



# VOYAGER<sub>PRO</sub>

## User's Guide Help

**Hello Adventurer!**

Trail Tech brings functionality and life to your motor vehicle with high quality and innovation. To ensure long and trouble-free operation, this embedded user's guide contains valuable information about how to operate and maintain your digital gauge properly.

Please read this manual carefully.

Tap the ? in the top corner of menu screens to get useful tips and information.



Use the links below to navigate.

**Thanks for riding with Trail Tech!**

This document is up to date for Voyager Pro Software Revision 1.2.

# Table of Contents Help

Below is an overview of available help screens.

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# Precautions Help

1. To charge Voyager Pro using a wall outlet, a Trail Tech approved wall charger is required (not provided in kits.) Attempting to charge Voyager Pro directly off an outlet will result in failure of your device.
2. Read all instructions before using Voyager Pro.
3. Avoid contact with gasoline, degreasers or other chemical cleaners.
4. Do not wash with pressure washer.
5. When installing Voyager Pro, disconnect the vehicle battery.
6. When installing radiator hose temperature sensors, make sure it fits BEFORE cutting the radiator hose.
7. Check gap between wheel sensor and magnet periodically to ensure correct measurements and reading on Voyager Pro.
8. Do not bend, twist, kink or abuse the sensor cables.
9. Do not disassemble Voyager Pro or its accessories.
10. Do not operate Voyager Pro while driving/riding.
11. Do not rely on Voyager Pro for operations requiring precise measurements of distance or direction. All GPS devices inherently contain some amount of error. Use the wheel sensor for the most precise data.





12. Introducing a fuse into the circuit before electronics is always a good idea. Use a 2 amp fuse with Voyager Pro (not provided.)

13. PAY ATTENTION TO THE TRAIL!

## FAQ Help

### How do I take a screenshot?

Press the menu button and the down button at the same time. A JPG image file will be saved to the MicroSD memory card. If you share it on social media, tag us #ridetrailtech



### How long does the internal battery take to charge fully?

Voyager Pro takes 3-8 hours to fully charge depending on charge mode. You don't need to pre-charge; connect and ride. Voyager Pro only charges when turned on to avoid drawing down the vehicle battery. In handheld mode the charge should last 40 minutes or more depending on features in use.

### How does sleep mode work?

After a short period of inactivity, Voyager Pro will enter sleep mode. Adjust the sleep mode setting to change the timeout period. Vehicle sensors can keep Voyager Pro awake using the wake-detection setting while the vehicle is moving. After 15 minutes in sleep mode, Voyager Pro shuts down completely to protect the vehicle battery. A button press is required to wake Voyager Pro after shut down.

## How do I get the best GPS reception?

The internal antenna is designed for optimum reception potential. If Voyager Pro is mounted with metal blocking the internal antenna, consider purchasing an external GPS antenna for better positioning.

## How do I mount Voyager Pro to my machine?

Voyager Pro is compatible with RAM mounts. Vehicles with handlebars can use the included handlebar mounting hardware. There are also protective accessory mounts available, or use the dock's four mounting holes for dashboard mounting.



## What kind of power does Voyager Pro need for proper operation?

Voyager Pro requires DC power to function and charge correctly. DC power systems with a failing vehicle battery may produce too low a system voltage (<11.5V) to allow for proper operation. For applications where DC power is not available, Trail Tech offers an AC wall charger for Voyager Pro to charge the internal battery.

## Voyager Pro kits include physical sensors, magnets, and other cables. Why, if it's a GPS?

You can use Voyager Pro without any sensors connected. However, connecting the vehicle sensors enables several features, like extra gauges, more precision, and battery charging.



### **My other GPS unit gets along just fine without a wheel sensor; do I really need one?**

All speed/distance data can be gathered from either GPS or the wheel sensor.

Trail Tech believes an accurate odometer and hour meter are critical features. To maintain this accuracy, a wheel sensor is recommended.



1. When using a wheel sensor, Voyager Pro knows to stop logging when the vehicle stops moving. When you start rolling again, Voyager Pro knows to resume logging (without a GPS induced lag.)
2. The wheel sensor will track distance, even when the GPS signal is out of range.
3. GPS cannot tell the difference between a motorcycle moving under its own power or in the back of a truck.

4. The GPS signal can be lost, especially around metal structures or in tunnels. With no signal, speed and distance accuracy is lost.

5. GPS cannot see small changes in elevation (i.e. whoops and ruts.) Over time this will create significant odometer error.

6. GPS is accurate while travelling in straight lines at constant velocity. However, tight, fast corners will cause the GPS to skip over part of your path. Over time this will contribute to odometer error.

### **Can Voyager Pro use GPX files?**

GPX (GPS exchange format) is Voyager Pro's native format. Import/export recorded tracks between the MicroSD and dozens of software programs and web services.

### **Can Voyager Pro be turned on and off manually?**

Yes. Hold down the upper left button to power Voyager Pro off.

### **How do I run Voyager Pro without connecting it to a vehicle?**

Voyager Pro provides an easy way to change unit settings to accommodate a wide variety of user needs. There are few menu options to change when Voyager Pro is used without external power:

1. Vehicle Profile > Wake Detection, Speed Source, and Charge Mode
2. Maps and GPS Setup > AutoLog Source

## **Physical Features Help**

There are a few things to know about the outside of Voyager Pro:

1. The four buttons on the case are for Menu/Power/Confirm, Back, Up and Down.



2. The large button at the top of the dock releases Voyager Pro. The dock should be mounted securely and wired in.



3. External antennas extend the range of Voyager Pro's features.



4. Voyager Pro is compatible with the popular RAM mounts. Kits may include handlebar, suction cup, or steering column mounts.



5. The MicroSD card is the primary way to transfer data files to and from Voyager Pro. (MicroSD card not included in kits.)



6. Installing all the vehicle sensors isn't required, Voyager Pro will do its best to use GPS data. However, each installed sensor unlocks new features of Voyager Pro.



