

## GETTING STARTED GUIDE

# **EZ-Guide® 250 Lightbar Guidance System**

**Version 2.00**

**Revision B**

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# Introduction

## Legal Notices

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For Limited Warranty information, refer to the *EZ–Guide 250 Lightbar Guidance System Release Notes*.

## About the EZ–Guide 250 System

The EZ–Guide 250 system is a GPS guidance system for agricultural vehicles. It helps you to drive the vehicle more efficiently by reducing skips and overlaps in the field.



The system includes the following features:

- a color LCD screen
- a lightbar with 15 LEDs
- an internal GPS receiver
- multiple field patterns for different field layouts

## Related Information

Sources of related information include the following:

- Help – the lightbar has built-in, context-sensitive help that lets you quickly find the information you need.
- Quick reference card – the quick reference card describes the most common features of the lightbar.

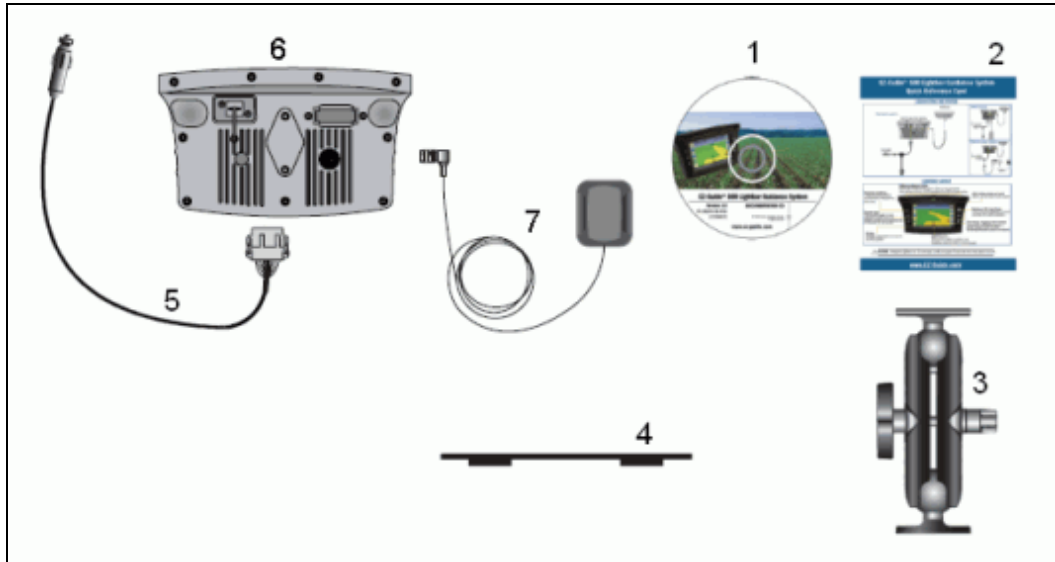
## Technical Support

If you have a problem and cannot find the information you need in the product documentation, contact your local reseller. Alternatively, go to the EZ-Guide website at <http://www.ez-guide.com/>.

# About the Lightbar

## What's in the EZ-Guide 250 Box

The standard components of the EZ-Guide 250 system are shown below.



ITEM	DESCRIPTION
1	EZ-Guide 250 documentation CD
2	Quick Reference Card
3	RAM mount
4	Antenna mount plate
5	Power cable (P/N 65168)
6	EZ-Guide 250 lightbar
7	Patch antenna

When you unpack the box, inspect all contents for visible damage, such as scratches or dents. If any components appear damaged, notify the shipping carrier. Keep the shipping and packaging material for the carrier's inspection.

## Parts of the Lightbar

The following figures show the front and back of the lightbar.



ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Action icons	4	Down button
2	OK button	5	Function buttons
3	Up button	6	LEDs



ITEM	DESCRIPTION
1	12-pin Deutsch power/data connector
2	Antenna port






3	RAM mount fixture
4	USB port

## How the Buttons Work





















On the front of the lightbar, there are six buttons. The buttons on the left and right sides of the lightbar work in different ways.

### Action buttons (on the right of the screen)

On the main guidance screen:

- Press  or  to scroll through the action icons.
- Press  to select the highlighted icon.





The following icons may appear to the right of the guidance screen:

ICON	DESCRIPTION		ICON	DESCRIPTION
	Reset guidance			Nudge left
	Set Point A			Nudge right
	Set Point B			Pause guidance
	Start headland			Resume guidance
	Complete headland			Change zoom scale
	Pause swath recording			Go to main Configuration menu
	Resume swath recording			Change view mode
	Recording FreeForm curve (press to stop)			Next FreeForm guidance line
	Not recording FreeForm curve (press to start)			Shift AB Line
	Display point, line and area mapping icons			Display panning icons

**Note:** Action icons appear only when they are appropriate. They are not all visible at all times.

The following action icons may appear on the right of a configuration screen:

ICON	DESCRIPTION	ICON	DESCRIPTION
------	-------------	------	-------------

	Increase value / up to next option		Proceed to next screen
	Decrease value / down to next option		Accept settings

In setup screens, the icons match the buttons beside them.











### Function buttons (on the left)

Beside each function button, there is an icon. When you press the function button, you select the feature that is shown on the icon.




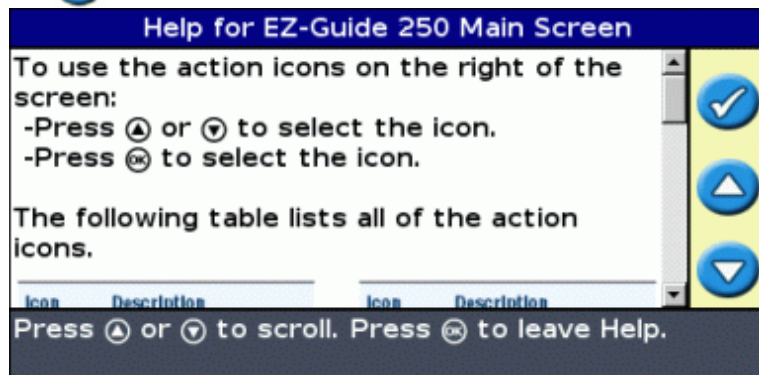
ITEM	DESCRIPTION
1	Coverage logging icon
2	Middle function button

The following function icons may appear beside the buttons on the left of the screen:

ICON	DESCRIPTION	ICON	DESCRIPTION
	Display information tab window		Cancel changes
	Turn on coverage logging		Go up one menu level
	Turn off coverage logging		Return to guidance screen
	Zoom in		Move back one screen
	Zoom out		Display Help

## Getting help

The EZ-Guide 250 lightbar has built-in help that explains how to use the current screen. To access the help, press the  function button:



## Optional Accessories

- Ag15 antenna upgrade (P/N 92010-00)
- All-port cable (P/N 64045)
- Suction cup (P/N 44922)

## Upgrades

The EZ-Guide 250 lightbar guidance system can be connected to the EZ-Steer® 500 assisted steering system.

