NAVITAS
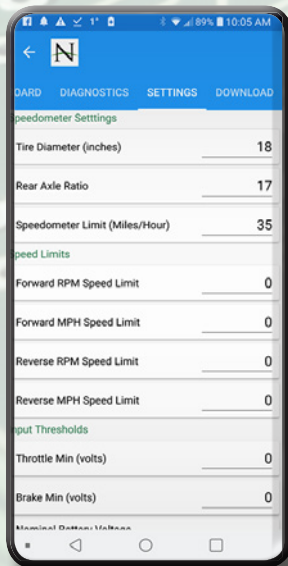
User App and Dealer / Technician App
Set-Up and Instruction Guide
for AC

Android

IOS

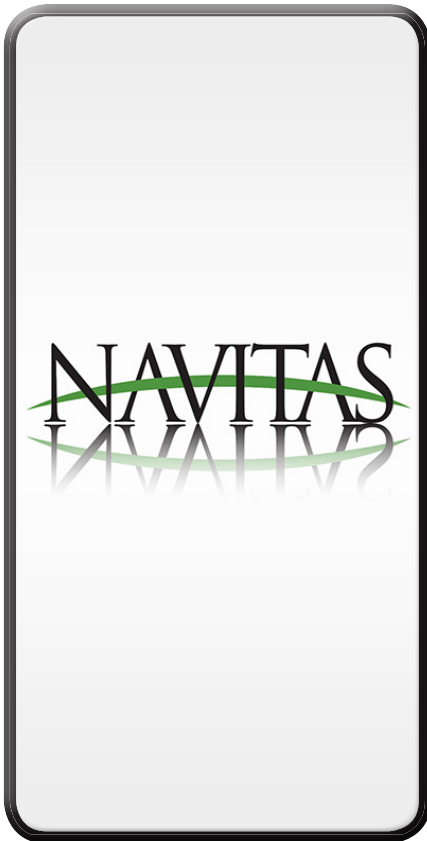Tablet (IOS & Android)

Available from:

ANDROID APP ON
Google play

Available on the
App Store

## NavitasVS.com

INSTALLATION

The **Navitas Customer App** is available online through Google Play and the Apple App Store.

The **Dealer/Technician App** is available by contacting Navitas at 1-844-576-2499.

- Navitas will register your email and ask which operating system you are using on your phone (Android vs IOS).

- Android users will receive an email from Navitas with access to the Dealer/Technician App on Google Store. IOS users will receive and email directly from Apple TestFlight with a link to the App.

- Download App onto phone.

- Install the Controller and turn car to ON
  - TSX controller will show a Green Light
  - TAC controller will blink once to show that power is connected.

NOTE: Some car models will require you to turn ON the RUN/TOW switch and others will power ON with a key switch.
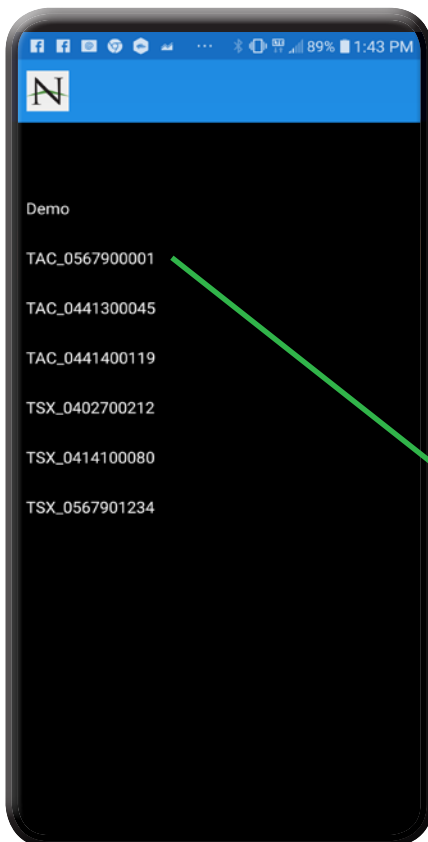
- Open the App and choose to connect to the TSX or TAC controller shown.