# Buttons Help

## Touch Screen

Control Voyager Pro's maps and menus by tapping and swiping the touch screen.



## Menu Button

Confirm selections and open the settings menu. Hold the menu button to power Voyager Pro off, hold it longer to do a hard shut down.

## Back Button

Backs out of any screen or menu. On main screens, the back button will open that screen's mini-menu, if there is one.

## Up and Down Buttons

Scroll between main screens and navigate menu options.



# Dock Help

## The Dock

The dock should be secured to the vehicle and wired in. The quick-release dock allows for swapping Voyager Pro between several vehicles.



## The Dock's Button

Press the large button at the top of the dock to release Voyager Pro from the dock.



## The Dock's Wires

The dock's wires connect to the vehicle sensors. Wheel sensor for speed, spark sensor for tach, battery connection for power and voltage, and thermometer for temperature. Voyager Pro will operate without any vehicle sensors attached by using GPS data, but you should at least install the power wire to keep the internal battery charged up.





## The Dock's Antenna Ports

Two threaded brass ports on the back of the dock are for connecting external antennas. An external antenna is **REQUIRED** for buddy tracking and could improve GPS signal strength in rough terrain.

Radio antennas plug into the male port, and GPS antennas plug into the female port.



## Locking the Dock

A small Allen wrench can be used to lock Voyager Pro to the dock for added security. Turn the small Allen screw inside 6 times to lock or unlock.



## Antennas Help

### Internal GPS Antenna

The internal GPS antenna is great for normal use. If there is excessive metal around the mounting location, it could interfere with reception. An external GPS antenna can be installed into the dock's GPS antenna port in order to achieve a better antenna mounting position.



### Antenna Ports

Two brass antenna ports are found on the dock next to the sensor wires. The left dock is female and accepts external GPS antennas. The other port is male and only accepts radio antennas.



### 1. External Plastic Radio Antenna

The external plastic radio antenna is designed to be mounted to plastic, like a number plate. It should be mounted vertically (up and down.) This antenna works well for most applications and is included in most Voyager Pro kits. Installing it enables buddy tracking features.



### 2. External Whip Radio Antenna

The whip antenna mounts to metal, like the metal roof of a UTV. Installing a whip antenna enables the buddy tracking features.



### 3. External Omni Radio Antenna

The omni antenna mounts to plastics, like the plastic roof of a UTV. Installing an omni antenna enables the buddy tracking features.

## Mounting Help

Voyager Pro's dock is ready for mounting with the AMPs hole pattern.

### RAM Mounts

RAM brand mounts are recommended. Voyager Pro can be mounted anywhere using the wide array of RAM mounts.



### Bar Mounting

Kits intended for motorcycles include bar clamps for 7/8" through 1-1/8" handlebars.



An aluminum center mount is available from Trail Tech for 1-1/8" handlebars.

## **TRAIL TECH CENTER BAR MOUNT**



## **Surface Mounting**

The dock can be mounted to any flat surface, like a UTV dashboard. Drill the holes using the AMPs hole pattern and secure with bolts.

## **SURFACE MOUNTING**



## **MicroSD Card Help**

Insert any MicroSD card into the side of Voyager Pro. Make sure the card slot cover is properly seated to keep debris out.



An installed MicroSD card enables import/export of tracks.

After exporting a track to the MicroSD card, insert it into your computer's card reader to save the track or view it in a mapping application like Rideleader.com.

Use the exFAT type if you format your MicroSD card on a PC.



Tracks saved on your computer can be placed on the MicroSD memory card, then imported onto Voyager Pro for viewing and route following. This is a great way to share tracks with your friends, or for pre-planning your own trips.

## Vehicle Sensors Help

Each installed vehicle sensor unlocks new features of Voyager Pro:

### Power Wire

Installing the power wire enables smart wake-detection and constant charging. If you only install one sensor, this is the one.

Introducing a fuse into the circuit before electronics is always a good idea. Use a 2 amp fuse with Voyager Pro (not provided.)

See #vehicle-power for important information about power and Voyager Pro.



## Engine Temperature

The engine temp sensor enables gauge screen temperature readouts and over-temp warning lights.



## Tach Sensor

The ignition sensor enables the tach bar graph screen and over-RPM warning lights. The tach signal can pause track recording while the engine is turned off.



## Wheel Sensor

The wheel sensor provides slightly more accurate speed and distance than GPS. The speed signal can pause track recording while no vehicle movement is sensed (the most accurate method).



## Vehicle Power Help

### Vehicle Power

Installing the power wire enables smart wake-detection and constant charging. If you only install one sensor, this is the one.

**DC power required.** Do not connect Voyager Pro to AC power except when using the AC wall charger. Connect to a switched 12V DC power source so that power to Voyager Pro is cut when the vehicle is turned off. When connected to the vehicle battery, charging will begin immediately and Voyager Pro should have full functionality. **On some bikes, erratic tach readings can be fixed by wiring the power directly to the battery instead of behind the key switch.**

There are few menu options to change when Voyager Pro is used without a connection to vehicle power:

1. *Vehicle Profile > Wake Detection, Speed Source, Charge Mode*
2. *Maps and GPS Setup > AutoLog Source*



## POWER WIRE



### FOR USE ON 12V DC SYSTEMS ONLY!

**Vehicles with DC Power:** Voyager Pro requires DC power. Vehicles with a battery or capacitor and regulator/rectifier produce DC power. Connect the power wire directly to the vehicle's 12V battery. Connect the red wire to the positive(+) battery terminal and the black wire to the negative(-) battery terminal.

**Vehicles with AC Power:** Use the Voyager Pro AC wall charger, or upgrade to a DC electrical system. Most carbureted MX bikes put out AC power, but Voyager Pro requires DC power.

A 2-amp fuse (not provided) can be used when wired directly to the vehicle battery. The primary benefit is to avoid overheating the power wire if it becomes significantly kinked or pinched.