## Fuse Information

The EZ-Guide 250 lightbar has a 10 A glass cartridge fuse located in the cigarette lighter plug. This fuse can be replaced by the user.

### Replacing the 10 A fuse

1. Locate the cigarette lighter plug holder on the end of the cable.
2. Unscrew the end cap where the spring-loaded pin protrudes. Be careful not to lose the pin after removing the end cap.
3. Remove the old fuse.
4. Insert the new fuse and then screw the end cap back onto the plug.

## Serial Port Information

By default, the lightbar does not have a serial port.

However, the following optional lightbar functions require a serial connection:

- Outputting simulated radar to send speed to another agricultural device, such as a yield monitor or a variable rate controller.
- Outputting NMEA messages to an external device.

To add a serial port to the standard lightbar cable:

1. Do one of the following:
  - ◆ Order the EZ-Guide 250 all-port cable (P/N 64045).
  - ◆ Order the serial port add-on cable (P/N 63076).
2. Identify P2 on the power cable (P/N 65168). It is the black 12-pin Deutsch connector.
3. Pull out the connector wedgelock with a pair of needlenose pliers. The wedgelock is the piece of orange plastic with four square holes.
4. On the other side of the dust cover, remove the sealing pins from cavities 5, 6, and 7.
5. Insert the labeled contacts on cable P/N 63076 into the specified cavities:
  - ◆ Yellow – Cavity 5
  - ◆ Violet – Cavity 6
  - ◆ Green – Cavity 7
6. Replace the wedgelock.

# Installation

## Step 1: Installing the Antenna

***Note:** To minimize any interference to the GPS signal, make sure that the GPS antenna is at least 2 m (6 ft) from any other antenna (including a radio antenna). You may experience interference if you operate the vehicle within 100 m (300 ft) of any power line, radar dish, or cell phone tower.*

### Installing the Patch Antenna

Find the mounting location for the antenna at the front of the vehicle roof, centered from left to right.

1. On the mounting plate, remove the protective covers from the adhesive strips.
2. Attach the mounting plate to the vehicle roof with the adhesive strips. Ensure that the mounting plate is centered along the vehicle roof.
3. Place the antenna directly on the mounting plate. The magnet on the bottom of the antenna will hold it in place.
4. Route the antenna cable into the cab.

***Note:** For optimum performance, always use the metal antenna mount plate.*

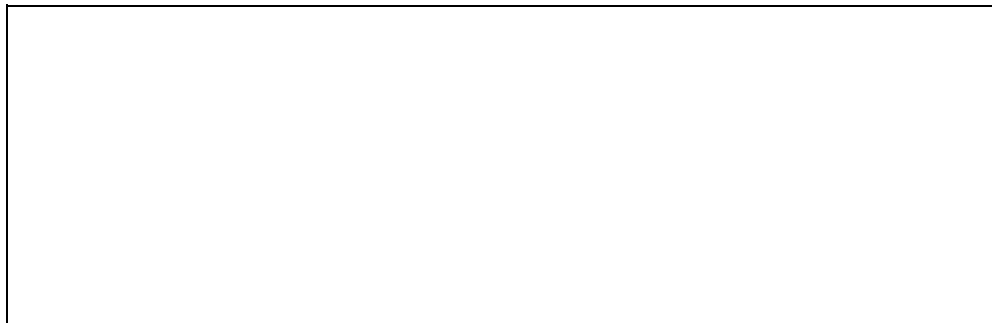
### Installing the Ag15 Antenna

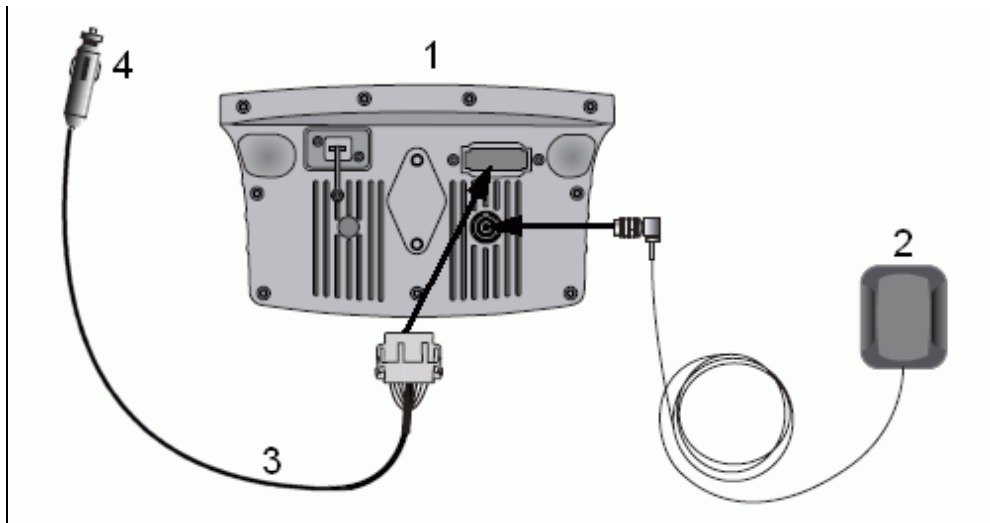
If you have upgraded to the Ag15 antenna, find the mounting location for the antenna at the front of the vehicle roof, centered from left to right.

