

SeedSense®

Trimble FMX/FM100

- **with Hydraulic Steer - Case IH Factory Install**

Installation & Configuration Guide for Harness 727131:

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 Hz**

- 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

Precision Planting Harness: 727131



Locating the NAV II controller and installing harnessing

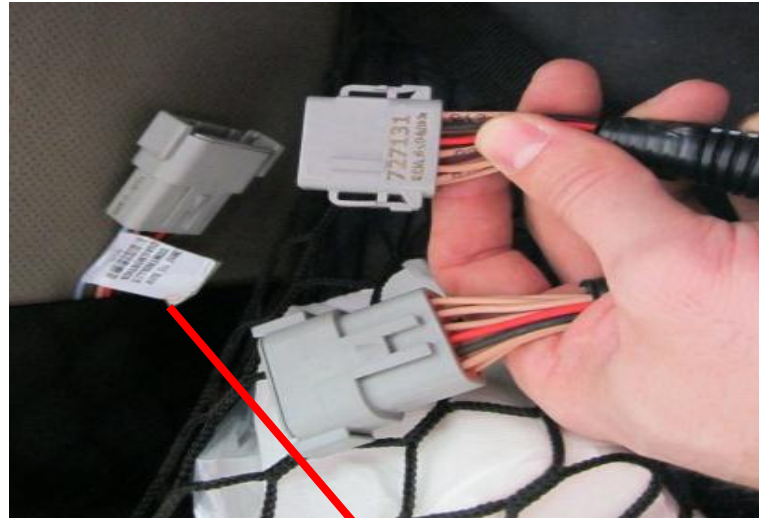
Step 1: Locate the NAV II controller box inside the access panel behind the seat. Remove all four wing nuts. (This location is for Magnum Tractors) Other locations could be 4WD under the “buddy seat” and combines typically found under the armrest or under the cab



Step 2: Slide the NAV II box off of the threaded studs to expose the connectors on its right side. There is a 12-pin Deutsch plug labeled “Controller Diagnostics.”



Step 3: Connect the 12-pin Deutsch connector on the 727131 Trimble GPS Adapter to the 12-pin Deutsch “Controller Diagnostics”.



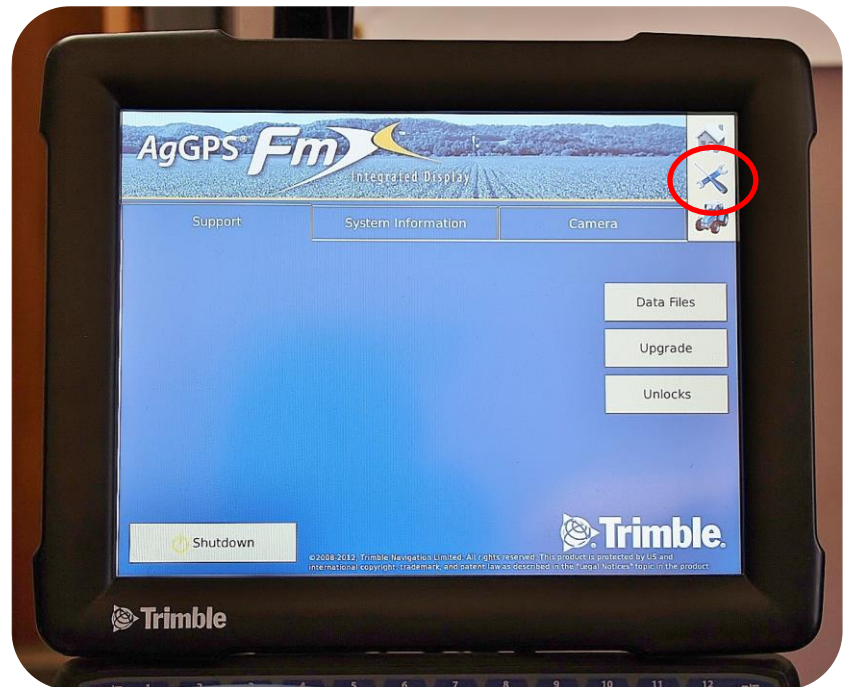
Step 4: Connect the 4-pin AMP “GPS Port 1&1 2” to the “GPS” port on the SeedSense tractor harness.