Voyager Pro can be set to charge always, or to only charge when the engine is running. In any case, charging only occurs when Voyager Pro is turned on, to avoid drawing down the vehicle battery.

A button press is required to wake Voyager Pro after shutting down. Complete shutdown happens 15 minutes after going into sleep mode, to avoid drawing down the vehicle battery. Wake-detection operates during sleep mode, but not after shutdown.

### AC Adapter Wall Charger

A Trail Tech wall charger can be used to power Voyager Pro indoors.



## Vehicle Accessory Socket

If Voyager Pro is mounted inside a vehicle using the suction cup or steering column mounts, it may make more sense to draw power from the vehicle's accessory power socket.



## Ignition Sensor Help

The ignition sensor detects the on/off status of the engine. When the engine is shut off, Voyager will go to sleep for power conservation.

The ignition sensor enables the tach bar on the tach graph screen and the over-RPM indicator lights.



To install the tach ignition sensor, wrap the sensor wire around the vehicle's spark plug wire. The sensor detects a pulse every time the spark plug fires.



If tach readings are erratic, there may be electrical static. Try using more or less sensor wraps and avoid running the sensor wire along other heavily charged wires. Adding an inline resistor can help with erratic tach but is not normally needed. Wiring the power wire directly to the battery instead of behind the key switch may also help with erratic tach.

If tach readings are way off, check your PPR (pulses per revolution) setting. Also try adjusting the tach sensitivity setting, use more or less wraps, and do not route the wire along other wires that carry an electrical charge.

## Temperature Sensors Help

A temperature sensor tells you how hot your vehicle is getting. Installing one enables engine temp readouts on the gauge screens and the over-temp indicator lights.

### Radiator Fin Sensor

For water-cooled machines. Fin sensors are a very easy install: press the sensor into the radiator fins. Use a dab of conducting grease to increase the sensitivity. Do not force a fin sensor that is too large at risk of damage to the radiator. Available in 3 sizes.

## **RADIATOR FIN TEMPERATURE SENSOR**



### **Cylinder Header Sensor**

For air-cooled machines. CHT sensors act as a crush washer between a spark plug and the engine's cylinder head. Available in 3 sizes.

## **CYLINDER HEAD TEMPERATURE SENSOR**



### **Radiator Hose Sensor**

For water-cooled machines. Hose sensors are the most accurate because they directly take the coolant temperature as it leaves the radiator and enters the engine. Installation requires cutting the radiator hose. Be sure to measure the inner diameter of the hose to make sure you have the right sensor **BEFORE CUTTING THE HOSE**. Available in a variety of sizes.

## **RADIATOR HOSE TEMPERATURE SENSOR**



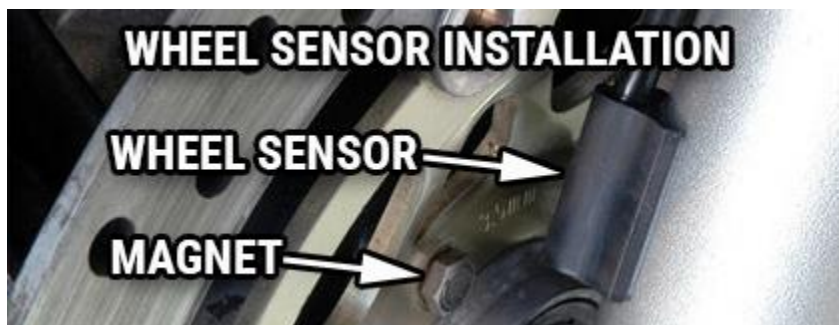
# Wheel Sensors Help

While not required, using the wheel sensor is recommended. It will collect more accurate speed and distance data than GPS. Due to limitations in GPS technology, physical sensors perform with more precision. GPS sometimes loses track of your movements, while the wheel sensor always knows when you are moving.



Two halves are required for the wheel sensor to function:

1. A magnet, on the spinning part of the wheel.
2. A speed sensor, on the non-spinning part of the wheel.



The magnet spins around tripping the sensor switch each time--giving speed, distance and time data to compare with the GPS data.

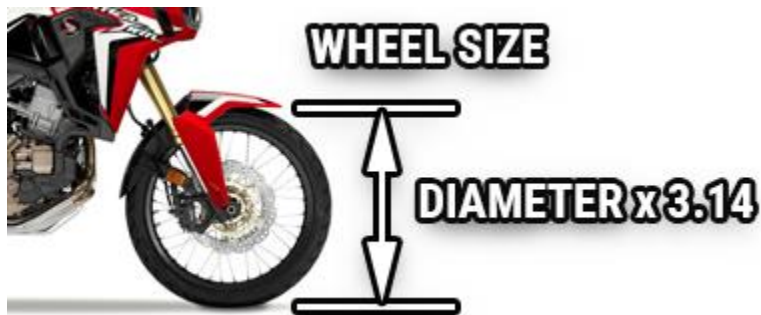
The magnet is installed on the brake rotor because it spins with the wheel. The provided magnetic bolt replaces a stock rotor bolt. If that will not work, glue the spare magnet in a hole on the brake rotor. (JB Weld or a similar slow-cure epoxy works well.)

After the magnet is in, the sensor is placed on a non-spinning part the wheel, rotor shield, or bracket.

Many Motorcycles and ATVs have special installation procedures. Refer to the online model-specific instructions for more information.

## Wheel Size

Knowing your exact wheel size is critical for the wheel sensor to calculate correct speed and distance data. The more accurate the wheel size, the better Voyager Pro performs.



## Measure Wheel Size Help

Knowing your exact wheel size is critical for the wheel sensor to calculate correct speed and distance data. The more accurate the wheel size, the better Voyager Pro performs.



When comparing calibration to GPS data, use a long straight section of road. GPS has trouble with tight fast corners and small vertical movements (causing comparison inaccuracy.)

