

California Type Evaluation Program
Certificate of Approval
Weighing and Measuring Devices

For:

Transportation Network Measurement System (TNMS)

Models:

For iOS Platforms:

- Ride United Driver iOS 12.1 or higher
- Ride United iOS 13.3 or higher (Passenger)

For Android Platforms:

- Ride United Driver OS 6.0 or higher
- Ride United OS 5.0 or higher (Passenger)

Software Version Number: v1.0.0 or higher

Submitted By:

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Standard Features and Options

Standard Features:

- Single-rate, TNMS computes fare based on time and distance
- System components include mobile devices such as smartphones and tablets
- Electronic receipts
- Summing of Fares and Extras including Tolls
- Upfront customer charging capability with pickup and drop-off addresses entered
- Ability to adjust fare with discount at the conclusion of the ride
- Driver ability to cancel a ride
- Displays: Measured (M) miles (total distance traveled), fare miles (total distance less the distance traveled below a specified speed), wait time on the display, summing of fare, extras (surcharges), and tolls
- Wireless communication

Minimum Operating System:

- iOS: 12.1 or higher
- Android: 5.0 or higher

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Kristin Macey

Kristin Macey, Director

Effective Date: March 3, 2023

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Transportation Network Measurement System (TNMS)/ Yamsol Ride United Driver, Ride United

Application: The Yamsol Transportation Network Measurement System (TNMS) consists of the Ride United Driver and Ride United passenger mobile apps which can be downloaded to any Android or iOS mobile operating device. The Yamsol TNMS, used in conjunction with a digital network, determines the actual time elapsed and distance traveled during a network arranged ride to calculate a fare for transportation services. The fare is calculated by software services residing on the Yamsol TNMS servers using data transmitted by the driver's mobile device present in a vehicle and running the Yamsol Driver application. The rider's device running the Yamsol application displays information that allows the user to review the current rates(s) for the transportation service and request a ride.

Identification: The manufacturer name, model, and software version are accessible through the Ride United menu button in the top left of the screen. The Ride United app information is under the "App Info" section of the menu. See **Figure 1a** for how to access the ID information. The Ride United Driver and passenger Apps are distinguished by the color of the icon. The blue icon is for the driver App, while the black icon is for the passenger App. See **Figure 1b** for the App icons.

