



Track Star GPS Data Forwarder
User's Guide

For SW Version 2.0

Track Star International, Inc.
8382 Seneca Turnpike
New Hartford, NY USA 13413
315-721-0931

www.trackstar.com

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This Manual

This manual has been written making every attempt to be complete and easy to use. Organization is by functional element of the software.

System Description

Overview

The Track Star GPS Data Forwarder allows USB GPS systems NMEA 0183 compliant to work with the Track Star AVLS Software. The Track Star GPS Data Forwarder allows users to see GPS information and Server information. Users also can set settings for the Unit and view the activity log.

Features and Capabilities

GPS

The Track Star GPS Data Forwarder makes use of the Global Positioning System, or **GPS**, to determine the location of the vehicle. Data from a network of satellites is used, by the unit installed in each vehicle, to determine the location of the vehicle with a high degree of accuracy.

The GPS positional data is transmitted by the GPS Data Forwarder to the Track Star AVLS System. The client software receives and processes the GPS data to show the location and movement data for the vehicle.

Communications

The Track Star GPS Data Forwarder communicates with the AVLS System through the communications protocols available in Windows. This allows the user to make use of any of the available technologies that provide access to the internet. Some examples are cellular Aircards, Wi-Fi, or any third party device that provides internet access through Ethernet.

Manual Organization

This manual is presented in four sections. The first deals with the current settings for the unit and the location of the unit it will explain what the features are of the software. The second will deal with the settings the user can change and set for the unit. The third deals with the Activity log what its features are. The last one will deal with the digital input panel.

Using GPS Data Forwarder Agent

Main Window

When the user first opens the Data Forwarder they can see three tabs (current settings, settings, and activity log), the forwarder status, a start button and a stop button.

Forwarder Status: the user what the status is of the forwarder. The four statuses the user will see are Running, Stopped, Stop Pending, Start Pending, Service not installed.

Forwarder Status

Running

Start

Stop

Stop Button: This allows the user to stop the GPS data forwarder.

Start Button: This allows the user to start the GPS data forwarder.

Current Status

The user can see the current setting the GPS Unit is set to and where the vehicle using the GPS system is located by longitude and latitude. Also in this Section the user can see the GPS unit's status, whether it is active or inactive.

GPS Information:

GPS Fixed: this shows whether or not the GPS has a fix.

Latitude: this shows the GPS latitude.

Longitude: this shows the GPS longitude.

Accuracy: the relative accuracy of the current position based on the satellite geometry.

Sat Time: the current time from the GPS system.

Last Rec: the time a message was last received from the GPS.

Time Diff: the time in seconds that is different between the computer clock and the GPS clock.

Heading: the current GPS heading in degrees.

Speed: the current speed in MPH.

Sats Tracked: the total number of satellites being tracked.

Sats in View: the total number of satellites in view.

Cycles: the time in seconds to cycle through all GPS messages to produce a location report to the server.

Traveled: the distance traveled since the last server report in feet.

Server Communication:

Last Sent: the time of day the last message was sent to the server.

Last Reply: the last time the server

replied. NOTE: please remember that the server only relies after it has received 8 messages. This is also only used in store and forward mode.

Msgs Waiting: the total number of messages waiting to be sent to the server.

Active: the time in seconds needed to send the last group of messages to the server.

Inactive: the time in seconds between the groups of messages being sent to the server.

Track Star GPS Forwarder Agent - ver 2.0.1120.1

Track Star GPS Data Forwarder

Current Status Settings Activity Log

12/11/2007 4:13:20 PM

GPS Information

GPS Fix	Yes	Heading	345.11
Latitude	43.082742	Speed (mph)	0.092
Longitude	-75.329407	Sats Tracked	9
Accuracy	Poor	Sats In View	11
Sat Time	12/11/2007 4:13:23 PM	Cycle (s)	0.995
Last Rec	12/11/2007 4:13:19 PM		
Time Diff (s)	4	Traveled (ft)	2.00

