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GuardRail is an optional 2G/3G GPS tracking unit with OBD-II Interface and plug-n-play installation. Featuring OBD / CAN Bus J1939 data acquisition, Bluetooth connectivity, driving behavior event management, and user-defined reports, GuardRail is an ideal solution for Usage Based Insurance, Car Rental, Fleet Management of both Passenger Vehicles and Heavy-Duty Trucks and Teenage Driver Tracking.
Product Features

❖ Flexible Wireless network options
❖ Small and easy plug and play installation
❖ Ultra-low current consumption in deep sleep mode
❖ Data communication by SMS/TCP/UDP
❖ High GPS sensitivity
❖ Built-in 3-axis G-sensor
❖ FOTA firmware upgrade using FTP
❖ Configurable Real Time Tracking & Logging
❖ 32 user-defined geofences
❖ Built-in buzzer for configurable event
❖ Roaming preference settings
❖ Harsh driving behavior events
❖ Configurable power management
❖ OBDII data collection
❖ FMS / J1939 data collection
❖ Fuel economy calculation
❖ User defined OBDII event transmission
❖ OBDII Diagnostic trouble code reporting
❖ Intelligent event control engine
❖ Buffered event message of 150,000 positions
ELD SETUP

The ELD can be setup manually or using the plug n play installation. This section will describe each method in detail.

ELD MANUAL SETUP

To manually setup and configure the ELD, login to AxleHub, the web based dispatching application. Select ELD menu item from the Setup Data>Equipment>ELD as shown in figure i.

When Selected, a list of all the ELD’s previously defined in AxleHub will be displayed as shown in figure ii. Select the icon from this screen to manually add the ELD to AxleHub. When selected, the Create ELD screen will display as shown in figure iii. Enter all the information for this ELD and hit save. The ELD is now setup and ready to be deployed.

Figure i: ELD Menu
As an alternative to the manual setup, the ELD can be plugged directly into the ODB II or J1939 port of the vehicle and the ELD will be automatically recognized and attached to the vehicle. At
At this point, all the information about the vehicle is known including the make, model, VIN and year of the vehicle.

In AxleHub, you can view the ELD information as shown in figure ii above. The user can perform actions for the selected ELD by clicking one of the icons as shown in figure iv. These actions include edit, view details, delete, see vehicle attached to ELD and configure.

![Figure iv: ELD Actions](image)

**ELD ATTACHED VEHICLE**

If the vehicle icon, ![vehicle icon], is green this means the ELD is plugged into a vehicle and AxleHub is receiving data. When selected, the vehicle information is displayed as show in figure V below.

![Figure v: Vehicle Information](image)
VEHICLE DETAILS

To access more information about the vehicles in AxleHub, select the **Trucks** menu item from the **Setup Data>Equipment>Trucks** menu as shown in figure vi.

When selected, a listing of all the vehicles defined in the system will display as shown in figure vii.

![Vehicle Details](image)

**Figure vi: Vehicle Details**

<table>
<thead>
<tr>
<th>Truck Number</th>
<th>VIN</th>
<th>Last Known Location</th>
<th>Odometer Reading</th>
<th>Description</th>
<th>RDC Number</th>
<th>Out Of Service Date</th>
<th>ELD Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>00006</td>
<td>1 Min E3C of Houston, TX 77042</td>
<td>25</td>
<td>PACCAR: 957-1105</td>
<td>9571105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>00007</td>
<td>Houston, TX 77055</td>
<td>254</td>
<td>PACCAR: 957-1106</td>
<td>9571106</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>00006</td>
<td>2NHEMY7VY7Y361433363</td>
<td>67229</td>
<td>DOTY: 957-1107</td>
<td>9571107</td>
<td></td>
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</tr>
<tr>
<td>00006</td>
<td>Houston, TX 77055</td>
<td>37672</td>
<td>PACCAR: 957-1108</td>
<td>9571108</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure vii: Vehicle Listing**

From the vehicle listing screen, the user can select several actions for a selected vehicle as shown in figure viii. These actions include edit, display details, delete, add vehicle certifications, view ELD information and map current location of the vehicle.

![Vehicle Actions](image)

**Figure viii: Vehicle Actions**

If the ELD icon is RED, then there is no ELD assigned to this vehicle. If the ELD icon is BLUE, then when the icon is selected, the ELD details screen is displayed as shown in figure ix below.
Figure ix: ELD Details
To track a vehicle in the AxleHub that is using an ELD, select the **Truck Tracker** menu item from the **Transportation** menu as shown in figure X.

A full list of all vehicles in AxleHub will display along with a map showing the current location of all the vehicles as shown in figure xi.

The vehicles listed on the left side of the screen with a green icon, means the vehicle has a working ELD attached.

---

**Figure x**: Truck Tracker

**Figure xi**: Truck Tracker
To see an individual vehicle’s current location, select the vehicle by clicking the icon. The right side of the screen will map the location of the select truck as shown in figure xiii below.
Figure xiii: Selected Vehicle
Similar to Truck Tracking, an individual driver may be tracked. Select the menu item Track, under the Transportation>Drivers menu as shown in figure xiv. If a driver is in a vehicle with an ELD attached to the vehicle, then the driver and associated date will show in the pick list on the Track Driver screen as shown in figure xv.

