



Neptune[®] 360[™]
Mobile Users' Guide
Version 1.7.3



Neptune® 360™
Mobile Users' Guide
Version 1.7.3

Copyright

This manual is an unpublished work and contains the trade secrets and confidential information of Neptune Technology Group Inc., which are not to be divulged to third parties and may not be reproduced or transmitted in whole or part, in any form or by any means, electronic or mechanical for any purpose, without the express written permission of Neptune Technology Group Inc. All rights to design or inventions disclosed herein, including the right to manufacture, are reserved to Neptune Technology Group Inc.

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications **without** notice.

Trademarks Used in This Manual

Neptune 360 is a registered trademark of Neptune Technology Group Inc. Other brands or product names are the trademarks or registered trademarks of their respective holders.



CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to use the software.



AVERTISSEMENT : Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourraient faire perdre à l'utilisateur son droit à utiliser cet équipement.

Neptune[®] 360[™] Mobile Users' Guide
Literature No. UM 360 Mobile 03.2023

Copyright © 2019-2023
Neptune Technology Group Inc.
All Rights Reserved.

Neptune Technology Group Inc.
1600 Alabama Highway 229
Tallahassee, AL 36078
Tel: (800) 633-8754
Fax: (334) 283-7293

<i>Chapter 1: About Neptune® 360™ Mobile</i>	<i>1</i>
Supported Devices and Operating Systems	2
Android™ Operating Systems	2
iOS Operating Systems	2
Required Devices and Equipment	3
Required Credentials	3
<i>Chapter 2: Getting Started</i>	<i>5</i>
Downloading the App	5
Logging In and Out of Neptune® 360™ Mobile	5
Logging In to Neptune® 360™ Mobile	6
Logging Out of Neptune® 360™ Mobile	7
Resetting Your Password	8
Unlocking Locked and Inactive Accounts	8
Pairing a Receiver	9
Pairing a Belt Clip Transceiver	9
Receiver Settings	10
Pairing a Mobile Data Collector	11
Modifying the Neptune® 360™ Settings	11
Editing the Settings	12
Modifying Neptune® 360™ Mobile Settings	13
Modifying the Receiver Connection Type	13
Connecting an MRXv2 Device	14
Modifying Data Log Settings	15
Modifying the Font Size	16
Modifying the High or Low Pressure Warning Limits	16
Modifying Meter Reading Settings	18

Chapter 3: Testing the RF Signal	21
Receiving Transmissions	21
Searching for Endpoints	22
Filtering Endpoints	22
Viewing Transmission Details	23
Sharing RF Test Readings	24
Chapter 4: Logging Data	25
Viewing a Past Data Log Session	25
Deleting a Past Data Log Session	26
Capturing a New Data Log Session	26
Reviewing a Data Log in List View	28
Viewing a Data Log as a Graph	29
Viewing Data Log Status	31
Sharing a Data Log	32
Chapter 5: Reading Meters	33
Reading Meters	33
Route Management	35
Selecting Meters to Read	36
Unassigning Routes	38
Starting the Reading Meter Function	40
Starting the Reading Function for a Mobile Device	40
Starting the Reading Function for a Probed Meter	41
Correcting a Missing Meter ID	42
Stopping the Reading Meter Function	42
Adding Comments and Comment Codes	43
Adding a Comment	43
Selecting a Comment Code	44
Syncing or Unloading Captured Readings	45
Viewing Meter Information	45
Viewing Accounts within a Route	46

Filtering the List of Accounts	47
Viewing Meter Information	48
Entering a Manual Reading	50
Skipping a Reading	51
Removing a Reading	52
Invalid Readings	53
Viewing Meter Details	54
Editing Dials	55
Using the Map Function	55
Using Offline Maps	55
Displaying the Map Style	56
Reading the Map	56
Displaying Pin Details	58
<i>Chapter 6: Reading and Logging Pressure</i>	<i>59</i>
Capturing a Pressure Reading	59
Viewing Logged Pressure Readings	60
Deleting a Past Pressure Log Session	61
<i>Glossary</i>	<i>63</i>
<i>Index</i>	<i>65</i>

This page intentionally left blank.

Figure 1 – Neptune® 360™ Mobile Main Screen	1
Figure 2 – Login Screen	6
Figure 3 – Select Site ID Screen	6
Figure 4 – Selecting a Function	7
Figure 5 – Neptune® 360™ Menu Options	7
Figure 6 – Login Screen	8
Figure 7 – Selecting a Receiver	9
Figure 8 – Pairing a Belt Clip Transceiver	9
Figure 9 – Receiver Information	10
Figure 10 – Pairing a Mobile Data Collector	11
Figure 11 – Mobile Settings	13
Figure 12 – Menu Icon	14
Figure 13 – Neptune® 360™ Mobile Home Screen	15
Figure 14 – Menu Icon	15
Figure 15 – Data Log Settings	16
Figure 16 – Miscellaneous Settings	16
Figure 17 – Menu Icon	17
Figure 18 – Pressure Settings	17
Figure 19 – Menu Icon	18
Figure 20 – Meter Reading Settings	18
Figure 21 – Download Offline Map	19
Figure 22 – RF Test Screen	21
Figure 23 – RF Test Transmissions	22
Figure 24 – Filtering the Endpoints List	23
Figure 25 – Selecting Filters	23
Figure 26 – RF Test Sharing Options, Android and iOS	24
Figure 27 – Past Data Log Sessions	25

Figure 28 – Capture Settings Screen	26
Figure 29 – Selecting the Meter Size	27
Figure 30 – Data Log	27
Figure 31 – Hour-by-Hour Data Log Readings	28
Figure 32 – Log Data as a Graph	29
Figure 33 – Data Log Statuses	31
Figure 34 – Selecting the Graph Format	32
Figure 35 – Meters Screen	34
Figure 36 – Route Management Screen	35
Figure 37 – Unread Routes	36
Figure 38 – Selected Routes	37
Figure 39 – Work Routes View	38
Figure 40 – Unassign Routes Confirmation	39
Figure 41 – Reading Meters	40
Figure 42 – Correct a Missing Meter	42
Figure 43 – Comments	43
Figure 44 – Comment Code	44
Figure 45 – Captured Readings	45
Figure 46 – Viewing Route Accounts	46
Figure 47 – Filtered Meters List	47
Figure 48 – Warning Messages	48
Figure 49 – Meter Screen Navigation	49
Figure 50 – Examples - Manually Entering a Reading	50
Figure 51 – Skipping a Reading	51
Figure 52 – Skip Reading Screen	51
Figure 53 – Removing a Reading	52
Figure 54 – Keying In a New Reading	53
Figure 55 – Meter Detail Screen	54
Figure 56 – Map Styles	56

Figure 57 – Pressure Reading Screen 59

Figure 58 – Past Pressure Readings 60

Figure 59 – Pressure Data Log 61

This page intentionally left blank.

Table 1 – Graph View Options	29
Table 2 – Meter Screen Fields	49
Table 3 – Map Icons	56

This page intentionally left blank.

Chapter 1: About Neptune® 360™ Mobile

Welcome to the Neptune® 360™ Mobile app. Using a cellular phone or tablet as your meter reading device makes the reading process fast and efficient without the burden of learning new hardware. You can use the app as soon as you install it.

The software has four major functions you can perform that are covered in this guide:

- RF Test.
- Data Logging.
- Meter Reading.
- Pressure Reading.

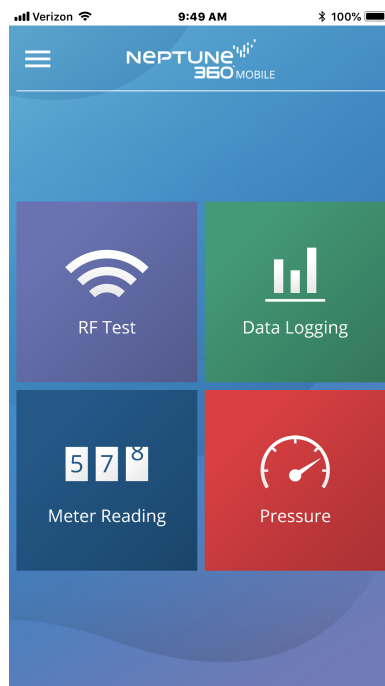


Figure 1 – Neptune® 360™ Mobile Main Screen

Supported Devices and Operating Systems

Neptune 360 Mobile supports Android™* and Apple® operating systems for both phones and tablets. Neptune has tested the mobile app on the following operating systems and performs additional testing as new versions of these operating systems are made available.

Android™ Operating Systems

- 7.0.X Nougat.
- 7.1.X Nougat.
- 8.1.X Oreo.
- 9.0.X Pie.
- 10.0.X.
- 11.0.X.
- 12.0.X.
- 13.0.X.

Android™ Devices

We recommend using Neptune 360 Mobile on devices from the following (Original Equipment Manufacturers) OEMs:

- Samsung®.
- Nexus™.
- Motorola®.

iOS Operating Systems

- 13.
- 14.
- 15.
- 16.

iOS Devices

Neptune 360 Mobile supports the following iOS devices:

- iPhone®.
- iPad®.

*Android is a trademark of Google LLC.

Required Devices and Equipment

Following are the devices required to use Neptune 360 Mobile.

- Mobile device – Android or iOS phone or tablet that runs one of the supported operating systems previously listed.



The mobile device requires a minimum of 2 GB of RAM to run the software.

- Transceiver – Neptune 360 Mobile pairs with:
 - Neptune belt clip transceiver.
 - MRX v2 or Mobile data collector v3 on Android.
 - Mobile data collector v4 on Android and iOS devices.
- Probe reader (optional) – Neptune Advantage II, Neptune Pocket ProReader.
- USB tether cable.



If you use an iOS device, you must pair it with a belt clip transceiver.

Required Credentials

Neptune 360 Mobile is linked to the Neptune 360 host software. Utility administrators must ensure that all mobile app users have an account established within the host system. Users can use their host system email address and password credentials to log in to the mobile app.

This page intentionally left blank.

This chapter includes the procedures to download and log in to Neptune[®] 360[™] Mobile, define the settings, and pair your device with an endpoint.

Downloading the App

Complete the following steps to download the Neptune 360 Mobile app.

1. Open the Google Play[™] store (Android[™]*), or the App Store (Apple[®]) on your device.
2. Search for Neptune 360 Mobile.
3. Tap one of the following to install the app:
 - **Install**, for an Android device, and then go to step 4.
 - **Get**, for an iOS device. You can now open the app and log in.
4. On your Android device, review the app permissions, and then tap **Accept** to continue the download.

Logging In and Out of Neptune[®] 360[™] Mobile

Make sure you have downloaded and installed Neptune 360 Mobile from the Google Play store (for Android) or the App Store (for iPhone[®]). For the procedure steps, see "Downloading the App" above.

*Android is a trademark of Google LLC.

Logging In to Neptune® 360™ Mobile

Complete the following steps to log in to Neptune 360 Mobile.