- The list of available controllers will include the serial number so you can make sure you are connected to the serial number on the appropriate controller.

- Each controller comes loaded with the appropriate software for your vehicle already installed and functional.

- NOTE: We occasionally provide diagnostic updates that can be downloaded into the controller (if recommended by the engineering division of Navitas).

- When you select the appropriate serial number, the DASHBOARD page will appear.

- From the DASHBOARD, select the SETTINGS tab to begin setting up your car.
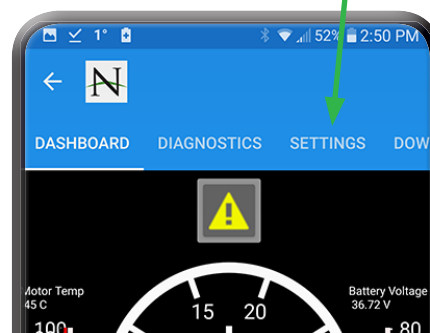
SETTINGS TAB

CAR SETUP:

- Select the "Settings" tab and verify the settings listed.

- If any changes are made, remember to select "done" on keypad and then select "SAVE" at the bottom of the Settings page.
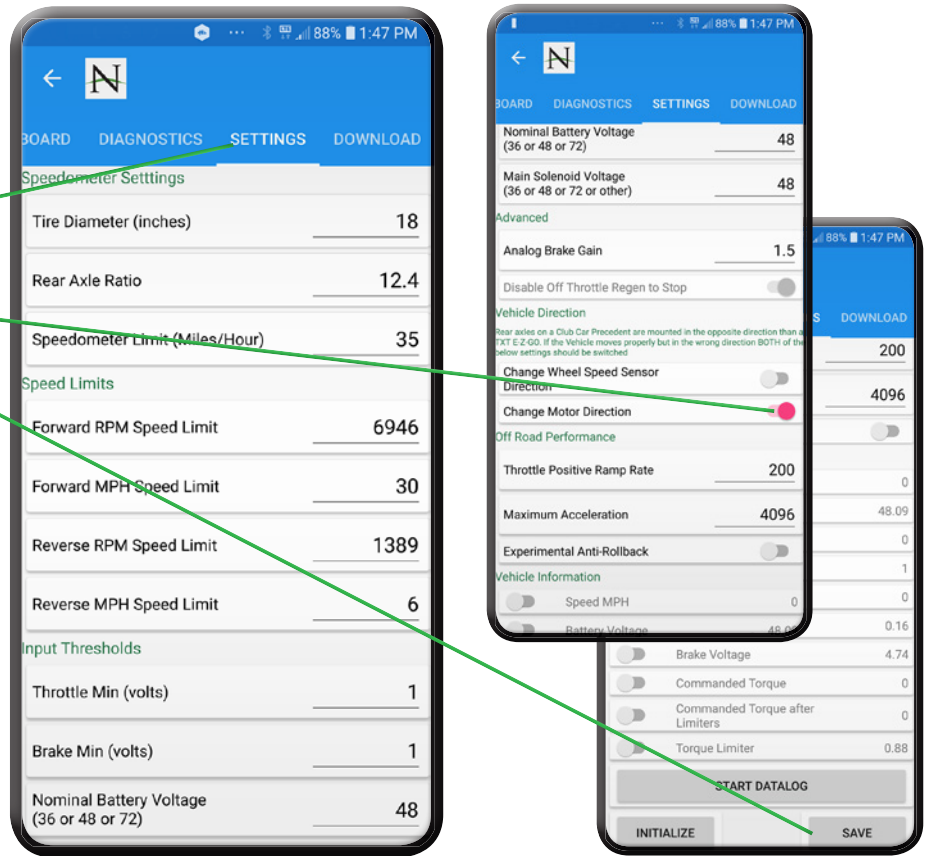
Data Logging:

On the bottom of Settings page, there are toggle switches you can choose to log the performance of your car.

- Choose the desired toggle switches and then select the "START DATALOG" button.

- This will show you real time graphing of the car's performance.