Display Configuration:

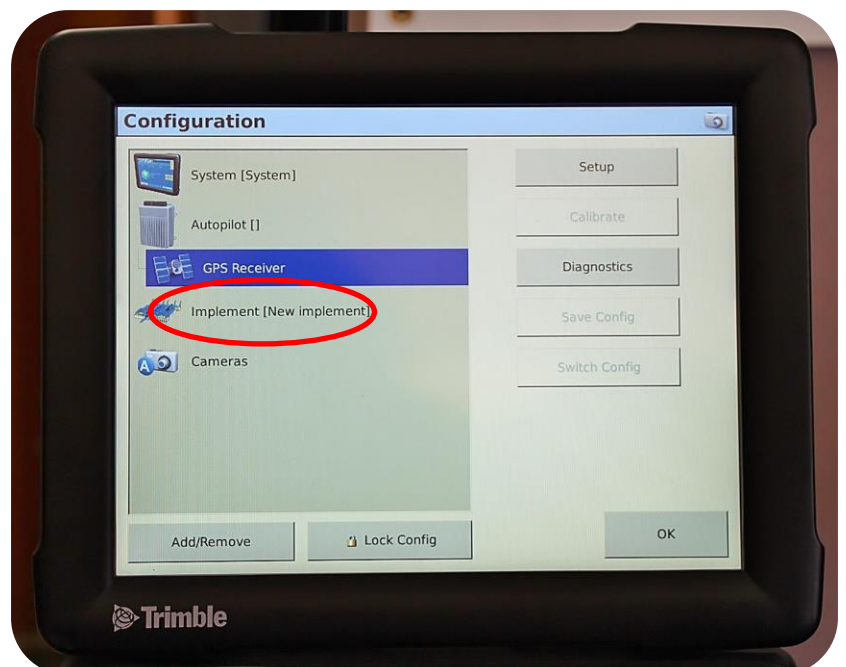
Next we will look at visual images giving step by step instructions to output NMEA messages from the Trimble FMX/FM1000:

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



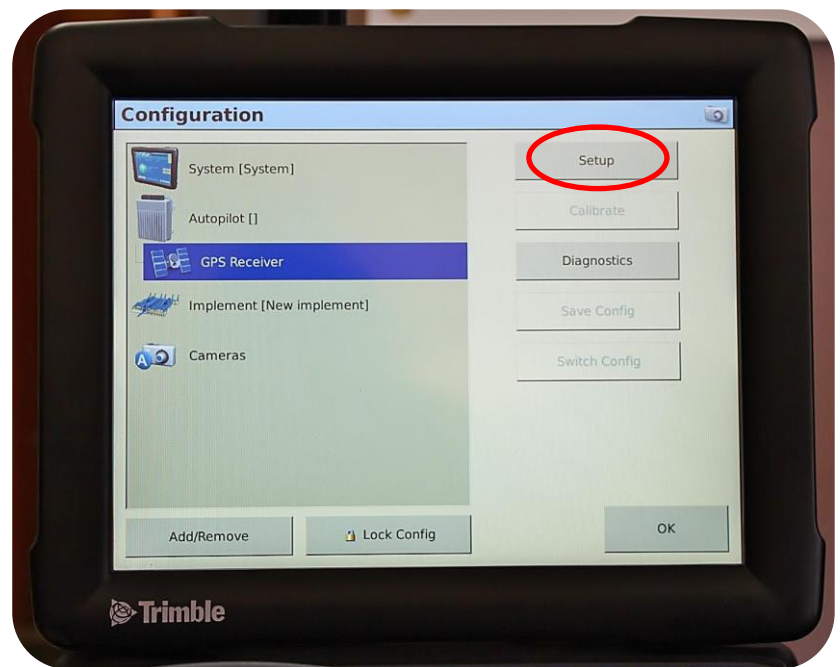
Step 2: Now that you are in the configuration screen you will see a button for GPS receiver.

