SeedSense®

Trimble FMX/FM 1000

- **with Hydraulic Steer - Trimble Aftermarket**

Installation & Configuration Guide for Harness 725599:

Summary: In order for 20/20 SeedSense Monitor to receive NMEA strings from a third party GPS receiver, there are a few simple steps that must be completed before signal will be transferred. Below are step by step instructions detailing configurations and requirements for communicating with our 20/20 SeedSense Monitor. Here are a few basic requirements for the 20/20 SeedSense Monitor.

NMEA Strings: Set at **5 HTZ**

- GGA: Time, position and fix type data.
- RMC: Time, date, position, course and speed data.
- VTG: Course and speed information relative to the ground.

Baud Rate: 19200 or 38400

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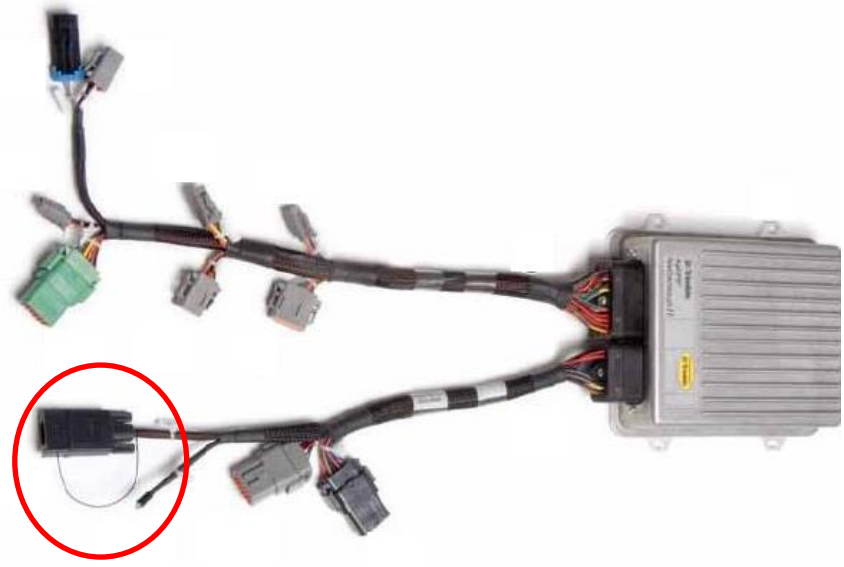
Precision Planting Harness: 725599 (use the Null End)

Connecting 20/20 to Trimble FMX/FM 1000 with Nav II Controller

First step is to locate your Nav II controller in your cab. This is typically located behind your operator's seat or underneath. The Nav II behind the seat will typically be in behind a removable plate under the cargo netting behind the operator's seat.

Location of the NAV can vary from behind the seat in the panel (Case Magnum) to under the cab (CAT challenger), to outside the back window (AGCO), left of the seat (Deere) and various other locations. The harnesses pictured are only installed on AFTERMARKET installations. Factory installation of Accuguide on Case vehicles have different harnesses than pictured. (May require the 725599, 727131, or a special round connexal adapter to 725599 configurations)