1. On the mounting plate, remove the protective covers from the adhesive strips.
2. Attach the mounting plate to the vehicle roof with the adhesive strips. Ensure that the mounting plate is centered along the vehicle roof.
3. Connect the antenna cable to the antenna.
4. Place the antenna directly on the mounting plate. The three magnets embedded in the bottom of the antenna will hold it in place.
5. Route the antenna cable into the cab.

## Step 2. Attaching the Lightbar Cables

The lightbar with the basic antenna and power configuration:





ITEM	DESCRIPTION
1	EZ-Guide 250 lightbar
2	Patch antenna
3	12-pin Deutsch power cable (P/N 65168)
4	To power (cigarette lighter)

1. Connect the power/data cable (P/N 65168) to the power port on the back of the lightbar.
2. Connect the other end of the power/data cable to the vehicle cigarette lighter.
3. Connect the antenna cable to the antenna port.

**Caution:** If you are using the EZ-Seer system, do not disconnect or connect any cables to the system while the lightbar is running. To connect or disconnect cables, first turn off the system with the ⓘ button.

## Step 3: Turning on the Lightbar

To turn on the lightbar:

1. Plug the power cable into the cigarette lighter. If the cigarette lighter is wired through the vehicle ignition using the optional power cable, insert the key and then turn on the vehicle ignition.
2. Press the ⓘ button (the top button to the left of the screen). The lightbar turns on.

## Turning off the lightbar

To turn off the lightbar, press and hold the ⓘ button.

The lightbar will begin to turn off (this takes about 5 seconds). To stop the shutdown sequence, release the button before the lightbar turns off.

You can leave the lightbar connected to the cable when it is turned off. It may draw a small amount of current, but it will not drain the vehicle battery.




If the lightbar loses power but then receives power again within 15 seconds, for example when cranking the vehicle starter, the lightbar will turn on automatically.

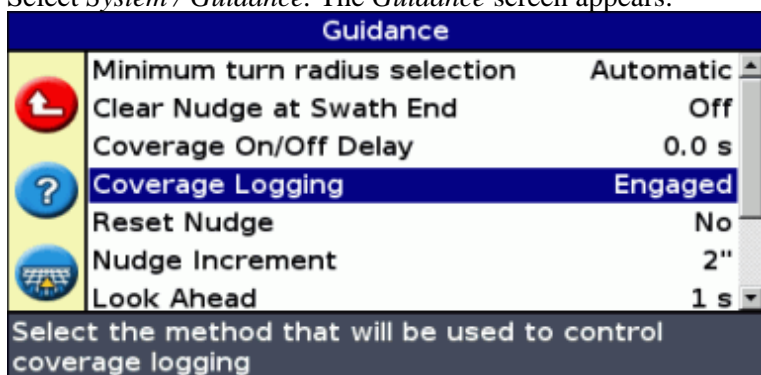
## Connecting a Coverage Switch


To install the coverage switch, refer to the instructions provided with the coverage switch.

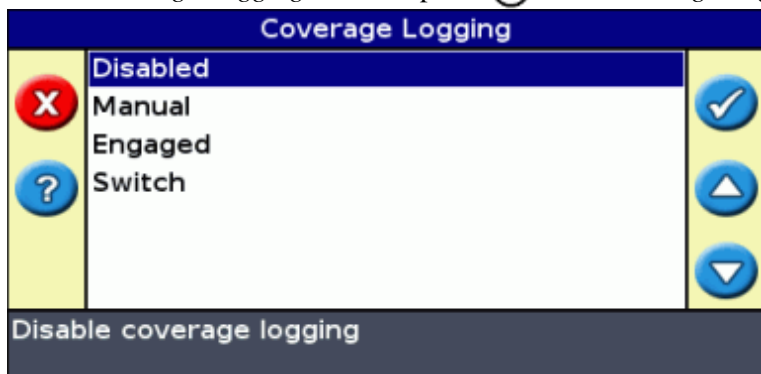
### Enabling the switch on the lightbar



From the main guidance screen:

1. Press  until you have selected the  icon.
2. Press . The *Configuration* screen appears.
3. Make sure that the *User Mode* field is set to Advanced.
4. Select *System / Guidance*. The *Guidance* screen appears:



5. Select *Coverage Logging* and then press . The *Coverage Logging* screen appears:



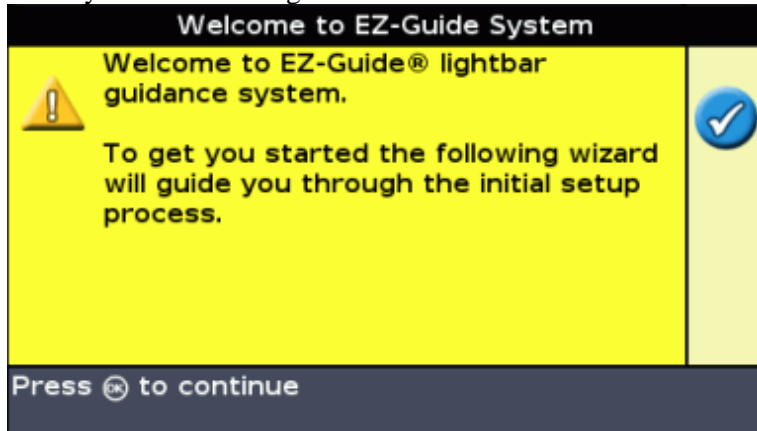
6. Press  until you have selected *Switch* and then press .
7. If necessary, set the user mode back to Easy.


Coverage logging is now set to start when you press the switch.