1. Open the app.
The Login screen is displayed.

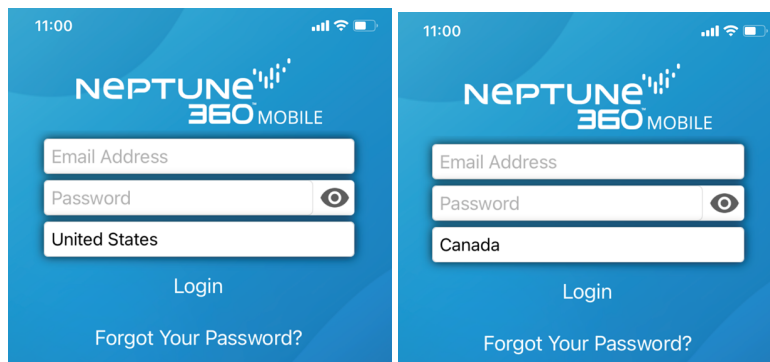


Figure 2 – Login Screen

2. To select a different default country than the one displayed, tap the country name to display the selections.
3. Tap the country you want as your default, and then tap **OK**.
4. In the **Email Address** field, type the email address you use for Neptune 360.
5. In the **Password** field, type the password you use for Neptune 360.
6. Tap **Login**.

The system displays the Select Site ID screen, if you have access to multiple utilities. Otherwise, the landing screen as shown in step 7 is displayed.



Figure 3 – Select Site ID Screen

7. Type the five-digit Site ID for your utility.

The app displays the Neptune 360 Mobile landing page and you can select the function you want.

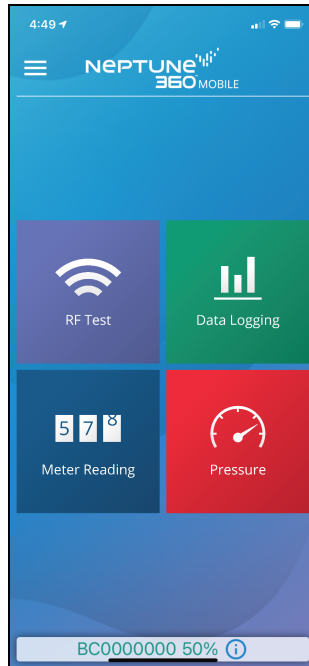


Figure 4 – Selecting a Function

Logging Out of Neptune® 360™ Mobile

You can log out of the app from any screen.

Complete the following steps to log out of Neptune 360 Mobile.

1. Tap the menu icon in the top left corner of the screen to display the menu options that slide to the right.

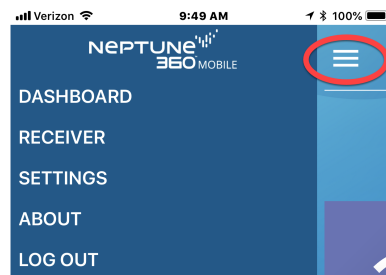


Figure 5 – Neptune® 360™ Menu Options

2. Tap **Log Out** to log out of the app.

Resetting Your Password

You can reset a password from your device in the field, without having to call your administrator to reset it for you. You need a network connection to be able to send the reset password email and access the link in the email.

1. Open the app.
The Login screen is displayed.
2. Below the Login button, tap **Forgot Your Password?**



Figure 6 – Login Screen

2. Type the email address you use for Neptune 360.
3. Tap **Send Password Reset**.
4. Tap **OK** to acknowledge the sent email message.
5. Follow the prompts in the email to reset your password.

Unlocking Locked and Inactive Accounts

If you are locked out of your Neptune 360 account, the app displays a message indicating your account is locked. Reasons for a locked account include:

- Three or more faulty attempts at logging in to the system.
 - Your account is currently inactive.
 - An administrator has manually locked your account or set it to inactive.
1. Tap **OK** to clear the locked account notification.
 2. Contact the administrator for your utility to unlock your account.

Pairing a Receiver

Before reading meters, you must pair your device with a receiver. A typical receiver used is a belt clip transceiver. If you have not yet paired a receiver, the first time you select **Meter Reading** the system displays a reminder.

1. After logging in, tap **Meter Reading**, and then tap **OK** to clear the reminder message.
2. Pair one of the recommended transceivers with your device. See "Pairing a Belt Clip Transceiver" below, or "Pairing a Mobile Data Collector" on page 11.

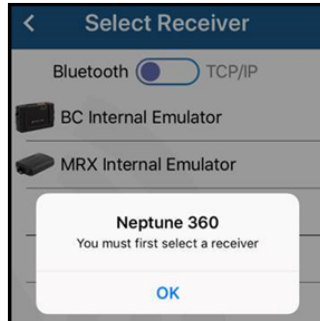


Figure 7 – Selecting a Receiver

Pairing a Belt Clip Transceiver

Receivers that display in green text indicate that the receivers have been connected previously.

1. Turn on the belt clip transceiver and place it in **Normal Mode**. The LED color for Normal Mode is green. For more information about the belt clip transceiver, see the "*Neptune Handheld Systems Users' Manual*."
2. On your Android or iOS device, enable Bluetooth capability. For Android, verify that the **Location** permission for the app is enabled. This permission handles Bluetooth functionality and is here in your Android settings: Settings > Apps > Application Manager > Neptune 360 Mobile.
3. Log in to Neptune 360 Mobile and tap the menu icon in the top left corner of the screen to display the menu options.

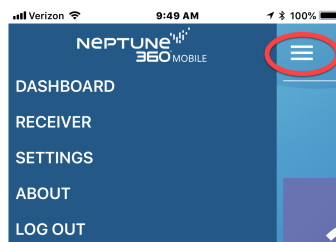


Figure 8 – Pairing a Belt Clip Transceiver

4. Tap **Receiver**.
5. Tap the serial number of the belt clip transceiver in the list to pair with it. If the belt clip transceiver does not appear in the list, tap **Refresh** toward the bottom of the screen, and then retry pairing.

After successfully pairing, the Neptune 360 Mobile dashboard is displayed and toward the bottom of the screen the connected belt clip transceiver displays in green text.

Receiver Settings

After you pair a belt clip or MRX, on the home page you see the belt clip ID in green and an **Info** button you tap to display the Receiver Info screen. The RF Mode field on this screen enables you to select the RF mode. You can choose efficiency and performance, which improves or decreases RF performance and inversely decreases or increases battery life for the receiver.

- Performance Mode – increases the speed of processing readings, but can reduce battery life of the receiver.
- Efficiency Mode – reduces the speed of processing readings, but helps save the battery life of the receiver.
- Moderate Mode – default mode. Functions between the two other options in terms of processing speed and battery life.

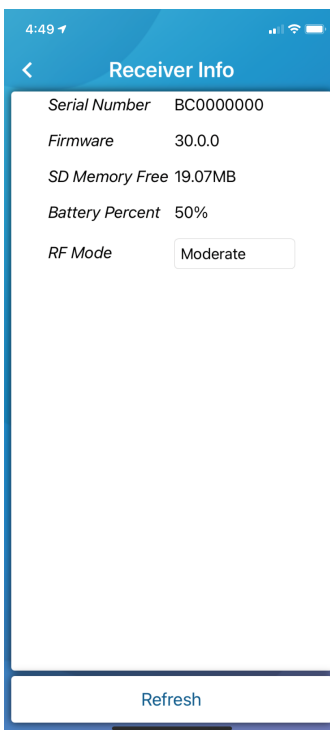


Figure 9 – Receiver Information

Pairing a Mobile Data Collector

Complete the following steps to pair your device with a mobile data collector.

1. Turn on the mobile data collector and wait approximately one minute for the receiver to gain full power. See the "*Mobile Data Collector Getting Started Guide*" for the steps to plug in the power cable and install the mobile data collector antenna.
2. On your Android or iOS device, enable Bluetooth capability. For Android, verify that the **Location** permission for the app is enabled. This permission handles Bluetooth functionality and is here in your Android settings:
Settings > Apps > Application Manager > Neptune 360 Mobile.
3. Log in to Neptune 360 Mobile and tap the icon in the top left corner of the screen to display the menu options.

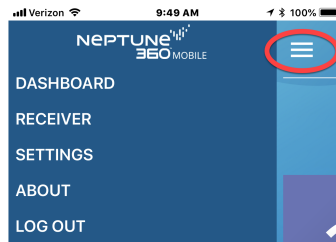


Figure 10 – Pairing a Mobile Data Collector

4. Tap **Receiver**.
5. Tap the serial number of the mobile data collector to pair with it. If the mobile data collector does not appear in the list, tap **Refresh** toward the bottom of the screen and then retry pairing.

After successfully pairing, the Neptune 360 Mobile dashboard is displayed and toward the bottom of the screen the connected mobile data collector displays in green text.

Modifying the Neptune® 360™ Settings

You can configure the Display Previous Readings setting for Neptune 360 Mobile when you first set up your web application system. You define this setting within Neptune 360. The setting has a Yes or No option:

- Display Previous Readings – displays the previous reading for each meter, using the Prev Read field from your import file.



If any of the Neptune 360 Mobile Settings are changed, users actively logged into Neptune 360 Mobile must log out and log back in to the application to receive the updated settings.

- Display High / Low Limits – displays the high limit and low limit for each meter, using the High Limit and Low Limit fields from your import file.
- Apply High / Low Limits – verifies captured readings against the high and low limits set for each meter.



If you manually enter a reading greater than or less than a meter's limits, the system prompts you to confirm whether the entered reading is correct. You do not need to enter the reading again. The system labels manually-entered readings outside the limits as Keyed High or Keyed Low. Confirmation prompts do not appear for radio or probed readings that are greater than or less than limits. However, the readings are still labeled as Radio High or Radio Low.

- Force Reading Reentry – requires meter readers to type the same reading again for verification, if manually-entered readings match the high or low thresholds.



You can only enable this reading if the Apply High / Low Limits setting is enabled.

Editing the Settings

Follow these steps to edit the Neptune 360 Mobile Settings within Neptune 360.

1. On the Settings screen, select **Neptune 360 Mobile Settings**, and then tap **Edit** to enable the settings.
2. Select **Yes** or **No** as the desired setting in each field.
3. Tap **Save** to save the settings.

Modifying Neptune® 360™ Mobile Settings

You can define the settings on your mobile device that are specific to the Neptune 360 Mobile app:

- **Miscellaneous** – define the font size for displaying Neptune 360 Mobile data and select the receiver connection type.
- **Data Log** – define meter size and reverse flow options.
- **Pressure** – define low and high pressure limits.
- **Meter Reading** – define meter reading alert, enable and remove offline maps, reset meter reading database.