- This information cannot be saved and only viewed with each drive.
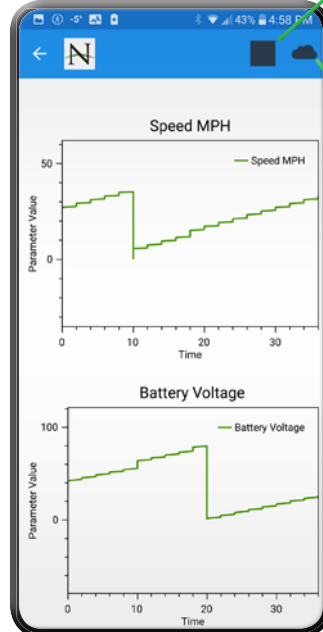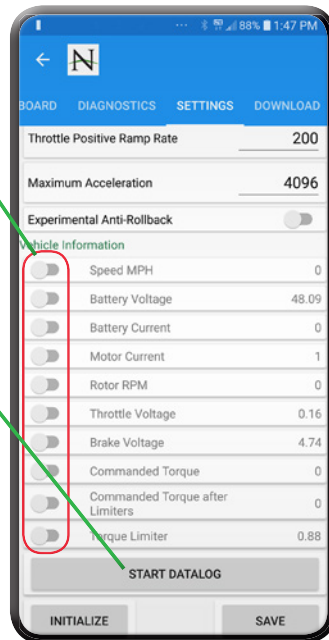
- You can stop and start the logging with the icon at the top right of the page.

- Select the cloud icon to share the data with Navitas Engineering if asked to.

8 Steps to Download AC Software - IMPORTANT

Controllers arrive from the factory with software already installed. If directed by Navitas to download an updated version of your software for the appropriate motor on the car, then here are the steps to download:

1. Go to Download Page and select the newest version of software directed by Navitas for your vehicle model/motor listed from top of page. (NOTE, there are also beta firmware updates available to utilize if instructed by Navitas Engineering to try)

2. Select'YES' to confirm download when prompted

> **WARNING: When you have selected `YES`to confirm download, align the phone/tablet within 1 meter of controller and DO NOT MOVE PHONE OR USE PHONE IN ANY WAY until the download completes (usually 3-4 minutes pending connection).**
>
> **THE CONTROLLER COULD BECOME PERMANENTLY DISABLED IF THE PHONE/TABLET LOSES CONNECTION TO THE CONTROLLER DURING THE DOWNLOAD!**