Select the driver to track and the corresponding date to view the driver’s daily tracks.
ROUTE REPLAY

To view a replay of the selected driver’s route, use the drag bar as shown in figure xvi to drag the pointer to replay the driver’s route. As the pointer is dragged, the time and speed are displayed for each point of the driver’s route.

Time: 07:01:55 AM Speed: 0 Speed Limit: 0

Figure xvi: Route Replay

On the map, a series of icons are displayed on the driver’s route. A description of what these icons represent are shown in figure xvii and are shown at the top of the screen.

Figure xvii: Route Legend
To view an individual driver log for a driver in AxleHub, select the **Driver Logs** menu item from the **Transportation>Drivers>Driver Logs** menu as shown in figure xviii. When selected, the driver log screen will be displayed as shown in figure xix below.

The picklist will have a list of all drivers that have a driver log available to view. When a driver is selected, the date picklist will be filled with all available dates where a log exists for the selected driver.

**Figure xviii: Driver Logs**

When a driver is selected, the driver event details will be displayed on the top of the screen. These details include the time the event occurred, the location, odometer reading, engine hours and other data as shown in figure xx below.

**Figure xix: Driver Logs**

**DRIVER EVENT DETAILS**

When a driver is selected, the driver event details will be displayed on the top of the screen. These details include the time the event occurred, the location, odometer reading, engine hours and other data as shown in figure xx below.
Figure xx: Event Details

**DRIVER LOG GRAPH**

The driver graph will be displayed on the bottom of the screen providing a visual representation of the selected driver’s day as shown in figure xxi.

![Driver Log Graph](image-url)
Every driver in AxleHub that has driven a vehicle with an ELD, will have a scorecard based on driving behaviors. To access the driver scorecard, select **Score Card** from the **Transportation>Drivers>Score Card** menu as shown in figure xxii.

Once selected, a list of drivers will appear on the left side of the screen and the associated score card on the right side of the screen for the selected driver as shown in figure xxiii below. The driver scores are calculated automatically by the system based on weights defined by the user described later in this section.

To see details about and individual driving score, select the driving event and the Driver Events screen will display as shown in figure xxiv below.

---

**Figure xxii: Driver Score Card**

**Figure xxiii: Score Card**
To define the weights for the calculation of driver score cards, select the **Driver Scorecard Metrics** menu item from the **Setup Data>Configurations>Driver Scorecard Metrics** menu as shown in figure xxv.

Using the slider for each driving and non-driving event, define the weight for each metric as shown in figure xxvi below. These values will be used in the calculation of the driver score card.
### GuardRail User Guide

#### Figure xxvi: Score Card Metrics

<table>
<thead>
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<th>Weighted Driving Behaviors</th>
<th>Weighted Non-Driving Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Braking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Acceleration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Cornering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop Sign</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Railroad Crossing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Selected Weights</td>
<td>Selected Weights</td>
</tr>
<tr>
<td>Speeding</td>
<td>0</td>
<td>Ticket Corrections</td>
</tr>
<tr>
<td>Hard Braking</td>
<td>0</td>
<td>DVR</td>
</tr>
<tr>
<td>Hard Acceleration</td>
<td>0</td>
<td>Safety Violation</td>
</tr>
<tr>
<td>Hard Cornering</td>
<td>0</td>
<td>Equipment</td>
</tr>
<tr>
<td>Stop Sign</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Railroad Crossing</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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**Driving Behaviors**

- **Speeding**
  - 0
  - 100

- **Hard Braking**
  - 0
  - 100
**Weighted Driving Behaviors**

**Selected Weights**

- Speeding: 54
- Hard Braking: 39
- Hard Acceleration: 0
- Hard Cornering: 0
- Stop Sign: 0
- Railroad Crossing: 0

**Weighted Non-Driving Events**

**Selected Weights**

- Ticket Corrections: 0
- DVIR: 0
- Safety Violation: 0
- Equipment: 0
Login to the Chorus Logistics’ mobile application, TollTagger, using a valid User id and password combination as shown in figure xxvii below. Once Logged in, select the Driver icon from the menu list at the top of the screen as shown in figure xxviii below.
Select the HOS from Drivers Hours of Service menu as shown in figure xxviii below. This will navigate to the Hours of Service screen as shown in figure xxvix below.
CHANGE DUTY STATUS

The current duty status will be displayed as a highlighted button based on the current duty status. To change the current duty status, select one of the options to change the status to the newly selected status.
Driver: Mike Naquin

Select Date: 2017-12-29 00:00:00

Scale Height

15

Scale Width

9

Figure xxx: Driver Log

**DRIVER LOG**

When the Driver Log icon is selected from the screen shown in figure xxix above, the driver log screen will be displayed as shown in figure xxx. Select a date from the picklist of available dates to view the corresponding driver log for the selected date.
Figure xxxi: Roadside Inspection

ROADSIDE INSPECTION

To begin the process of transferring the requested driver logs electronically, select the Roadside Inspection icon from the screen shown in figure xxix. Once selected, the user will be prompted with the method of data transfer either email or electronic data transfer. Select the requested transfer and hit transfer file as shown in figure xxxi to begin the transfer of the requested driver logs.