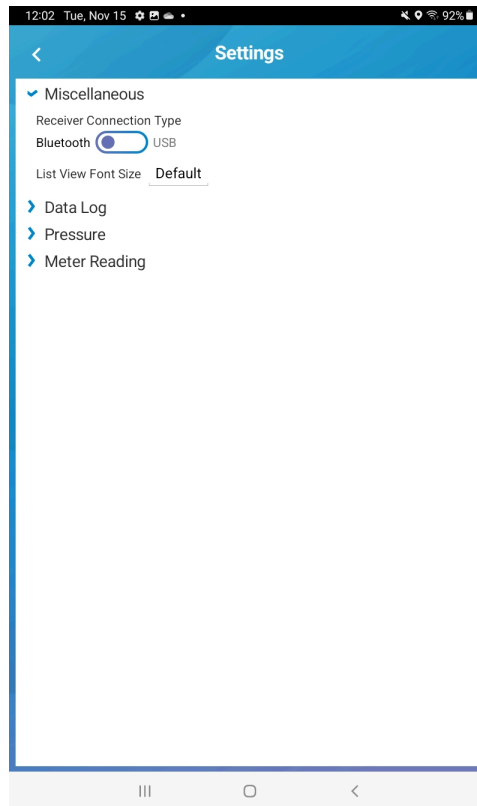


Figure 11 – Mobile Settings

Modifying the Receiver Connection Type

Miscellaneous Settings allow you to select the receiver connection type. The receiver connection type default is Bluetooth, but you have the option to select USB.

- If your current connection type is not Bluetooth and you select Bluetooth, the app uses Bluetooth connection searches on all Receiver screens.
- When you select receiver type connection USB, the app uses USB connection searches on all Receiver screens.

- If you are connected to an MRX v2 via USB on Android, you see "MRX920" and the MRX v2 serial number in green on the home page.

Complete the following steps to modify the receiver connection type.

1. Tap the menu icon in the top left corner of the screen to display the dashboard.

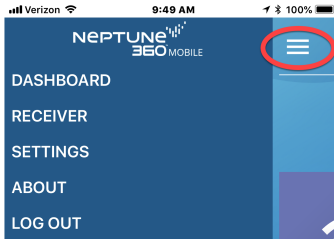



Figure 12 – Menu Icon

2. Tap **Settings**.
3. Tap **Miscellaneous**.
4. Select the receiver option you want.

Connecting an MRXv2 Device

You can connect an MRX v2 to your Android device using a USB tether.



Also, receiver information and battery information normally available by clicking  on the bottom of the Home screen is not available while using a USB tether connection.

1. Connect the USB tether to your Android device and the MRXv2.
2. On your mobile device, tap the menu icon on the main screen.
3. Select **Receiver** and wait until you see the MRXv2 receiver in the list.

4. Tap the MRXv2 option to connect to the receiver and redisplay the Home page on your mobile device.
MRX920 displays in green at the bottom of the screen. You can now read meters and perform RF tests using your mobile device.

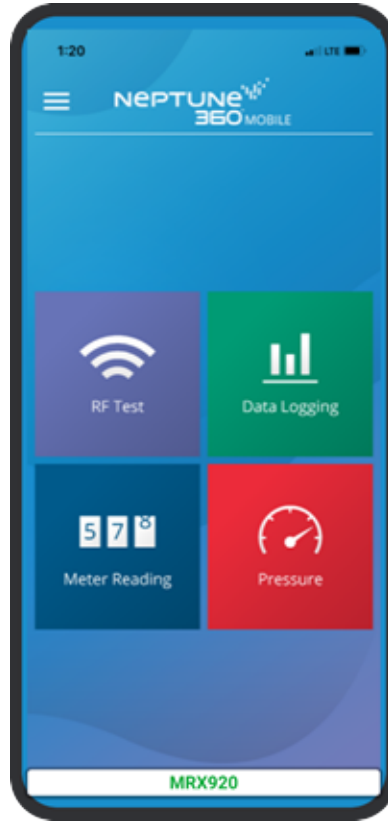


Figure 13 – Neptune® 360™ Mobile Home Screen

Modifying Data Log Settings

The Data Log settings enable you to reset the meter size, hide reverse flow meters, and reset the data log database.

Complete the following steps to modify the settings.

1. Tap the menu icon in the top left corner of the screen to display the menu options.

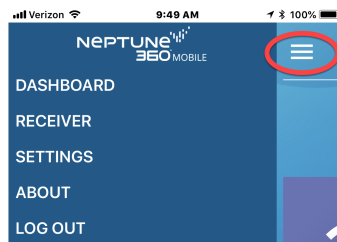


Figure 14 – Menu Icon

2. Tap **Settings**.
3. Tap **Data Log** to display the options.

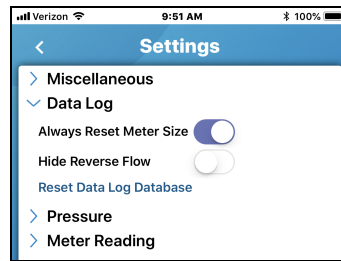


Figure 15 – Data Log Settings

4. Slide the buttons to the right for the options you want to enable:
 - **Always Reset Meter Size** (enabled by default) – reset the meter size each time you capture a new data log session. See "Logging Data" on page 25.
 - **Hide Reverse Flow** – hide meters experiencing reverse flow.
 - **Reset Data Log Database** – delete all data log information from your device.

Modifying the Font Size

Miscellaneous settings allow you to set the font size for the Neptune 360 Mobile list displays.

Complete the following steps to modify the font size.

1. Tap the menu icon in the top left corner of the screen to display the dashboard.
2. Tap **Settings**.
3. Tap **Miscellaneous**, and then tap **Default** to display the List View Font Size options.

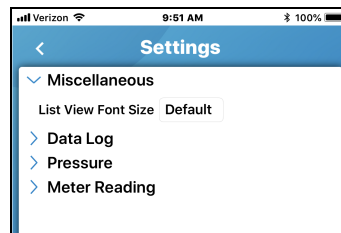


Figure 16 – Miscellaneous Settings

4. Select the font size you want, and then confirm your selection.

Modifying the High or Low Pressure Warning Limits

You can modify the high and low pressure warning limits.

Complete the following steps to modify the settings.

1. Tap the menu icon in the top left corner of the screen to display the dashboard.

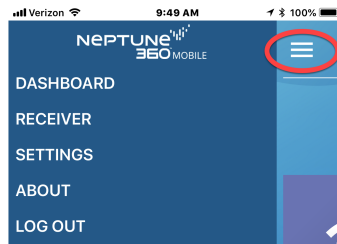


Figure 17 – Menu Icon

2. Tap **Settings**.
3. Tap **Pressure** to display the options.

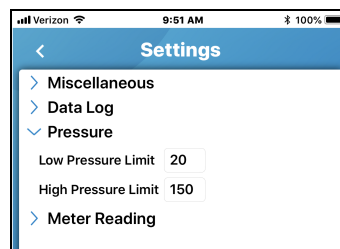


Figure 18 – Pressure Settings

4. Highlight the limit you want to modify and type the new limit.

Meters below or above the limits you define are at risk for functioning at less than maximum capacity. The readings for meters below or above the limits display in **red**.

Modifying Meter Reading Settings

Meter reading settings allow you to enable a tone when your device reads a meter and enable real time readings. You can also reset the reading database.

Complete the following steps to modify the settings.

1. Tap the menu icon in the top left corner of the screen to display the dashboard.

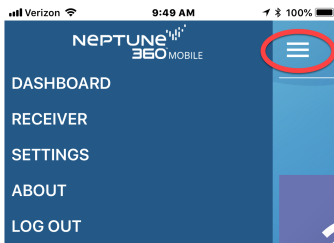


Figure 19 – Menu Icon

2. Tap **Settings**.
3. Tap **Meter Reading** to display the options.

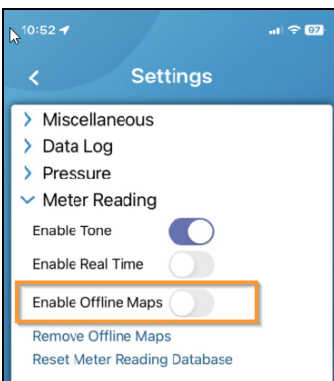


Figure 20 – Meter Reading Settings

4. Slide the buttons to the right for the options you want to enable, or tap the options to remove or reset:
 - **Enable Tone** – play a tone when a reading is captured.
 - **Enable Real Time** – automatically unload readings to Neptune 360 based on a predefined interval (every 15 minutes).
 - **Enable Offline Maps** – enable the maps assigned to you for meter reading.
 - **Remove Offline Maps** – remove the offline maps when you no longer need them to free up space on your device.
 - **Reset Meter Reading Database** – delete all captured readings from your device.

5. If you enable offline maps for the first time, the system displays a prompt to download any offline maps assigned to you. Tap **OK** to begin downloading the maps assigned to you.

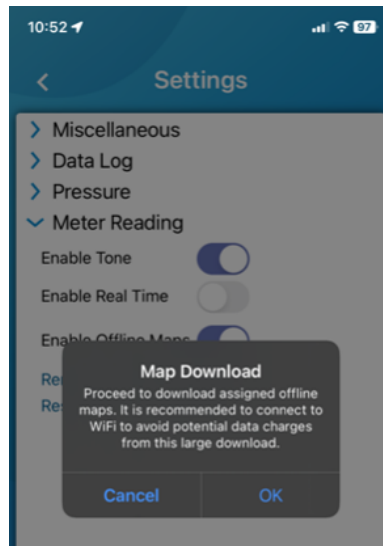


Figure 21 – Download Offline Map

You can tap **Meter Reading** and confirm the offline map is now available.

This page intentionally left blank.

The RF Test feature allows you to verify that your device can receive readings from an endpoint using a paired belt clip transceiver or mobile data collector.

Receiving Transmissions

Follow the steps to test receiving transmissions from any endpoint in the area.

1. In the app, tap **RF Test**.

The system displays the RF Test screen.



Figure 22 – RF Test Screen

2. Tap **Start** to begin receiving transmissions. After you tap Start, the text changes to Stop.

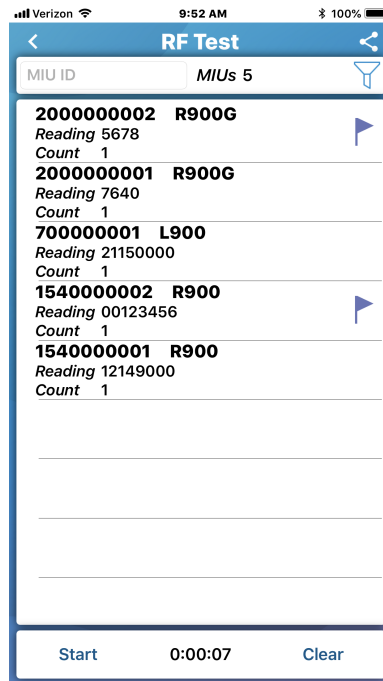


Figure 23 – RF Test Transmissions

3. To clear the screen of the transmissions, tap **Clear**.



Unique endpoints display to show how many unique endpoints have been "heard" since you last tapped Start. The count value for each endpoint shows how many readings your device captured since transmission began. The latest reading is always displayed.

Searching for Endpoints

You can search for a specific endpoint and display the details.

1. In the **MIU ID** field, type a full or partial ID to display a list of matching endpoints.

The app displays the endpoints that match the part of the ID you typed.

Filtering Endpoints

You can filter the list of endpoint transmissions to organize the list by a certain flag or other criteria.

Complete the following steps to filter the endpoints.