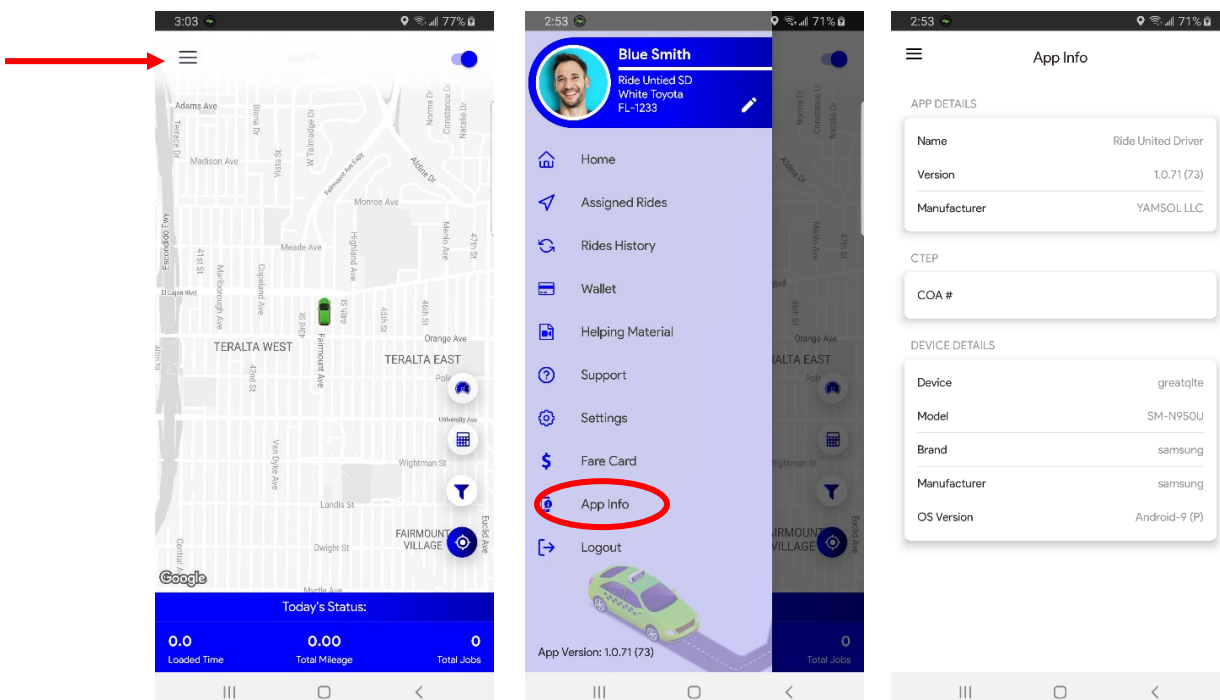


Figure 1a. Screen access to the required identification information



Figure 1b. Ride United Driver and Passenger App logos

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Transportation Network Measurement System (TNMS)/ Yamsol Ride United Driver, Ride United

Sealing: The algorithms used to calculate metrological data (time and distance) are hosted on secure servers. The servers are protected using industry-standard security measures and access is limited to only a few selected Yamsol employees who are Registered Service Agents (RSA). Yamsol RSAs are only allowed to update fare parameters from the portal. All communication to these servers is protected through encryption (Transport Layer Security, TLS). All code deployments (algorithm changes) are logged for auditing purposes.

The information that can be viewed in the audit trail includes all fare parameter changes by RSAs, changes made by the backend developer to the algorithm, and iOS/Android app changes in the fare/meter algorithm.

Officials can access the audit trail using the following URL address: <https://logs.rideunitedsd.com/>. The URL brings the user directly to the audit trail for all changes. There is no need to enter a username or password.

Operation: The Yamsol TNMS is operated on a touchscreen device. In the driver app, a ride is started by tapping the odometer button in the lower right of the screen (**Figure 2**). The rider app can request a ride by selecting a specific pickup location or using the current location. The rider app will calculate an estimated total fare for the ride and display it on the screen. See **Figure 3** for an example of the fare estimate screen in the rider app.

