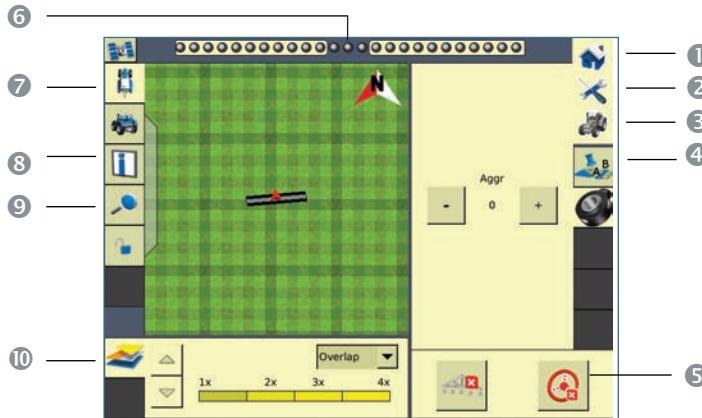


FM-1000™ Integrated Display with the EZ-Pilot™ Steering System

Quick Reference Card

RUN SCREEN



Item	Description
①	Home Tap to close a field and return to the start window.
②	Setup and configuration Tap to change some setup and display options when the field is open.
③	Run icon Tap to take a picture of the current screen.
④	Active plug-in tab Show status and control functions for the applications connected to the FM-1000 integrated display. Tap the Tab icon to change the tab.
⑤	Engage panel Contains the engage controls for plug-ins such as the Autopilot™ automated steering system, TrueTracker™ implement steering, and the FieldLevel II automated levelling system. You can also control for coverage logging.
⑥	Offline guidance display When the vehicle is online, the center indicators are green. When the vehicle moves offline, the indicators change to red and move to either side, depending on the direction to the line.
⑦	Vehicle view Tap to toggle between overhead and trailing views.
⑧	Information dialog Tap to display a larger amount of permanent text for operations relating to the display while viewing the Run dialog in the upper right-hand corner.
⑨	Zoom and Pan Tap to show zoom and pan function buttons. To zoom in and out, tap the magnifying glass; to pan in any direction, tap the arrow buttons. You can also tap the main map window to adjust the zoom level.
⑩	Coverage theme Displays the coverage and variety tracking settings. Height, coverage/overlap, variety, and GPS quality can be shown.

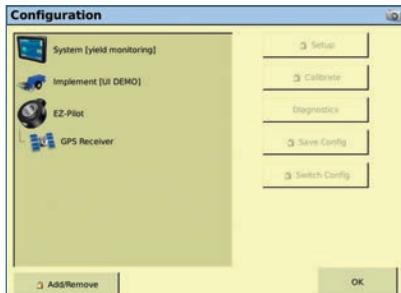
The FM-1000 integrated display has built-in, context-sensitive Help that lets you quickly find information you need about the current screen. To access the Help from any configuration screen, tap . When you are finished with the screen, tap OK.

CONFIGURING THE EZ-PILOT SYSTEM WITH THE FM-1000 INTEGRATED DISPLAY

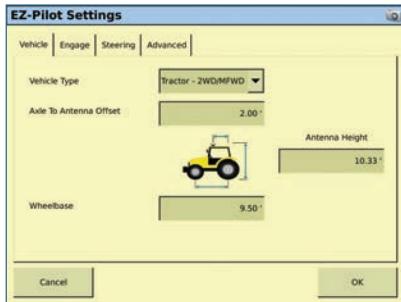
Note: For more information on system calibration and settings, see the EZ-Pilot documentation.

Setting up the system

1. In the *Configuration* screen, select *EZ-Pilot* and then tap **Setup**:



The *EZ-Pilot Settings* screen appears:



2. Enter the following information in the *Vehicle* tab:
 - a. Select a vehicle type from the drop-down list that closely resembles the machine being calibrated.
 - b. Measure the horizontal distance between the front and rear axles (the “wheelbase”) and then enter it.
 - c. Measure the antenna height from the ground and then enter it.
 - d. Measure the horizontal distance from the fixed axle, identified in the image, to the antenna and then enter it.

Note: The *Engage Options*, *Steering Settings*, and *Advanced* tabs on this screen are populated automatically with starting values, based on the vehicle type selected.