3. Close App and restart App

4. Connect to vehicle

5. Go to 'SETTINGS', Tab and Scroll down to bottom

6. Select 'INITIALIZE' and 'CONFIRM'

7. Select 'SAVE' and 'CONFIRM'

8. Reconfigure Settings to vehicle and user preferences.
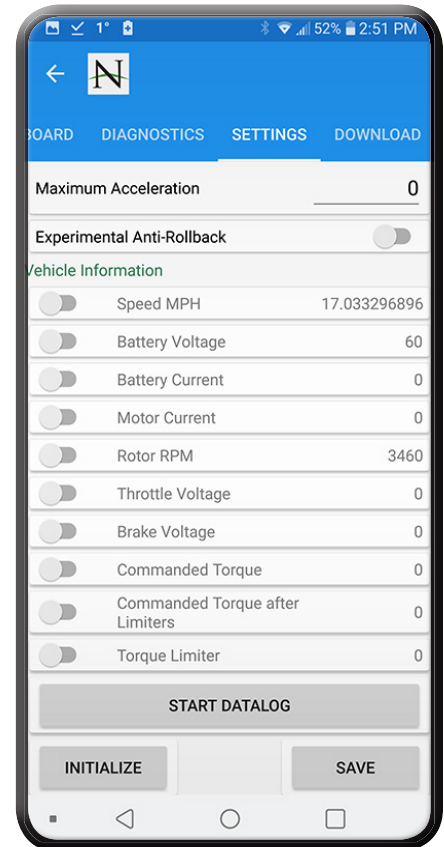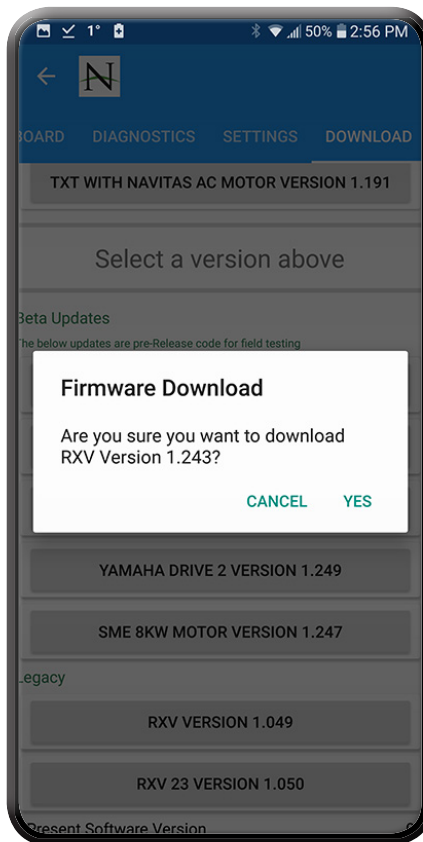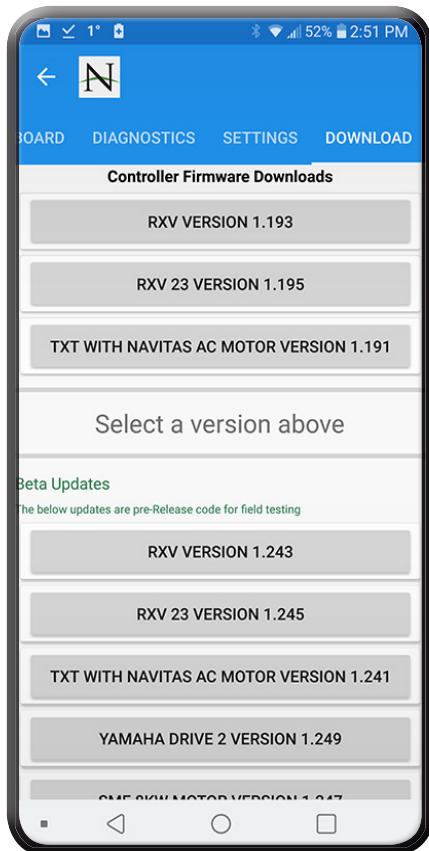
AC APP DASHBOARD FUNCTIONS EXPLAINED:

Here is a review of each item on each page of the AC App Dashboard

- **Speedometer** – if tire size on the settings tab is correct, then the speedometer will report speed directly from the vehicle

- **Motor Temperature** – measures the temperature of the motor

- **Lock Button** – select this button to lock or unlock car remotely.

- **Direction status** – F N R is shown
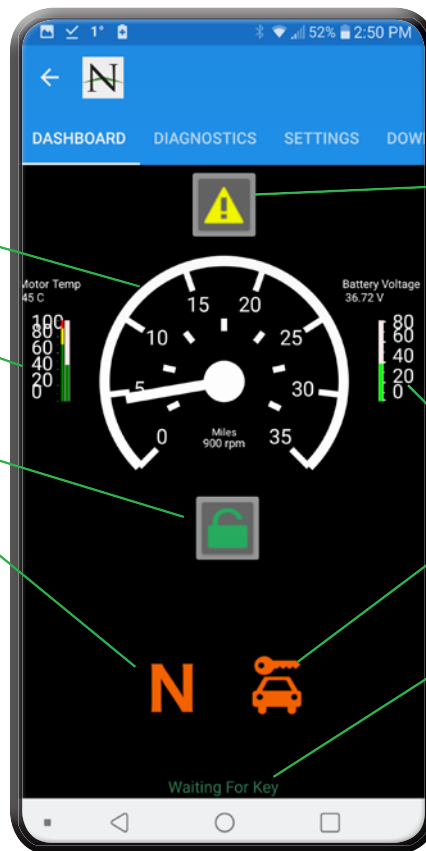
- **Caution sign** – indicates errors stopping vehicles or warnings about state of vehicle. When you select the caution sign, faults will show. You can choose email and it will generate an email to send to your dealer or you can cancel and correct the faults