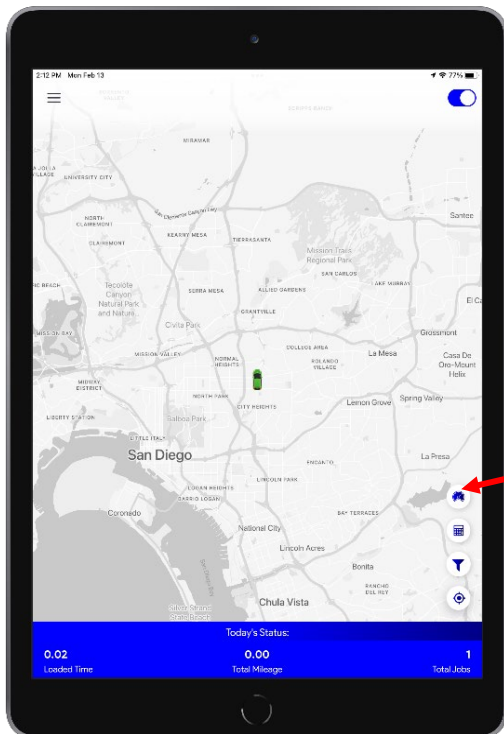


Figure 2. Red arrow indicates the odometer button which initiates a ride

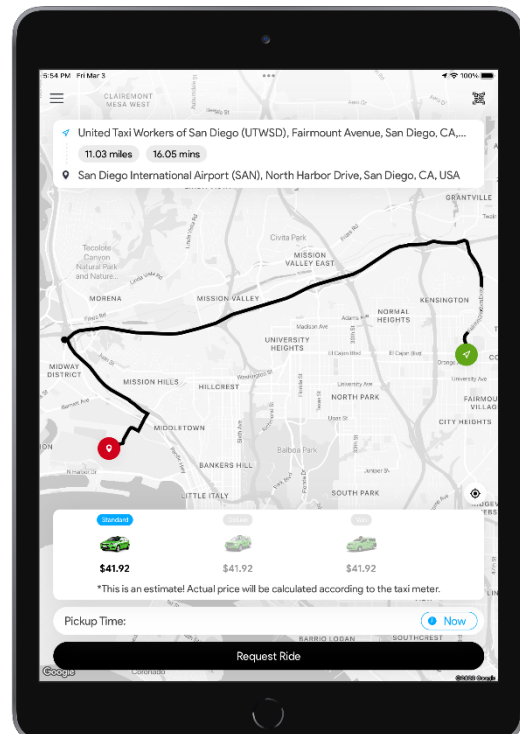


Figure 3. Passenger fare estimate screen

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In the driver app, once a destination address has been entered, select the green “Start Ride” button at the bottom of the screen. The total fare, distance, time, and other indications will begin to accumulate. The blue “Extras” box may add additional fees and tolls. The yellow “Abort” button may be used if the rider ran away, or the ride was started accidentally. Ending a ride is accomplished by tapping the red “End Ride” button at the bottom of the screen and confirming Yes or No. See **Figure 4** for an example of the driver main screen shown during a ride.

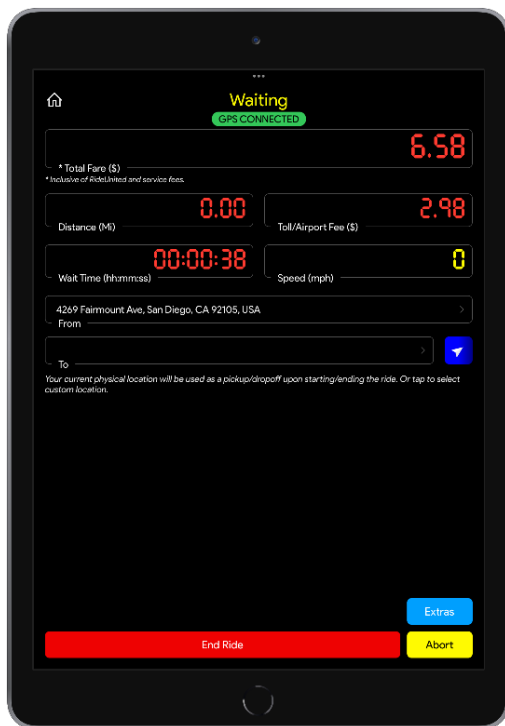


Figure 4. Driver main screen with “End Ride” button in red

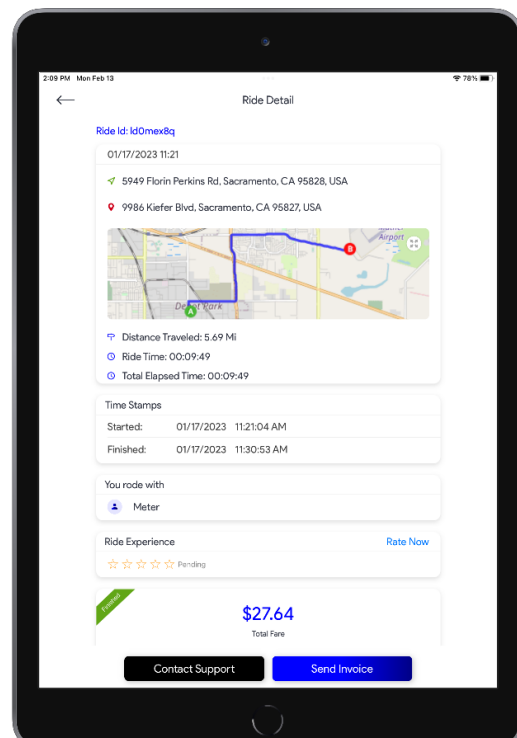


Figure 5. Ride detail (receipt) screen

Options to “Add Tip” and “Adjust Fare” appear on the next screen of the driver app. Once payment has been received, tap the grey “Payment Received” button and confirm Yes/No. A receipt may be sent to the customer from the next screen by entering the customer’s contact information. Tap the blue “Send Now” button to generate a ride receipt. See **Figure 5** for the Driver Summary screen example.