# Getting Started

## Quick Start Wizard

When you turn on the lightbar the *Welcome to EZ-Guide* screen appears automatically:

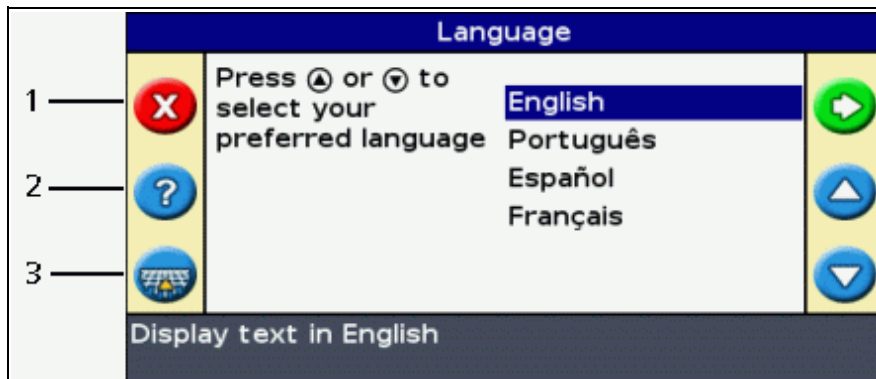


Press  . The Quick Start Wizard appears.

The wizard has several setup screens that enable you to configure important settings before you begin driving.

During the Quick Start Wizard, you can press the function button to exit at any point. The system uses any settings you have entered; for any settings that you have not yet entered, the system uses the settings from last time.




The first time that you run the lightbar, complete the whole wizard.



ITEM	DESCRIPTION
1	Quit wizard
2	Built-in help
3	Skip the wizard and begin driving



To adjust a setting:

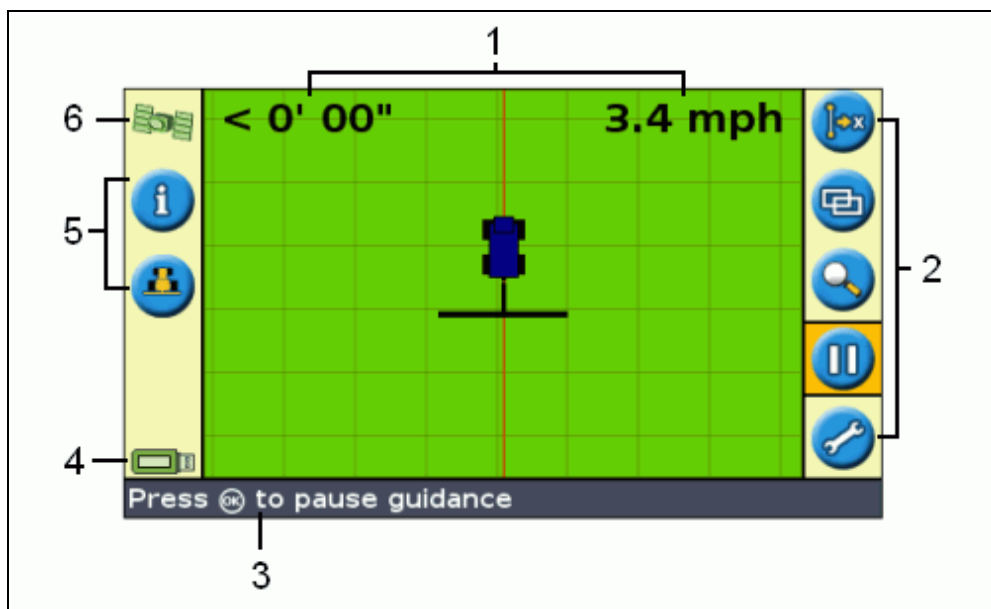
1. Press  or  to select the correct value.
2. Press  to enter the selection and proceed.

You can select whether or not the Quick Start Wizard appears next time you turn on the lightbar. If you choose to hide the wizard at startup, the lightbar skips the wizard and starts on the main guidance screen.

To alter these settings after startup, run the Quick Start Wizard from *Configuration / Quick Start Wizard*.

Once you complete the Quick Start Wizard, the main guidance screen appears.

## Items on the Main Guidance Screen






ITEM	NAME	DESCRIPTION
1	Status text	There are two status text items on the main guidance screen. The item on the left shows the distance that the vehicle is from the guidance line. The item on the right shows the current vehicle speed.
2	Action icons	See <a href="#">How the Buttons Work</a>
3	Tips / Message panel	The Tip / message panel explains the icon functions and shows driving tips.
4	USB drive status indicator	Shows the current status of the USB drive.
5	Function icons	See <a href="#">How the Buttons Work</a>
6	GPS quality icon	Shows the quality of the GPS signal.




## Status Indicators

On the main guidance screen, the lightbar has two status indicators.

The color of the USB drive icon shows the status of the USB drive:

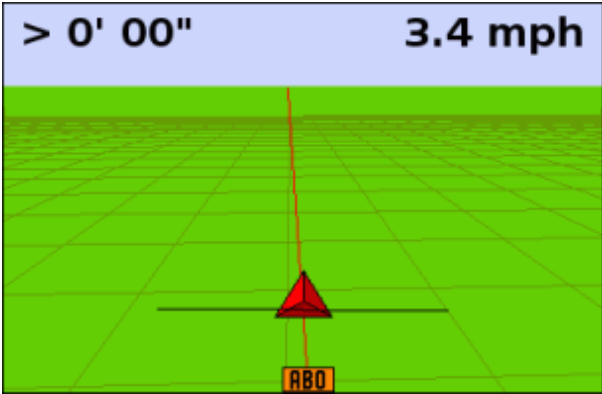
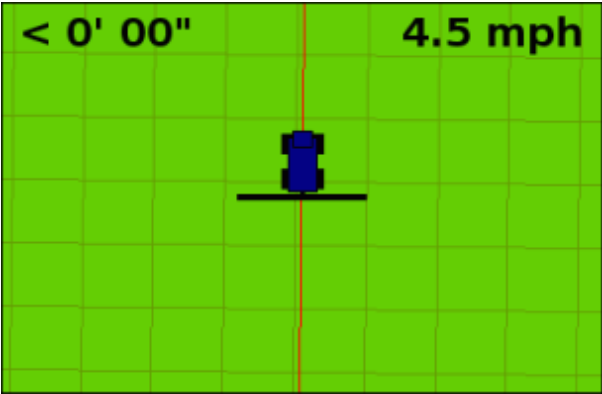
ITEM	DESCRIPTION
 Green	The USB drive is connected and ready
 Orange	The USB drive is connected, but currently loading
 Red	The USB drive is disabled due to an error

The color of the satellite icon shows the status of the GPS signal:

ITEM	DESCRIPTION
 Green	The GPS signal is strong
 Orange	The GPS signal is outside acceptable settings
 Red	There is no signal

## View Modes

There are two views when you are driving in the field:

PERSPECTIVE MAP VIEW	PLAN MAP VIEW
	
A 3D view of the field	A bird's eye view of the field

By default, the view switches from plan view to perspective view when you enter the field. You can change the view mode in Advanced mode.