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

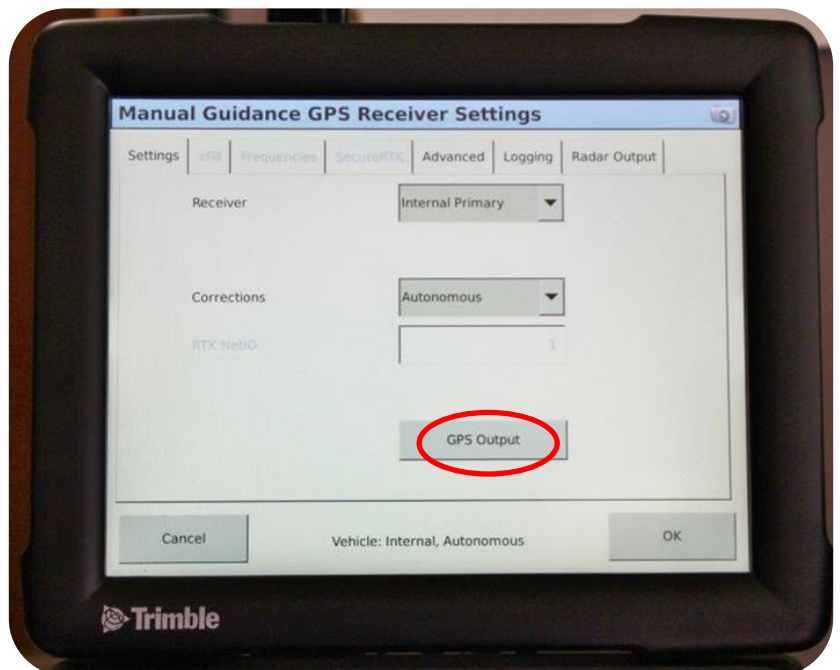


Step 3: After selecting GPS Receiver press Setup.

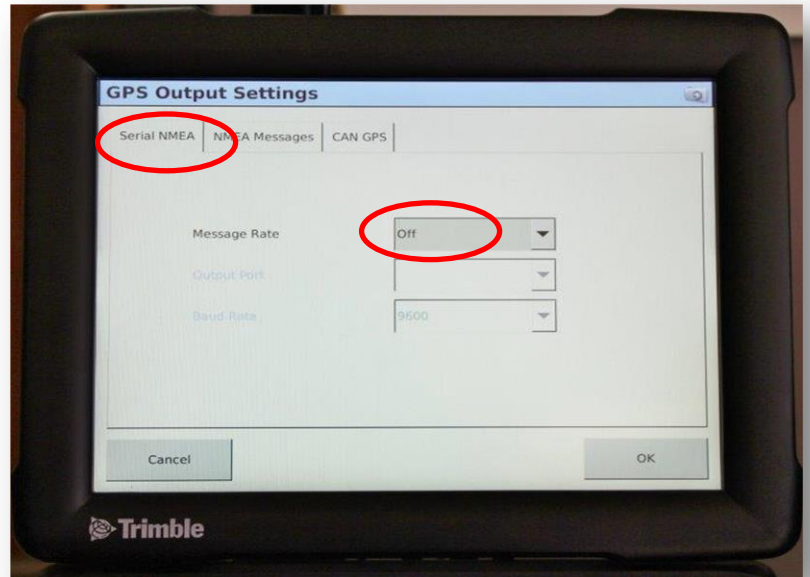
This will take you to the AutoPilot guidance GPS receiver settings



