Beacon Gateway App

VERSION 1.1

Version History

Date	Description	Author	Version
08/10/2018	Initial Creation	C Ginder	1.0
02/08/2019	Added FCC Compliance Statement	C Ginder	1.1

Contents

1 Document Overview

This document was created by LHP Telematics as a user guide for the Bluetooth Beacon Gateway application.

1.1 Terms and Acronyms
Table 1 lists the definitions for the terms and acronyms that will be used in this guide.

TABLE 1: TERMS AND ACRONYMS

Term/Acronym	Definition
LHPT	LHP Telematics, LLC
TCU	Telematics Control Unit
BLE	Bluetooth Low Energy
Advertisement	Data broadcast by a beacon

1.2 Beacon Modes
The Bluetooth Beacons have two modes: Configuration and Asset Tracking.
- **Configuration Mode:** The beacon is in a power-saving mode and will only send an advertisement when bumped.
- **Asset Tracking Mode:** The beacon is configured for an asset and will send an advertisement every two seconds.

1.3 Beacon Reporting
Once a Bluetooth Beacon has been bumped, it begins sending advertisements every 2 seconds. The advertisements will include a snapshot of attachment hours, which are accrued as whole hours based on the amount of time the beacon detects vibration.

1.4 Application Modes
BACKGROUND SCANNING

When you begin scanning for beacons, the Beacon Gateway app will continue to scan even if you switch apps, swipe the task away, or put your phone to sleep. It will only stop scanning if you open the application menu and tell it to stop scanning.

CROWD SOURCING

The app is capable of scanning beacons that may not be in your customer account, which is called crowd sourcing. While it is capable of scanning those beacons, *only data from beacons that are in your customer account will be visible to you. Data from beacons that are not registered to your account will not appear in the app.*

1.5 Application Download
To download the Beacon Gateway app, search for Beacon Gateway in the Google Play Store and Apple App Store.
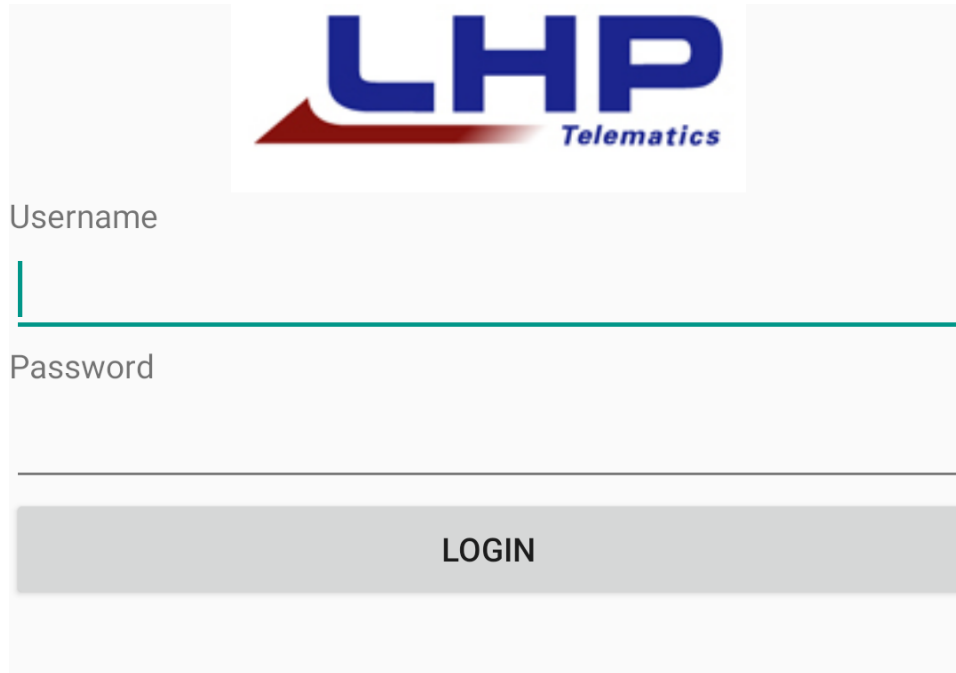
1.6 Beacon Mounting Instructions

Complete the following instructions to mount the beacon to an attachment.