- **Battery Voltage** – measures the battery charge

- **Key Icon** – shows key is present in vehicle and turned on or greyed out if off

- **Green Words on Bottom** – indicates the vehicle's driving status (e.g. waiting for key, waiting to be unlocked, waiting for charger to be removed, waiting for tow switch, battery too low, waiting for forward or reverse switch, waiting for throttle to release, waiting for brake switch to be released, waiting for brake pedal to be released, waiting for foot switch, driving)
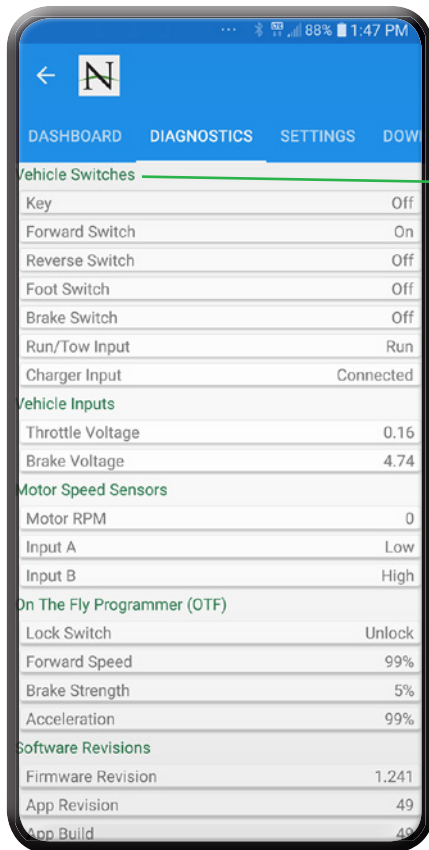
Diagnostics:

Vehicle Switches

*These switches measure signals that are either driven to ground or battery voltage

- Key – shows on or off
- Forward Switch – shows on or off
- Reverse Switch – shows on or off
- Foot Switch – shows on or off
- Brake Switch – on a Curtis RXV it will show on or off
- Run/Tow Input – shows run or tow.
  On either version of RXV, the tow disengages the brake and non-RXV models the Tow turns the vehicle off
- Charger Input – shows connected or off
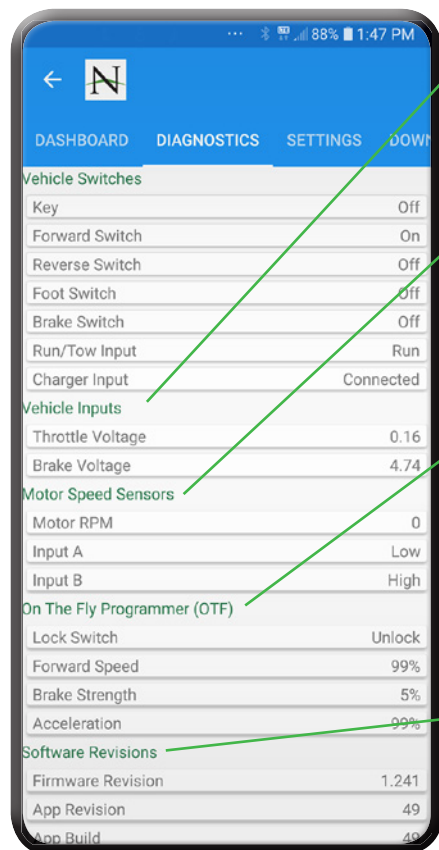
Vehicle Inputs

*These are analog signals that measure between ground and 5V

- Throttle Voltage – displays present voltage. Most vehicles run from .5-4.5 volts
- Brake Voltage – Shows on RXV and displays present voltage (usually .5-4.5 v)

Motor Speed Sensors

*These are digital signals that measures ground or 5V

- Motor RPM – a calculation of speed utilizing input A and input B pulses
- Input A – shows low or high and changes rapidly if vehicle is moving
- Input B – shows low or high and changes rapidly if vehicle is moving