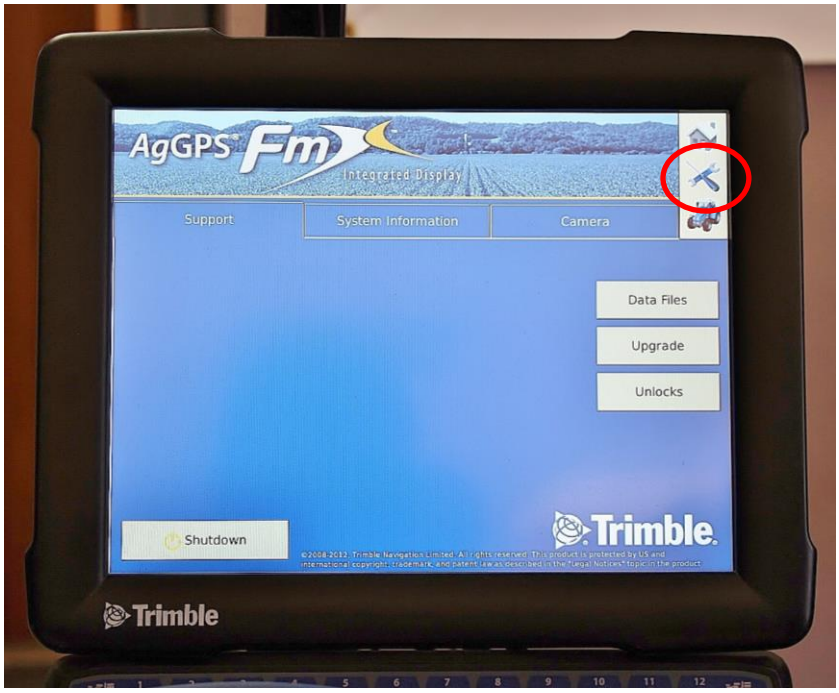
The 725599 Harness connects to the 9 pin serial port (Laptop with LED Light flashing rapidly). To locate the serial port on the Nav II first find the Deutsch connector on the Nav II (it is the small of the two plugging into the Nav II). Then connect the Null 4 pin connector to the GPS connector on the 20/20.



Display Configuration:

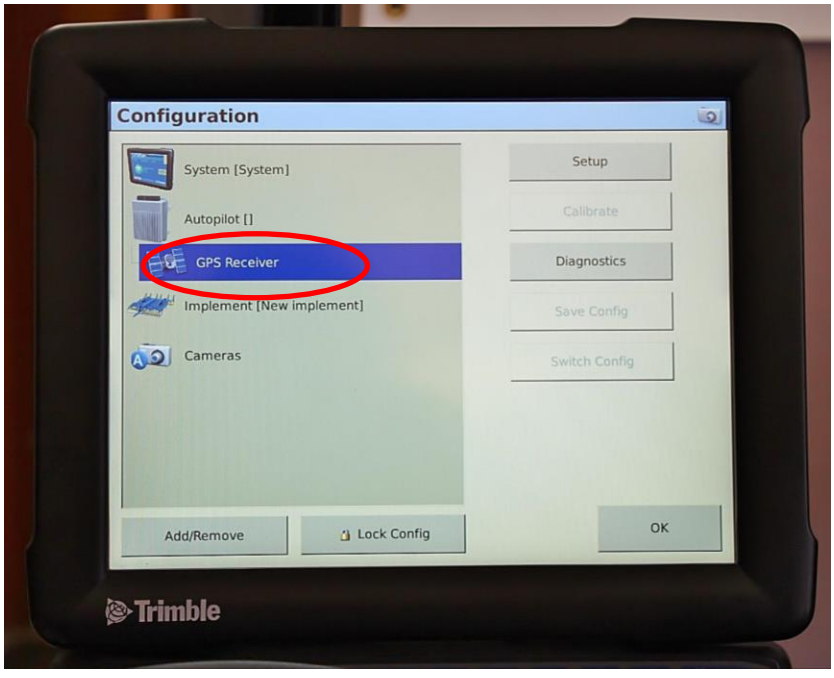
Next we will look at visual images giving step by step instructions to output NMEA messages from the Trimble FMX/FM 1000:

Step 1: Locate the wrench in the upper right hand corner of the display**.**



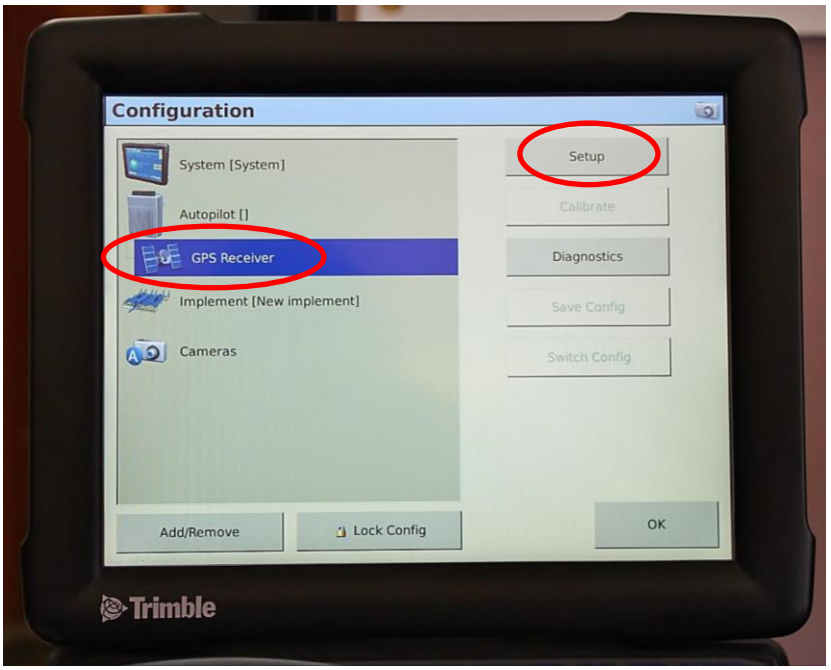
Step 2: Now that you are in the configuration screen you will see a button for GPS receiver.

Note: If you are running a system without a NAV II controller the image below will show a satellite instead of a NAV II controller

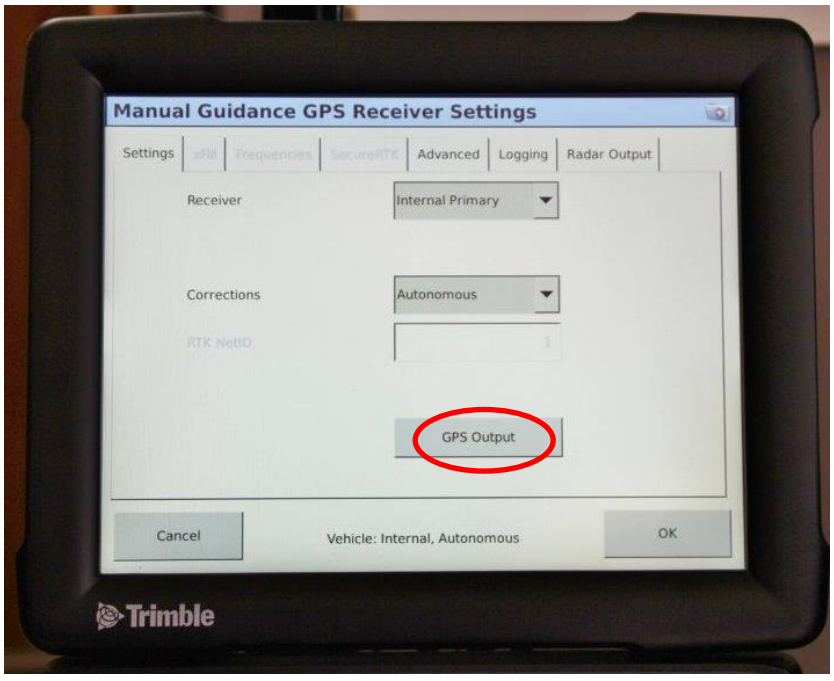


Step 3: After selecting GPS Receiver press Setup.

