User Manual

Straightpoint COLT App 4

Straightpoint COLT App
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THIS MANUAL WAS WRITTEN IN THE ENGLISH LANGUAGE AND PROFESSIONALLY TRANSLATED TO ALL OTHER LANGUAGES CONTAINED WITHIN THIS DOCUMENT.
PLEASE NOTE THAT STRAIGHTPOINT ACCEPT NO RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS.

1.0 COLT App 4 Introduction

This Android/ iOS application has been developed to use with the Clamp On Line Tensionmeter (COLT), to measure the tension in tower lines, wire ropes etc. under Bluetooth Low Energy communication standard.

The Application will accurately search, connect and display the tension value from the measuring device under specific manufacturing standards.
The COLT app is very simple, reliable and easy to use. This application can do a high-end data logging according to the mobile device's memory capacity and it will allow user to view or send the logged data via email.

Another attractive feature is the 'database update', the COLT app currently supports around 150+ wire ropes and Straightpoint will add more wire ropes to the library. The user will be able to update their database with just one click and get all the wire rope details free of charge.

2.0 Downloading and Installing the App

For full instructions on the COLT App, please download the app from Play Store /iOS App Store, using the QR codes below and then see the help section.

Note: The app will work from Android 7.0 version onwards, and the application is suitable to work with almost all manufacturer's mobiles with a 4" display size or above, except some Samsung models; this is due to manufacturer's defect with BLE connectivity.

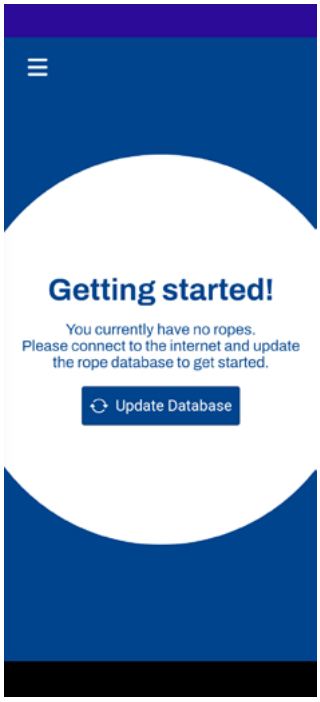
With Apple devices, the app will work from iOS version 14 upwards, and is suitable to work with iPhone 6s upwards.

3.0 Description

1. After the installation, the app will open via a splash screen and then ask for a T&C agreement, followed by another screen to download an updated rope database.
2. After the installation, the app will open via a splash screen and then ask for a T&C agreement, followed by another screen to download an updated rope database.
3. The user can switch language or change the display size if you wish from the menu.

1.

2.



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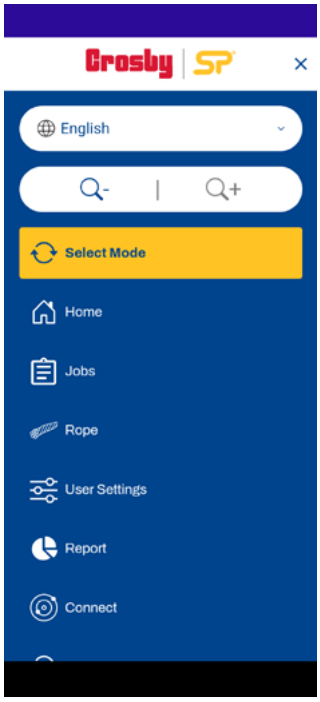


After downloading an updated rope database, the user will directed to the connection screen.

The user can connect to a simulator or scan for a physical device.
The app will prompt for location permissions and to switch on Bluetooth if required.

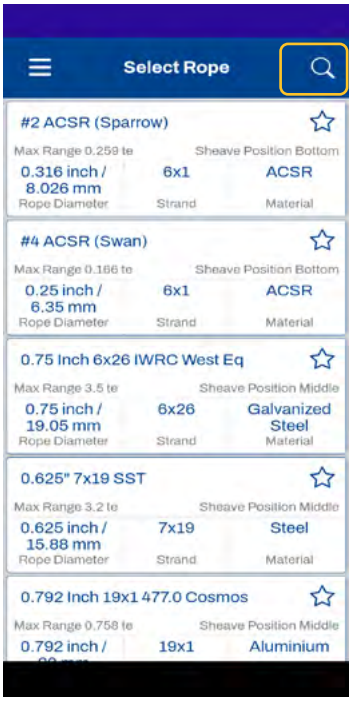
The user can the identify the names of the devices by finding the serial number engraved on the COLT.

The user can the identify the names of the devices by finding the serial number engraved on the COLT.

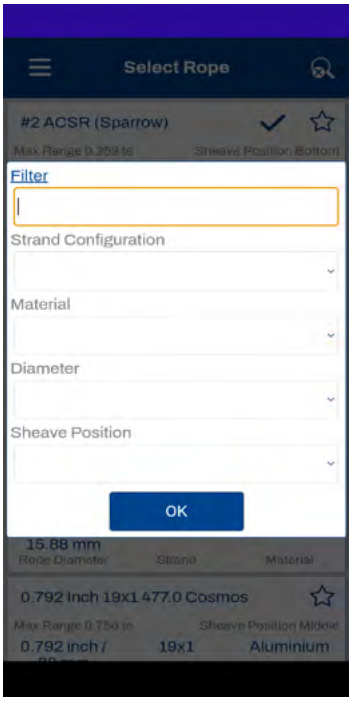
Once the user is connected to the device for the first time, you will be taken to the rope display to select a rope.

The user will get 150 plus ropes in the application database.

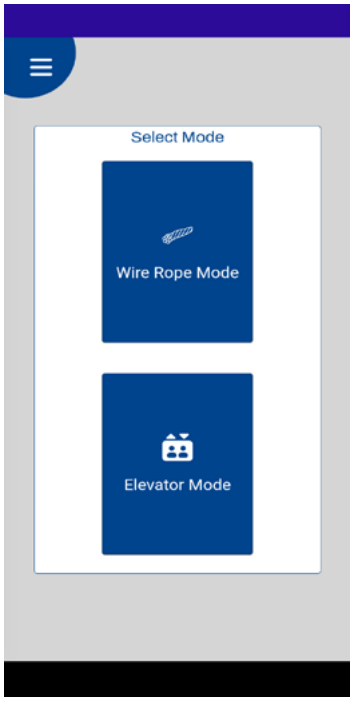
A search is available through the icon on the top right.



The user may filter by entering text into the filter or by selecting an option in any of the drop downs. If a filter is applied, hitting the icon in the top right will clear the filter.



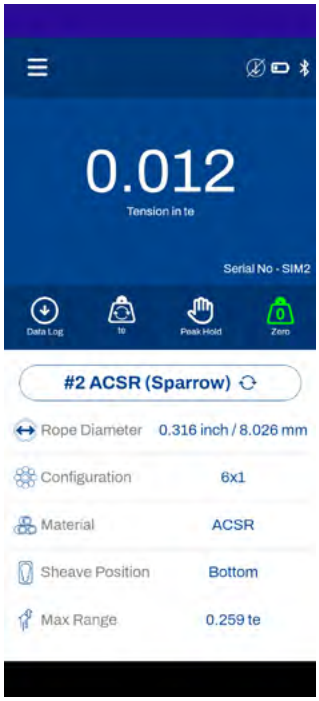
After the user has selected a rope, a screen to select which mode they wish to use will be shown.

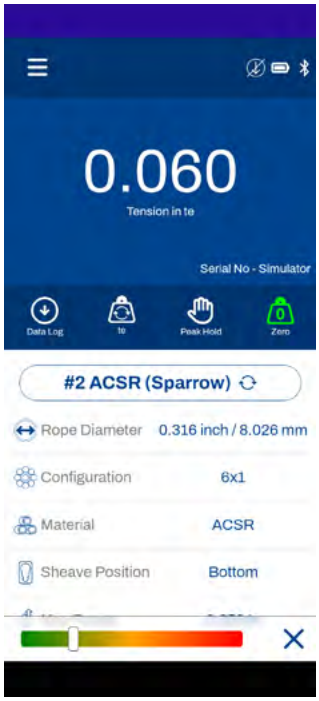


3.1 Home Screen

The Home screen is where the user can see the tension reading from the COLT device.

From the Home screen the user can access various options like unit change, Data logging, Set Zero and Peak hold. User can also see the selected wire rope details such as rope diameter, configuration, current sheave position of the COLT device, maximum calibration range of the selected rope and wire rope colour. The user will also get an indication of battery level in the COLT device, Bluetooth connection, overload condition, and type of selected data log from the top right corner of the screen.





If a simulator is connected a slider down the bottom is displayed allowing you to mimic changing the tension. It can be closed if it is overlapping part of the display you are trying to access.