On the Fly Programmer (OTF)

- *If no OTF present, values default to smooth drive settings
- Lock Switch – when locked, the vehicle will store the 3 settings listed below:
- Forward Speed – measured as a percentage of maximum vehicle speed
- Brake strength – when you are off the throttle, it measures the percent of maximum deceleration torque
- Acceleration – measurement of maximum acceleration torque

Software Revisions
- Firmware Revision – Revision of internal controller code
- App Revision – Revision of current App
- App Build – Build of Current App

Settings Page
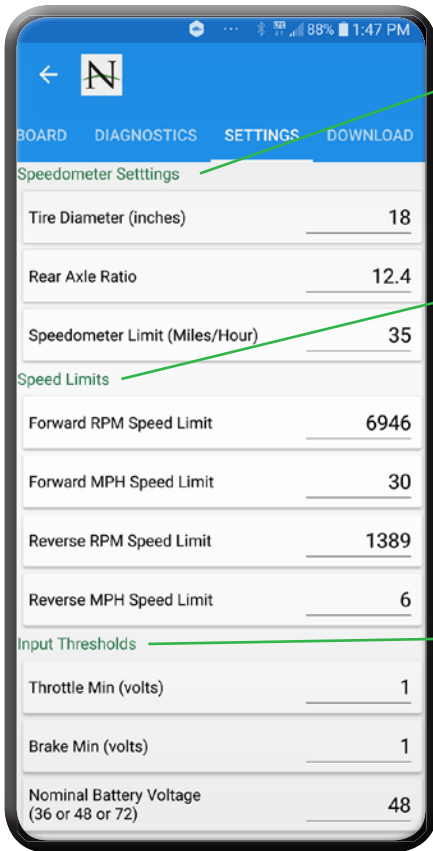
Speedometer Settings

- Tire diameter (inches) – used to calculate vehicle speed and speed limits
- Rear Axle Ratio – used to calculate vehicle speed and speed limits
- Speedometer Limit (mile/hr) – sets maximum displayed speedometer on the dashboard

Speed Limits

- Forward RPM Speed Limit – linked to Forward MPH Speed Limit. Can change either one
- Forward MPH Speed Limit – linked to Forward RPM speed Limit. Can change either one
- Reverse RPM Speed Limit – linked to Forward MPH Speed Limit. Can change either one
- Reverse MPH Speed Limit – linked to Forward RPM speed Limit. Can change either one
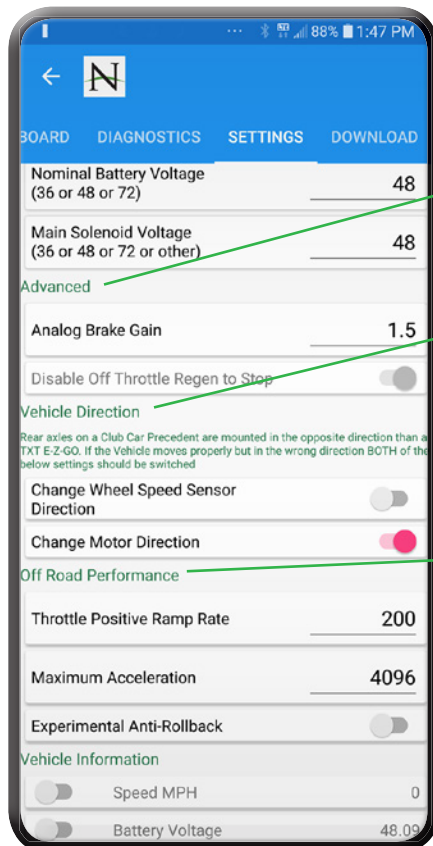
Input Thresholds

- Throttle Min (volts) – Minimum voltage required for throttle to start moving vehicle
- Brake Min (volts) – for RXVs minimum voltage to begin braking vehicle
- Nominal Battery Voltage (36, 48 or 72V) – set to your nominal battery pack voltage
- Main Solenoid Voltage (36, 48 or 72V) – allows you to set the solenoid voltage