1. Weld the ring onto the desired attachment.
    a. Remove any paint as required before welding.
2. Paint the ring and welded surface.
3. Program the beacon using the mobile app instructions as presented in this guide.
    a. It is possible to provision the beacons before mounting them to attachments.
4. Insert the beacon into the ring.
5. Insert the snap ring to complete the installation.

2 Beacon Gateway App

The Beacon Gateway App can be used to locate and provision LHPT BLE Beacons. Log in to the app using your LHPT Equipment Intelligence web portal account credentials.
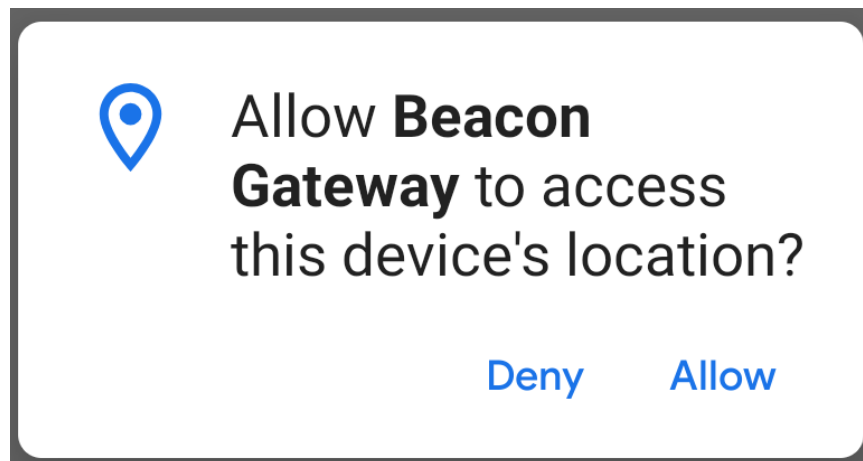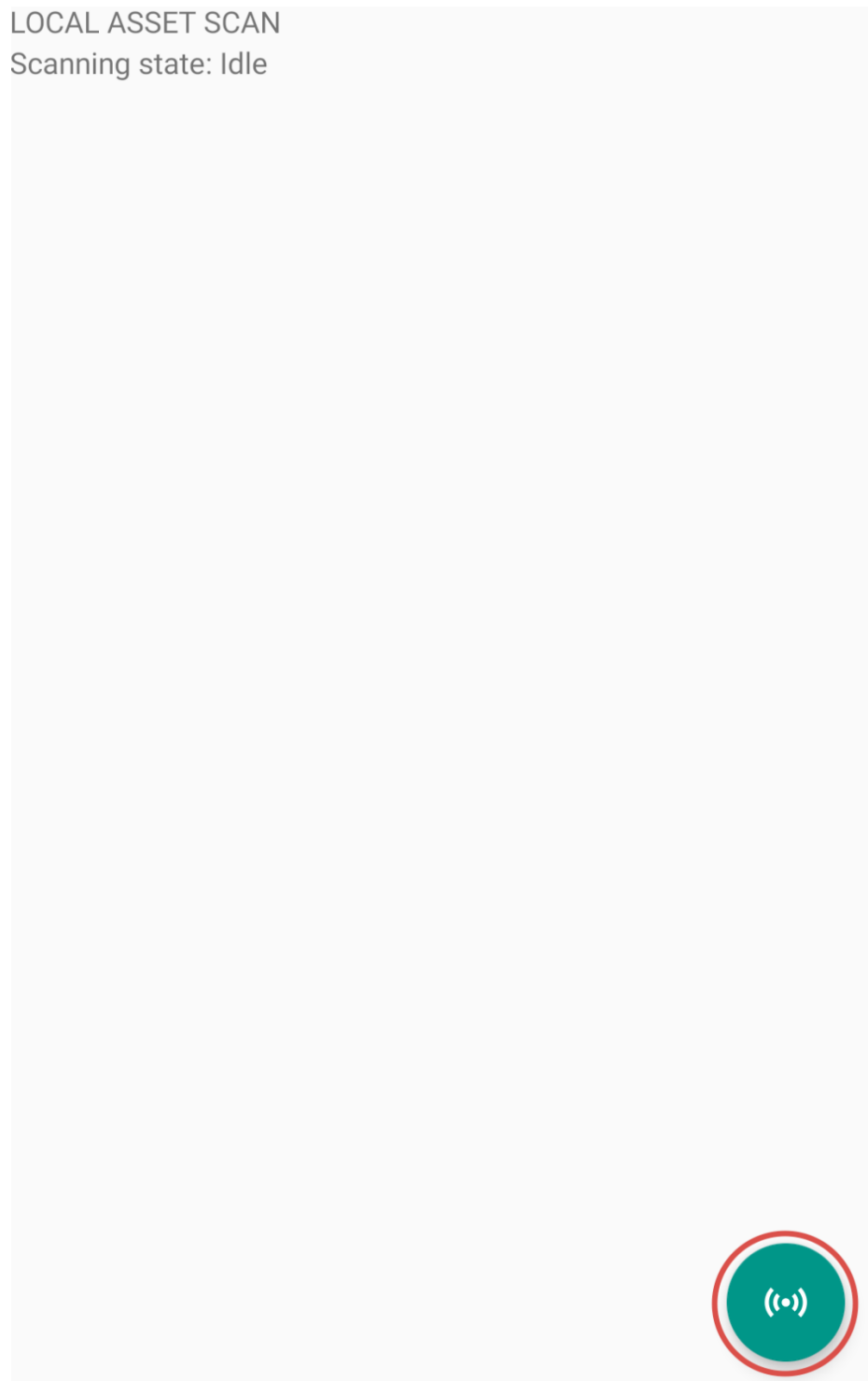