### Method 1: Ruler

Find the circumference of front wheel by measuring its diameter in millimeters. Multiply the wheel diameter by 3.14. The result is your wheel size.



### Method 2: Rolling

On a flat surface, mark the tire sidewall and the ground with a marking pen. Roll the wheel until the mark on the tire completes one revolution and is back on the ground. Mark the ground at this location. Measure the distance between the marks on the ground in millimeters (multiply inches by 25.4 to convert to mm). Use this number for your wheel size. For accuracy, the rider's weight should be on the bike when making the measurement.



## Input Wheel Size

After measuring, update the wheel size setting.

**SETTINGS > PROFILE > WHEEL SIZE**



## Screens Help

### There are several Main Screens

Voyager Pro has a series of main information screens: the gauge cluster screen with a large speedometer, the tach screen with an animated tach graph, the



map screen, the user definable screen, the stop watch screen, and the GPS satellites screen.

By default, the stop watch and satellite screens are hidden. Power users can streamline the interface by only showing screens they find useful.

Screens can be enabled/disabled in the settings menu.



## Basic Controls

Switch screens using the up and down buttons. If a menu is open, cancel it using the back button to return to the main screens.



## Notification Bar Help

The bar across the top of the main screens shows the time of day and a variety of helpful icons.

## NOTIFICATION BAR



It displays color-coded icons for Bluetooth connection, cellphone connection, headset connection, phone message notification, incoming call notification, buddy tracking status, track logging status, cell signal strength, GPS status, and internal battery level and charging status.

When a message or incoming call notification occurs, an alert bar will drop down from the top of the screen.

## NOTIFICATION BAR ALERT





## Cluster Screen Help

The main gauge screen displays speed and other data from the sensors.



It displays current speed, elevation, engine temperature, ambient temperature, trip distance, and engine voltage.

To reset the trip distance, press and hold the trip gauge and then tap the Ok button.

Engine temperature features require a temperature sensor is installed.

Voltage readouts require the power wire is installed.

## Tach Screen Help

The tach screen is dominated by a large animated tachometer bar graph. It also displays ambient temperature, trip distance and current speed.



You can adjust the maximum value of the tach graph in Settings>Vehicle Profile: PPR, tach indicator lights, and tach graph max scale.

To reset the trip distance, press and hold the trip gauge and then tap the OK button.

RPM features only work if an ignition sensor is installed.

# Map Screen Help

The map screen shows your current GPS position.

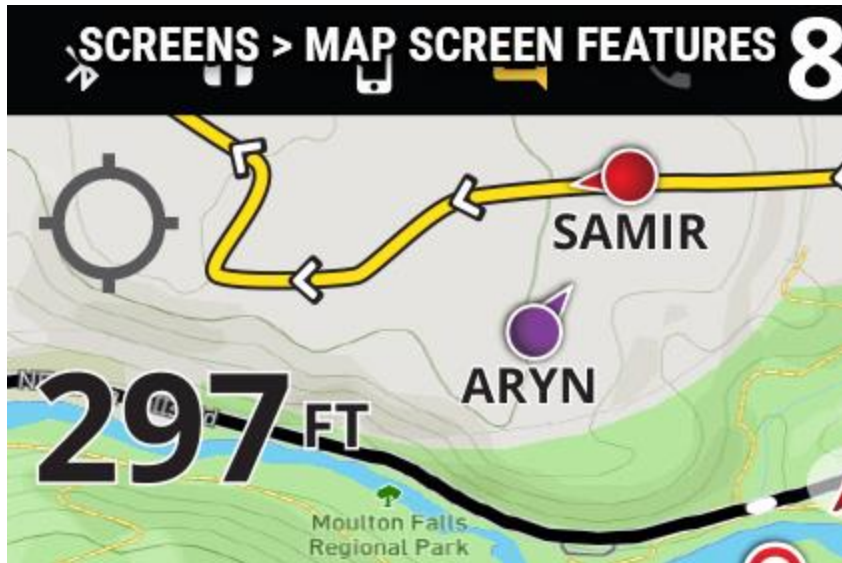


## Track Recording

When track recording is turned on, Voyager Pro creates a track behind you. You can also place waypoint map markers at points of interest. The tracks and waypoints can be saved (and reloaded) as GPX files from the MicroSD card.

## Buddy Tracking

If you are in a buddy group, the group members will appear on the map as colored circles with direction arrows. Your buddies name will show under the arrow icon. You can change the color of your icon and name that appears on other group member's screens in the buddy tracking settings.



## Track Arrows

Track arrows go along the currently loaded GPX track, indicating the track's direction. You can reverse the direction of the track arrows or hide them in the map bar options.

## Map Screen Gauges

Three vehicle gauges are available on the map screen. To choose which gauges to display, tap and hold the upper right gauge or select the MAP GAUGES in the map bar option menu. They can be hidden by selecting NONE.

## Zooming Help

Zoom the map by tapping the + and - buttons, or use a pinch gesture to zoom in and out.



Zoom level is displayed as the map scale in the bottom right corner.

## Center Lock/Pan Lock/Buddy Lock Help

The top left button on the map screen will change the centering behavior. You can touch and drag on the map to pan.

### Pan Lock

Press and hold the center lock icon to turn on pan lock. A small locked icon will appear next to the center lock icon. When pan lock is enabled, panning and pinch-to-zoom will be disabled, but you can still use the + and - onscreen buttons to zoom with. This mode is useful for wiping the screen clean on dusty trails, or to manually lock the map onto the bounds of a riding area.





## Center Lock

When panned off-center, the top left icon will appear as an empty crosshair. Tapping this button will center and lock the map on your current location, and keep the map centered on your location as you travel.



## Buddy Lock

When buddy tracking is active, pressing the center lock icon will switch between center lock and buddy zoom. Buddy zoom will automatically zoom and pan the map to keep your entire riding group visible.

# Map Mini-Menu Help

The map screen's mini-menu provides quick access to helpful map features.