1. Tap the filter icon in the top right corner of the screen to display the filter options.

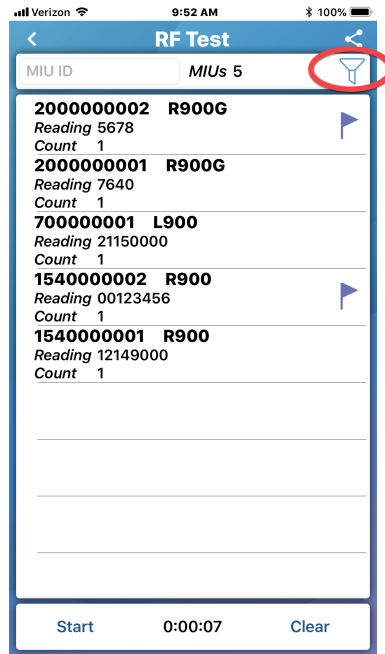


Figure 24 – Filtering the Endpoints List

2. Select the desired filter options.

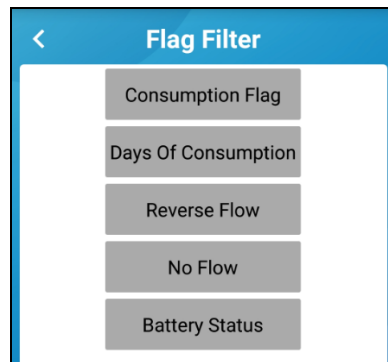


Figure 25 – Selecting Filters

Viewing Transmission Details

You can view details about a specific endpoint. The details for any flagged endpoint display in **red**.

1. Tap the row for which you want to display details.

Sharing RF Test Readings

You can share RF Test readings with another user.

Complete the following steps to share RF test readings.

1. For Android™*, verify that the **Storage** permission for the app is enabled. This permission handles sharing and is here in your Android settings: Settings > Apps > Application Manager > Neptune 360 Mobile.
2. Tap the share icon in the top right corner of the screen.

The application displays the sharing options.

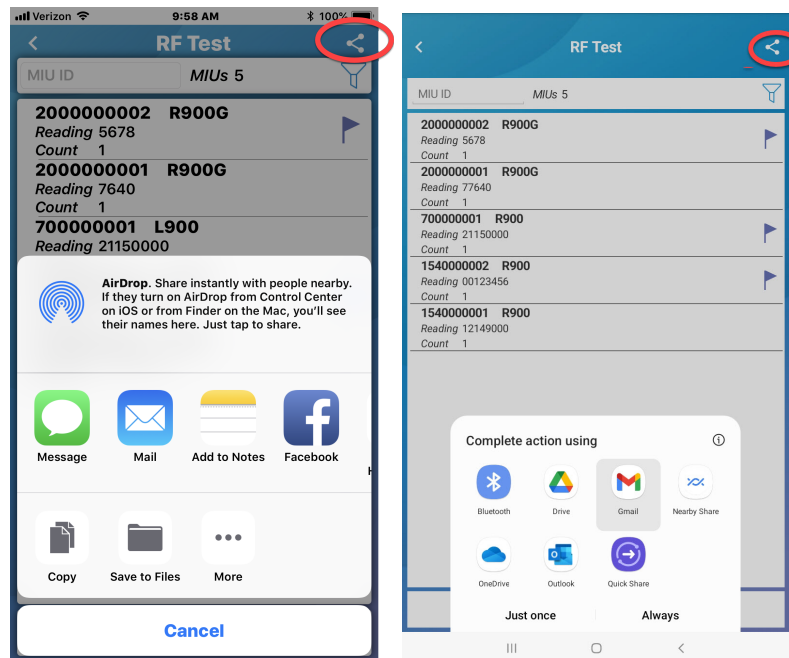


Figure 26 – RF Test Sharing Options, Android and iOS

3. Tap the icon for the app to share readings.
The secondary app opens.
4. Type a note to accompany the readings, as appropriate.

*Android is a trademark of Google LLC.

The Data Logging feature allows you to retrieve up to 96 days of hourly reading consumption data from endpoints. You can display the data in graph or report format, which you can share with the homeowner as well as the utility office.

Meters using E-CODER[®] registers can capture and share flagged data such as continuous consumption, tamper, and reverse flow data.

Viewing a Past Data Log Session

You can view past data logging sessions and search for a data log for a specific endpoint.

Complete the following steps to view a past data log session.

1. In the app, tap **Data Logging**.

The system displays a list of past logging sessions.

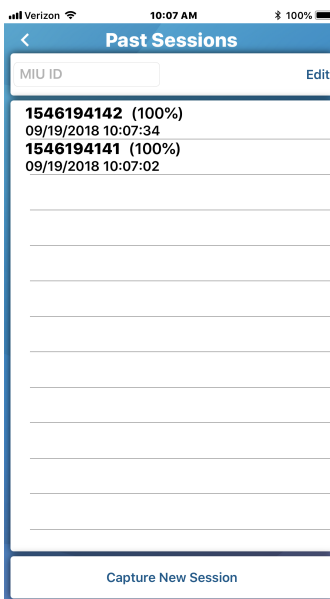


Figure 27 – Past Data Log Sessions

2. Tap a session.

The app displays the data log for that session. You can search for a data log of a specific endpoint. See "Searching for Endpoints" on page 22.

Deleting a Past Data Log Session

You can delete past data log sessions from your device.

1. Tap **Edit** in the top right of the screen.
2. Select the sessions you want to delete, and then tap **Delete** in the bottom left corner of the screen. See the figure on the previous page.

Capturing a New Data Log Session

To start a new data log session, first verify that your device is paired to a belt clip transceiver or mobile data collector.

Complete the following steps to capture a new data log session.

1. Tap **Capture New Session**.

The system displays the Capture Settings screen.

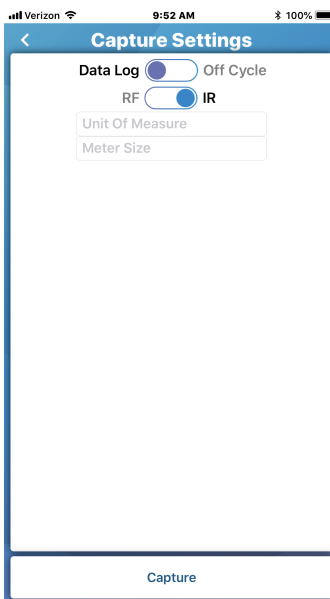


Figure 28 – Capture Settings Screen

2. Select the data log session type:
 - **Data Log** - captures and logs live readings
 - **Off Cycle** – facilitates the retrieval of off-cycle reads used for move in / move out readings and for other unique requests for a specific day's reading. For this option, you must specify the date and MIU ID.

3. Select the capture method:
 - RF – Radio Frequency.
 - IR – Infrared signal. If you select this option, skip step 4.
4. Do one of the following. If you selected:
 - IR, go to step 5.
 - RF, tap **MIU ID** and type the full or partial ID for the endpoint.
5. Tap **Unit Of Measure** and select the desired unit of measure.
6. Tap **Meter Size** and scroll to select the size.

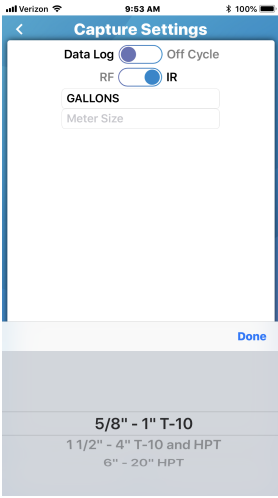


Figure 29 – Selecting the Meter Size

7. Tap **Capture** on the screen to start the data log session.
After the system starts downloading data, it displays the data log.

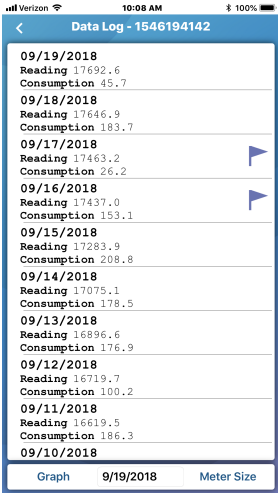


Figure 30 – Data Log

Reviewing a Data Log in List View

Each row in the initial main data log screen shows the date, reading, and consumption. You can tap a row that contains a flag to expand it and display the details. To view a specific date, either scroll through the list or tap the date on the screen.

Complete the following steps to review a data log list.

1. Tap a reading flag to see hour-by-hour readings.

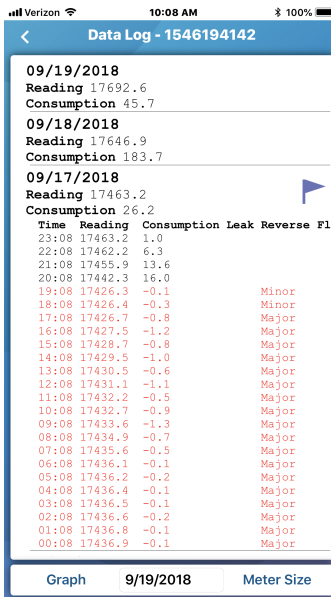


Figure 31 – Hour-by-Hour Data Log Readings

2. If you want to change the meter size and readings, tap **Meter Size** in the bottom right corner of the screen.

Viewing a Data Log as a Graph

You can view the data log in graph format.

Complete the following steps to display log data as a graph.

1. Press **Graph** in the bottom left corner of a data log.

The system displays the data as a graph.

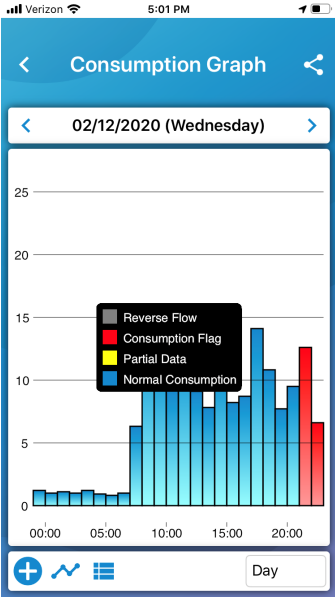







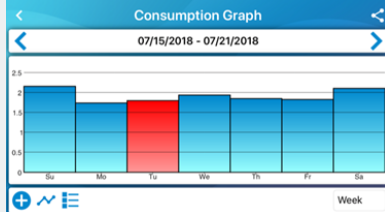
Figure 32 – Log Data as a Graph

2. Tap a bar on the graph to drill down to the reading details.
3. To change the view options of the graph, see the following table.

Table 1 – Graph View Options

View Option	Description
<	Move to the previous day's readings according to the interval in the bottom right corner of the screen.
>	Move to the next day of the readings based on the interval in the bottom right corner of the screen.
Interval	Tap the interval field in the bottom right corner of the screen to change the reading interval displayed in the graph. All intervals, except hourly intervals, are based on the most recent reading completed as of midnight: <ul style="list-style-type: none">• All – display all days in the current reading, up to 96 days.• Month – display the readings for the past 30 days.• Week – display the readings for the past 7 days.