NOTE: If you do not have an Equipment Intelligence user account, contact your company's telematics admin user to have an account created for you.
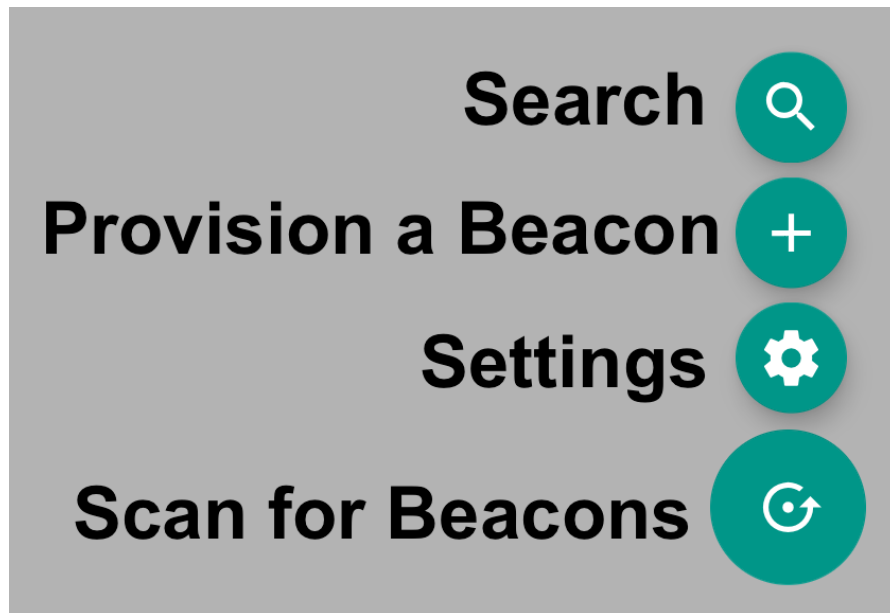
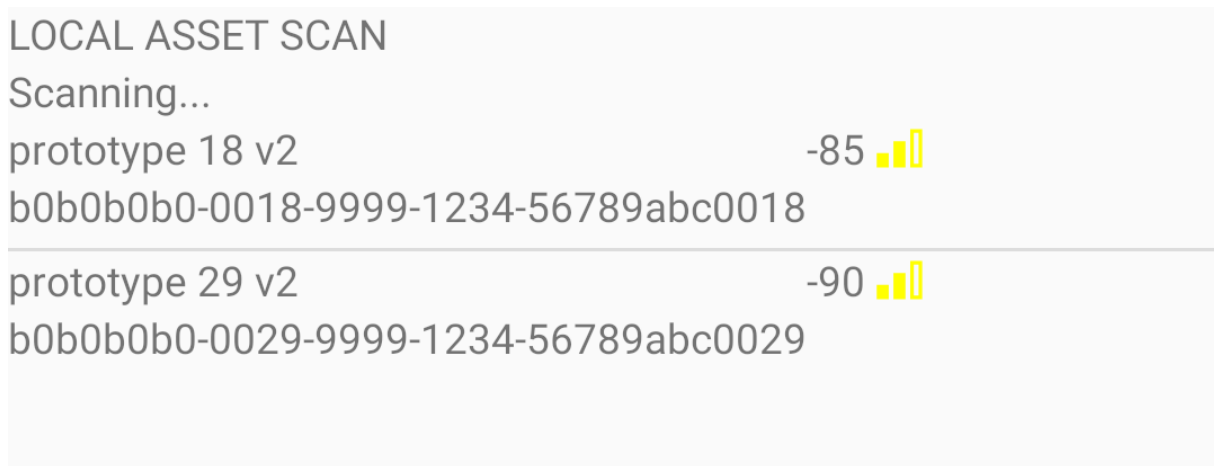Give the app permission to access your phone's GPS and Bluetooth.