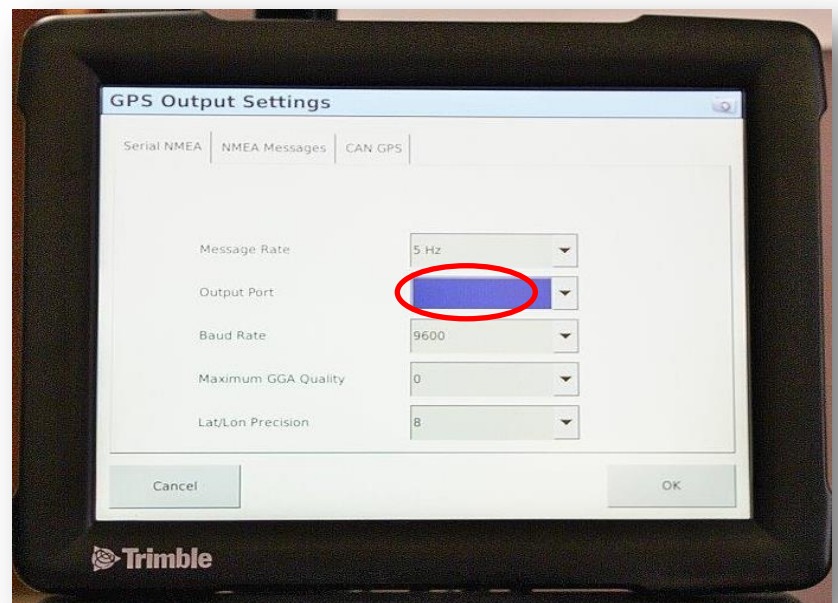
Step 4: Select GPS Output



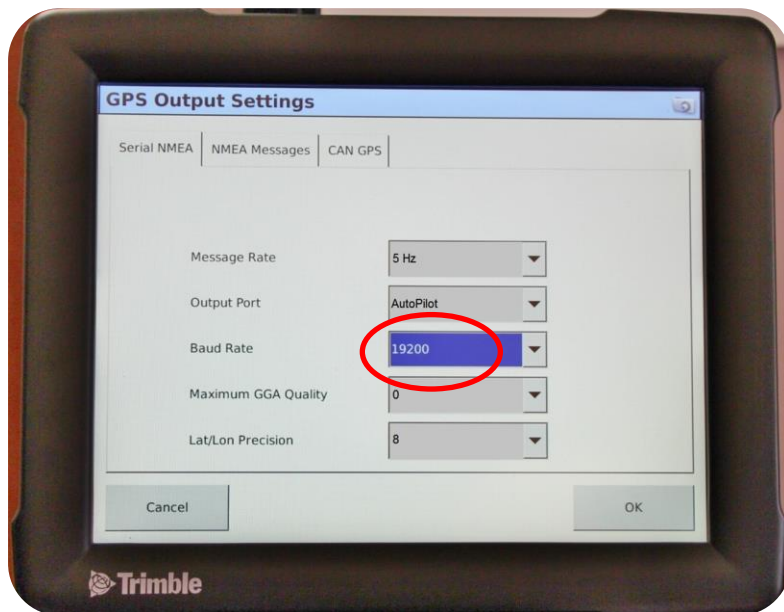
Step 5: NMEA output will need to be setup: Press the down arrow next to Message Rate. This will be set at 5 HZ



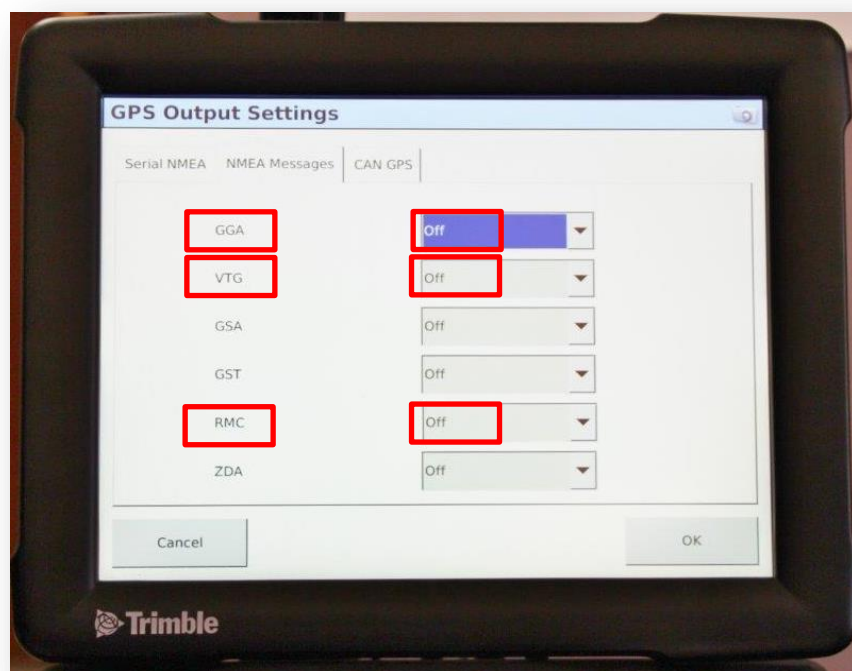
Step 6: Now we will tell the Trimble FMX/FM1000 which port to send the NMEA messages through. The output port that needs to be selected with say **AUTOPILOT**