**SCREENS > MAP > MINI MENU**



**MENU ICON**



**MAP SCREEN MINI MENU**

While on the map screen, press the back button or the 3-dots icon (in the lower left) to open the map mini-menu bar across the bottom.

You can pause or record track logging, set a new waypoint marker, toggle map layers, setup or join a buddy track group, and save or load tracks to MicroSD.

# Tracks Help

The track menu is opened from the map's mini-menu.



## Recording Tracks

When recording, a track is drawn behind your location arrow as you move. The red recording icon in the top notification bar will blink to show recording is active. A white circle means that recording is on, but the vehicle is not moving. A pause icon will show when recording is disabled.

## New Logging Track

When starting a new logging track, the previous logging track will no longer record but will still be displayed on the map.

## GPX Files

A GPX file is a way to store a set of waypoints, tracks, and routes in a small file. The GPX file can be created by Voyager Pro's track recording abilities, by other GPS devices, or by a desktop computer app or website. When loading a GPX file from the MicroSD card, Voyager Pro will scan it for all the waypoints, tracks and routes and add them to the map.

## Clear GPX

The clear GPX option removes tracks loaded via GPX files, and stored logging tracks. Clear GPX does not affect the current track logging session or files stored on the MicroSD card.

## Load GPX Help

Select a GPX file to load. Loading GPX adds tracks/routes/waypoints from the GPX file to the map.

**SCREENS > MAP > TRACKS > LOAD GPX**



## Save GPX Help

Save the stored list of tracks as a GPX file. The file will be saved on the MicroSD card.

In the save file, you can save just tracks or also include routes and waypoints.

## SCREENS > MAP > TRACKS > SAVE GPX



## Waypoints Help

Use waypoints to mark important locations, such as where the truck is parked or where camp is located.

## WAYPOINTS



Add a waypoint at your current location using the waypoint icon on the map's mini-menu.

Long-press on the map screen to drop a waypoint at that location.

Tap a waypoint to open a slideout with more information about the waypoint. The slideout displays the position and how far away you are from the waypoint. Icons at the bottom hide or edit the waypoint, and set it as the destination waypoint.

## SCREENS > MAP > WAYPOINT SLIDEOUT



## Hide a Waypoint Help

Tap on a waypoint to open its slideout menu, then tap the eye icon to hide the waypoint so that it no longer appears on the map.

Unhide hidden waypoints by tapping the Layers icon on in the map's mini-menu.

## SCREENS > MAP > WAYPOINT SLIDEOUT



## Waypoint Edit Help

Tap on a waypoint to open its slideout menu, then tap the edit icon where you can change the waypoint's name, delete it, or change the marker color.

## SCREENS > MAP > WAYPOINT SLIDEOUT > EDIT WAYPOINT



## Set Destination Waypoint Help

Tap on a waypoint to open its slideout menu, then tap the set destination icon. When enabled, a line will be drawn on the map between your location

arrow and the destination waypoint marker. The distance to the waypoint will be shown at the bottom of the map. Tap the red "X" next to the distance to cancel the destination.

**SCREENS > MAP > WAYPOINT SLIDEOUT >  
SET DESTINATION**



## Buddy Tracking Help

Buddy Tracking connects multiple Voyager Pros to a private location tracking network. Once connected to the buddy tracking group, you will see map markers showing the name and location of all group members.

**SCREENS > MAP > BUDDIES**





## Enable Buddy Tracking

Buddy Tracking works using sub-gigahertz short-wave radio signals. It will have excellent reception extremely far if there is line of sight. The more things in the way, the shorter the range. An external Trail Tech antenna is required to use buddy tracking features.



## Buddy Beacon

When you activate the buddy beacon, your map marker flashes red on everyone else's screens. It is not a rescue beacon, the national guard will NOT be notified.

**SCREENS > MAP > BUDDIES > BEACON**



## Buddy Regions

Buddy Tracking radio frequencies are currently restricted from operating in Europe. Voyager Pro will function normally, except buddy tracking will be disabled when in that region. See the map below for active regions.



## Buddy Display Name Help

Your Buddy Tracking Display Name, or call-tag, appears under your map marker icon on the screens of everyone in your buddy tracking group. (Please keep it PG-rated.)

**SCREENS > MAP > BUDDIES > NAME**



## Join Buddy Group Help

Voyager Pro will scan the area to see if there are any buddy tracking groups already set up. If there is, tap on it in the list to join the group.

**SCREENS > MAP > BUDDIES > JOIN**



## Create Buddy Group Help

If no group has been formed, you will have to step up and take the leadership role. Put in a name that represents your group, fine-tune the size and then tap create group.

Screen updates are faster with smaller group sizes.

**SCREENS > MAP > BUDDIES > CREATE**



## Buddy Beacon Help

When you activate the Buddy Beacon, your map marker flashes red on everyone else's screens. It is not a rescue beacon, the national guard will NOT be notified.

The beacon will not flash on other buddies screens if they are out of range of the V2V antenna. Their icon will remain at their last known location. At the first hint of a signal, their icon will update to the new position.

**SCREENS > MAP > BUDDIES > BEACON**



# Buddy Regions Help

## Buddy Regions

Buddy Tracking radio frequencies are currently restricted from operating in Europe. Voyager Pro will function normally, except buddy tracking will be disabled when in that region. See the map below for active regions.



## Map Options Help

In the map's mini-menu, tap the options icon to open the map options. You can choose between perspective or flat maps, track up or north up, and customize the map marker colors.

## SCREENS > MAP > LAYERS



The elevation topo-lines and hill shading can be toggled.

If you enjoy technical data, extra onscreen readouts can be enabled to show current latitude/longitude and the actual zoom level.

## GPX Display Options Help

When you import a GPX file, it can load various tracks, routes and waypoints. Show or hide them individually or as a group.

## SCREENS > MAP > LAYERS > GPX DISPLAY



# Map Colors Help

Customize the colors of tracks, routes and waypoints for the map screen.