Until you scan for beacons, the Home page of the app will be blank. Click the circular menu button at the bottom of the page.

LOCAL ASSET SCAN
Scanning state: Idle

The menu has four options: Search, Provision a Beacon, Settings, and Scan for Beacons. Tap the bottom Scan for Beacons button to look for beacons that are near you.
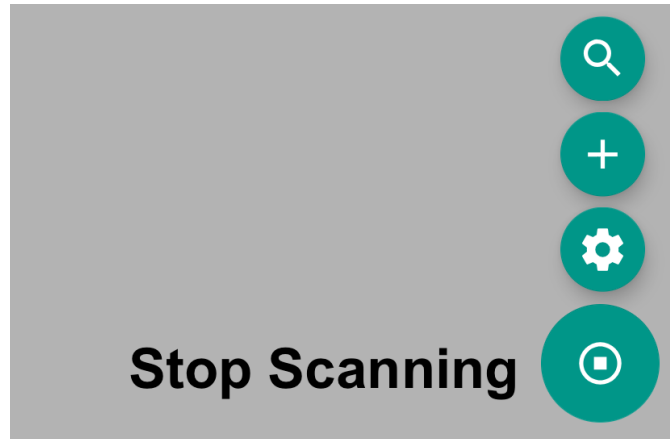

The app will begin scanning for nearby provisioned beacons that are in your customer account. It will list the Asset Name, Beacon ID, and RSSI for nearby beacons.

NOTE: A green RSSI indicates a beacon is close to you, a yellow RSSI indicates a beacon is moderately far away from you, and a red RSSI indicates a beacon is far away from you.

If you want to stop scanning, tap the Stop Scanning button at the bottom of the menu. The app will continue to scan for beacons until you tell it to stop, even if you switch applications or put your phone to sleep.

Clicking on a beacon opens its Details page. The Details include the Asset Name, Beacon ID, Number of Attachment Hours, Attachment Type ID, Battery Status, the ability to mark a beacon as lost, and the last known location.

NOTE: For the time being, the Attachment Type ID will always be 0.

2.1 Provision a New Beacon

To provision a new beacon, click the menu button and then click the plus icon.

On the Provision Beacon screen, enter an Asset Name.

Click the Verify Barcode button to open your phone's camera so that you can scan the beacon's barcode. You *must* be able to view and scan the barcode to successfully provision a beacon.

Beacon UUID
b0b0b0b0-0021-9999-1234-56789abc0021

Tracked Asset Name

prototype 21

Attachment ID

☐ Smart Attach Capable Attachment?

0000

VERIFY BARCODE

Barcode verified

Beacon is Bumped

PROVISION

Connect to device

Assign Configuration

Register with LHPT

CLOSE

Bump the beacon to wake it so that it begins reporting.