GPS active

Server Communications

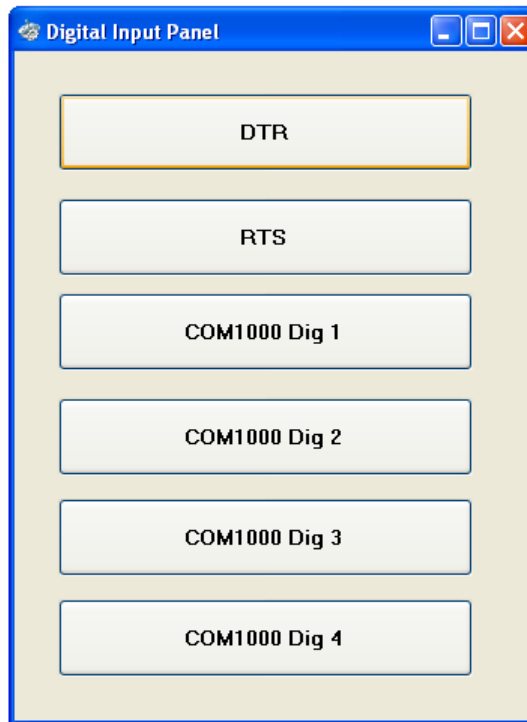
Last Sent	12/11/2007 4:13:06 PM	Active (s)	0.036
Last Reply	12/11/2007 4:12:51 PM	Inactive (s)	14.215
Msgs Waiting	0		

Digital Input Panel

Forwarder Status Running Start Stop

Digital Input Panel

The Digital input panel allows the user access to buttons to activate inputs rather than hitting the hot keys needed for that specific input. The button names are user configurable through the Configure Digital Inputs menu. The user can click one of these buttons when they need to send an input to the server. When the user selects a button and the GPS is active it will make one sound and if it's inactive it will make another to let the user know whether or not the GPS unit is active or inactive.



Settings

The settings tab allows the user to configure the settings for the GPS system.

COM Port: the serial port the GPS Antenna is connected to. If you don't know, the service will attempt to find it for you.

Baud Rate: the speed of the GPS device. This is usually 4800

Destination IP: the IP address of the AVLS server.

Destination Port: the port number used to communicate with the server.

Device ID:

Use IP: Use the IP address and not the device ID when communicating with the server.

Ten Digit Number: this is the 10 digit number that the device will be identified with in the AVLS System.

Reporting Interval (Sec): the interval in which to report data to the server.

Recording Interval (Sec): the interval in which to collect data from the GPS device.

Startup Delay: the delay in seconds before the service starts. This allows any com port software to run first.

Distance Traveled (ft): the distance in feet that must be traveled before data is sent to the server.

Recording Methods:

Time: will record GPS information based on the recording interval.

Distance: will record GPS information based on the distance traveled.

Both: will record GPS information based on both the recording interval and distance traveled.

Minimize traffic: will record GPS information based on the recording interval but will minimize traffic by only sending messages if the position changes by a specific amount.

Options:

Store and Forward: this allows communication with the server in the store and forward reliable mode. NOTE: This can only be used in networks that allow two way communications between the vehicle and the server.

Sync time: this option periodically synchronize your computer time with the GPS satellite time.

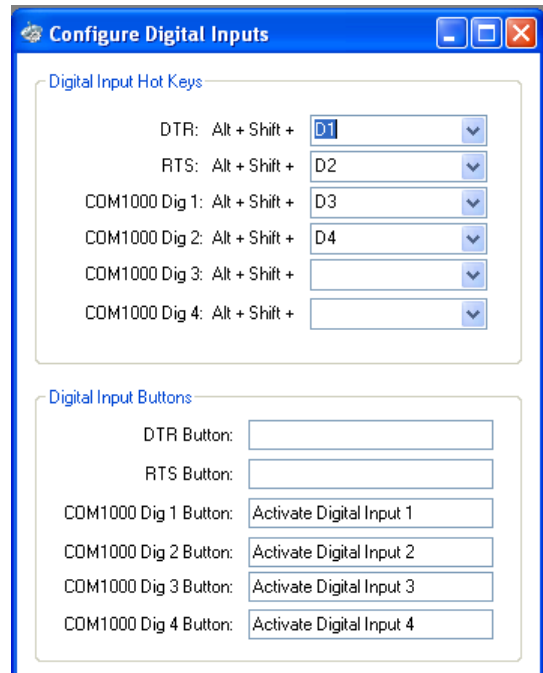
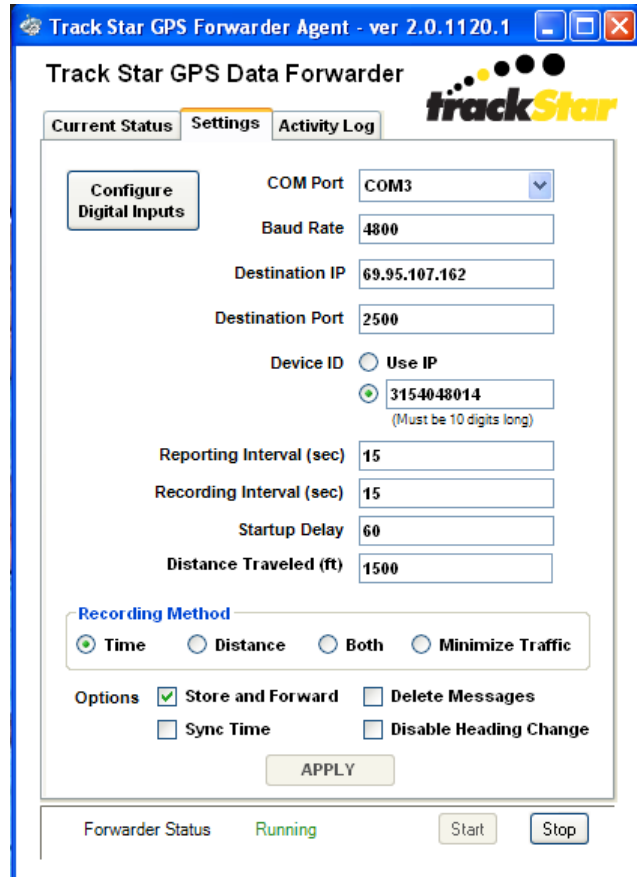
Delete Messages: this option will purge any messages still waiting to be sent whenever the service is restarted.