**SCREENS > MAP > OPTIONS > COLORS**



## Recorded Tracks

Recorded Tracks are the current tracks being recorded using the track logging features.

## GPX Tracks

GPX Tracks are tracks that have been loaded into internal memory by loading a GPX file.

## GPX Routes

GPX Routes are like GPX Tracks. They are called Routes to distinguish them from Tracks for ride planning. Simply put, you haven't ridden a Route yet, but you have ridden all the Tracks.

## Waypoint Colors



Finally, you can change the default marker color for new waypoints. Later you can change waypoint colors individually by tapping it on the map screen to open the waypoint slideout menu.

## Color Picker Help

Tap a swatch to select a new color. Press the back button to cancel.



## User Screen Help

The user screen is customizable. You can choose 1-6 gauges from a long list of available readouts. Select fewer gauges to make the remaining ones larger.

While on the user screen, press the back button to choose different gauges.

Long-press a gauge to reset it, if applicable.

## SCREENS > USER



## Choose Gauges Help

Tap each gauge position to bring up the list of available selections.

The top option is 'None.' Selecting nothing for a position will cause the other readouts to increase in size on the user screen.

To open this menu, navigate to the user screen and press the back button.

## SCREENS > USER > CHOOSE GAUGES



# Media Screen Help

The media screen is the center for phone and headset interaction.

You can control the song playing on your phone, change headset volume levels, change the music source, and access phone dialing, call history and messaging features. The headset can control music pausing and can answer incoming calls.



Tap the Driver or Passenger headphone icon to mute the sound to that device. Press and hold the icon to open up a volume slider.

## SCREENS > MEDIA > VOLUME



## Music Source Help

Voyager Pro controls music playback, but it must know where to load the music from.

Open the music source menu by pressing the back button while on the media screen, or by tapping the media source icon on the media screen.

Choose between loading music from the phone or from the MicroSD card.

## SCREENS > MEDIA > SOURCE



## Driver Contacts Help

When a phone is paired to Voyager Pro as the "Driver's Phone," the contact list can be accessed.

To open the contact list for the driver's phone, tap the Contacts icon on the media screen.



## Call History Help

When a phone is paired to Voyager Pro as the "Driver's Phone," the call history list can be accessed.

## SCREENS > MEDIA > CALL HISTORY



## Dialer Help

When a phone is paired to Voyager Pro as the "Driver's Phone," calls can be placed using Voyager Pro's onboard dial pad.

Open the dialer by tapping the Dialer icon the media screen.

## SCREENS > MEDIA > DIALER



## Messages Help

When a phone is paired to Voyager Pro as the "Driver's Phone," the messages list can be accessed. For privacy, only messages that have occurred since pairing the phone will appear.

Open the messages list by pressing the Messages icon on the media screen.



## Stop Watch Screen Help

The stop watch screen is a tool used as a simple timer, or as a lap timer.

Tap the large circle to begin counting. Tap it again to take note of the first lap off to the side and start timing a new lap.

Icons at the bottom can pause, resume, and reset the timer.

## SCREENS > STOPWATCH



## Satellite Screen Help

The satellite screen displays a graph of the sky and visible GPS satellites in orbit. The graph to the side shows the relative signal strength of each satellite.

## SCREENS > SATELLITE



## Settings Help

The Settings Menu is where Voyager Pro is customized to your needs. You can access the settings menu from the main screens by pressing the menu button.





In the settings menu you can hide main screens, adjust the display sleep timers, customize the speed source, wheel size and alert thresholds, select different measurement units, connect Bluetooth devices, use the file and data utilities, and more.



## Enable Screens Help

The main screens include Cluster, TachBar, Map, User, Media, Stopwatch, and GPS Satellites screens. Toggle to disable an individual screen from appearing in the scroll rotation. Customize the gauges shown on the User Screen in the Choose User Screen Gauges menu item.

## SETTINGS > ENABLE SCREENS



When scrolling through screens, the screen name appears to signal the change. To disable the show screen title feature, toggle it.

## SETTINGS > SCREENS > SHOW TITLES



## Display Setup Help

The display setup screen controls the screen's backlight levels, the night mode theme, and the sleep timer.

Voyager Pro has an ambient light sensor. When it gets dark outside, night mode switches the map screen to a style that is easier to read at night.

## SETTINGS > DISPLAY



## Themes Help

Automatically switch between day-mode and night-mode map styles depending on how bright out it is. Or, manually choose a style and stick with it.

## SETTINGS > DISPLAY > THEMES



## Sleep Help

Voyager Pro remains awake while connected to power, either from a vehicle or AC wall adapter.

The sleep and wake-detection settings can configure Voyager Pro to enter sleep mode when no tach signal or wheel sensor movement is detected.

If the wheel speed sensor is being used for wake-detection, Voyager Pro will wait an additional 3 minutes after stopping before entering sleep mode. This is to accommodate short pauses in movement, such as at a traffic light.

When in sleep mode, Voyager Pro will wake up as soon as it senses movement based on the wake-detection setting.

15 minutes after going into sleep mode, Voyager Pro will shut down completely to avoid drawing down the vehicle battery. After shutdown, press the power button to wake Voyager Pro again.



## Vehicle Profile Help

Use the vehicle profile menu to customize Voyager Pro to the vehicle it is mounted on.

Set up the odometer and engine hours, and values to configure the wheel sensor, engine temperature sensor, tachometer sensor, and power sensor.

## SETTINGS > VEHICLE PROFILE



## Wake Detection Help

When in sleep mode, Voyager Pro waits for a sign to wake up.

**15 minutes after entering sleep mode, Voyager Pro will shut down completely; after a complete shut down, press the power button to wake up.** When shut down Voyager Pro uses no power to preserve battery power.