Beacon UUID
b0b0b0b0-0021-9999-1234-56789abc0021

✓ Tracked Asset Name

prototype 21

✓ Attachment ID

☐ Smart Attach Capable Attachment?

0000

✓ **VERIFY BARCODE**

Barcode verified

✓ Beacon is Bumped (8/10/2018 2:13:58 PM)

PROVISION

Connect to device

Assign Configuration

Register with LHPT

CLOSE

Tap the Provision button.

Beacon UUID
b0b0b0b0-0021-9999-1234-56789abc0021

✓ Tracked Asset Name

prototype 21

✓ Attachment ID

☐ Smart Attach Capable Attachment?

0000

✓ **VERIFY BARCODE**

Barcode verified

✓ Beacon is Bumped (8/10/2018 2:13:58 PM)

PROVISION

Connect to device

Assign Configuration

Register with LHPT

CLOSE

NOTE: Assets cannot have duplicate names. If you have entered a duplicate name, you will receive the following error message when you attempt to provision the beacon.

Duplicate Asset Name

That name is already in use. Please choose a unique name for this asset.

OK

After tapping Provision, the app will connect to the beacon, assign the correct configuration, and register the beacon and asset with LHPT. Tap Close to return to the Home page.

Beacon UUID
b0b0b0b0-0021-9999-1234-56789abc0021

✓ Tracked Asset Name

beacon 21

✓ Attachment ID

☐ Smart Attach Capable Attachment?

0000

✓ VERIFY BARCODE

Barcode verified

✓ Beacon is Bumped (8/10/2018 2:16:09 PM)

PROVISION

✓ Connect to device: Services Discovered

✓ Assign Configuration: Beacon fully configured!

✓ Register with LHPT

CLOSE

The newly-provisioned beacon will appear on the Home page.

LOCAL ASSET SCAN

Idle

beacon 21   -34 ▪▪▌
b0b0b0b0-0021-9999-1234-56789abc0021

prototype 18 v2   -81 ▪▪▐
b0b0b0b0-0018-9999-1234-56789abc0018

prototype 29 v2   -88 ▪▪▐
b0b0b0b0-0029-9999-1234-56789abc0029

2.2 Mark a Beacon as Lost

To mark a beacon as lost, click a beacon name on the Home screen.

LOCAL ASSET SCAN

Idle

beacon 21   -34
b0b0b0b0-0021-9999-1234-56789abc0021

prototype 18 v2   -81
b0b0b0b0-0018-9999-1234-56789abc0018

prototype 29 v2   -88
b0b0b0b0-0029-9999-1234-56789abc0029

On the Beacon Details page, scroll to the bottom of the details and check the box for Mark as Lost.
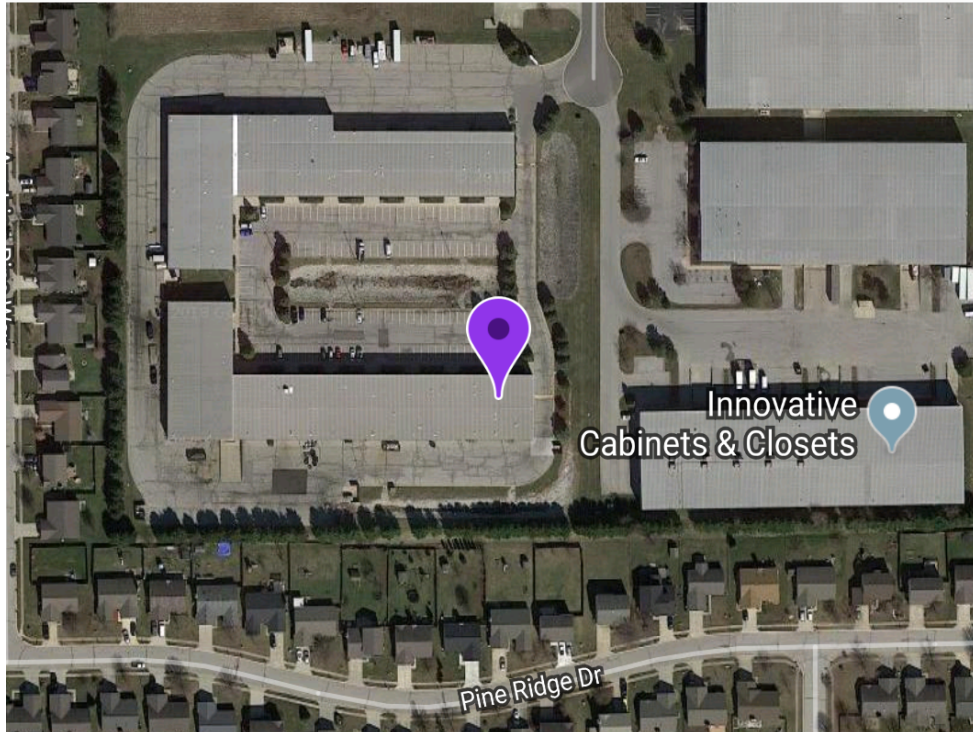
Beacon UUID