Data Log: A user can start the data logging through this tab.
Press this tab and enter the required 'Job Details' including latitude, longitude, temperature, windspeed, wind direction etc and select the required Datalog type from the same screen. The method of data logging will be different according the type of Datalog selected. The selected Datalog type can be found from the top right corner of the home screen.

Unit: From this tab the user will get provision to change the default load unit to other different units.
The available units in the drop-down list will be kg, te, lbs, kN. This will not be a permanent unit change.
Peak Hold: Using this tab selection, the user can hold the peak load value in the home screen. Press the tab again to release the peak hold value.

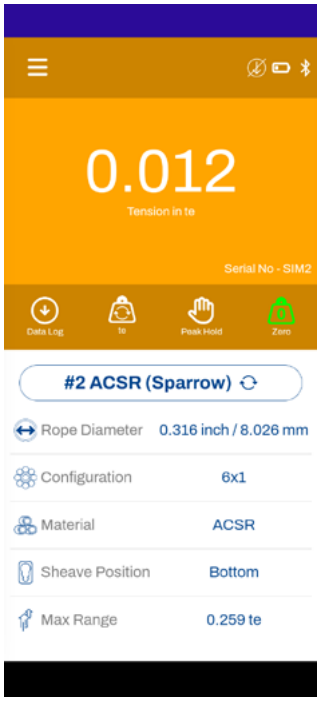
Zero: Using this tab, the user can zero the present load value.
For each rope there will be a zero shift because this zeroing is common for all the wire ropes, so each time before measuring the rope tension, the user should make sure that the home screen display is zero.

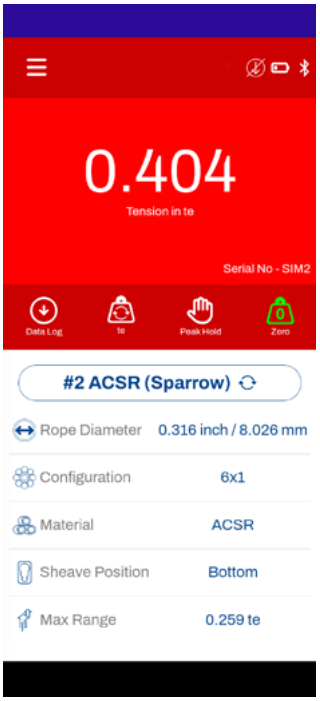
Alarm: Home screen will give the overload and under load alarm

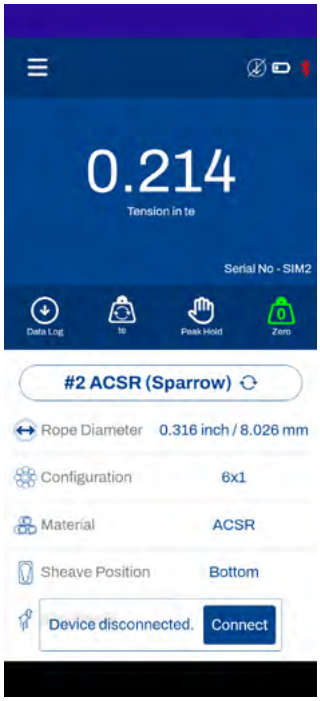
Both visual and audio according to the user setting threshold. The alarm can be turned off by tapping the screen or by bringing the load value into the alarm limit.

The user can disable the alarm functionality from user settings. It will show an orange visual for the low alarm and red for high alarm.

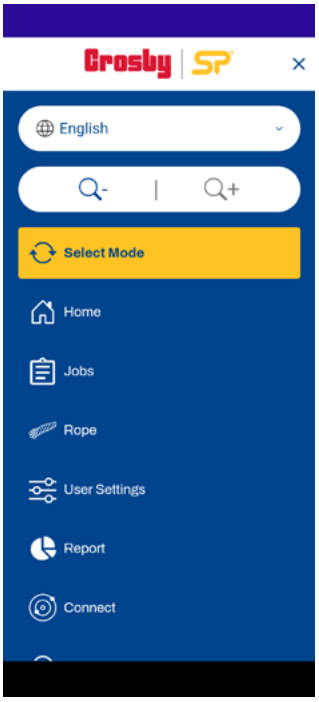
Note: Once the COLT device is disconnected from the application, or the mobile device is disconnected from the COLT, the home screen will give a pop-up informing about the device disconnection. The user can reconnect through the connect button in the pop-up.







3.2 Mode Selection



There are two modes available in the COLT App:
1. Wire Rope Mode
2. Elevator Mode
The Mode Selection is possible via the menu. The current running mode is determined from the name showing on the yellow background under the menu. Pressing the mode button will give user the opportunity to change the mode.

1. Wire Rope Mode

A standard mode for the user to select wire rope and perform normal data logging processes.

2. Elevator Mode

User can perform elevator car weighing and elevator car balancing data logging.

3.2.1 Wire Rope Mode

Once the user has selected this mode, the app will reconnect to your last connected device or take the user to the connection screen to search for the Bluetooth devices nearby. The user can then connect to the required device by pressing the 'Connect' button (users will need to allow all the required permissions for the perfect working of the app).

Once connected to the device, the user will be redirected to the home screen.

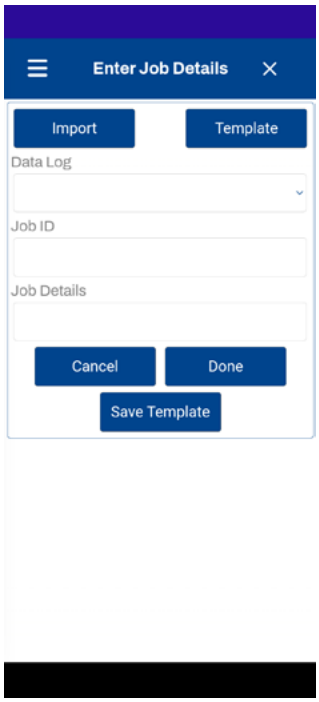
Datalog:

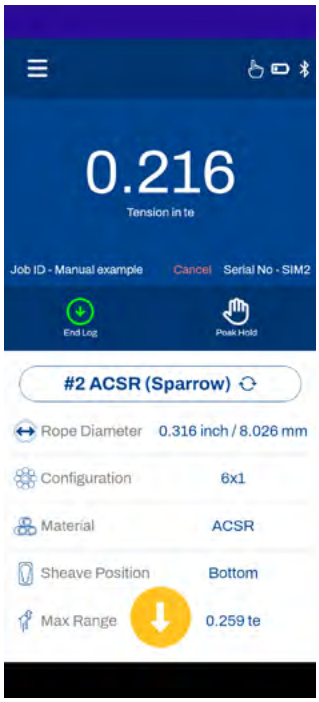
There are various types of datalogging available under this mode, they are:

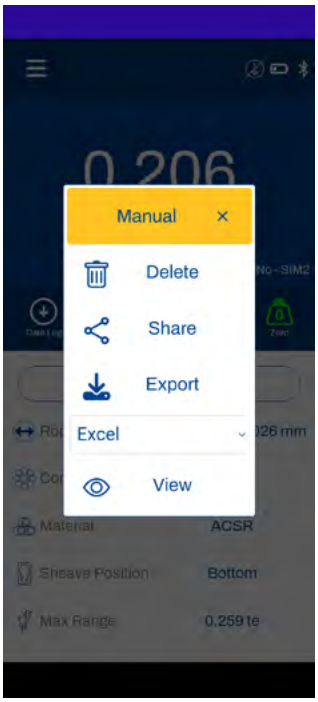
- Manual
- Timed
- Multi Anchor
- Custom
- Overload
- Average
- Multi Wire

- **If the selected datalog type is ‘Manual’, the home screen symbol will be**

After entering the job details, the user should press the ‘REC’ button whenever they need to log the data in to the log file – this is a manual on-demand process. After the full data entry, press the ‘End log’ for saving the logged data file and the screen will give a pop-up options to view, share or delete the logged file.







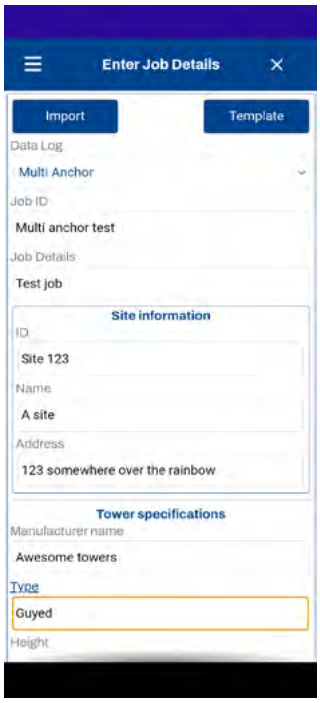
- **If the data log type is ‘Timed’, the home screen symbol will be**

In this mode, after entering the job details press the play button available on home screen to start the datalogging process then the data will be logged automatically according to the time set in user settings. After the full data entry, press stop button to stop/save the logged data file then the screen will give options to view, share or delete the logged file.