Table 1 – Graph View Options (continued)

View Option	Description
	<ul style="list-style-type: none"> Day – display readings for the day or show the hourly consumption for the selected day. For an hourly reading, the app displays the consumption for the most recent 60-minute period.
	Collapse the consumption units on the y-axis of the graph.
	Expand the consumption units on the y-axis of the graph.
	Change the graph to an area chart.
	Change the graph to a bar chart.
	Display the labels for the graph colors: <div data-bbox="511 798 747 945" style="background-color: #333; color: white; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Reverse Flow Consumption Flag Partial Data Normal Consumption </div>
Landscape View	Turn your device sideways to display the graph in landscape view: <div data-bbox="503 1039 885 1249" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  </div>

Viewing Data Log Status

There are three statuses that the data log can display:

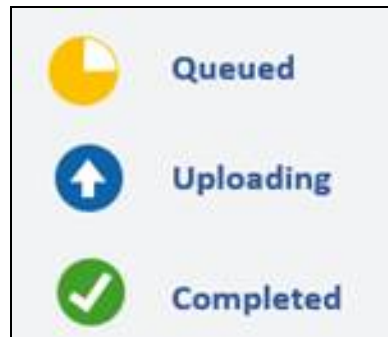



Figure 33 – Data Log Statuses

- Queued – the Data Log is loaded to be transmitted, but transmission is pending the user's access to cell service to push it to the Web app.
- Uploading – the Data Log transmission to the Web app is in progress.
- Completed – the Data Log has successfully transmitted to the Web app.

Sharing a Data Log

You can save the data log as a PDF file, and send it to another user.

Complete the following steps to share a data log.

1. For Android™*, verify that the **Storage** permission for the app is enabled. This permission handles sharing and is here in your Android settings: Settings > Apps > Application Manager > Neptune 360 Mobile.
2. Tap the share icon  in the top right corner of a data log.

The following screen appears.

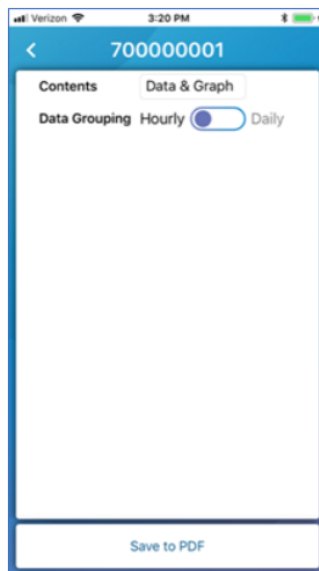


Figure 34 – Selecting the Graph Format

3. Tap in the **Contents** field.
4. Select the format in which you want to send the graph data:
 - **Data & Graph.**
 - **Data Only.**
 - **Graph Only.**
5. In the **Data Grouping** field, select **Hourly** or **Daily** for the consumption interval data you want to include in the PDF.
6. Tap **Save** to save the PDF and select how to share it.

*Android is a trademark of Google LLC.

This chapter defines how to read meters using the Neptune® 360™ Mobile app on your device.

Reading Meters

The Meter Reading feature allows you to capture readings for routes that have been imported into Neptune 360 for your utility. You can also manually key a reading for any account, or skip a reading and apply a skip code. After you capture or key readings, you can sync them to Neptune 360.



The app automatically syncs with Neptune 360 *only* if you have no readings in the database of the mobile app. If there are existing readings in the database of the app, it does not automatically sync when you access the Meter Reading feature.

Captured readings are displayed in order of the time they were captured. This feature supports probe reading using an Advantage II probe or Pocket ProReader and a belt clip transceiver.

Following is a sample Meters screen that shows a metrics bar above the search bar that shows:

- Left number – number of routes included on the current Meters page.
- Center number – number of meters / total number of routes when the All filter is selected. When you tap:
 - Missed, the number changes to display the number of missed readings / total number of meters.
 - Invalid, the number changes to display meters with invalid readings / total number of meters.
 - Captured, the number changes to display meters with captured readings / total number of meters.
- Right number – reading completion percentage. Displays 100% when all readings are captured for the routes.

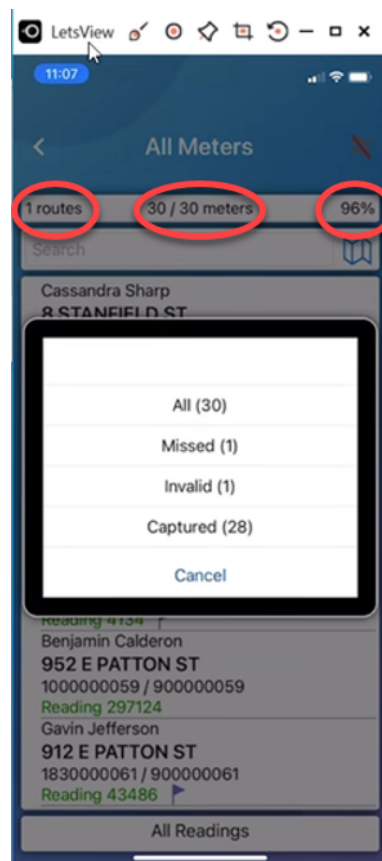


Figure 35 – Meters Screen

Route Management

If your account's role includes the Sync Unassigned Routes permission (assigned to you in the web application), you can see:

- Routes assigned to you from Route Management.
- Incomplete unassigned routes.

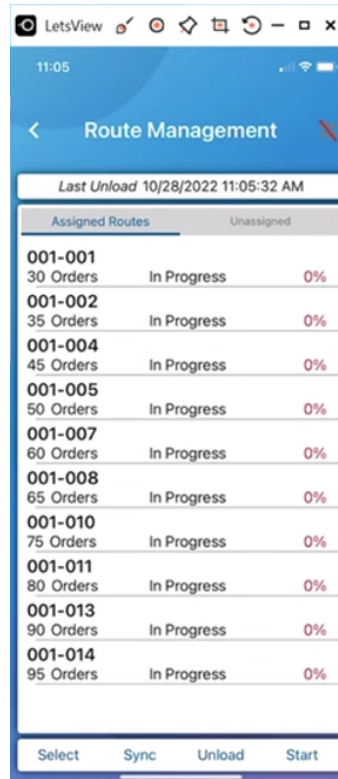


Figure 36 – Route Management Screen

If you tap an unassigned route and assign it to yourself, the route moves to Assigned Routes.

Selecting Meters to Read

Follow the steps in this procedure to select the meters to read.

1. On your device, tap **Meter Reading**.

The Route Management screen is displayed showing routes that have not been read.

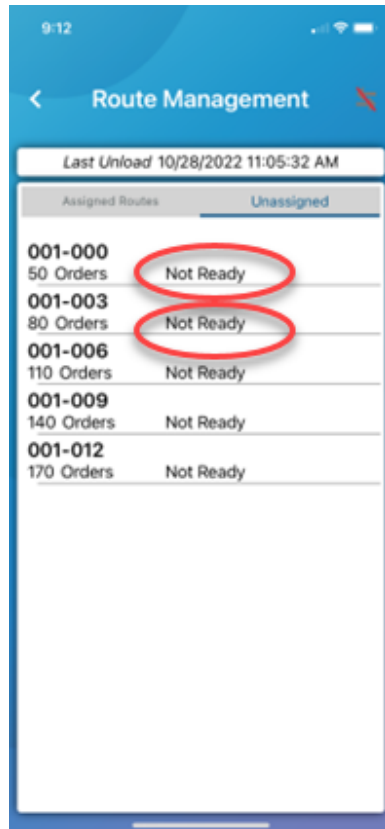


Figure 37 – Unread Routes



If your utility does not have any routes that are missing readings, the device displays, "No routes with missed orders are available." If in the past you selected a route to read and the current status of the route is In Progress, the app asks whether you want to sync again, since there could have been changes made to your routes within Neptune 360.

2. To assign yourself individual routes and move them to the Assigned Routes list (routes in the Not Ready state), tap each unassigned route, and then in the confirmation dialog box that displays, tap **Yes** to sync the device and move the routes. The device:
 - Sends any captured readings to Neptune 360.
 - Removes completed captured readings.
 - Updates the status of the routes you selected to In Progress.

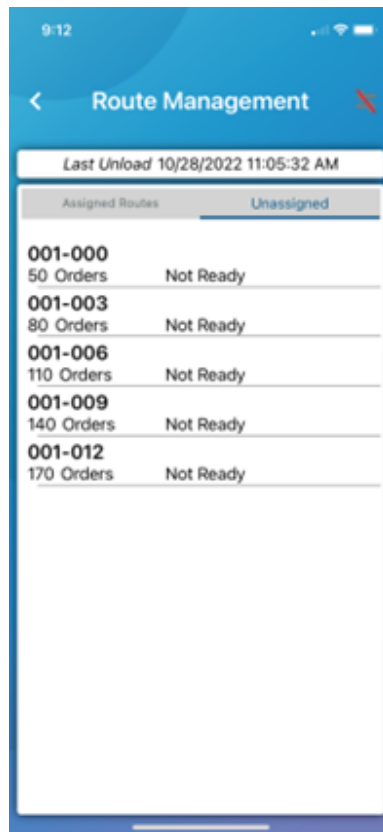


Figure 38 – Selected Routes

3. To view all meters and accounts within the selected routes on a single page, tap **Select**, and then tap **Work Routes**.

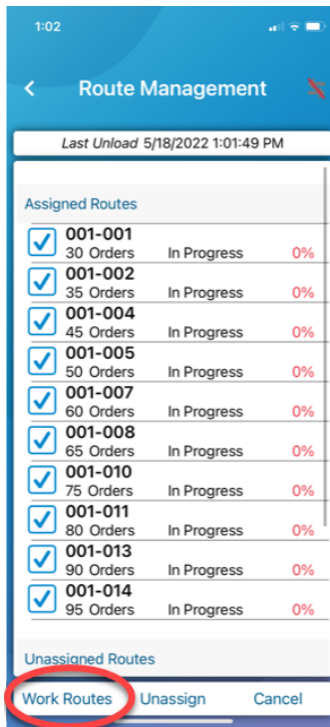


Figure 39 – Work Routes View

Unassigning Routes

If you assign yourself a route by accident, you can unassign the route so that another reader can pick it up. You must have permission to sync unassigned routes to unassign them.

1. On the Route Management screen, tap **Select** in the bottom right corner of the screen.

2. Select one or more routes assigned to you that you want to unassign, and then tap **Unassign**.
The system displays a confirmation message.

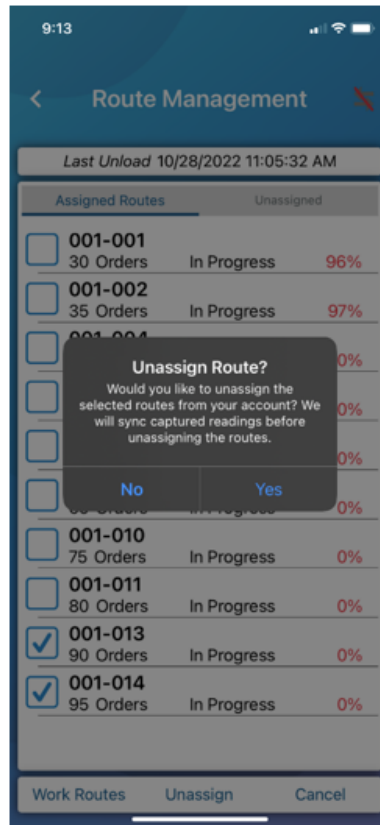


Figure 40 – Unassign Routes Confirmation

3. Tap **Yes** to confirm you want to unassign the routes.
The system syncs all captured readings for the routes you selected to unassign, and then unassigns the routes and places them in the Unassigned Routes list.