b0b0b0b0-0021-9999-1234-56789abc0021
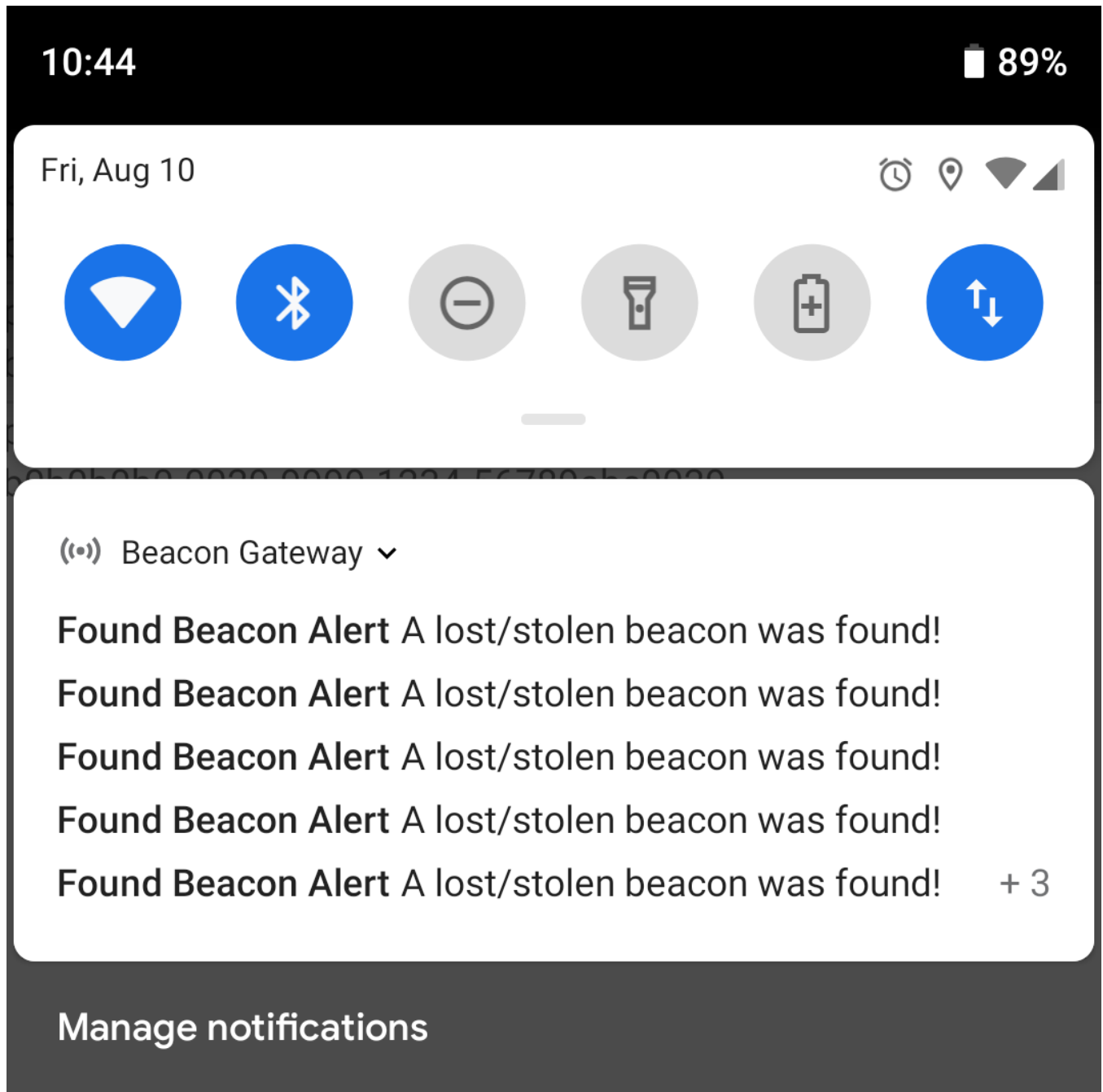
Attachment Hours