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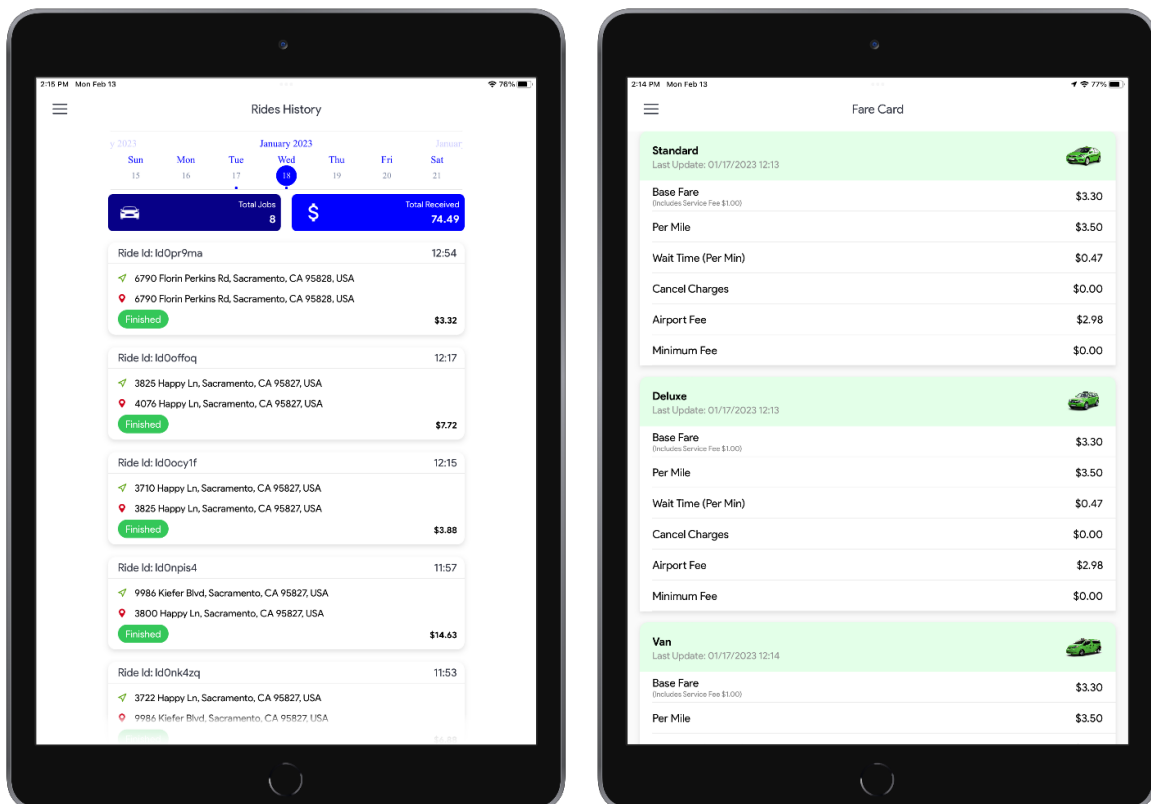
Test Conditions: The Yamsol Ride United driver and Ride United passenger Apps were installed on a Samsung Tab S7 and Apple iPad 6 for this evaluation. Both android and iOS devices and the driver and rider apps were evaluated. The emphasis of the type evaluation was on the Yamsol app software design, markings, operation, accuracy, repeatability, and performance. A series of tests were conducted to ensure the accuracy of the distance and time measurements. In addition to tests for repeatability on a certified measured mile course, tests were performed on routes that exposed the system to conditions that may contribute to the loss of, or interference with, the signals providing measurement data. These tests included objects that may obstruct or reflect signals, including tunnels and bridges, routes that do not follow a direct straight-line path, and changes in altitude. All displayed information was evaluated and measured to confirm compliance. Tests were conducted to determine compliance and accuracy of optional features such as tolls and additional fees. Receipts were generated electronically and transmitted via email and text message. Receipt format and content were evaluated.

Evaluated By: M. Lawrence (CA), A. Samujh (CA), and C. Nelson (CA)

Type Evaluation Criteria Used: *California Code of Regulations, Title 4, Division 9, Chapter 1, Article 1. General Code 1.10. and Section 5.60 Transportation Network Measurement Systems, 2022 Edition*

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Example(s) of the Device:



Ride United History and Fare Card screens