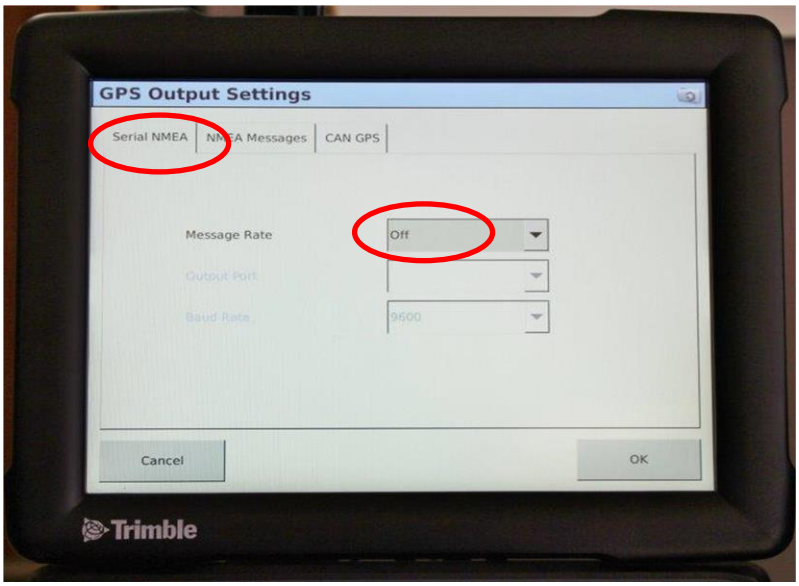
This will take you to the AutoPilot guidance GPS receiver settings



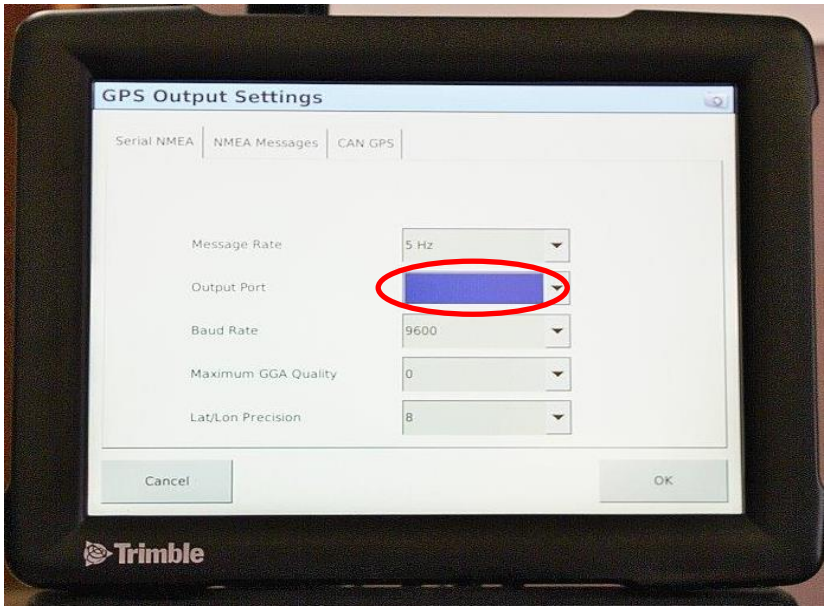
Step 4: Select GPS Output



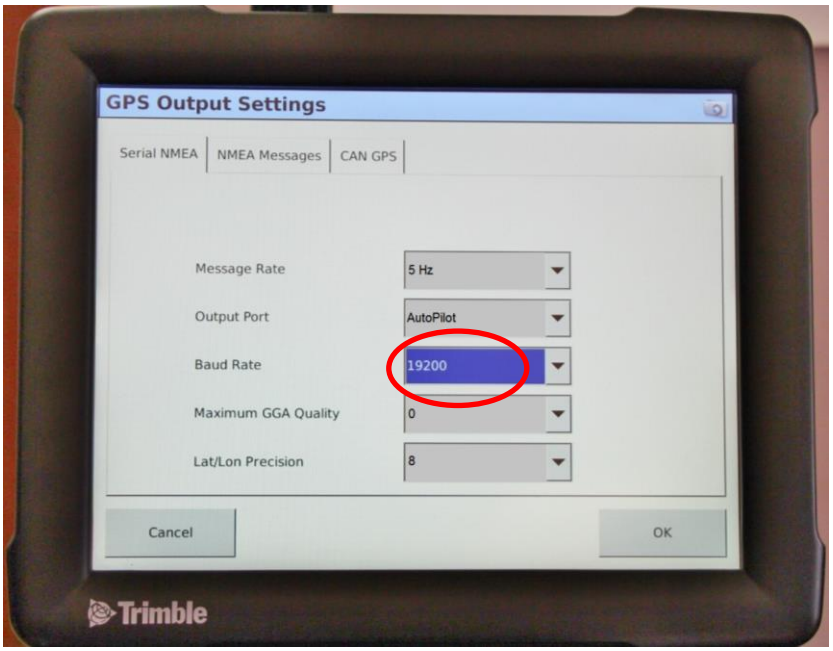
Step 5: NMEA output will need to be setup: Press the down arrow next to Message Rate. This will be set at **5 Hz**