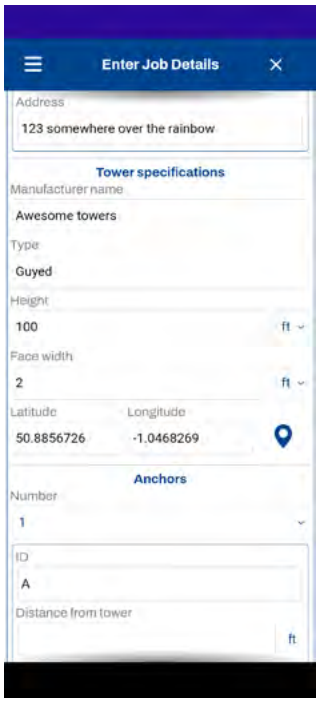
- **If the data log type is ‘Multi Anchor’, the home screen symbol will be**

The multi anchor option lets the user set a number of details associated with towers. The user can add site, tower, number of anchors and number wire levels specifications.
Multi anchor is available in normal or inspection. The normal option records the tension before and after for each entry while inspection only records the tension once per entry.

Site specifications:

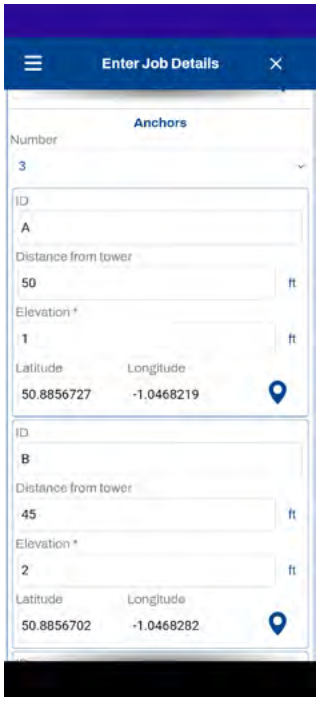


Tower specifications:



The height and width measurement unit here will also determine the units used in the other sections.

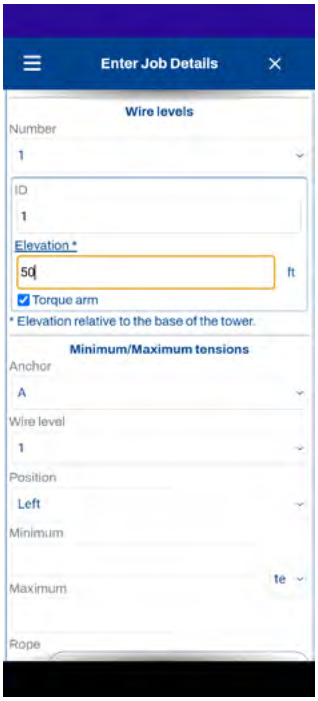
Specify the number of anchors:



An ID must be provided for each anchor. The other fields can also be amended from the logging screen if they are not entered here.

Elevation is measured relative to the base of the tower.

Specify the number of wire levels:



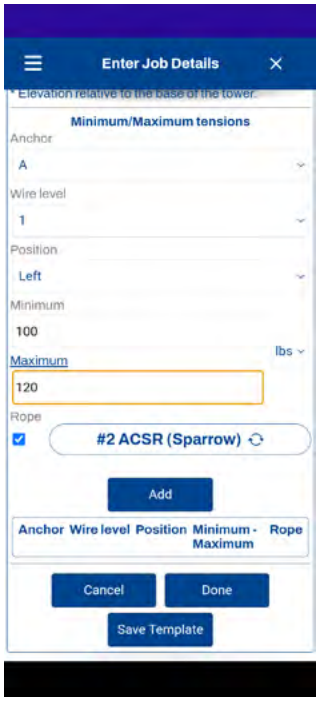
There is a “Torque arm” tick box which will allow the user to specify that a torque arm has been used at that level.

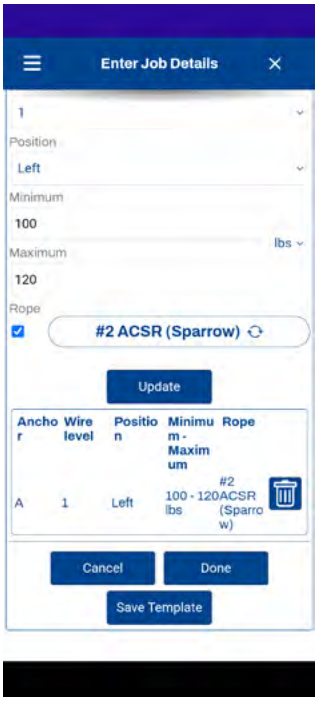
This will allow the user to specify left, right or centre positions.

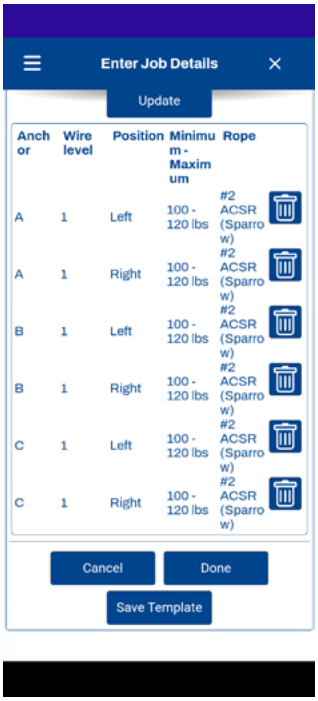
Please make sure that this is correct as check and unchecking this box will remove entries from the minimum/maximum tensions section.

The minimum and maximum tensions box will allow the user to prepopulate information about each anchor and corresponding wire level:

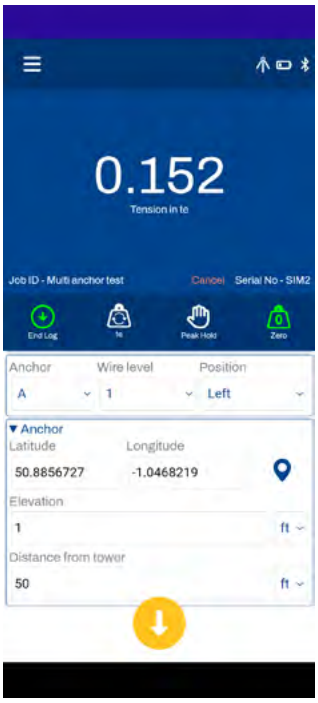
Optional:The user may do so if they intend to save the entered information as a template for repeated use. If the user has the rope option ticked, the rope displayed will automatically be switched to that rope when logging. Tapping the rope name will allow the user to select a different rope. Hit add/update to set the information for the displayed anchor and wire level. This will show the recorded information.
The trash can buttons next to each entry will remove the details:



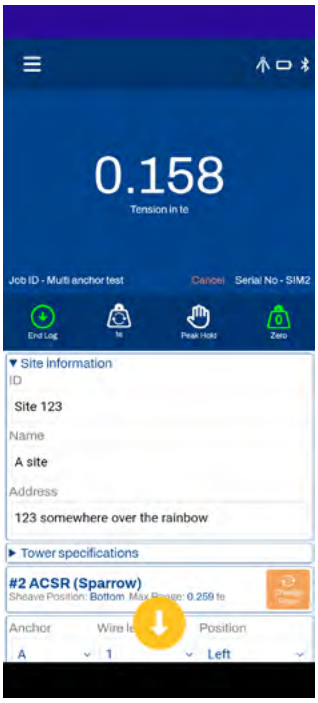


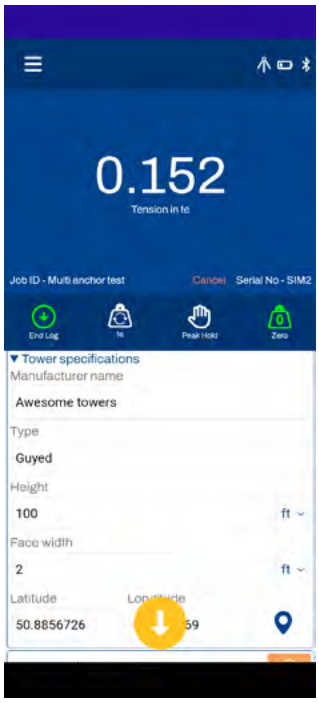


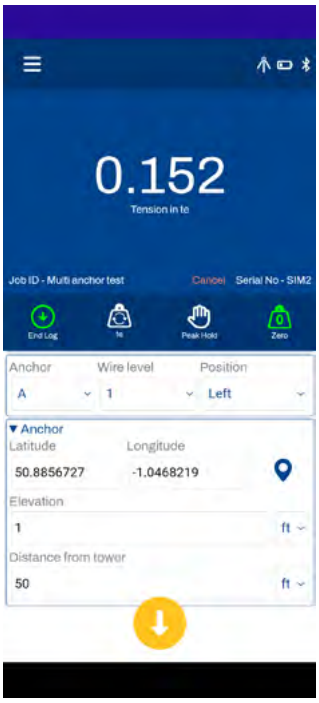
Next the user will be taken to the logging screen:



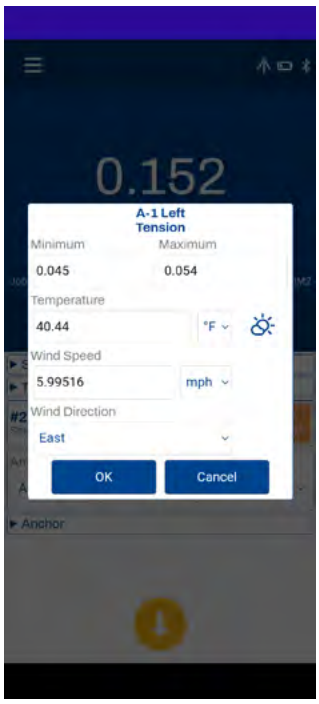
The site information, tower specifications and currently selected anchor sections can be expanded if the user needs to update the data:







Hitting the log button will pop up the additional details for the entry and record the those details.
The weather icon will pull the weather from a weather service over the internet.
This also will fill in the current anchor position using the user location, if it is not already populated:



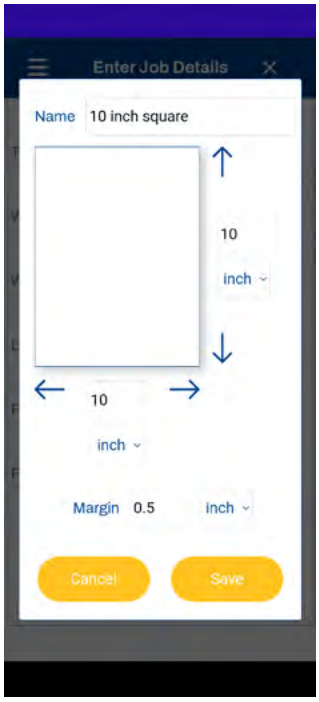
Each entry will have a before and after. Each time the user logs against an existing entry they will be asked if they wish to record log as before or after.

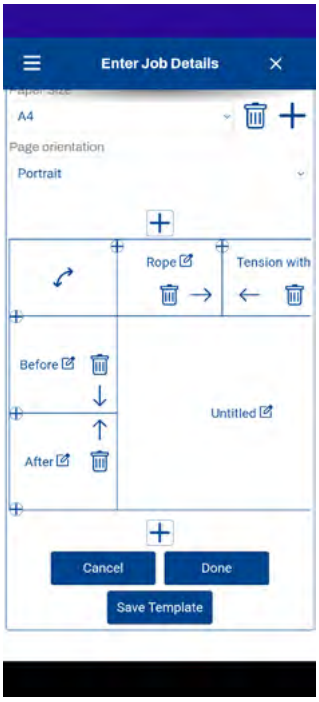
Each entry has a camera button to take photos against that entry. The user can have multiple images:

- **If the datalog type is ‘Custom’, the home screen symbol will be**

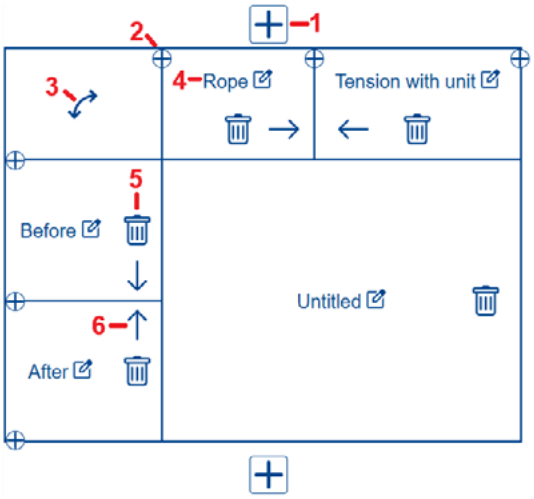
Custom allows the user to set up a custom report which can take multiple readings.

First select a paper size and orientation. The user can add or remove them using the symbols next to the paper size. Adding will display the following where you can enter your own measurements:



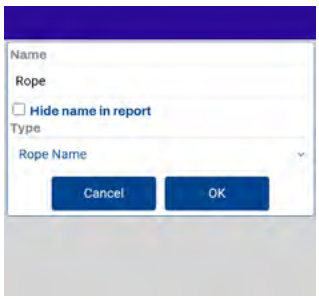


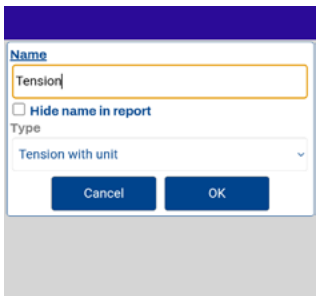
The user will see this section of a report which they can customize:



1. The large square add button will allow you to add another section before or after the current section.
2. The small round add buttons will add a heading or record to your custom report at the row or column indicated.
3. The curved arrow will let you swap the location of headings and records.
4. The name of the section, heading or record can be tapped to bring up more options. These include renaming, hiding the name when the report is generated or the type of data a heading can contain.
5. The trash can will delete the section, heading or record.
6. The arrows will let you move a section, record or header.

Headers will control what the user will be prompted for after each record if any:

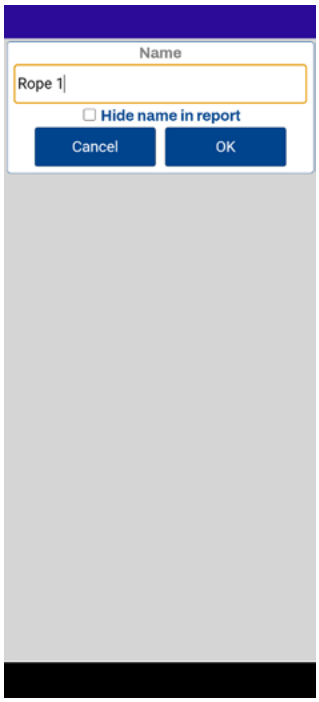




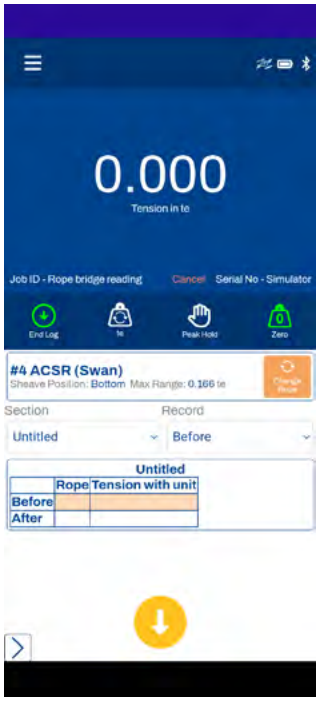
The following header types are available:

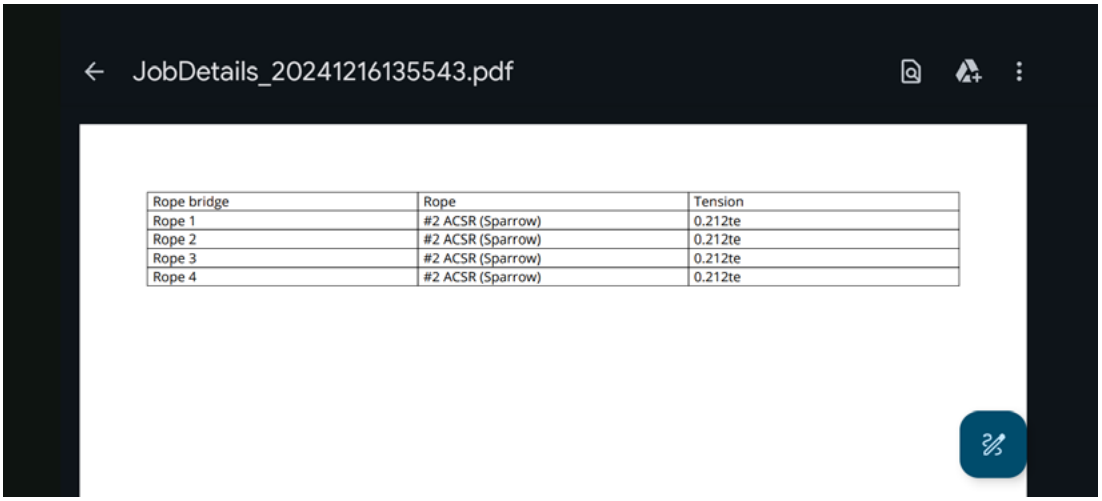
- **Date:** The date the reading was recorded. The user will not be prompted. It is recorded automatically.
- **End temperature:** The end temperature. The user will be prompted at the end.
- **End windspeed:** The end windspeed. The user will be prompted at the end.
- **Is overloaded:** Was the overloaded warning present when the reading was made. The user will not be prompted. It is recorded automatically.
- **Job details:** The job details entered.
- **Job end date:** The date when the job ended. The user will not be prompted. It is recorded automatically.
- **Job end time:** The time when the job ended. The user will not be prompted. It is recorded automatically.
- **Job ID:** The job ID. The user will not be prompted during the reading as this is taken from the details entered into the job.
- **Job start date:** The date when the job started. The user will not be prompted. It is recorded automatically.
- **Job start time:** The time when the job started. The user will not be prompted. It is recorded automatically.
- **Latitude:** The latitude entered. The user will not be prompted during the reading as this is taken from the details entered into the job.
- **Longitude:** The longitude entered. The user will not be prompted during the reading as this is taken from the details entered into the job.
- **Material:** This will be recorded from the rope the user has selected at the time the record made.
- **Multiple choice:** The user will be prompted from predefined responses entered into the job details.
- **Prefilled text:** Text which will be entered automatically.
- **Rope diameter:** This will be recorded from the rope the user has selected at the time the record made.
- **Rope name:** This will be recorded from the rope the user has selected at the time the record made.
- **Serial no:** The serial number of the COLT.
- **Strand configuration:** This will be recorded from the rope the user has selected at the time the record made.
- **Temperature:** This will be recorded from the temperature entered at the start of the job.
- **Tension:** This will be recorded from the rope the user has selected at the time the record made.
- **Tension with unit:** This will be recorded from the rope the user has selected at the time the record made.
- **Text:** The user will be prompted for text to be recorded.
- **Time:** The reading was made.
- **Unit:** Will be taken from the unit when the recording is made.
- **Wind direction:** The wind direction from the start of the job.
- **Wind speed:** The wind speed from the start of the job.

We recommend you put in a name for anything that will be displayed to the user.
The user must also put in some records for what they want recorded.



During the logging process, the user will see drop downs for the sections and records of your report:





The section the user is editing will be brought to the top, and the record they are editing will be highlighted for better visibility.

- **If the datalog type is 'Overload', the home screen symbol will be**

After entering the job details, the home screen will provide a start button to start the datalog, whenever the load value goes beyond the overload threshold limit set in the alarm high user settings, the overloaded load value will be logged automatically. Press the stop button to save the logged data file and then the screen will give options to view, share or delete the logged file.

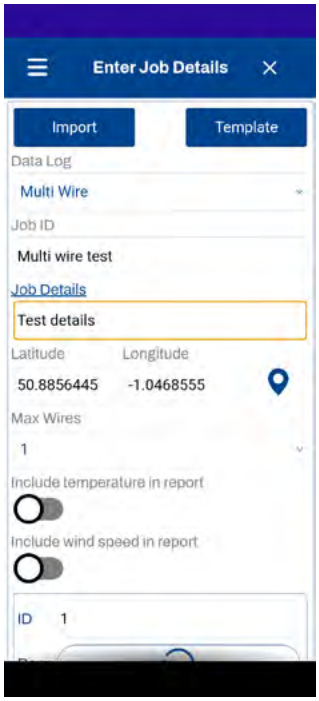
- **If the datalog type is 'Average' the home screen symbol will be**

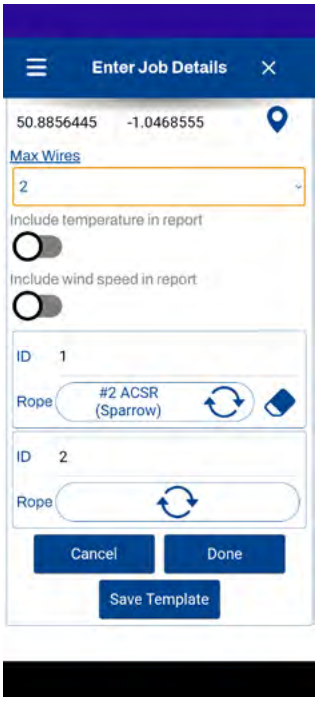
After entering the job details user should press the 'REC' button whenever user needs to log the data in to the log file – this is a manual on demand process. After the full data entry, press the 'End log' to save or view the average of the logged data and the screen will provide pop-up options to view, share or delete the logged file.

Note: All the data logged files will be available in the 'Report', from this, the user can view and share the files in CSV/Excel/ PDF format.

- **If the datalog type is 'Multi Wire' the home screen symbol will be**

Multi Wire will allow you to take the tension for a number of wires:





The user can include the temperature or wind speed in their report, by toggling the switches.

Each wire can be given a different ID.

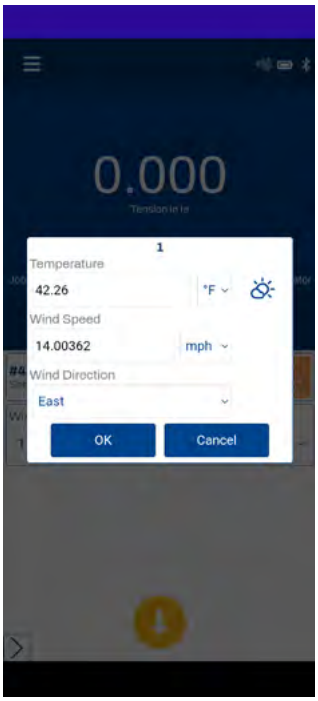
The user can also select the rope they will be using with the wire if they wish to save the details as a template for later use and have the rope switch automatically while logging.

If they wish to remove the rope, tap the eraser icon next to the rope name.

During logging the user can take photos by tapping the camera icon

The user can have multiple photos.

When the user logs an entry, if they have selected any of the weather options selection they will see a prompt:



Tapping the weather icon will attempt to retrieve the current weather information from a weather service on the internet.

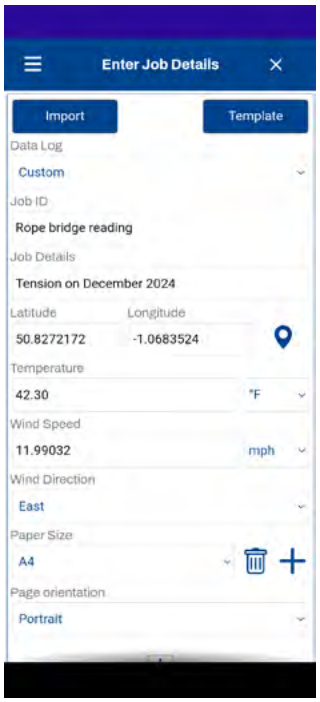
3.2.2 Elevator Mode

Elevator mode is used to weigh and balance elevator car based on elevator car weight.
In the balancing job, the user can select the required number of wire ropes, and based on the selection, they can see the load on each wire rope, also based on the slider graph, the user can easily adjust the load on the wire rope.

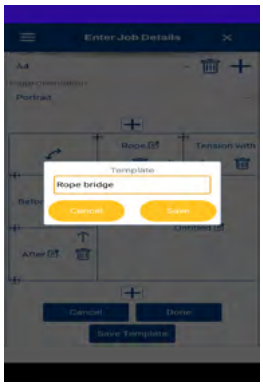
Datalog job can be selected by selecting the ‘Job’ option in the home screen, this action will open a screen where user can enter the job details also can select the required job. There are 2 job selections available in Elevator mode.

3.2.3 Datalog Templates

When starting a datalog job, you will see a ”Template” button in the top right corner, and a ”Save Template” at the bottom. These will allow you to set up a template for re-use later.
First fill in as much detail that will be used for the template.



Next tap the ”Save Template” button which will prompt you to give the template a name.