## SETTINGS > PROFILE > WAKE DETECTION



1. If wired behind key switch power, Voyager Pro can wake from sleep mode whenever the vehicle is switched on.



2. If the ignition sensor is installed, Voyager Pro can wake from sleep mode when the spark plugs start firing.



3. If the wheel sensor is installed, Voyager Pro can wake from sleep mode as the wheel starts spinning.



## Speed Source Help

Choose which sensor to pull speed data from:

1. Installing a Trail Tech magnetic wheel sensor will return precision speed data.
2. GPS speed does not require an installed sensor, but may wander a little at slow speeds and in tight corners.

Remember to input an accurate wheel size for the speed gauges to be correct.



A speed readout is displayed on most of the main screens.

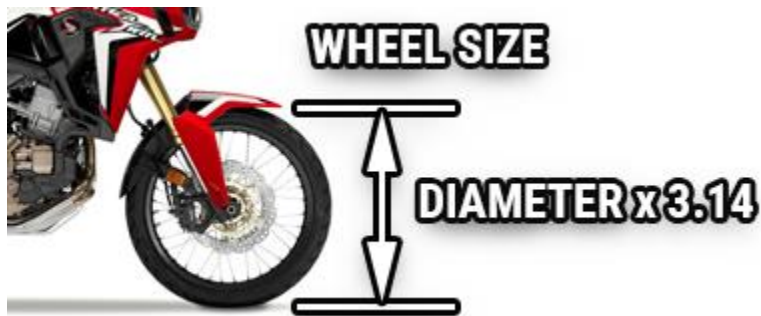
## Wheel Size Help

Voyager Pro needs to know your wheel size to do precise speed measurements. (I.e. the magnetic wheel sensor reports how many times the wheel spins, but wheel size is needed to calculate how far the wheel travels per rotation.)

**SETTINGS > PROFILE > WHEEL SIZE**



Do not panic. For more information on obtaining your wheel size, see #measure-wheel-size.



## Temp Yellow Indicator Help

When the engine temperature reaches this customizable temperature level, Voyager Pro will turn on yellow lights to alert you to the threat.

Use the tumblers to select the yellow alert temperature threshold, then tap Ok to save it.



## Temp Red Indicator Help



When engine temperature exceeds this customizable temperature level, Voyager Pro will flash the red alert lights to indicate the engine temperature is in the danger zone.

Use the tumblers to select the red alert threshold, then tap Ok to save it.



## PPR Help

PPR stands for "Pulses Per Revolution." (I.e. the number of times the spark plug sparks each time the engine revolves.)

PPR controls the tachometer readout. If it seems like the tach is displaying a number either twice or half as fast as actual, then likely the PPR needs to be adjusted.

Most modern fuel-injected dirt bikes are 0.5 PPR.

## SETTINGS > PROFILE > PPR



## Tach Sensitivity Help

The tach sensitivity setting changes the threshold that Voyager Pro recognizes tach pulses. Changing the sensitivity on some vehicles can help cut through ambient electrical noise.

If the tach signal is still erratic after adjusting sensitivity, during installation wrap the sensor more or less times, and avoid routing it along other electrical wires.

## SETTINGS > PROFILE > TACH SENSITIVITY



## Tach Yellow Indicator Help

When the engine revs above this customizable threshold, Voyager Pro will send an alert by turning on the yellow indicators.

Use the tumblers to select the RPM yellow alert threshold, then tap Ok to save the selection.



## Tach Red Indicator Help

When the engine is revving over this danger threshold, Voyager Pro will turn on the red alert indicator lights.

Use the tumblers to select the RPM red alert level, then tap Ok to save it.



## Tach Graph Max Scale Help

The tach graph screen and a big animated bar graph. The graph defaults to max out at 9000 RPM, but you should customize it to match the maximum RPM of your vehicle. This way you can get the full range of graph motion.

Use the tumblers to select the max value for the graph, then tap Ok to save the choice.

**SETTINGS > PROFILE > MAX TACH SCALE**



## Charge Mode Help

Voyager Pro usually charges up its internal battery whenever it is connected to power. However, if Voyager Pro is wired directly to the vehicle battery (instead of behind a key switch) then the vehicle battery may be drained. In that case to avoid draining the vehicle battery, set Voyager Pro to only charge when the engine is running (i.e. a tach signal is active.)

**SETTINGS > PROFILE > CHARGE MODE**



## Units Setup Help

Customize the measurement units displayed on the gauge screens. Choose between standard or metric readouts.

## SETTINGS > UNITS



### Speed & Distance Units Help

Choose to display speed in miles or kilometers per hour. This choice will take effect in all places where speed is displayed.

## SETTINGS > UNITS > SPEED & DISTANCE



### Elevation Units Help

Choose to display elevation in feet or meters. This choice will affect all elevation readouts.

## SETTINGS > UNITS > ELEVATION



## Temperature Units Help

Choose to display temperature in Fahrenheit or Celsius. This choice will take effect in all temperature displays.

## SETTINGS > UNITS > TEMPERATURE



## Date & Time Help

Set Voyager Pro's internal clock to your local time.

The time does not automatically adjust itself if you travel to another time zone or for 'daylight saving time'.

**SETTINGS > UNITS > TIME & DATE**



## Set Time of Day Help

Use the touchscreen tumblers to select your local time.

The time does not automatically change for daylight savings or for time zones.

To save the selection tap ok, or press the back button to cancel without saving.



## SETTINGS > UNITS > SET TIME



## Set Date Help

Use the touchscreen tumblers to select today's date.

To save the selection tap ok, or press the back button to cancel without saving.

## SETTINGS > UNITS > SET DATE



## Maps & GPS Setup Help

The maps and GPS setup menu lets you customize details of how track recording works.

## SETTINGS > MAPS & GPS



Map Screen Actions are similar to the menu items found on the map screen's slideout bar.

## SETTINGS > MAPS & GPS > ACTIONS



The Autolog Source can pause track logging if the vehicle isn't moving.

Log frequency determines how often a new track point is logged to memory.