Starting the Reading Meter Function

When your device has routes in the In Progress state, you can start the reading process.

Starting the Reading Function for a Mobile Device

Complete the following steps to start the reading function to read meters using a mobile device.



This procedure applies only when you perform readings using a belt clip transceiver or mobile data collector. This procedure is not required when you manually enter readings.

1. Tap **Start** in the bottom right corner of the screen, or tap the icon in the top right corner of the screen.

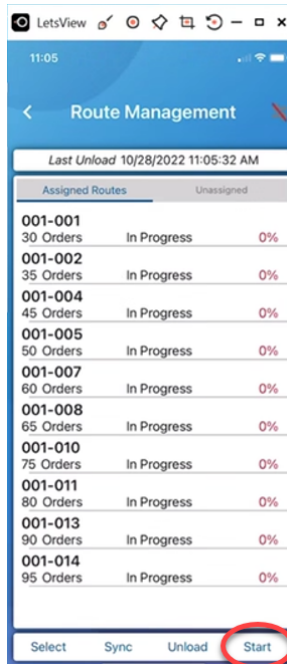


Figure 41 – Reading Meters

2. If mobile mapping is enabled for your utility and you are using an:
 - Android™* device, your location is already tracked because it is required when using Bluetooth®.
 - iOS device, go to step 3.

3. Tap the desired location access option:
 - Only while using the app.
 - Always allow.
 - Don't allow.

*Android is a trademark of Google LLC.

The icon flashes to indicate that the connected receiver is listening for readings for the accounts in the routes. As the device captures readings the completion percent increases to 100%. Any sounds that your device produces means it is accepting readings.

Starting the Reading Function for a Probed Meter



The Advantage II and Pocket ProReader can read ProRead™ registers, E-CODER® (BASIC) registers, and Sensus ECR II and III TouchRead receptacles. The Sensus ECR III must be programmed with the same format used for the "6 wheel ECR II register."

Complete the following steps to start the reading function for probed meters.

1. Pair the belt clip transceiver with your mobile device. For the step procedure, see "Pairing a Receiver" on page 9.
2. Tap **Start** in the bottom right corner of the screen, or tap the icon in the top right corner of the Neptune 360 Mobile screen.
3. Use the probe reader to read the meters.
The receiver sends the collected readings to Neptune 360 Mobile, which you can view.

Correcting a Missing Meter ID

There may be times when you perform a probe reading and the reading cannot be linked via a meter ID. When this occurs, the system displays an icon (finger pushing a button) between the Accept and Skip icons.



This icon is only visible on the Meter page and the reading selected is linked to that meter.

1. Tap the finger pushing a button icon to display the readings you can apply to the account.

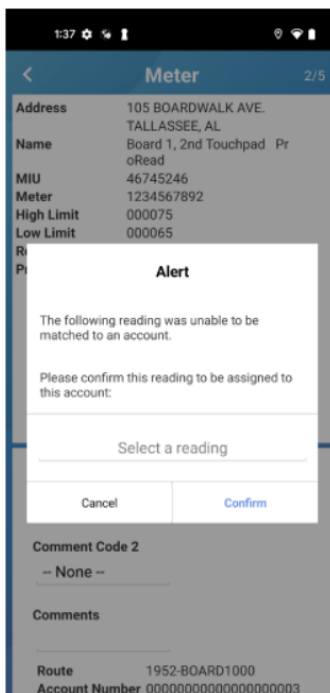


Figure 42 – Correct a Missing Meter

2. Select a reading and then tap **Confirm**.
There are situations in which this window displays multiple readings. If so, select a reading to assign to the first meter. After displaying the next meter and clicking the icon again, one less value in the **Select a reading** field is displayed for selection.

Stopping the Reading Meter Function

You can stop the meter reading process at any time.

1. Tap **Stop** in the bottom right corner of the screen, or tap the icon in the top right corner of the screen.

Adding Comments and Comment Codes

You can enter free form comments for any meter reading that are specific to that reading, route, or account. You can also apply predefined comments to any reading by selecting a comment code. An administrator creates these comments in the Neptune 360 web application and includes information that applies to meter reading cycles or routes. Comments and comment codes are optional and you can view them in an export file generated in the Neptune 360 web application.



To see the most recent comment codes, sync the data between Neptune 360 Mobile and the web application. For more information, see "Syncing or Unloading Captured Readings" on page 45.

Adding a Comment

The Comments box is displayed by default on the Meter screen and you can type up to 128 characters for the comment.

1. Tap in the **Comments** box, and then type a comment.

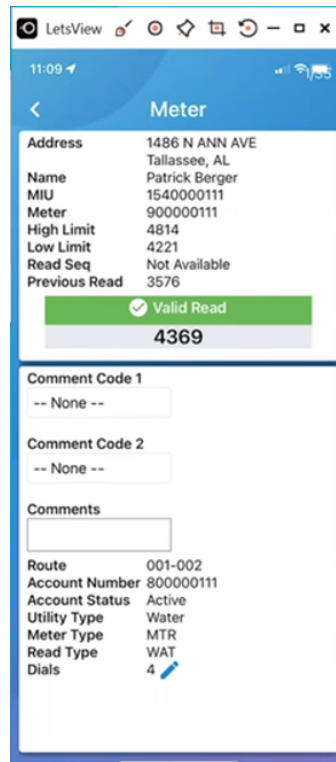


Figure 43 – Comments

Selecting a Comment Code

You can select from a list of comment codes created in the Neptune 360 web application to associate with the comments you enter.

1. Tap the **Comment Codes** field label to display the Code 1 and Code 2 fields.

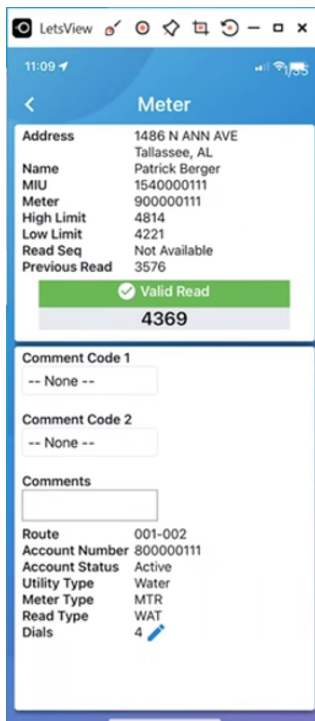


Figure 44 – Comment Code

2. In one or both fields, tap to display the codes, and then tap the codes you want to apply.
3. Tap the Code label to redisplay the **Comments** field. For more information about adding comments, see "Adding a Comment" on the previous page.

Syncing or Unloading Captured Readings

You can synchronize captured readings with the Neptune 360 web application on the Route Management screen. If you have at least one reading captured, Neptune Mobile does not automatically sync with Neptune 360, so follow this procedure any time you want to sync your readings.



Neptune 360 Mobile must be connected to a network for syncing to occur.

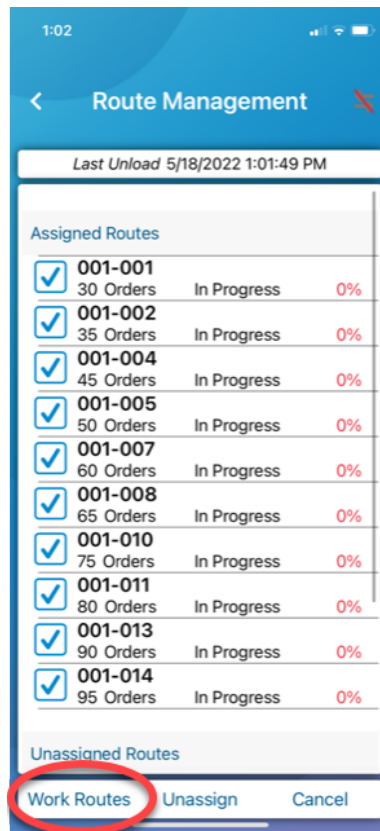


Figure 45 – Captured Readings

- Tap one of the following:
 - Sync** to send all captured readings on the device to Neptune 360 and *remove* them from the device.
 - Unload** to send all captured readings to Neptune 360 and *retain* them on the device.

Viewing Meter Information

You can drill down to access meter information for any meter with the status **In Progress**. You can filter a list of meters to either show only missed readings or only captured readings.

Viewing Accounts within a Route

Make sure you select a route with the status In Progress.

Complete the following steps to view accounts within a route.

1. Tap the route for which you want to view the accounts. By default, this screen displays all accounts within the route.

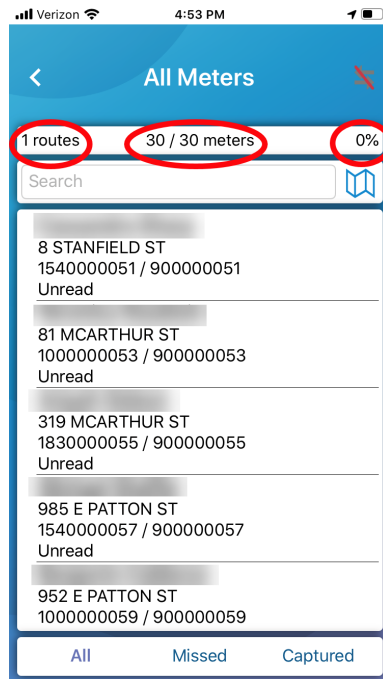


Figure 46 – Viewing Route Accounts

2. To search for a specific account / meter in the list, in the **Search** field, type any part of the following:
 - Account name.
 - Account number.
 - Address.
 - MIU ID.
 - Meter number.

Filtering the List of Accounts

You can filter the list of accounts to display only missed or only captured meters.

1. On the Meters screen, tap one of the following:
 - **Missed** to display only meters not yet read within the route.
 - **Captured** to display only meters for which the device captured a reading.

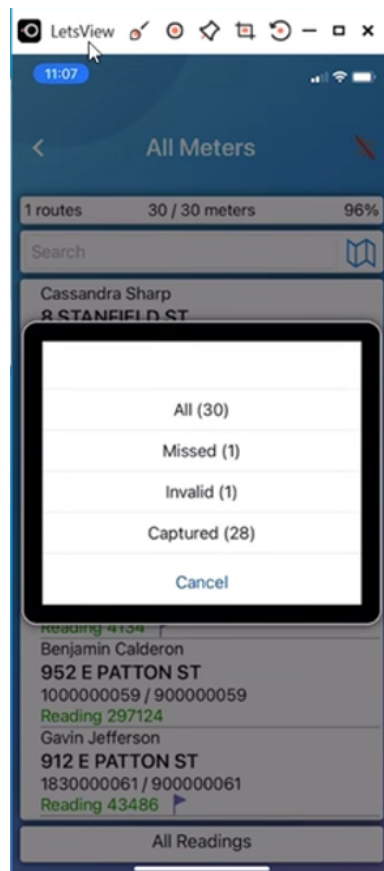


Figure 47 – Filtered Meters List

Viewing Meter Information

You can review the reading information for a specific account / meter.