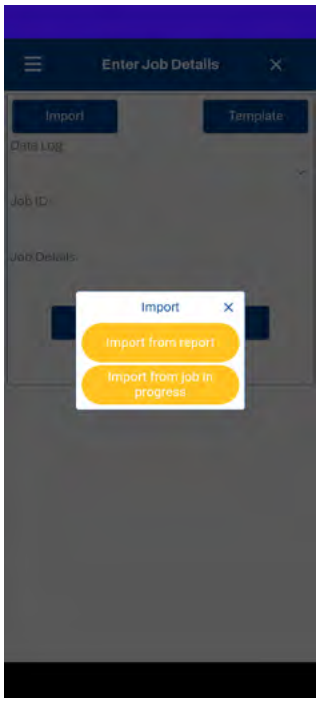
The template is now saved.

The next time the user wishes to use the same text tap the ”Template” button.

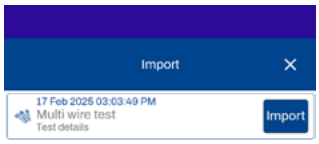
- Tap the apply button and any details the user has filled into the template previously will be copied into the job details form.
- There are also other options under this menu. These are Delete, Import, Export, Share and Close.
- Deleted will delete the currently selected template.
- Import will allow the user to import a previously exported template.
- Export will create a zip file of the template which can be saved to the users phone to be backed up or imported at a later date.
- Share will create a zip file and share the templated through another app on the users phone e.g. Email.
- Close will close the template menu.

3.2.4 Importing From A Previous Job/Report

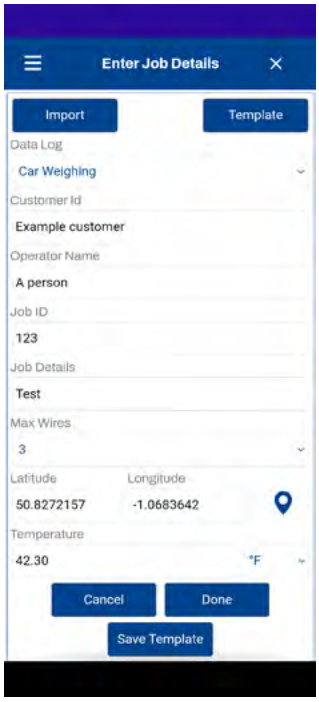
If you have created a report before, and you wish to use the same details, you can import from the report. Tap the Import button at the top of the Enter Job Details screen, and you will see 2 buttons. One to Import from a report you have completed, and one to import from a job in progress:



After selecting either option the user will be presented with any reports that they can import from:



Tapping the job / report will show you the report so you can check it is the correct details you are importing. Once you are happy, close the report and tap the Import button to copy those details.



Car Weighing:

Before selecting the Datalog mode, the correct wire rope must be selected from the 'Rope' option.
The user should also turn the tare off and make the load value zero.

Once the user is on the ‘Enter Job Details’ screen, they need to enter all the required job details and select the Datalog type as ‘Car Weighing’.

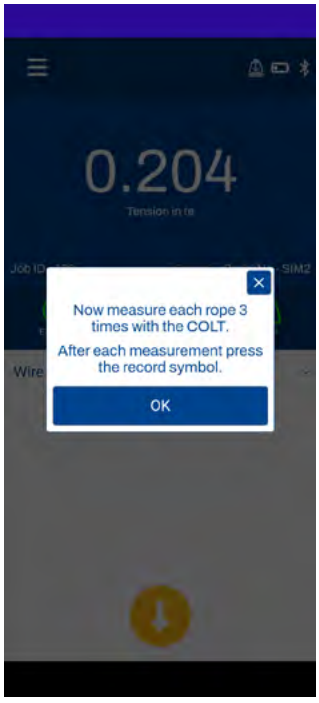
Press ‘Start/Save’; a pop-up instruction will appear asking for three sets of readings to be taken for each wire rope, please confirm the pop-up and then use the record button to record the reading.

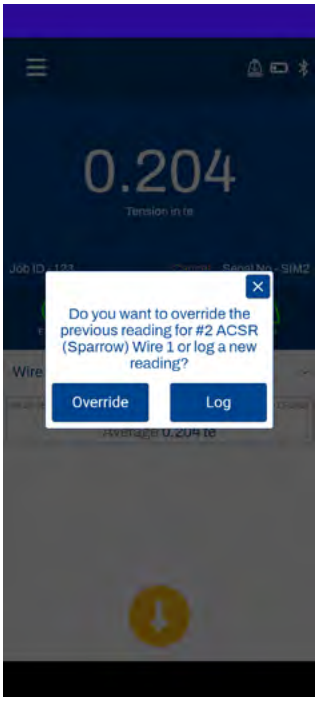
This pop-up appears asking for three sets of readings to be recorded.

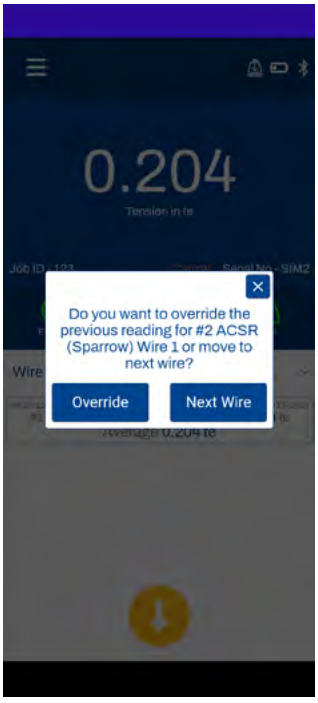
After three sets of readings have been taken for all wire ropes, a pop-up message appears to confirm ‘End Weighing’, once pressed, the app will display the total weight data via another pop-up.

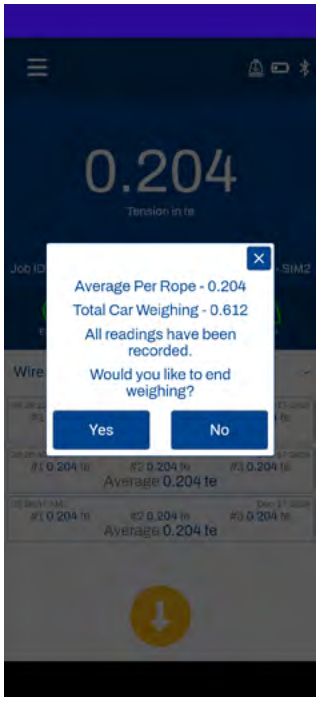
- Select next wire or override last reading.
- Select ‘Log’ to record new reading or select override to override the last reading.
- Select ‘Car Weighing’ Fill in the job details and press Save.

After three sets of readings have been taken for all wire ropes, a pop-up message appears to confirm ‘End Weighing’, once pressed, the app will display the total weight data via another pop-up.



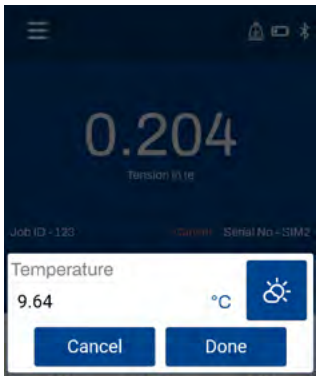


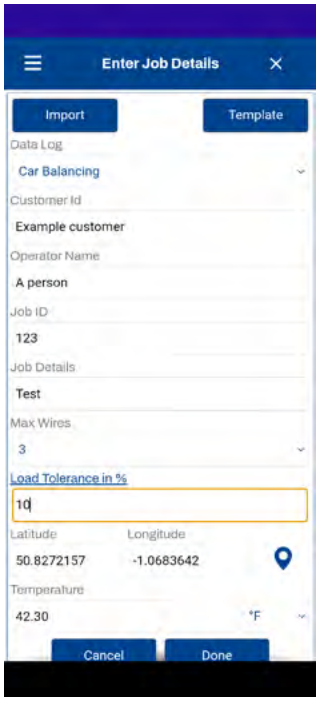




When confirmed, the user will be prompted for the final temperature reading.

Once the user has submitted the user has the option to view, send or delete the log; the popup will also give the user an opportunity to start a new Datalog job.





Car Balancing:

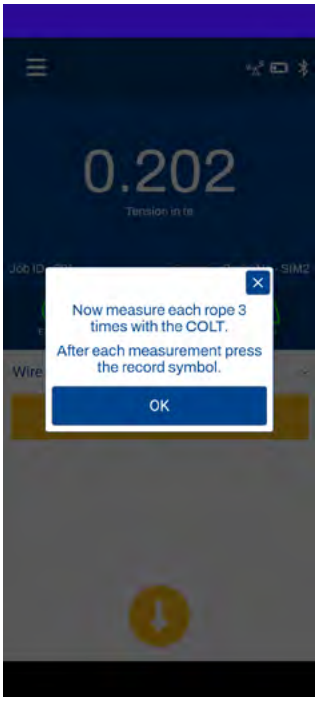
Before selecting the Datalog mode, the correct wire rope must be selected from the 'Rope' option.