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

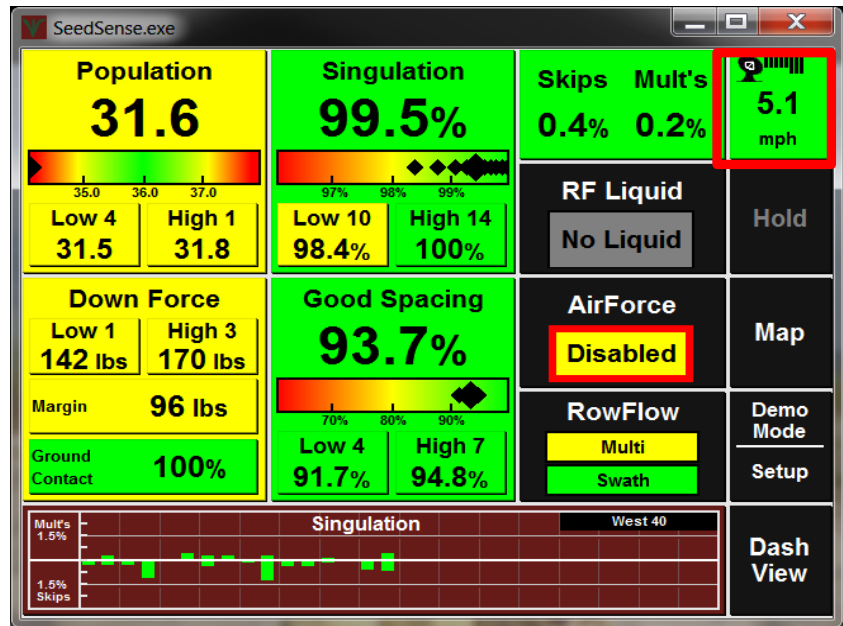


Step 8: Press NMEA Messages: The 20/20 SeedSense requires NMEA strings **GGA**, **VTG**, and **RMC** to be turned on.

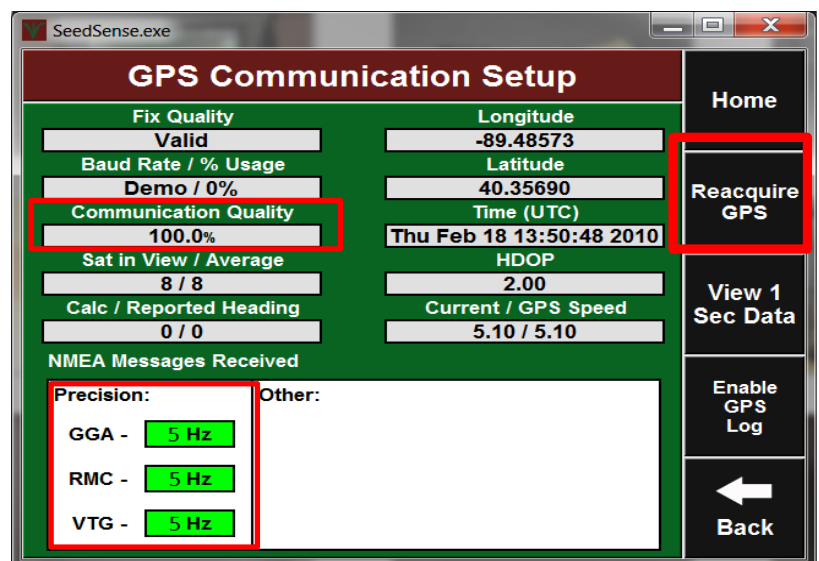


To verify GPS communications we will need to go to the 20/20 SeedSense Display Unit.

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.