## User Modes





The EZ-Guide 250 lightbar guidance system has two user modes:

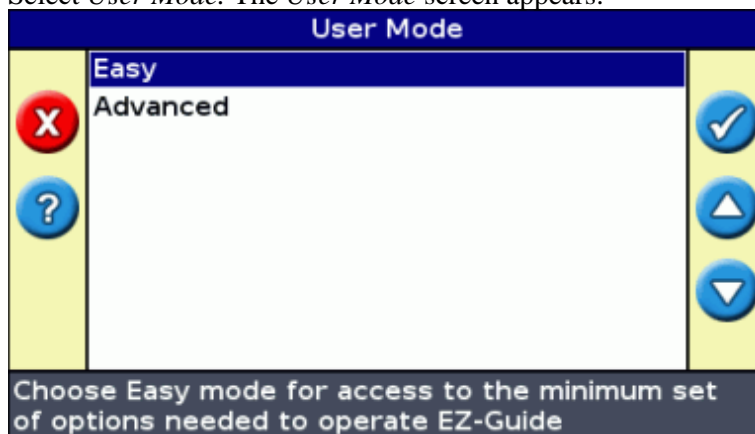
MODE	DESCRIPTION
Easy	Limited to accessing the most simple features. Fewer action icons are available. Simplified driver options (for example, creating a guidance line is easier).
Advanced	The user can access all of the settings.


Use Easy mode if you want to select a swath pattern and quickly begin driving.

## Changing the User Mode

To change between Easy mode and Advanced mode:

1. Press  or  until you have selected the  icon and then press . The *Configuration* screen appears.
2. Select *User Mode*. The *User Mode* screen appears:



3. Select Advanced or Easy and then press . The main guidance screen reappears, with the lightbar in the selected mode.

## Changing the Backlight Brightness

To change the strength of the screen backlight, select *Configuration / Backlight*.

## Changing the LED Brightness

To adjust the brightness of the LEDs on the lightbar, select *Configuration / LED Brightness*.

- In bright sunlight, increase the brightness to make the LEDs more obvious.
- In darker conditions, for example driving at dusk, you can lower the brightness settings so the LEDs are less intense.

## Getting GPS Corrections

By default, the EZ-Guide 250 lightbar is configured to receive the following free corrections:

REGION	CORRECTION
North America	WAAS
Europe	EGNOS

These corrections provide submeter accuracy with the patch antenna, or 15 cm–20 cm (6 in–8 in) pass-to-pass accuracy when using the optional Ag15 antenna.

To change the GPS corrections (for example, to configure external GPS), select *Configuration / GPS Setup / GPS Correction Source*.

For more information, see *Advanced Mode: GPS Corrections*.

# Easy Mode Guidance

## Introduction to Guidance

The EZ-Guide 250 lightbar uses onscreen lines, either straight or curved, to guide you. These are called the **guidance lines**. The most simple form of guidance line is a **straight AB Line**. To create an AB Line, you define a start point (the A point) and an end point (the B point). Once you define the A and B points, a straight line is drawn between them. This is your **master line**.

When you define the first guidance line, the lightbar copies it to create additional guidance lines.



### Distance between guidance lines

When you begin to define the line, you specify the width of the implement attached to the vehicle. This width is used to calculate the distance between the guidance lines. If you do not want the guidance lines to be exactly one implement width apart, you can set an overlap or skip.





### Headlands

You can record a headland boundary and get guidance to it, or you can work without a headland.

### Onscreen appearance

When the main guidance screen shows the perspective view, the lines are tagged with flags that describe them.



ITEM	DESCRIPTION
	The master line that you created, and that the swaths are based on.
	The A (start) and B (end) point on the master line.
	The first swath to the left of the master line. (The direction "left" is relative to the direction the master line was drawn, not the vehicle's current position). The current swath and tag are orange. <i>Note: On a Pivot pattern, the swaths are numbered out from the center, not from the initial swath.</i>
	The second line to the left of the master line.





## Following Guidance

The lightbar displays guidance in two places:

- On the LEDs
- On the screen

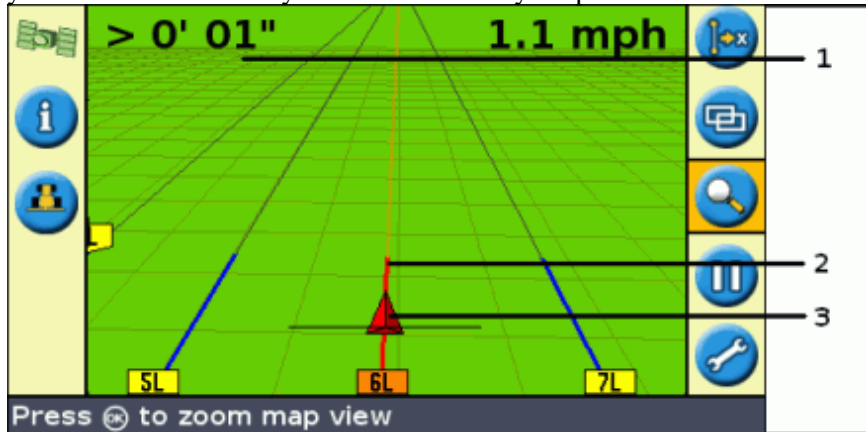
### Guidance on the LEDs

The term **LED** refers to the row of 15 Light Emitting Diodes (LEDs) that are located above the screen. The LEDs that are lit up show the position of your vehicle relative to your intended guidance line. As your vehicle position changes in relation to the guidance line, the lit LED moves left or right. Use the lightbar to obtain accurate guidance, if an implement offset or implement draft is set, or for fine guidance on straight swaths.

