

# Precision Planting 20/20 SeedSense® Display: Connecting GPS from a Trimble® FMX® Display to the 20/20

## Introduction

Precision Planting's 20/20 SeedSense® display requires DGPS information to provide real-time planting information and generate planter performance maps based on field location. The following instructions outline the procedure to connect a Trimble® FMX® Display to a Precision Planting 20/20 SeedSense® Monitor in order to enable DGPS communication between the two devices. In this case, the 20/20 SeedSense® Monitor is acquiring GPS/GNSS positioning data from the Trimble system.

## Required Hardware/Accessories



Precision Planting  
Cable PN: 727060



20/20 SeedSense® Monitor



Trimble® FMX® Display

## Instructions

1. Connect the 12-pin (female connector) of the Cable to **Port B** of the FMX display and the 4-pin connector to the GPS connector on the main harness that connects to the 20/20 monitor.
2. Turn ON the 20/20 monitor and FMX displays. The startup screen of the 20/20 should have a **'NO GPS'** box in the top, right-hand corner indicating no GPS communication at this time.
3. On the FMX startup screen, select the **Settings** icon located on the top right hand corner and then select **GPS Receiver** from the configuration options. The **GPS Receiver** option will be highlighted.
4. Select the **Diagnostics** button on the screen to check the incoming GPS signal (long/lat, status, quality, etc.) from the receiver. If working properly, select **OK** to go back to the configuration screen.

5. Select the **Setup** button to open the **GPS Receiver settings** screen (If the FMX display is password protected, you will be prompted to enter the administrative password in order to go to the next screen).
6. On the **GPS Receiver Settings** screen, select the **Settings** tab and then the **NMEA Output** button to open the **NMEA Message Output Settings**.
7. Select the tab marked **Rate**. Under this tab, you can select the NMEA message settings such as rate, output port and baud rate for the 20/20 monitor.
8. From the dropdown list for these settings, select the following:

<b>Message Rate</b>	<b>5 Hz</b>
<b>Baud Rate</b>	<b>19200</b>
<b>GGA Quality</b>	<b>1</b>
<b>Lat/Lon Precision</b>	<b>8</b>

*\*See Precision Planting's SeedSense (20-20) Operators Manual for further GPS setup info.*

9. For the **Output Port** setting, select **B (ext GPS)** from the dropdown list to set **Port B** to output GPS NMEA data.
10. Now select the **Messages** tab under the **NMEA Message Output Settings**. Make sure the GGA, VTG and RMC message strings are checked **ON**. Select **OK** twice to return to the FMX home screen.
11. **RESTART** the **FMX display** by selecting **Shutdown** and then turning it back **ON** from the power button manually in order for these new settings to be saved. The Port B on FMX should be activated to output the correct GPS NMEA data now.
12. The 20/20 monitor should have GPS communication via the FMX now. The top right hand box on the 20/20 monitor should indicate the GPS signal and tractor ground speed.
13. Select **Setup<Systems<GPS<GPS Communications** on the 20/20 Monitor to check the GPS status and quality.