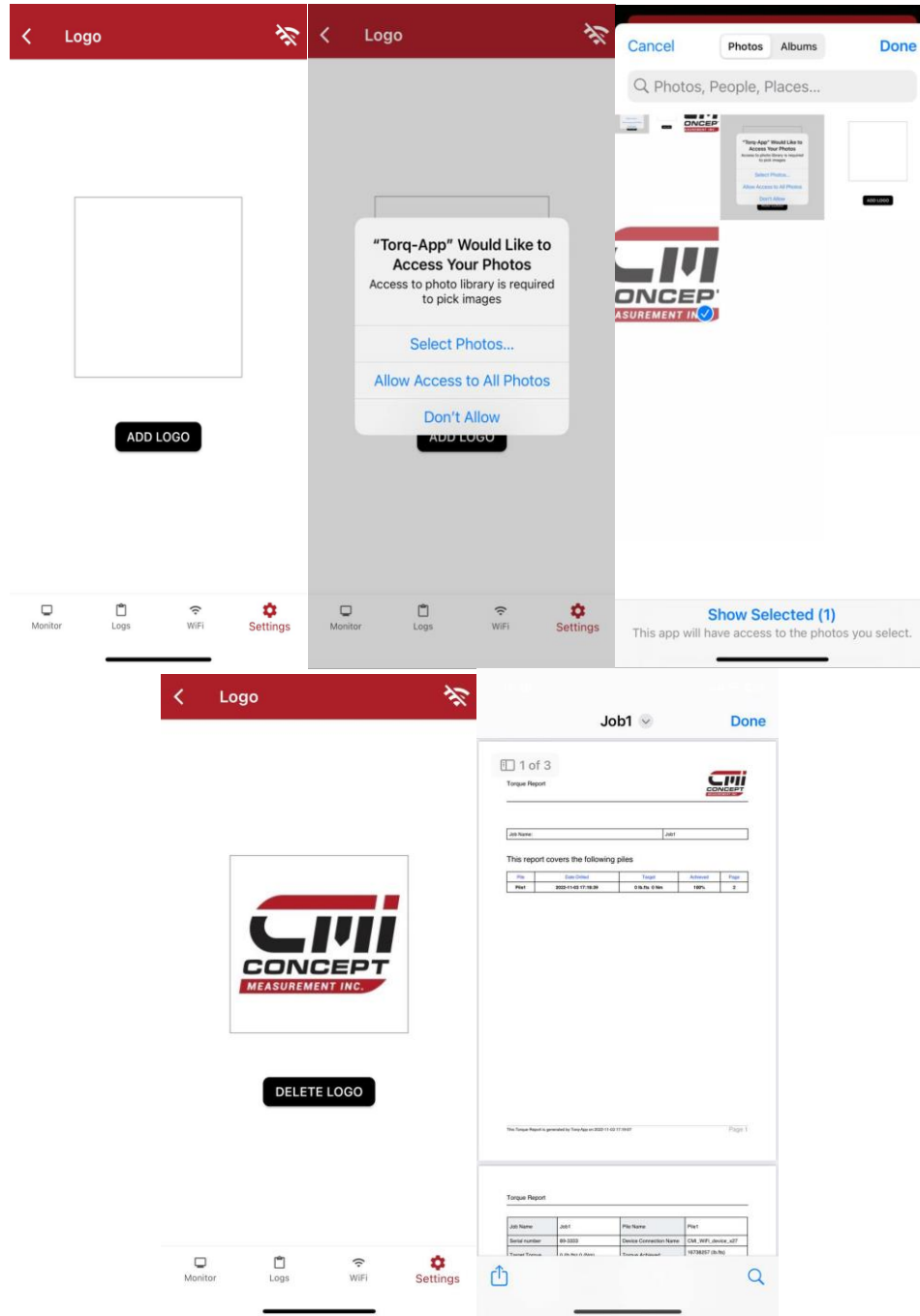


Figure 17 Adding logo

- **Setting Units**
- Torque unit: Nm and ft-lbf are the available units. Please select as required.
- **Set Torque Threshold**
- Torque logging threshold: the minimum torque value above which data will be logged into the pile logs. **\*NOTE:** If you regularly install piles at lower torque values (under 5-10,000 ft-lbf) – *please set this value to ZERO* – to maximize data points displayed on your PDF line chart. Do not confuse this with “Target Torque” (desired installation torque).
- **Depth Unit/ Increment**
- Depth unit/increment: m and ft are the available units.  
You can initiate changing of depth step by increments by pressing Depth increment option. Select the most preferable increment and increase or decrease the depth on Monitor screen only by selected increment.
- Depth step: 0.5, 1.0, 2.0 and 5.0
- **Inclinometer**
- Show inclinometer: when selected, the bullseye diagram and angle information will be shown on the Monitor screen
- **Depth – Peak Torque/ Average Torque**
- Depth for peak torque and Depth for average torque.  
If you want to set the observed depth for peak and average torque you can fill the observed depths for average and peak torque (two different fields).
- **Logging Interval**
- Logging interval: the following logging intervals are available: on depth change, 1, 5, 10 and 30 seconds. Unless you anticipate very long pile installation time span (>1 hr. per pile) – *please choose the 1 second option*, to increase the number of data points captured.