VEHICLE POSITION	LIGHTBAR APPEARANCE
<p>Vehicle is directly on the guidance line</p> 	<p>The three center LEDs (green) show that the vehicle is online.</p> 
<p>Vehicle is off the guidance line</p> 	<p>A single lit LED has moved right. This shows that the vehicle is offline to the left.</p>  <p><i>Note: This assumes that the LED Mode is set to Chase (the default). If the LED Mode is set to Pull, the LEDs move left when the vehicle is offline to the left.</i></p>

## Guidance on the screen

The lightbar screen shows the position of your vehicle in the field, the guidance line, and the offline distance, so you can tell how much you need to correct your position.



ITEM	DESCRIPTION
1	Offline distance
2	Guidance line
3	Vehicle position

## Guidance Patterns

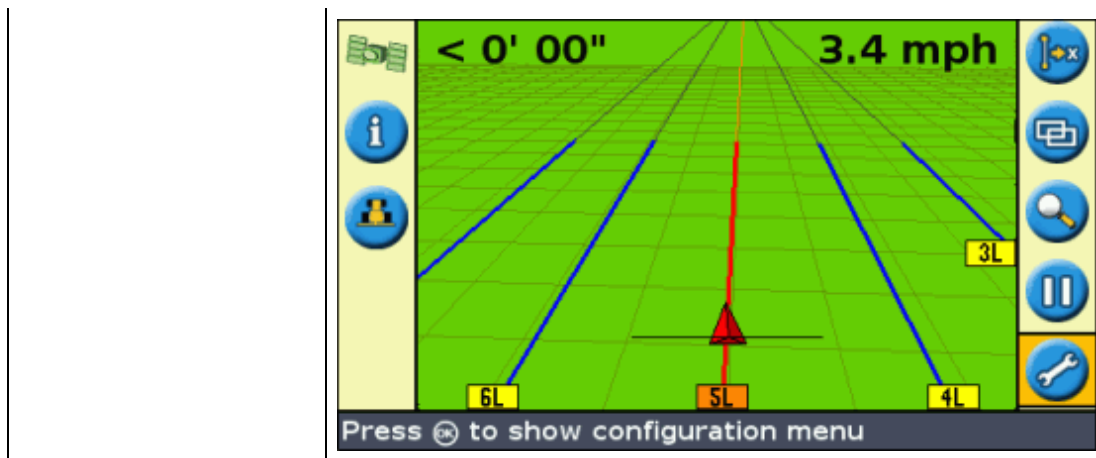
The EZ-Guide 250 lightbar has seven guidance patterns so you can create guidance to suit your field layout:

### Straight AB

A Straight AB is the most simple form of line. Use a straight AB Line when you do not need to define headlands and you want to drive the field in parallel straight lines.

To create a straight AB Line, define a start point (A) and an end point (B). The Straight AB Line then appears as a straight line between the two points.

PATTERN	EXAMPLE
<p>The diagram shows a green field with a straight line from point A to point B. A vehicle icon is shown on the line. The field is divided into sections labeled A and B.</p>	



**Note:** When the vehicle is on a guidance line, the line extends 1 km (0.6 miles) before Point A and 1 km beyond Point B. This makes it easier to see where the next swath is, and to get online after the turn.

### Mapping an AB Line

1. Drive to the start point of the master line.
2. Set the A point:
  - a. Press or until you have selected the icon.
  - b. Press . The A point is set.
3. Drive to the other end of the line.
4. Ensure that the icon is selected and then press . The master AB Line appears.
5. Turn left or right for the next swath. As you move toward the next swath, it appears on the screen and turns orange to show that it is selected.

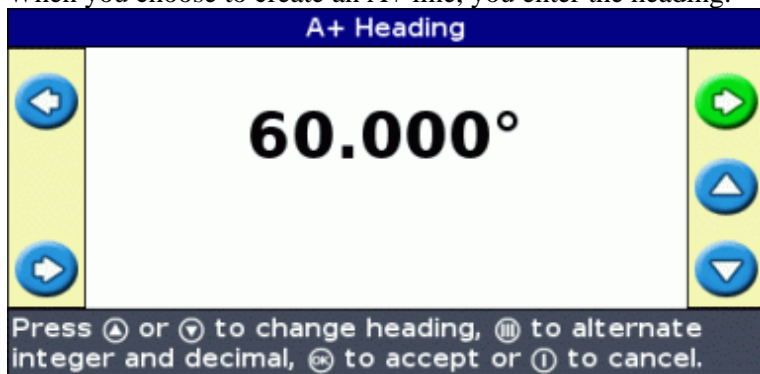
### A+ line

An A+ line is also a straight line. It is defined by a single point on the line (the A point) and the heading of the line.

PATTERN	EXAMPLE



When you choose to create an A+ line, you enter the heading.



The default heading is the same as the previous AB Line. This pattern is useful for when you need guidance exactly parallel to the last AB Line, for example when:

- driving adjacent fields
- mapping the AB Line on a road down the side of the field
- skipping an access road in a field

The A+ line extends 1 km (0.6 miles) before and after the A point.

### Mapping an A+ Line

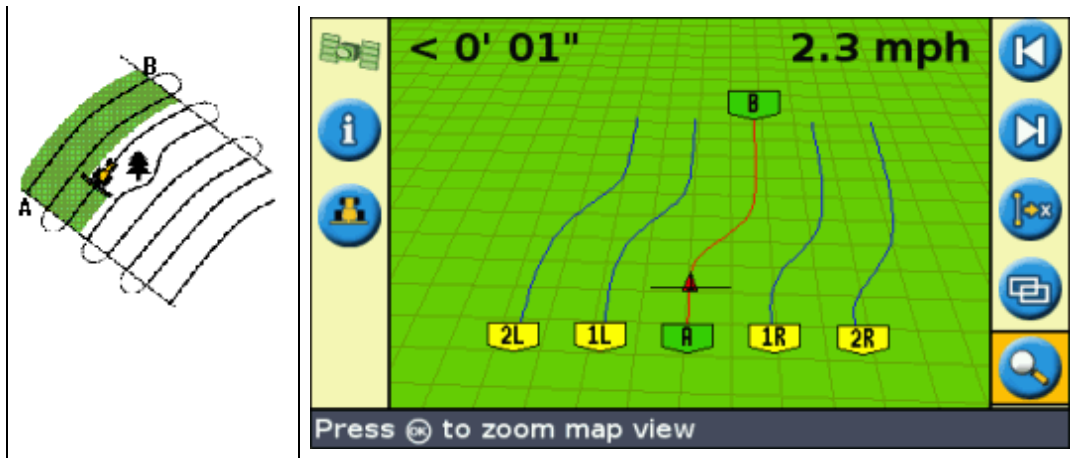
1. Drive to the start point of the master line.
2. Set the A point:
  - a. Press ▲ or ▼ until you have selected the A icon.
  - b. Press [OK]. The A point is set. Because you have already set the line heading, your master AB Line appears on the screen.
3. Follow the AB Line for guidance down the first swath.
4. Turn left or right for the next swath. As you move toward the next swath, it appears on the screen and turns orange to show that it is selected.