0

Attachment Type ID

0

Battery Status

False

☑ Mark as Lost?

Last Known Location: 8/10/2018 2:17:45 PM UTC

If the beacon is scanned by any phone from any user in your customer account, you will receive an alert notification that the beacon has been found.
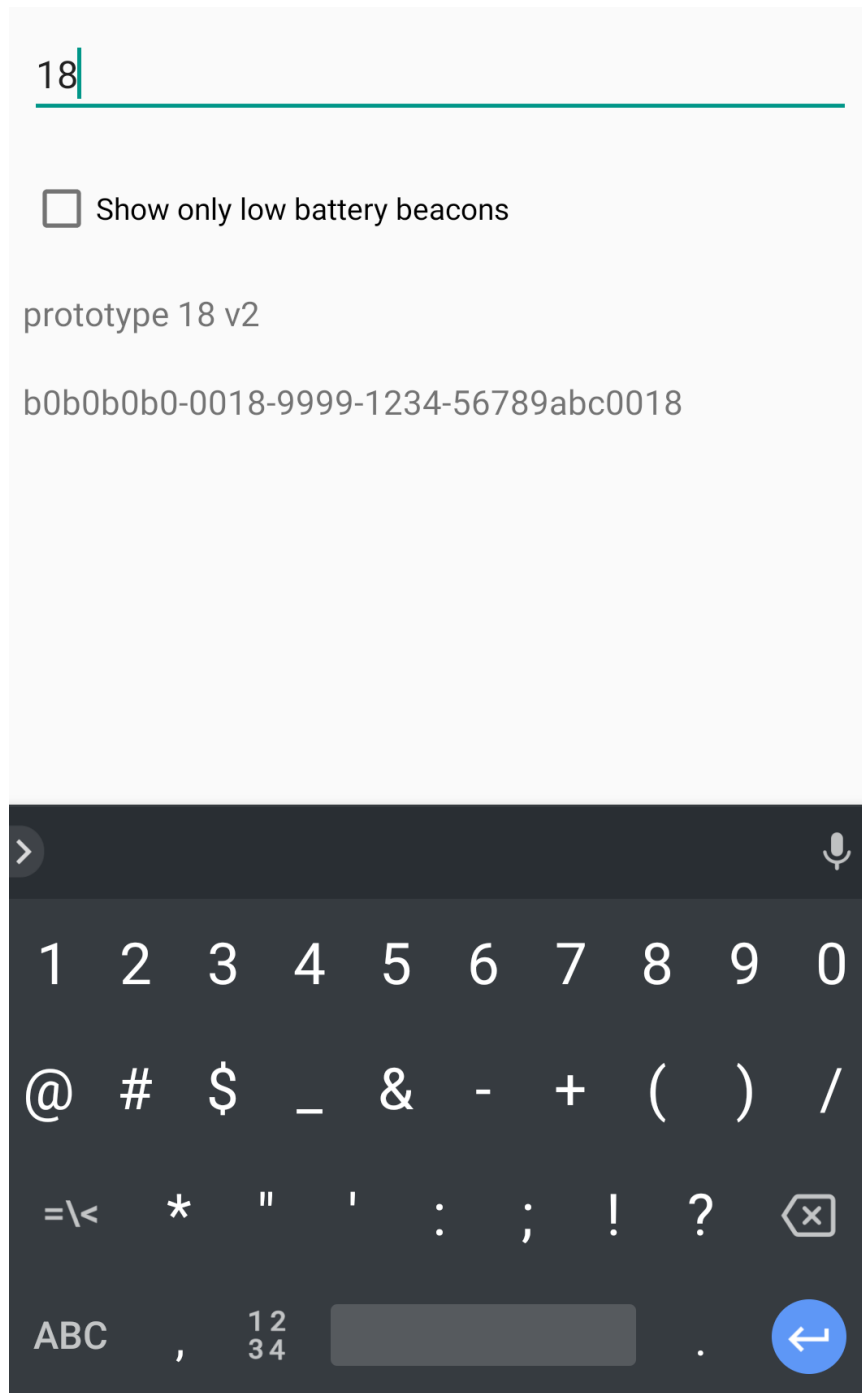
2.3 Search Beacons