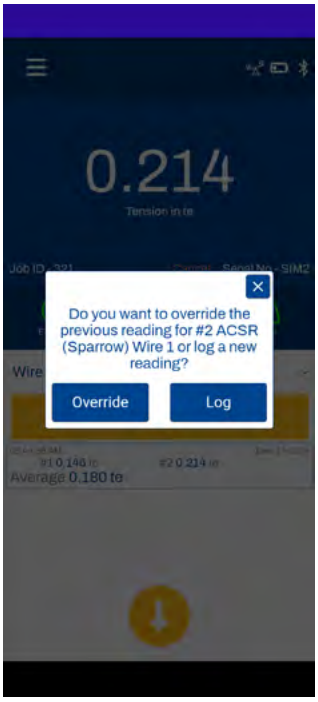
The user should also turn the tare off and make the load value zero.

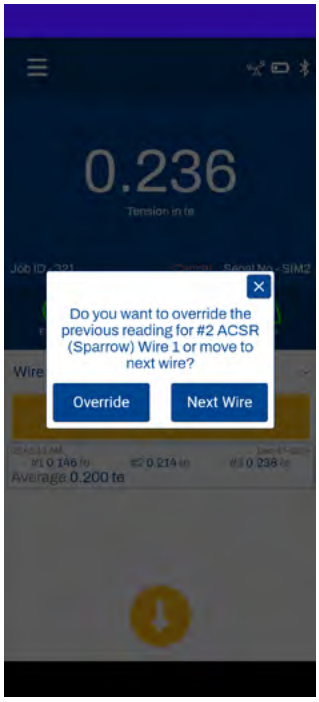
Once the user is on the ‘Enter Job Details’ screen, they need to enter all the required job details and select the Datalog type as ‘Car Weighing’, then press ‘Start/Save’; a pop-up instruction will appear asking for three sets of readings to be taken for each wire rope, please confirm the pop-up and then use the record button to record the reading.

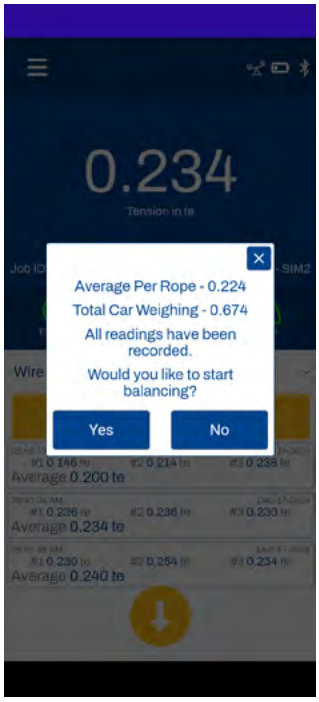
Fill in the job details and press Save.

Select ‘Car Balancing’ This pop-up appears asking for three sets of readings to be recorded.



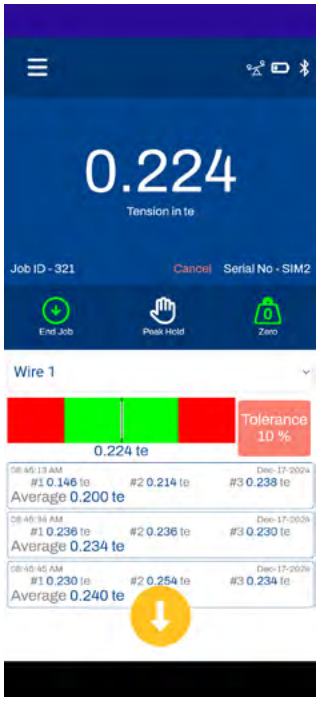


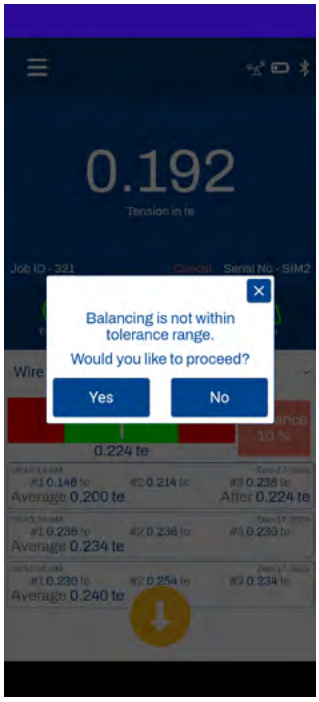




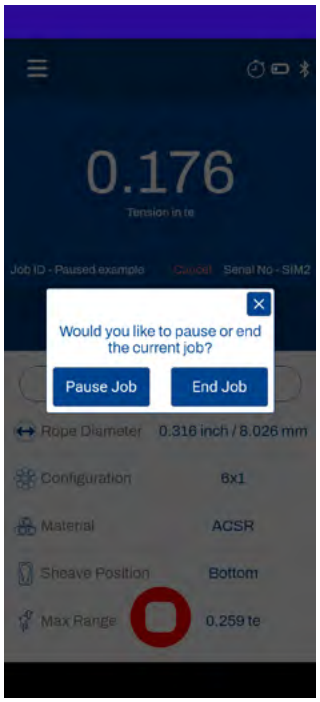
The user will see a slider graph and tolerance setting option on the home screen.

Same as before:
Select next wire or override last reading.
Same as before:
Log or Override reading.
Pop-up appears asking to proceed to balancing.
Screen showing slider graph and tolerance setting.
Pop-up appears asking to
go to next wire or override.
Balancing slider graph: Select the wire ropes again for balancing, using the slider graph with RED and green bands.





The required target value shown under the graph will give the user the recommended required target.
The rope can be balanced by keeping the value within the green band, and logging the reading once it is within the green band.
The new balanced value will save as an 'After' reading.
Once logged, move to the next rope or override the last one.
Select ‘Report’ from the menu to display saved reports.
When the reading is outside the green band, the following pop-up will appear, asking if you want to proceed.
Once all the readings are taken, you have an option to end balancing or override the last reading.

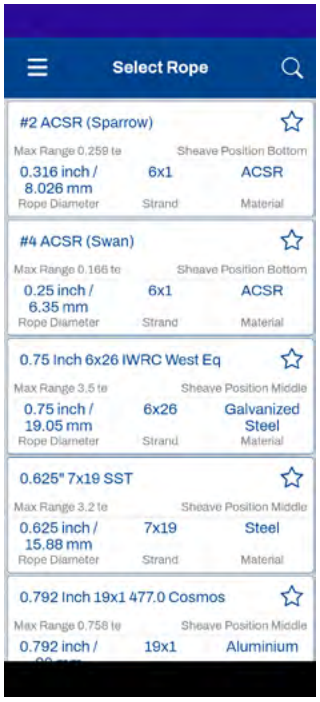


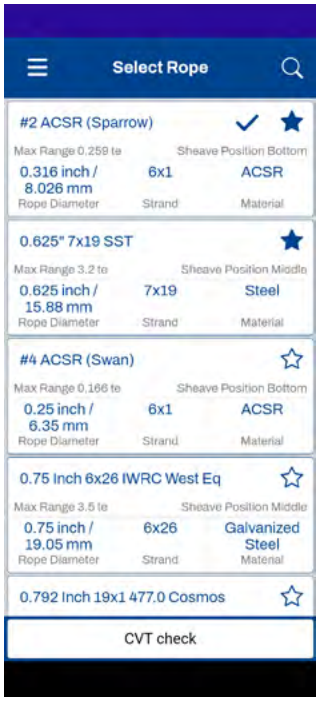
3.2.5 Pausing Jobs

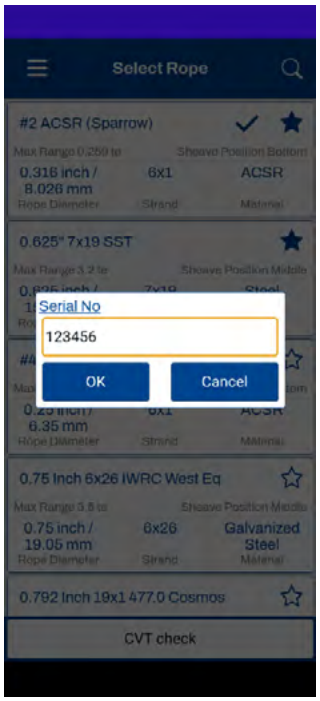
If you are unable to complete a datalog, you can pause the job by tapping the “End Log”/”End Datalog” buttons. A pop up will ask if you wish to pause or end the job. Select “Pause Job”.

You can resume any paused jobs by going to the Jobs screen through the menu.

Tap the name to resume the job or hit the delete icon to delete it.