Complete the following steps to view meter details.

1. In the list of accounts, tap any account to display meter information.

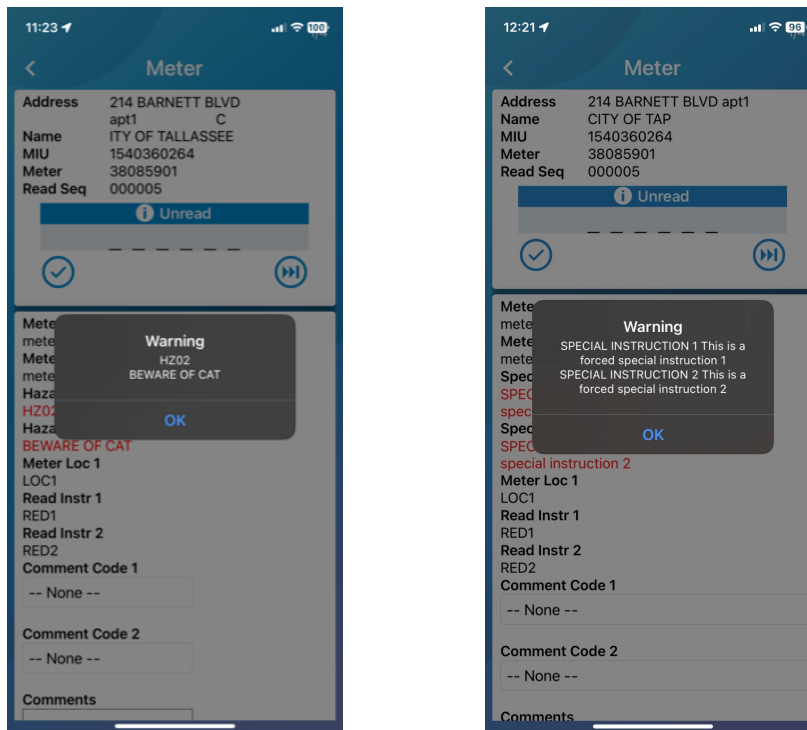


Figure 48 – Warning Messages

2. Tap **OK** in the pop-up warning message to dismiss it. The messages display only if they are set in the import file for a meter. Possible messages indicate the meter has:
 - A Hazard Code associated with it. See "Viewing Meter Details" on page 54 for more information.
 - Special Instructions associated with it. This indicates one or more special instructions are defined for the meter and the flag to force the special instructions is set to **Y**.

In the top right corner of the screen, the numbers indicate the placement of the current account within the total number of accounts in the route.

3. Swipe left or right to display the next or previous account.

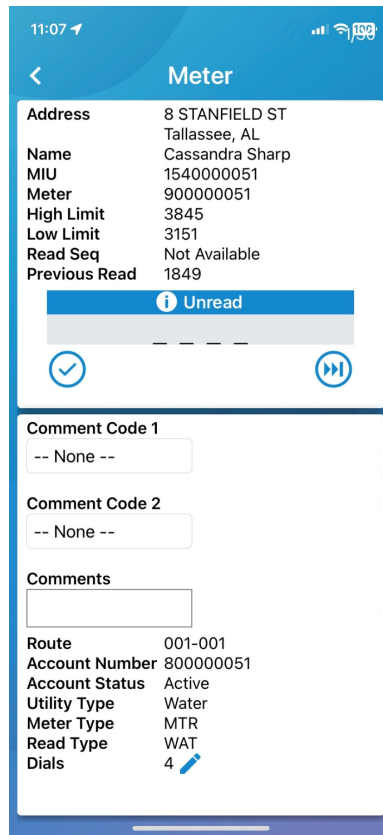


Figure 49 – Meter Screen Navigation

The following table defines the data that appears on the Meters screen.

Table 2 – Meter Screen Fields

Field	Description
Address	Physical address where the meter is located.
Name	Name on the account.
MIU	ID for the endpoint connected to the meter.
High Limit	Highest reading expected for the meter, as determined by the billing system.
Low Limit	Lowest reading expected for the meter, as determined by the billing system.
Read Seq.	Meter reading order, as determined by the billing system.
Previous Read	Recent previous reading for the meter.

Entering a Manual Reading

On the meter screen, you can manually key a reading. Keyed readings appear in **red**.

Complete the following steps to enter a manual reading.

1. Tap the reading field.

The device's keyboard appears so you can enter the reading.

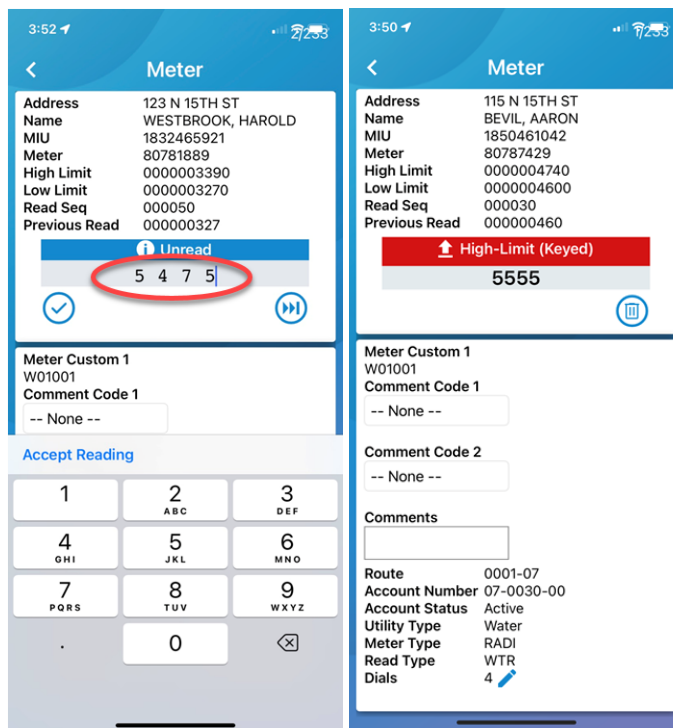


Figure 50 – Examples - Manually Entering a Reading

2. Type the reading, and then tap **Apply Reading**.

The app saves the reading and moves you to the next account in the route.

Skipping a Reading

You can skip a reading and apply a skip code to an account. Complete the following steps to skip a reading.

1. On the Meter screen, tap the **page forward** icon.

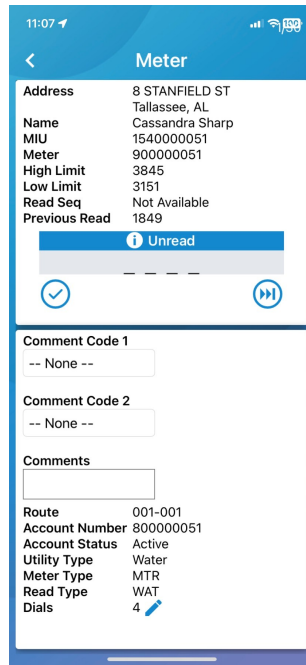


Figure 51 – Skipping a Reading

The system displays the Skip Reading screen.



Figure 52 – Skip Reading Screen

2. Tap in the **Skip Code** field, and then select a code from the list.

The system displays the next account in your route.

Removing a Reading

You can remove a captured invalid meter reading and manually key in the correct reading. Invalid readings are any of these values:

-:
- UUUUUUUU
- ????????
- MMMMMMMM
- 117440513
- 117440514
- 117440515
- 117440516
- 117440517
- 117440518
- 117440519
- 134217727
- Any value that is more than eight digits

1. In the Meters screen for an account, tap **Remove Reading** to remove the reading.

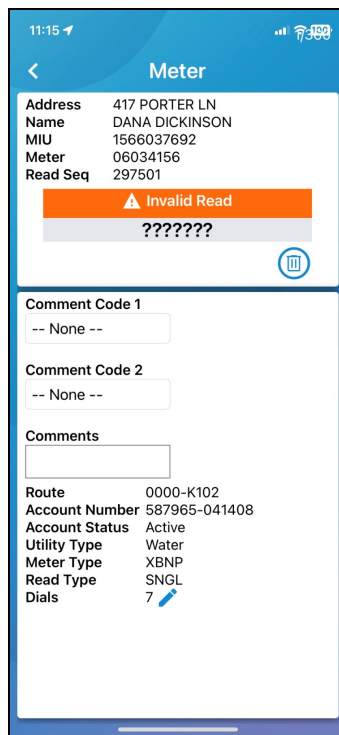


Figure 53 – Removing a Reading

The app redisplay the Meter screen with the reading entry box enabled.

2. Type the new reading into the entry box.

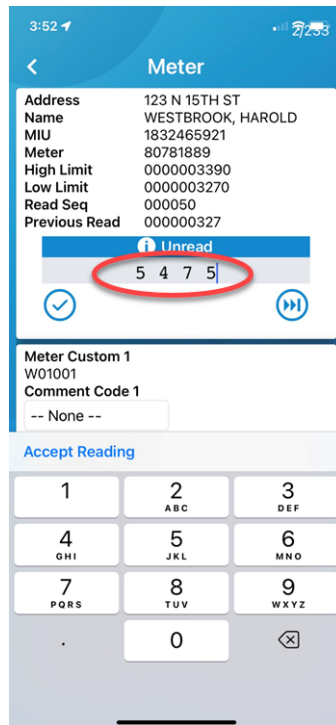


Figure 54 – Keying In a New Reading

Invalid Readings

Neptune 360 Mobile sounds a tone when your device acquires an invalid reading. On the Meters page, the text for the reading is in orange instead of green. When you tap the meter with the invalid reading, the text for the reading on the individual meter page is also in orange.



Be sure to enable the sound on your device to hear the tones when you receive an invalid reading.

Viewing Meter Details

The Meter Detail screen displays additional detail about the account, the meter, and the reading.

1. On the Meter screen, tap **Additional Info**.

The system displays the Meter Detail screen. All information is defined in the Neptune 360 software:

- Route – route number for the account / meter.
- Account Number – number for the account.
- Utility Type – type of utility for the meter reading.
- Meter Type – class of meter.
- Read Type – type of reading on the meter.
- Dials – number of dials on the meter.
- Codes – codes or instructions assigned to the meter including hazard codes, special instructions, meter location codes, read instruction codes, and meter condition codes. Codes are set in the import file that is uploaded into Neptune 360 and you cannot change them.
- Comment codes and associated comments a meter reader assigns.