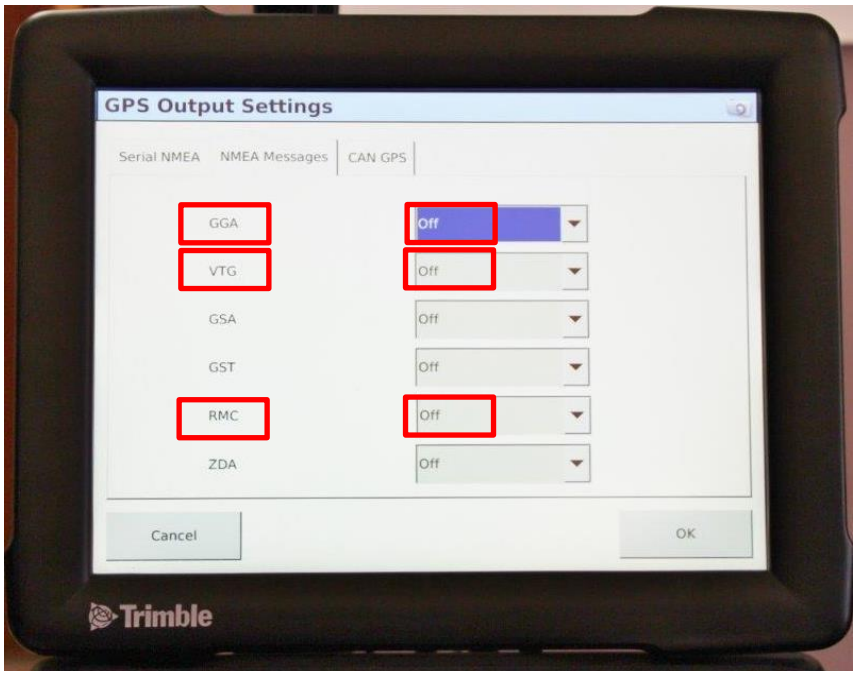
Step 6: Now we will tell the Trimble FMX/FM1000 which port to send the NMEA messages through. The output port that needs to be selected with say **AUTOPILOT**



Step 7: Precision Planting requires a baud rate of 19200 or 38400. This can be selected from the down arrow shown below.