3. Tap **OK**. The *Configuration* screen appears.

Calibrating T3 terrain compensation

The EZ-Pilot system contains sensors that use T3™ terrain compensation technology to provide roll compensation when the vehicle is on a slope or drives over a bump. For roll compensation to work correctly, you must calibrate the IMD-600:

1. Select *Orientation* to calibrate the IMD-600 and perform a Terrain Compensation (T3) calibration.
2. Select the EZ-Pilot plugin and then tap **Calibrate**. The *EZ-Pilot Steering Calibration* screen appears.
3. Select *Orientation*. The *EZ-Pilot Roll Calibration* screen appears:

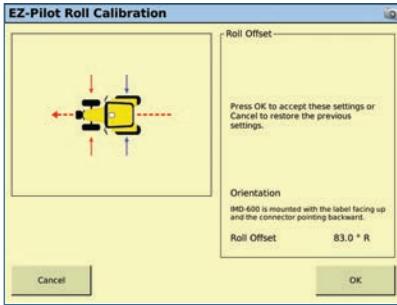


4. Select the direction that the connectors of the IMD-600 face from the drop-down list and then tap **Next**.

Note: For the best accuracy roll compensation, install the EZ-Pilot IMD-600 as specified in the platform installation instructions, placing it parallel to the vehicle center-line. Ensure that the IMD-600 is rigidly mounted, for vibration may reduce the accuracy of the terrain compensation.

5. Park the vehicle and mark the inside position of both sets of wheels.

6. Tap **Next**. The display records the roll offset in the first direction. This takes approximately 20 seconds. Do not move the vehicle while the offset is being read:



7. Turn the vehicle around and ensure that the wheels are over the positions marked in Step 5.
8. Tap **Next**. The display records the roll offset in the second direction. This takes approximately 20 seconds. Do not move the vehicle while the offset is being read.
The T3 calibration results appear. The *Roll Offset* value should be between 0° and 4°.
9. Tap **OK** to accept the settings.

Calibrating the SAM-200 motor

Note: SAM-200 calibration configures the EZ-Pilot system Angle per Turn, Aggressiveness, and Freeplay settings.

Before calibrating the vehicle, do the following:

- Ensure that the vehicle's hydraulic oil is up to operating tBefore calibrating the vehicle, do the following:
- Ensure the vehicle setup is complete and that all relevant measurements are entered in the SETUP section.
-

- Ensure that you calibrate the IMD-600 before you calibrate the SAM-200 motor.
- Ensure that the vehicle's hydraulic oil is up to operating temperature before beginning. See the vehicle documentation.
- Ensure that the tire pressure is correct.
- Perform initial calibration without an implement or with the booms folded in on a high-clearance sprayer. After initial calibration is completed, the settings can be fine-tuned with the implement or booms folded out.
- Choose a field with the smoothest possible surface and perform calibration between 2 to 4 mph (3 to 6 kph) with the vehicle at normal operation rpm.

EZ-Pilot calibration requires a straight A-B line. If you do not create an A-B line before you begin the calibration, the system prompts you to open a field and create one.

1. Tap  in the Home screen.
2. In the *Configuration Selection* screen, tap the **Edit** button next to *Display*.
3. Select EZ-Pilot and then tap **Calibrate**.
4. Select SAM-200.
5. Perform T3 roll calibration.
6. Calibrate the EZ-Pilot system settings:
 - a. Calibrate Angle per Turn.
 - b. Calibrate Aggressiveness.
 - c. Calibrate Freeplay Offset.
4. Confirm the calibration settings.

Note: You may need to run the SAM-200 calibration more than once to achieve optimal results.

RUNNING THE EZ-PILOT SYSTEM

Engaging the system

To engage the EZ-Pilot system, you must have an A-B line defined, and the vehicle must be within the engage limits configured in *EZ-Pilot / Engage Options*.

To manually engage the EZ-Pilot system, press the Engage button on the main guidance screen or on the optional remote control.

Disengaging the system

Turning the steering wheel manually disengages the EZ-Pilot system. Trimble recommends that you check this setting before you start using the system in a new installation by engaging on a line and then turning the wheel until EZ-Pilot disengages. To adjust the amount of force required to disengage the system, change the *Override Sensitivity* in the *EZ-Pilot Setup* screen. The EZ-Pilot system automatically disengages when:

- The vehicle is outside the engage limits configured in the *Engage Options* screen.
- The system is paused.
- GPS positions are lost.
- The Minimum Fix Quality setting is set to a high accuracy correction method and the system receives low accuracy positions (for example, no corrections).
- To manually disengage the system, do one of the following:
 - Tap the Engage button on the main guidance screen or on the optional remote control.
 - Turn the steering wheel to override the electric motor.
 - Press the optional EZ-Pilot remote control.

CAUTION – When on a public road, the red EZ-Pilot system override switch must be in the off position.