### Identical curve

The identical curve pattern records your exact route between the A and B points, instead of a straight line.

All of the guidance lines will match the master curve, regardless of where the vehicle has driven. Use the curve pattern when you want to work the field with gentle curves.

PATTERN	EXAMPLE



### Mapping an Identical Curve

1. Drive to the start point of the curve.
2. Set the A point:
  - a. Press or until you have selected the icon.
  - b. Press . The A point is set.
3. Drive the initial curve.
4. Ensure that the icon is selected and then press . The master line appears on the screen.
5. Turn left or right for the next swath. As you move toward the next swath, it appears on the screen and turns orange to show that it is selected.

### Adaptive curve

The adaptive curve pattern is similar to the identical curve pattern. It provides guidance along a curve. However, the adaptive curve pattern updates guidance after each swath to take into account any deviations you made.

It continually records your path and provides guidance that matches the last path you drove.

PATTERN	EXAMPLE

There are two ways to define adaptive curves:

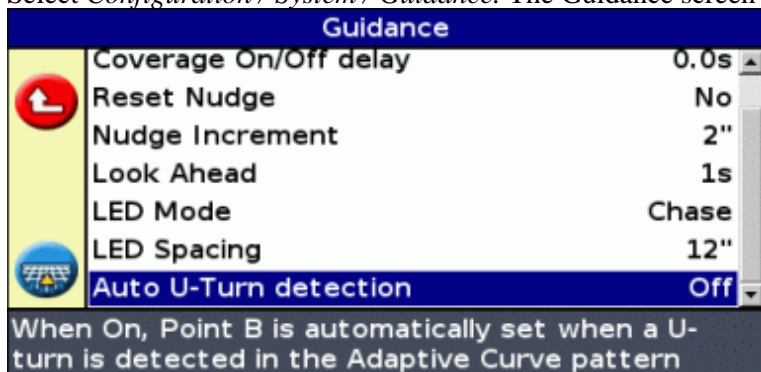
- Set the A and B points
- Set the A point and perform a U–turn onto the next swath (which is automatically detected)

The method that you use depends on the Auto U–Turn detection setting.

### Changing the Auto U–Turn detection setting

**Note:** To change the Auto U–turn detection, the lightbar must be in *Advanced mode*.

1. Select *Configuration / System / Guidance*. The Guidance screen appears.



2. Adjust the Auto U–Turn detection setting.

### Mapping an Adaptive Curve

There are two ways to use the adaptive curve pattern:

- Automatically: Set the *Auto U–turn detection* option to On and then perform a U–turn to generate each new swath.
- Manually: Set the Auto U–turn detection option to Off and then set the B point at the end of each swath to generate the next swath.

### Adaptive curves with automatic turn detection

1. Drive to the start point of the curve.
2. Set the A point:
  - a. Press or until you have selected the icon.
  - b. Press . The A point is set.
3. Drive the initial curve.
4. At the end of the first curve, perform a U–turn. The system detects the turn and generates the next swath.

### Adaptive curves with manually defined swaths

1. Drive to the start point of the curve.
2. Set the A point:
  - a. Press or until you have selected the icon.
  - b. Press . The A point is set.
3. Drive the initial curve.
4. At the end of the first curve, set the B point. The system generates the next swath.

- Continue to drive the swaths, setting the B point at the end of each one.

### Using the adaptive curve pattern for rowfinding

- In Advanced mode, select *Configuration / System / Guidance* and then set the *Auto U–Turn detection* option to Off.
- Reset guidance:
  - Enter the width of the implement.
  - Create a guidance line based on the adaptive curve pattern.
- Set the B point at the end of each row.
- Turn the vehicle toward the next swath. When the vehicle is halfway through the turn, guidance along the next swath appears.

### Curve smoothing

By default, curves are smoothed by the EZ–Guide 250 for improved guidance and autosteering. You can disable curve smoothing on tight turns (curves that have a radius of less than 3m (10ft)).

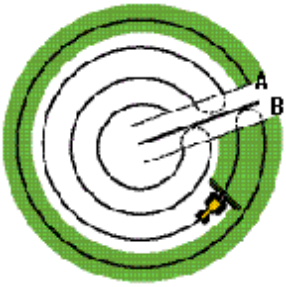
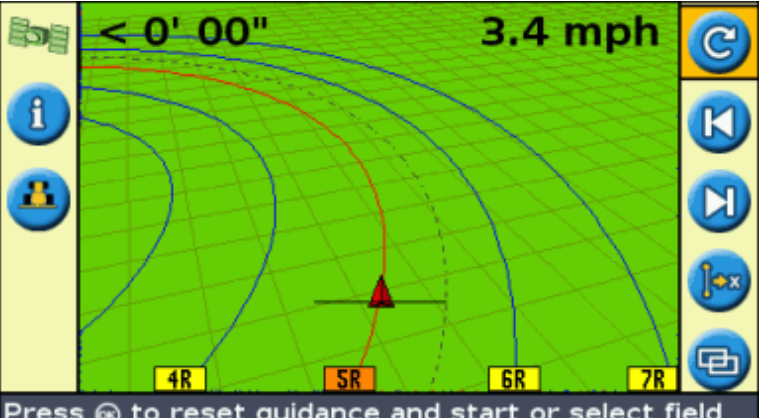
**CAUTION:** If you disable curve smoothing, the EZ–Steer 500 system or the AgGPS Autopilot system may not be able to autosteer around the tighter turns. Be careful when you disable curve smoothing.