To search your beacons, tap the menu button and then tap the magnifying glass icon.

In the Search bar, begin typing the name or ID of the beacon you want to find. The results will filter as you type.

Check the box to Show Only Low Battery Beacons if you only want to search your beacons that have a low battery.
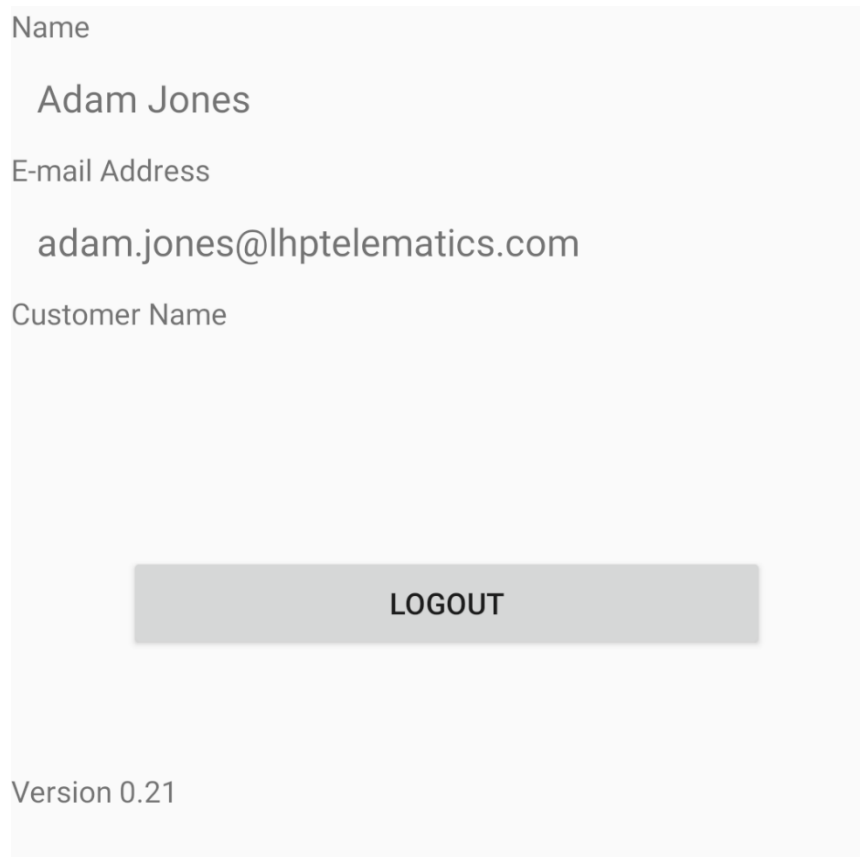
2.4 Settings

To view your account settings, tap the menu icon and then tap the gear icon.

You can then view your account settings or log out of the app.

Part 15 FCC Rules

NOTICE:

This device complies with Part 15 of the FCC Rules [and with Industry Canada licence-exempt RSS standard(s)].

Operation is subject to the following two conditions:

    (1) this device may not cause harmful interference, and

    (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

    (1) l'appareil ne doit pas produire de brouillage, et

    (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

NOTICE:

Changes or modifications made to this equipment not expressly approved by MARQUARDT Switches, Inc. may void the FCC authorization to operate this equipment.