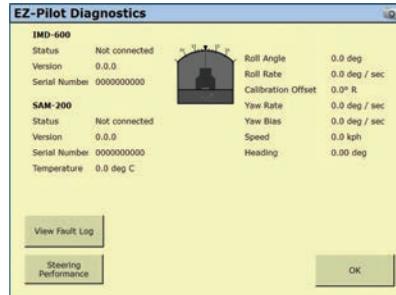
Engage status indicators

Engage status	Engage button color	Vehicle icon color
Ready to engage		
Engaged		
Cannot engage		

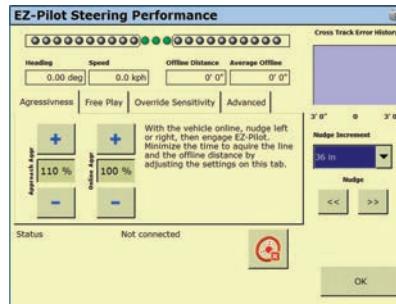
EZ-Pilot plugin diagnostics

The *EZ-Pilot Diagnostics* displays the SCM statistics and inertial information.

1. In the *Configuration* screen, select the EZ-Pilot plugin and then tap **Diagnostics**. The *EZ-Pilot Diagnostics* screen appears. This screen displays the roll and heading of the vehicle as well as the temperature of the steering control module:



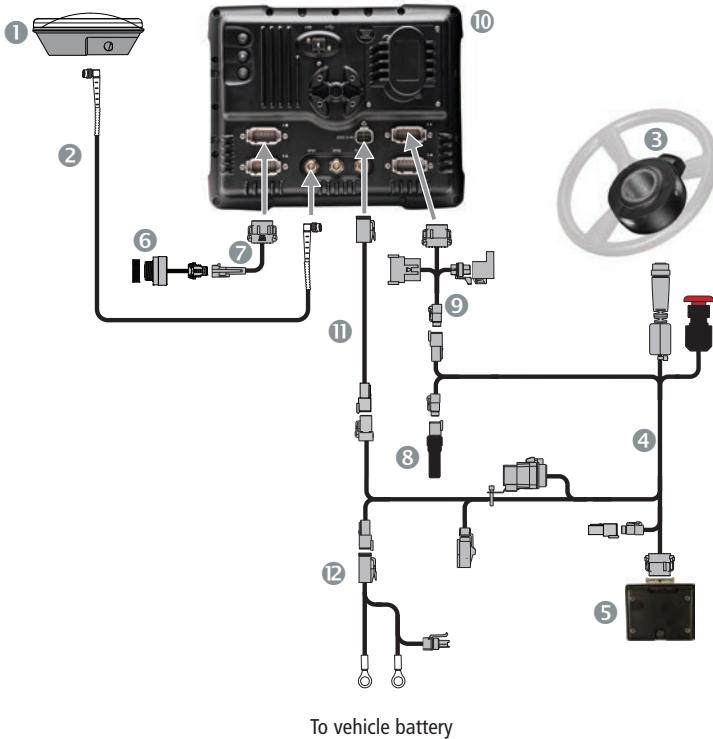
2. Tap **Steering Perf**. The *EZ-Pilot Steering Performance* screen appears. This screen is designed for advanced users that understand how to adjust EZ-Pilot performance. If you do not know where to start, Trimble recommends that you adjust the steering parameters in order, stepping through the numbered tabs in sequence:



3. To adjust steering settings, tap the appropriate tab and then make the required changes.
4. Tap **OK**.

CONNECTING THE SYSTEM

Once the EZ-Pilot steering system has been professionally installed, add the FM-1000 integrated display as shown. For proper operation of the Sonalert, ensure that the EZ-Pilot system is connected to Port C or D of the FM-1000 display and the Sonalert is plugged into port A.



No	Description
1	Antenna (P/N 77038-00)
2	Antenna cable (P/N 50449)
3	SAM-200 steering motor (P/N 83382-xx)
4	IMD-600 - SAM-200 to CAN power cable (P/N 76351)
5	IMD-600 (P/N 83390-xx)
6	Display to Sonalert cable (P/N 84668)
7	Sonalert (P/N 43104)
8	FM-1000 to Field-IQ™ cable (P/N 75834)
9	CAN terminator (P/N 59783)
10	FM-1000 integrated display (P/N 94100-xx)
11	Power cable (P/N 66694)
12	Basic power cable (P/N 67258)

FM-1000™ Integrated Display with the EZ-Pilot™ Steering System

Quick Reference Card



P/N 93020-90-E06-B

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