Tapping on the result will show the usages.

The maximum possible use of the CAL rod is limited to 500 counts, so the user should use the same mobile device to obtain the correct CAL rod count.

The Cal rod count value will be available in the 'Report' section in the menu – see the 'Rope' section in this manual.

Once the maximum count has been reached, the app will display an alert message for the user.

To view a video guide on performing a calibration check using the Cal Rod please select this link: https://youtu.be/d-wlbMeRfoo

3.3 Rope

Under the Rope option, the user can select the required wire ropes, select 'Rope' from the menu bar and then select the required wire ropes from the rope list.
If the user needs to add several wire ropes in their favourite list, that provision is also provided on this page.

The Rope selection can be done by a single touch.
To add a rope to a favourite list, press and hold the wire rope for a couple of seconds, then release or tap the star.
The user can easily identify the favourite rope from the filled 'star' symbol that appears in the right-hand side of the rope details.

3.4 Calibration Check

Cal rod counter values can be checked within the CAL Check section. By clicking on 'CAL Check', it will list out rod count of corresponding serial numbers.
Cal Rod Counter:
The COLT device can be supplied with a CAL Rod (available for purchase) in order for checking and verifying the accuracy of the COLT.
How to use the CAL Rod to perform a calibration check:
1. Within the COLT App there is a 'CAL Check' option available in the 'Rope' section.

(This will not be available when connected to a simulator)

When the user selects this, a pop-up window will appear, asking the user to input a serial number.

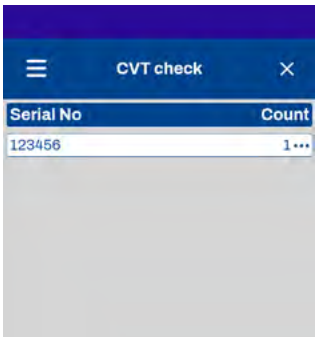
2. Enter the CAL rod serial number and select 'SAVE', the app will then go back to the home page.

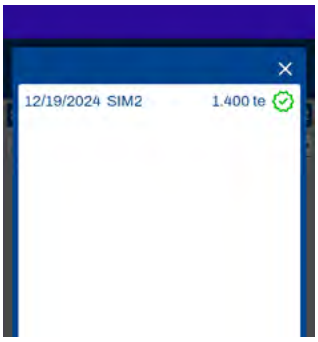
3. Before starting a Cal check, make sure the COLT device is on a flat surface and zero the app home screen value if there is any load value showing.

4. Take the COLT and fix the CAL Rod between sheaves.

5. Take 3 readings for the calibration check. If the average load value is in between 1.27-1.452 te / 2800-3200 lbs then the calibration test will pass.

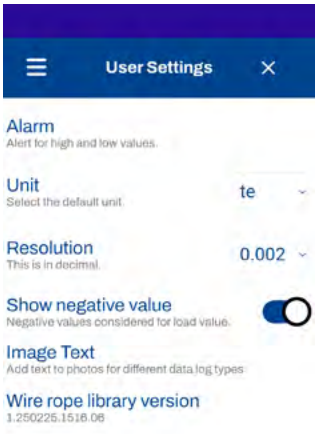
6. When the user presses 'OK' the app will redirect to the 'Rope' page and the user can select the required rope for the next job.





3.5 User Settings

This is the place where the user can do all the settings before taking the load reading.
The user can set the default unit, resolution and the low and high alarm threshold.
Everything can be set from this screen.



Alarm:

The alarm setting will allow the user to set the alarm threshold levels.
The setting will allow the provision to set the high and low alarm levels.
You will also be able to enable or disable vibration (default is off), or enable of disable sound (default is on).

Unit:

This is the default unit setup. According to this setting the home screen will show the unit. Available units are kg, te, lbs, and kN.

Resolution:

Resolution is the minimum load value change setting.
According to the unit selection, the resolution will vary.
For the kg unit, available resolutions are 2, 5 & 10, for tonne unit it is 0.002, 0.005, and 0.010, for lbs it is 2,5,10 for kN it is 0.02, 0.05, 0.10.
The user can select it from the drop-down list.

Show Negative Value:

Show negative value setting allows the user to enable or disable the negative load readings showing on the home screen. If this setting is in disabled mode, the home screen value shows '0' for all the load values less than or equal to zero.

Image Text menu

This will allow the user to add text to an image when you take a photo. It is available for the Multi Anchor and Multi Wire log types. By default these are switched off.
The settings are per log type. The user can customize the position of where the text will be placed on the image and what order the text is displayed.
Tap on the green tick / red cross icons to toggle each option on or off. Tap on the arrows to move each line up or down.
The arrows will not show if there are no lines enabled, or if there is only 1 line.

The following details can be placed on the photo, depending on the log type:

- Time (will be when the image is taken).
- Location (will use the phone location when the image is taken). If location access is not available it will not be included.
- Rope (taken from the log entry).
- Temperature (taken from the log entry).
- Wind speed (taken from the log entry).
- Tension (taken from the log entry).
- Wire (taken from the log entry).
- Wire Level (taken from the log entry).
- Anchor (taken from the log entry).

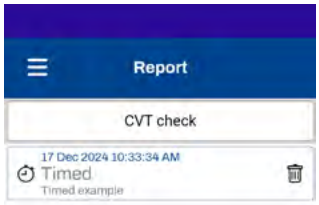
For values taken from the log entry if the log has before and after entries, the last value will be used.

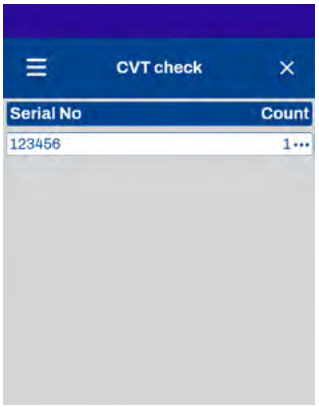
Wire rope Library version:

This option will display the current wire rope database version running on the app.

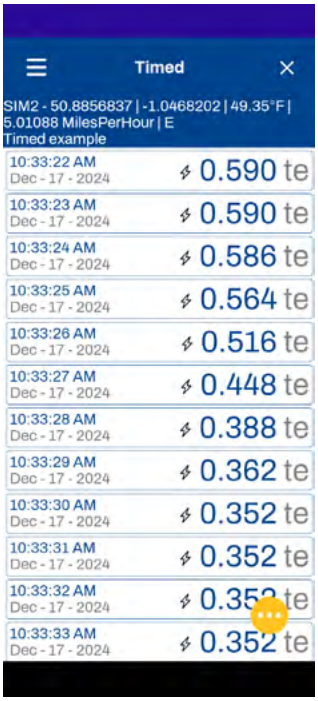
3.6 Report

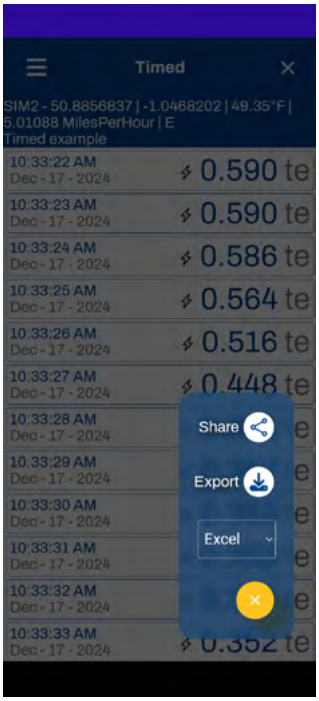
Under the report option all the logged reports are available as well as the CAL rod counter.





This page will allow the user to view or send the logged data and to download it in CSV/Excel/PDF file format.





3.7 Connect/Disconnect:

Disconnect allows the user to search for the all available COLT devices within the range of the application.
The application will list out all the devices in the scan list and the user can connect to the desired COLT device.
If the user faces any application hang issue or load value issues, they can reconnect to the device through this option.

3.8 Database Update:

This is the option the user should do first after the application installation.
This allows the application to install the factory calibrated wire rope data to the mobile device.
Note: Once the app is updated with latest wire rope library it will not allow the user to revert to an older version or to the same version.

3.9 Help:

Help will download the latest user manual for the COLT App for the user. The user's mobile device will need to be capable of opening pdf files.

3.10 Product Info:

This will redirect the user to the COLT product webpage on the Crosby Straightpoint website. Mobile devices should be connected to Wi-Fi/Internet for this to be successful.

Distributor Stamp

Crosby Straightpoint
123 Proxima Park, Houghton Avenue, Waterlooville, Hants, PO7 3DU UK · Tel: +44 (0)2392 484491
2801 Dawson Road, Tulsa, OK 74110 · USA · Tel: +1 (918) 834-4611