Disable Heading Change: disables automatic detailed recording when the heading changes.

Configure Digital Inputs:

Digital Input Hot Keys: Users can configure the hot keys for the unit. Once these hot keys are set the user can hit the keys configured for each input to send an input signal to the server.

Digital Input Buttons: Users can enter a custom name to appear on each button in the Digital Input Panel.



Activity Log

The activity log allows the user to see what data is being sent to and received from the server. Also allows the user to see what activities are taking place by the GPS unit.

Options:

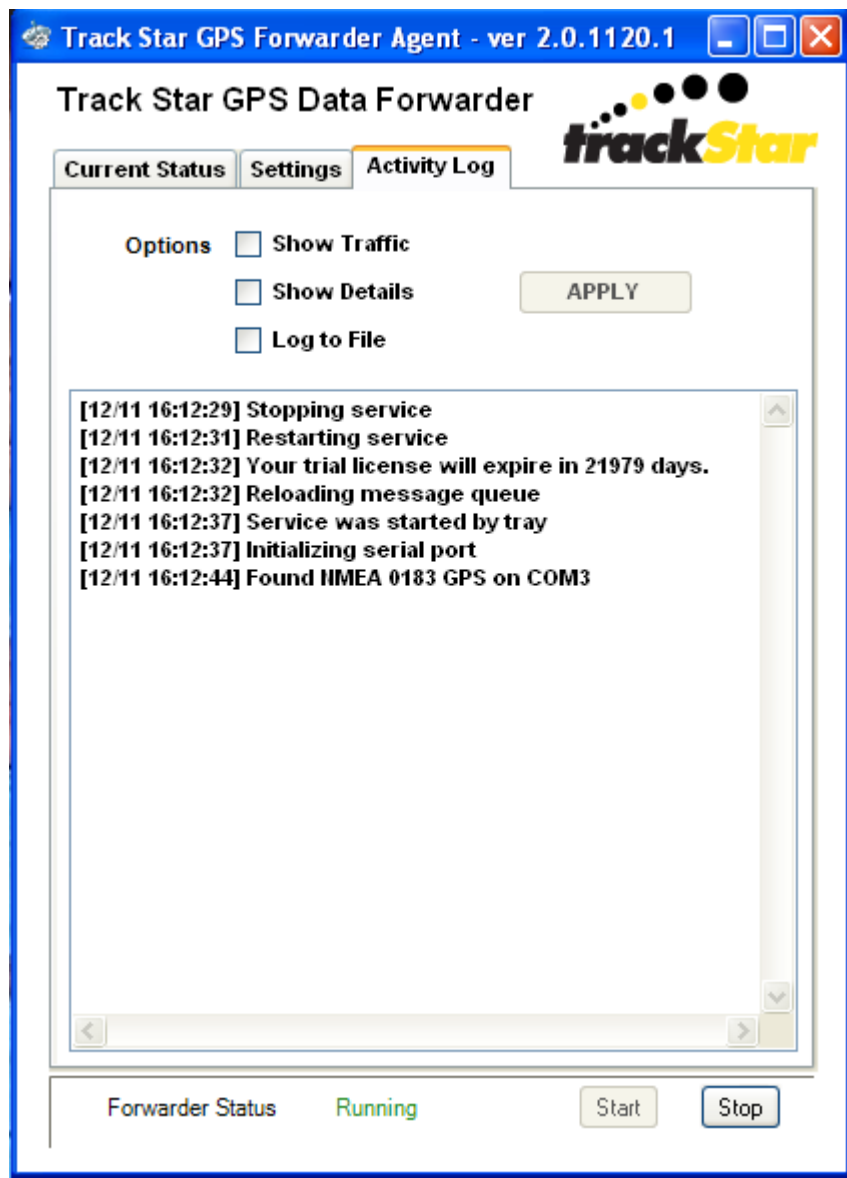
Show Traffic: this shows the traffic going to and from the server in the activity window.