Auto-split will create a new track segment when there is a big gap between two points in the track (instead of drawing a long line between them.)

## Autolog Source Help

The Autolog Source can pause track logging if the vehicle isn't moving. For instance, you don't want it to record when the bike is in the back of the truck, or parked at camp. Install a tach or wheel sensor so Voyager Pro knows exactly when the bike is in motion.

**SETTINGS > MAPS & GPS > AUTO-LOG**



## Log Frequency Help

Log frequency determines how often a new track point is logged to memory. You can choose time based or distance based. The largest values are fine for most needs and keep the file sizes smaller.

## SETTINGS > MAPS & GPS > FREQUENCY



## Auto Split Help

Auto-split will create a new track segment when there is a big gap between two points in the track (instead of drawing a long line between them.)

## SETTINGS > MAPS & GPS > AUTO-SPLIT



## Coordinate Format Help

Coordinate values can be displayed in a few different formats. The default is deg, min.dec.

## Examples:

Degrees in decimal (deg.dec):

40.446° N

79.982° W

Degrees decimal minutes (deg, min.dec):

40° 26.767' N

79° 58.933' W

Degrees minutes seconds (deg, min, sec):

40° 26' 46" N

79° 58' 56" W

## SETTINGS > GPS > COORD FORMAT



## Bluetooth Settings Help

In Bluetooth settings, enable or disable Bluetooth altogether, change Voyager Pro's public name, and then connect phones and headsets.

Two phones and two headsets can be connected.

## SETTINGS > BLUETOOTH



Media Screen Actions opens menu options similar to the Media Screen's embedded options.

## SETTINGS > BLUETOOTH > ACTIONS



## Bluetooth Devices Help

On the device pairing screens, Voyager Pro scans for nearby Bluetooth devices to connect with. After Voyager Pro finds the phone or headset, tap its name to pair them. Remember to put the phone or headset in pairing mode so that it will be visible to the scans.

## PAIRING BLUETOOTH DEVICES



## Bluetooth Connection Help

A successfully paired device can be temporarily disconnected, or unpaired/forgotten entirely. A forgotten device takes longer to connect with next time than a device that was just disconnected.

## BLUETOOTH DISCONNECT



## Utilities Help

The file browser lets you view the contents of the MicroSD card. Tap jpg files to view the image.

The software update lets you choose an upgrade file from the MicroSD card to update the onboard software, maps, and themes.

View the system information for software versions plus internal voltage and core temp readouts.

The technician area is where the devs do their science.



## File Browser Help

Using the file browser, you can view the contents of the MicroSD card.

Tap a JPG file to open the image viewer, then swipe or use the up and down buttons to scroll through all the images.

Double-tap a .GPX file to import it.



## SETTINGS > UTILITIES > BROWSER



## Software Update Help

Voyager Pro can update its own firmware code, map data, and map styles via the MicroSD card.

A firmware update is an upgrade to the user interface and the code backbone. It could refine the interface or introduce entirely new features.

A map data update adds maps for different regions or parts of the world. Maps are very large and detailed, so the whole world cannot be loaded all at once. The data can include specialized layers like hill shading, topo-lines, and satellite imagery.

A map style update changes the way the map looks on the map screen.

## SETTINGS > UTILITIES > SOFTWARE



After loading new map styles and map data, activate them by tapping the options icon on the map screen's mini-menu.

Software updates are released online at [trailtech.net](http://trailtech.net) and transferred to Voyager Pro via the MicroSD card. The internal battery must be at 50% or better charge in order to begin the software update.

## System Information Help

Included in the system information is a unique device production serial number and the running hardware and software versions.

The voltage and temperature reports should be used during installation and troubleshooting to assure that power is arriving to Voyager Pro as expected.

## SETTINGS > UTILITIES > SYSTEM INFO



## Technician Area Help

The technician area is a place for the developers to run science tests, but it is of little interest to anyone else.

## SETTINGS > UTILITIES > TECHNICIAN



## Contact Trail Tech Help

Still confused? You can contact Trail Tech support and we'll do our best to walk you through it.



### **Online instructions:**

[trailtech.net/instructions](http://trailtech.net/instructions)

### **Phone:**

(844) 378-8143

### **Email:**

[technicalservice@apexproductgroup.com](mailto:technicalservice@apexproductgroup.com)

### **Instagram and Facebook**

On Instagram, get inspired by daily photographs about the powersports lifestyle from the Trail Tech library of riding adventures. Follow #ridetrailtech.



## **Warranty and FCC Help**

### **Keep Your Info**

If you call to request service for your digital gauge, you need the date of purchase, dealer's name, address, and telephone number. Warranty service requires proof of purchase.

Call before shipping to get an RMA (return merchandise authorization) number.

## Warranty

Within one year from the date of original purchase, Trail Tech will repair or replace, at its option, any Trail Tech powersport computer which is deemed defective in workmanship or materials. Please contact Trail Tech or the dealer where the item was purchased for assistance.

Damage or injuries resulting from negligence or misuse are not covered by this warranty. Incidental or consequential damages are specifically excluded.

*\*This warranty gives you specific legal rights. You may also have other rights which vary from state to state.*

*\*Because some states do not allow the exclusion of incidental or consequential damages, this exclusion may not apply to you.*

## FCC Notice

To display the FCC label information for this equipment:

1. Turn on the power to the unit.
2. Press the top left button to get the Settings menu.
3. Select User Manual.
4. Select "warranty - fcc" or scroll to the FCC Notice section.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

FCC ID: 2AOW7-T001

Contains: FCC ID Z64-2564N, FCC ID Z64-WL18SBMOD

Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation.

This device complies with FCC RF radiation exposure limits for general population.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

A copy of the Declaration of Conformity is available on request from Trail Tech:

1600 SE 18th Ave  
Battle Ground, WA 98604

Phone: (844) 378-8143

Email: [sales@apexproductgroup.com](mailto:sales@apexproductgroup.com)