Advanced

- Analogue Brake Gain – allows you to adjust the stiffness of RXV braking.
- Disable Off Throttle Regen to Stop – greyed out and not used

Vehicle Direction
Rear axles on a Club Car Precedent are mounted in the opposite direction than a TXT –E-Z-GO. If the Vehicle moves smoothly but in the wrong direction, then both of the below settings should be switched

- Change Wheel Speed Sensor Direction – with Club Car, this is turned off
- Change Motor Direction – with Club Car, this is turned off

Off Road Performance

- Throttle Positive Ramp Rate – shows torque ramp rate
- Maximum Acceleration – shows maximum torque you will ramp up to
- Experimental Anti- Rollback – not used at this time

SETTINGS TAB
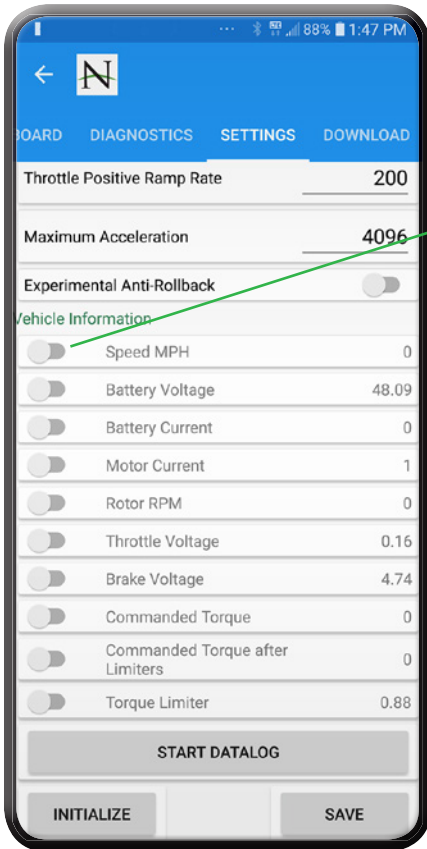
*Select toggle switches to log vehicle performance. Once logging begins, a start/stop button appears in the top right corner of page. Information cannot be saved but can be shared with Navitas Engineering via the cloud button at top right on page.

- Speed MPH
- Battery Voltage
- Battery Current
- Motor Current
- Rotor RPM
- Throttle Voltage
- Brake Voltage
- Commanded Torque – used for debugging
- Commanded Torque after Limiters – used for debugging
- Torque Limiter- used for debugging
- Start Datalogue button – navigates to datalog screen
- Initialize button - used for restoring default parameters
- Save button – used to save changes in settings internally