Show Details: this shows detailed informational messages in the activity window.

Log to File: this will log the contents of activity window to disk file.

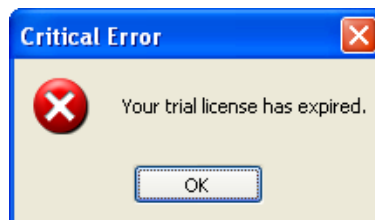
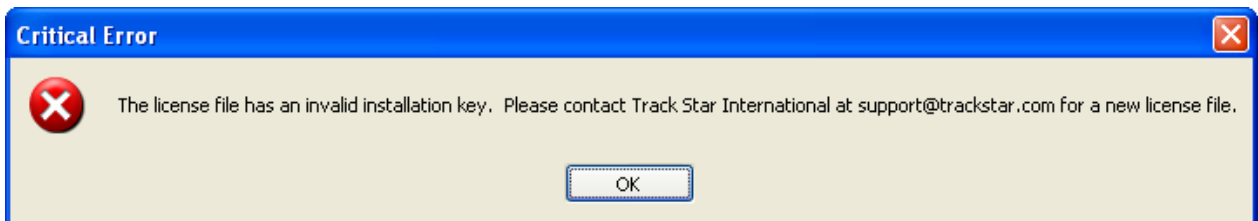
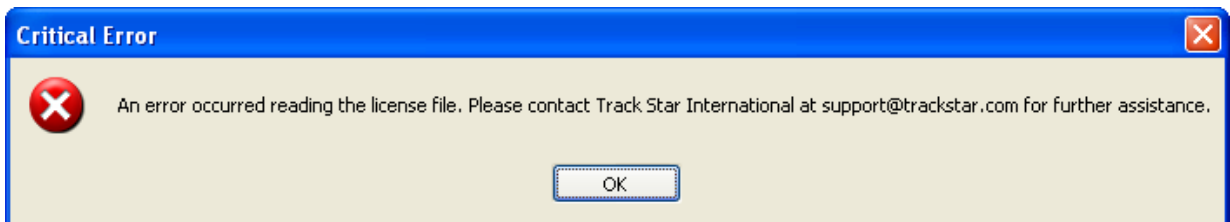
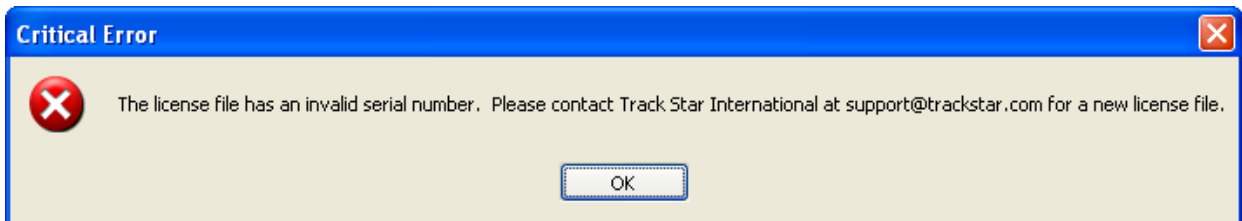
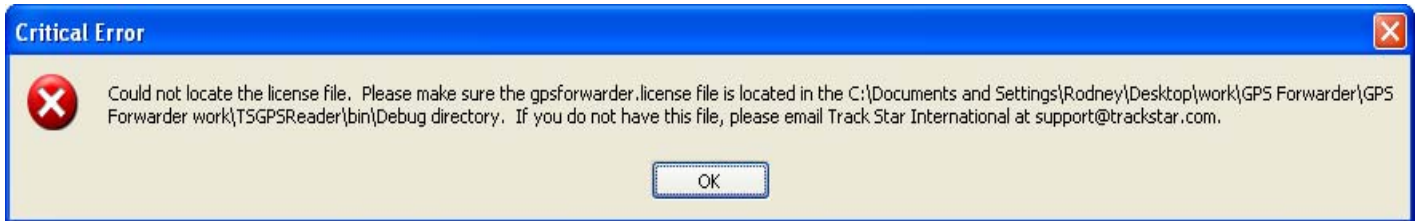
Apply: if the user changes any of the options they must hit the apply button in order for the activity window to change what data is displayed in the window.

Activity Window: the window records data the GPS unit is sending or receiving. And any other important information the user needs.



Critical Errors:

Licensing Error: if user doesn't have a valid license the user will be notified by a message box and it will be also logged in the Activity log window.





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