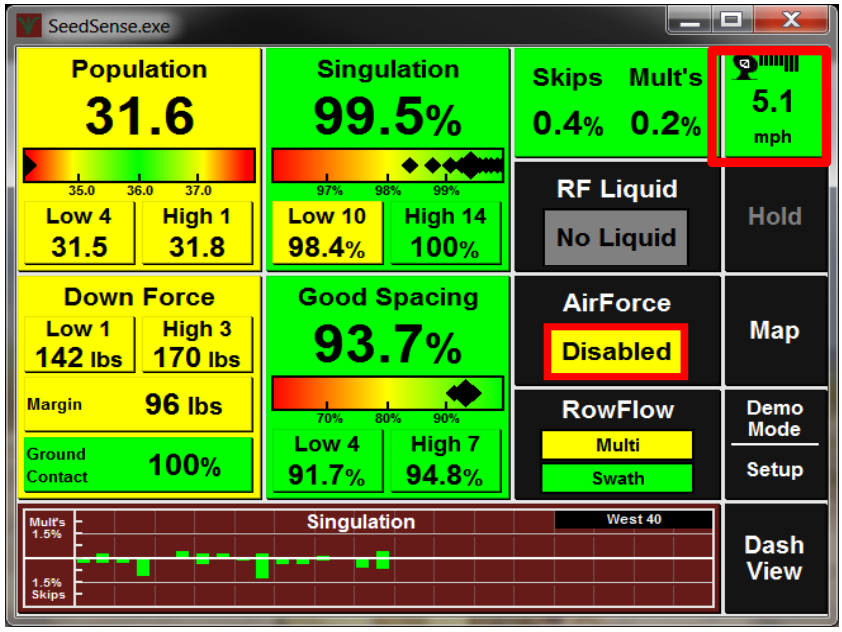


Step 8: Press NMEA Messages: The 20/20 SeedSense requires NMEA strings **GGA, VTG**, **and RMC** to be turned on.

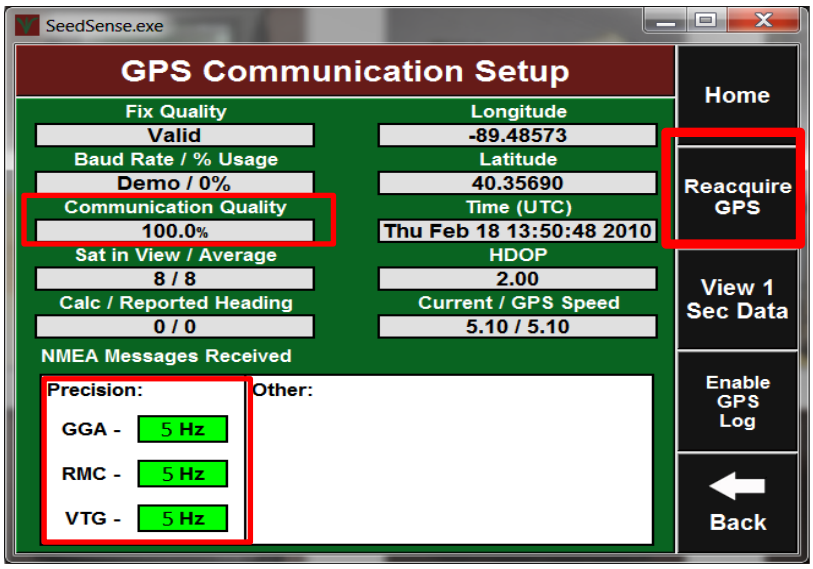


To verify GPS communications we will need to go to the 20/20 SeedSense Display Unit.

From the home screen press the SPEED/GPS button



First press REAQUIRE GPS: Then Verify Communication quality and NMEA Messages



Setup Tips/Troubleshooting

Problem: AutoPilot controllers (NAV2) output the GPS location of the rear axle, rather than the GPS location of the antenna.

Solution: In this case, enter the "Forward" distance in the 20/20 as 0 (Setup / Systems / GPS / Tractor / Forward, C).

Models Included: *This may apply to any of the following monitors:* FMX, FM1000, FMD, Insight, CFX 750, EZ-Guide 500, EZ-Guide Plus, DJ Inteli Ag, Pro600, Pro700. Any system where the GPS signal comes from the NAV2. This does NOT include a system that is pulling the GPS directly from the Receiver on the top of the cab.

Is my model affected?

To confirm if this applies to your system, a simple test can be completed.

1. Have your tractor parked outside, with the GPS receiver system and the 20/20 powered on, and the GPS connected between them.

2. View the GPS Communication page on the 20/20 (Setup / Systems / GPS / GPS Communication).

3. Record this GPS location on a notepad.

4. Next, change the antenna to rear axle distance on your GPS receiver (Configuration / AutoPilot / Calibrate / Roll Antenna Compensation / Antenna Distance from Fixed Axle).

5. This can be changed from 0 ft. to 20 ft.

On our initial test, changing the GPS offset changed the coordinates displayed by about 0.00004. If changing this distance on the GPS receiver changes either the latitude or longitude values on the 20/20, then your GPS is outputting the location of the rear axle. Be sure to input the original values into your GPS before leaving this test.