Sample Screens

Speed MPH and Battery Voltage (left), Battery Voltage and Rotor RPM (right)
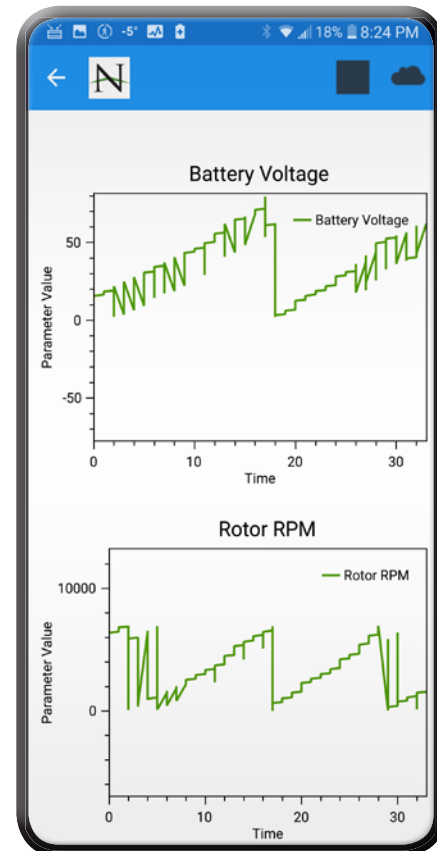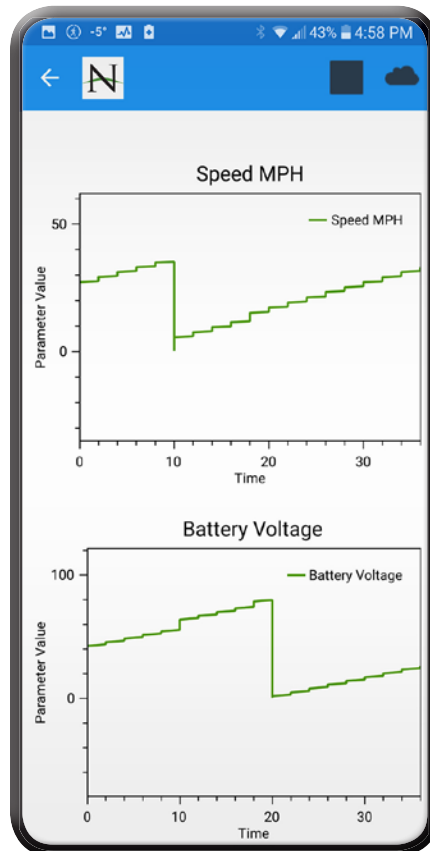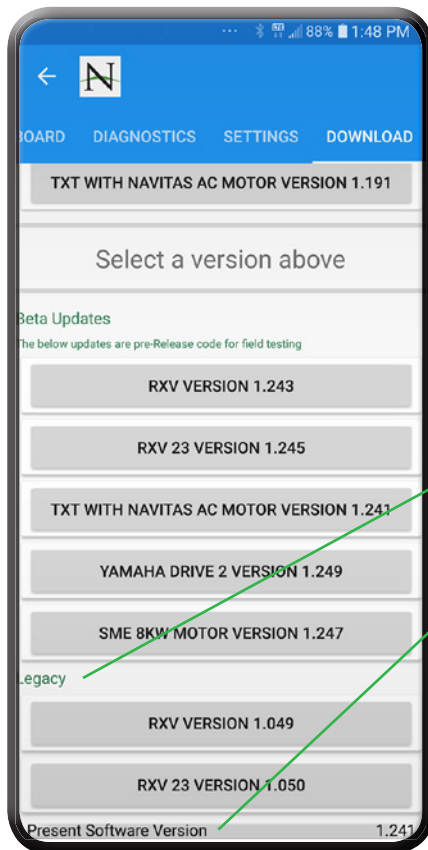
DOWNLOAD TAB
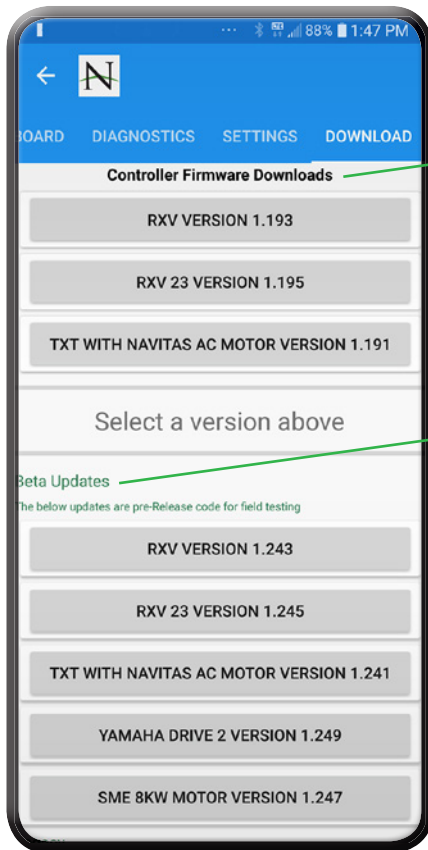
Controller Firmware Downloads

- Top Firmware versions are present releases

Beta Updates:

- Trial software for testing of minor fixes

Legacy Updates:

- Past software versions available

- Present Software Version – denotes current internal software version

Visit www.navitasvs.com/support or www.navitasvs.com/faq to see videos and pdf manuals for Bluetooth App assistance

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