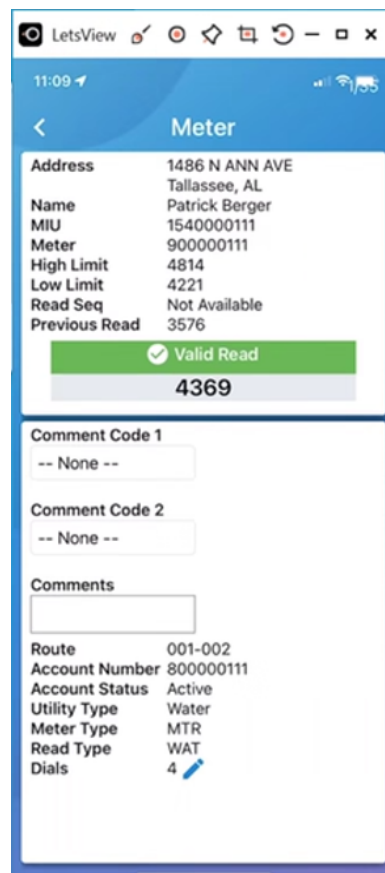


Figure 55 – Meter Detail Screen

Editing Dials

The number of meter dials is defined in the billing files imported into Neptune 360. You can change the number of meter dials your device reads. For example, a utility may be interested in reading only the first four dials.

1. On the Meter Detail screen, tap **Additional Info**.
2. Tap the pencil icon beside **Dials**.
3. Edit the number of dials you want to read for this meter.

Using the Map Function

The Mobile Mapping feature allows you to visually track meters and your meter reading progress. You must enable your device's location and the map and geocoding permissions to enable the functions and track your movements on the map. You can:

- Locate meters, which show as pins on the map.
- Determine meter status based on the pin color.
- Toggle the map style between street and satellite.
- See your current location on the map and where you have been on your route.

Using Offline Maps

Your utility can assign offline maps to use for reading meters when the cell service is limited or no WiFi is available, so you have access to offline maps at all times. Your utility can assign and unassign different maps to routes via Neptune 360 as needed. For more information on the map assignment in Neptune 360, refer to the Neptune 360 Help.

After one or more maps are assign to you, you can enable the maps for use.

Displaying the Map Style

You can toggle between a street map style and the satellite map style.

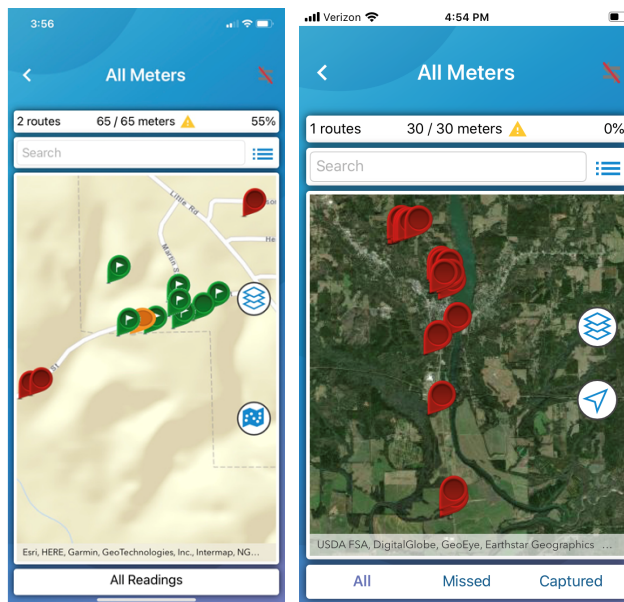


Figure 56 – Map Styles

1. After selecting a route, on the Meters screen tap the map icon in the top right corner of the screen.
The system displays the street map by default.
2. To display the satellite map, tap the map style icon







Reading the Map

Both the street and satellite maps include icons that provide additional information about meters and routes on the map. The following table defines the data on the map view for all meters within the routes.

Table 3 – Map Icons

Icon	Description
	Toggle that shows the street and satellite map image.
	Map centering function around your device location is off when you zoom or pan the map display.
	Device marker that shows your device location and points in the direction your device is moving. The system tracks and moves the icon in real time.
	Toggle that hides the travel trail behind your device marker. You control the display of the

Table 3 – Map Icons (continued)

Icon	Description
	travel trail by starting and stopping the meter reading function. See "Reading Meters" on page 33 for more information.
Pin icon (any color)	Indicates a meter location. A meter must have the latitude and longitude defined in your Neptune 360 import file. When you read a meter, the related pin changes color in real time based on the status.
 Green pin	You have read this meter.
 Green pin with flag	A reading with a flag that indicates one of the following: <ul style="list-style-type: none"> • Continuous consumption. • Intermittent consumption. • Major or minor reverse flow. • No flow. • Continuous consumption recorded for a minimum of 35 days.
	The reading is invalid.
	You have not read this meter.
	If one or more meters within a route are missing latitude and longitude coordinates, the warning icon displays. When you tap it, the system displays "Some meters are missing coordinates and are not displayed on the map." The travel trail and meter status icons persist on screen for a maximum of 24 hours, or until you sync the readings with the web application. See "Syncing or Unloading Captured Readings" on page 45 for more information.
	Displays the list of meters in the selected route.

Displaying Pin Details

You can display the details for each meter pin on the map, regardless of the status (color) of the pin.

1. Tap the pin for which you want to display details.
The system adjusts the map to show the pin you tapped in the center of the map and displays the following:
 - Customer name.
 - Address.
 - Endpoint / meter ID.
 - Reading – if you have not captured a reading, the pin is red and the label is Unread. If applicable, an associated flag displays to the right of the reading.
2. Tap the space beside the reading to display the pin in the Meters screen.

Chapter 6: Reading and Logging Pressure

Pressure readings include the endpoint (MIU) ID, the pressure graph, and the high and low limits for the pressure log. Like the meter readings, the system stores a maximum of 96 days of pressure readings.



A pressure monitor attached to an endpoint is required to take pressure readings.

Capturing a Pressure Reading

To take a pressure reading, verify that your device is paired with a belt clip transceiver or mobile data collector.

To capture a pressure reading, follow these steps.

1. In the app, tap **Pressure**.

The following screen appears.

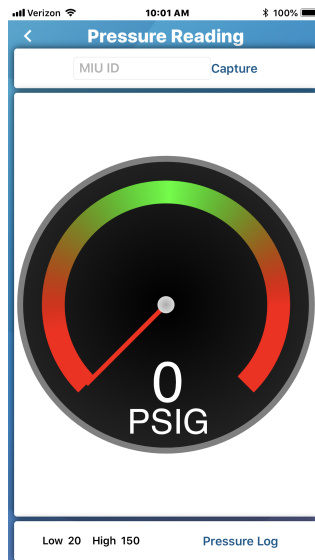


Figure 57 – Pressure Reading Screen

2. In the **MIU ID** field, type the ID number for an endpoint.
3. Tap **Capture** to obtain the pressure reading for the endpoint.

The app can wait up to 30 seconds to receive the pressure reading. The reading displays in the center of the gauge and the needle indicates the pressure range, which should be in the green zone.

Viewing Logged Pressure Readings

The pressure log displays the pressure data logged for an endpoint. A pressure log displays the following information:

- Endpoint ID.
- Dates of the previous 96 days.
- Time the data was retrieved (in 24-hour format).
- High and low limits.

To log the pressure reading for an endpoint, follow these steps.

1. In the app, tap **Pressure**.
2. Tap **Pressure Log** in the bottom right corner of the Pressure screen.

The system displays the following screen.

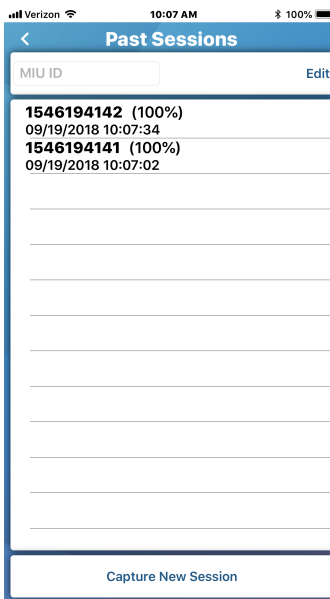


Figure 58 – Past Pressure Readings

3. Tap a past session to display the pressure log for the session.

- To search for the pressure log of a specific endpoint, type the ID for the endpoint in the **MIU ID** field.

The system displays the log.

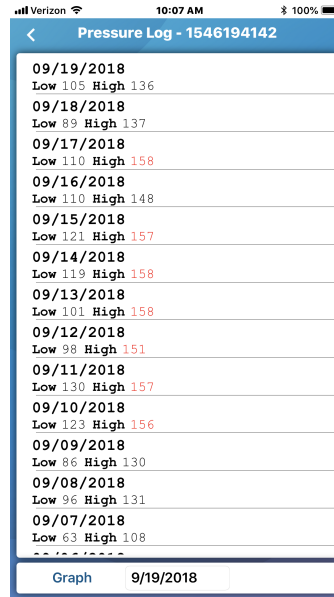


Figure 59 – Pressure Data Log

Deleting a Past Pressure Log Session

You can delete past pressure log sessions from the device.

To delete a past pressure log session, follow these steps.

- Tap **Edit** in the top right of the Past Sessions screen.
- Select the sessions you want to delete, and then tap **Delete** in the bottom left corner of the screen.

This page intentionally left blank.

B

BCT

Belt clip transceiver.

E

Endpoint

A piece of equipment that collects water usage readings, such as a meter.

I

IR

Infrared.

M

MIU

Meter Interface Unit, also called an endpoint.

O

OEM

Original Equipment Manufacturer.

R

RF

Radio Frequency.

T

transceiver

Device that transmits and receives communications, in particular a combined radio transmitter and receiver.

A

accounts

 filtering 47

 viewing 46

application, downloading 5

B

belt clip transceiver 3

belt clip transceiver, pairing 9

C

capturing a pressure reading 59

credentials 3

D

data log 26

 capturing 26

 reviewing in list view 28

 sharing 32

 viewing 25

 viewing as a graph 29

data log settings, modifying 15

deleting a past pressure log session 61

devices 3

downloading, application 5

E

E-CODER® 25

editing dials 55

entering a manual reading 50

I

IR 27

L

logging data 25

M

meter reading

 skipping 50-51

 starting 40

 stopping 42

MIUs

 filtering 22

 searching for 22

N

Neptune® 360™ Mobile

 Logging In 6

 Logging Out 7

O

- off cycle 26
- operating systems
 - Android 2
 - iOS 2
- Other Term
 - Subterm 10

P

- product description 1

R

- receiving transmissions 21
- RF 27

S

- selecting meters to read 36
- sharing RF test readings 24
- supported devices 2
- syncing or unloading captured readings 45

T

- transceiver 3
 - MRX920™ 3

V

- Viewing 47
 - logged pressure readings 60

W

- warning message 48



Neptune Technology Group Inc.

1600 Alabama Highway 229
Tallassee, AL 36078
USA Tel: (800) 633-8754
Fax: (334) 283-7293

Neptune Technology Group Canada Co.

7275 West Credit Avenue
Mississauga, Ontario L5N 5M9
Canada Tel: (905) 858-4211
Fax: (905) 858-0428

Neptune Technology Group Inc.

Avenida Ejercito Nacional No 418
Piso 12, Despacho 1203
Colonia Polanco V Sección
C.P. 11560 Delegación, Miguel Hidalgo
Mexico D.F.
Tel: (55) 5203-5708, (55) 5203-4032,
(55) 5203-5294

Online
www.neptunetg.com