- **Log Current Position**
  - Log current position: when selected, the GPS longitude and latitude coordinates will be saved in the log file. This information will be derived from your device's (smartphone/ tablet) internal GPS. The accuracy is limited to that of your device (typically useful for only job/ project location – NOT individual pile location).
- **Default Email**
  - E-mail: a default e-mail address to be used when sending log files from your device (smartphone/ tablet).
- **About Torq App**
  - About app: The app name, app version, app ID and OS version are also listed on this screen. By navigating to the "About app" section the following information will appear:

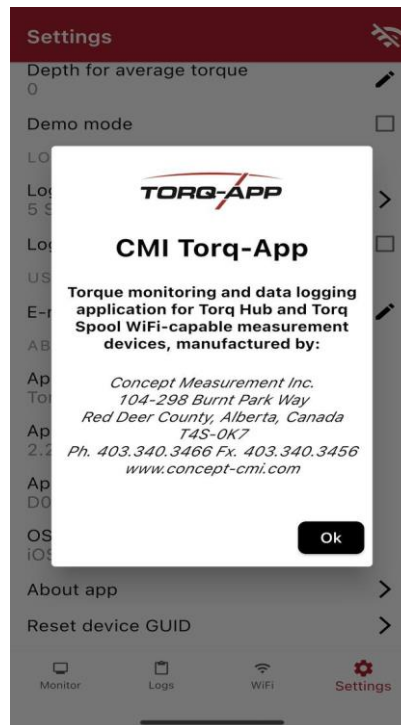


Figure 18. "About app" screen



### ○ **WARRANTY POLICY**

#### **LIMITED WARRANTY**

*CMI, warrants its products against manufacture defects, faulty design, material, and workmanship for the periods listed below. The warranty starts on the delivery date to the retail owner and is non-transferable.*

*WARRANTY PERIOD: from the delivery to the original user Torq System: 12 months on all components against manufacture defects.*

#### **WARRANTY SERVICE**

*All new CMI products are warranted to be free from defects in material and workmanship, which may cause failure under normal usage and service when used for the purpose intended. The CMI warranty covers faulty workmanship and defective parts manufactured by CMI. The warranty does not extend to transportation cost of parts, nor does it cover consequential loss. CMI equipment must be operated in accordance with the recommended procedures and within the ranges as specified in the Operating Manual.*

*Any claims under this warranty must be made within fourteen (14) days after the buyer learns of the facts upon which claim is based. All claims not made in writing and not received by CMI within the time specified above may be deemed waived. CMI will not be responsible for or accept any charges for work carried out by any repairs, or for any charges for any spare parts fitted to any CMI products without written approval from CMI. CMI'S liability on all losses and damages to buyer resulting from any cause whatsoever, including CMI negligence irrespective of whether such defects are discoverable or latent, shall in no event exceed the purchase price of the parts, with respect to which losses or damages are claimed, or, at the discretion of CMI, the repair or replacement of defective or damaged parts.*

#### **VOID WARRANTY**

*This warranty is void if field repairs or modifications have been made to the Torq system without prior written approval. The complete unit must be available for inspection in its original but alleged failed condition. This warranty does not apply to normal wear or to damage resulting from accident, abnormal use, abuse, or neglect.*



*CMI makes no other warranty. All other warranties, whether expressed or implied, such as warranties of merchantability or fitness for a particular purpose, are hereby excluded and disclaimed to the extent that they exceed the warranties expressly granted in this limited warranty. In no event shall CMI be liable for consequential or incidental damages.*

### **RETURNED GOODS POLICY**

*CMI reserves the right to determine whether products claimed to be defective shall be inspected when returned to the factory. If judged by CMI to be defective in material or workmanship, the product will be replaced, or a credit issued at the option of CMI.*

*Upon notification of defect, CMI warranty department will issue a Return Materials Authorization (RMA) number. All returns for replacement or credit MUST be accompanied by an RMA number. Products returned without an RMA number will be rejected and returned to the sender freight collect. All returns must be shipped "prepaid". Products shipped "collect" will be refused. Proof of purchase such as invoice number must accompany returns.*

*All RMA's must be returned to CMI within 7 days of the request.*



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# 104-298 Burnt Park Way  
Red Deer County, Alberta  
Canada, T4S-0K7  
Phone: (403)340.3466  
e-mail: [info@concept-cmi.com](mailto:info@concept-cmi.com)

[www.concept-cmi.com](http://www.concept-cmi.com)

*A corporate member of:*



©2024 Concept Measurement Inc.

Phone: (403)340.3466 email: [info@concept-cmi.com](mailto:info@concept-cmi.com) #104-298 Burnt Park Way, Red Deer County, Alberta, Canada T4S-0K7