To disable curve smoothing:

- Set the lightbar to Advanced mode.
- Select *Configuration / System / Guidance / Minimum Turn Radius Mode*.
- Select *Disabled*.





### Pivot

Use the Pivot pattern on fields that are irrigated using a center–pivot. With this pattern, you can drive concentric circles around the center–pivot.

PATTERN	EXAMPLE
	

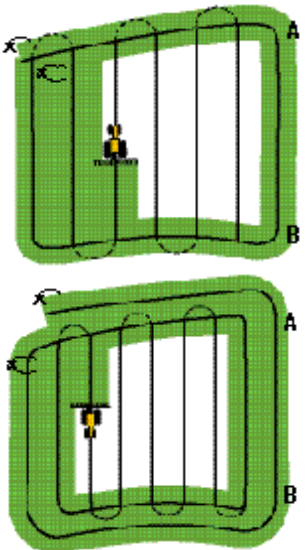
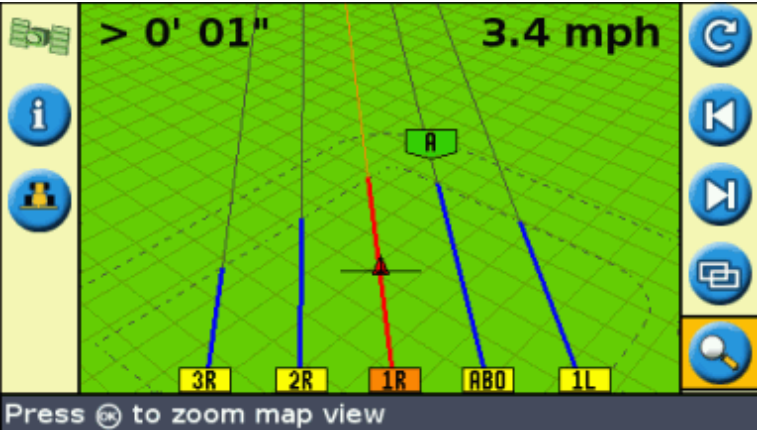
### Mapping a Pivot

**Note:** Always set the master line near the outer edge of the field.

1. Drive to the start point of the pivot.
2. Position one wheel of the vehicle in a pivot wheel rut, with the rear of the vehicle to the pivot arm. If the field is not a full circle pivot, face the rear of the vehicle to the edge of the field.
3. Set the A point:
  - a. Press  or  until you have selected the  icon.
  - b. Press . The A point is set.
4. Drive around the field. Keep the vehicle wheel in the rut. The lightbar does not yet provide guidance.
5. When you have driven at least 1/4 of the pivot circumference, map Point B. The lightbar generates guidance swaths.
6. Turn left or right for the next swath. As you move toward the next swath, it appears on the screen and turns orange to show that it is selected.
7. Steer the vehicle so that the lit LEDs are centered on the lightbar as you drive forward along the swath.

## Headland

The Headland pattern enables you to define the boundary ( "Headland" ) of the pattern, as well as the guidance lines contained within it. Use the Headland pattern to give you room to turn.

PATTERN	EXAMPLE
	

You can change two settings for the Headland pattern:

- The number of circuits
- The internal pattern (in Advanced mode only)

### Number of circuits

When you create a headland, you need to specify the total number of circuits (including the master headland). This defines how wide the headland is.

**Note:** No matter how many circuits you are creating, you only define the outside headland. The inner headlands circuits are copied from that original circuit.

### Internal pattern


The internal pattern is the pattern of the guidance lines inside the headland. In Easy mode, the internal pattern is automatically an AB Line. In Advanced mode, there is a choice of two internal pattern types:

ITEM	DESCRIPTION
Straight AB	Creates standard parallel swaths inside a headland
A+	Creates parallel swaths at a pre-defined heading

### Ending the headland

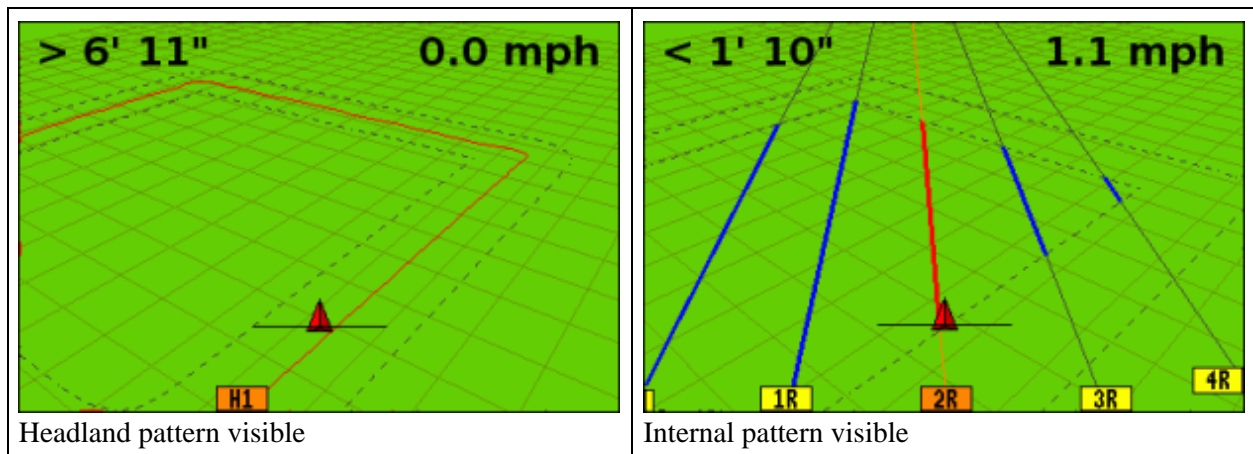
**Note:** You need to define the master line for the internal pattern before you complete the headland.

To finish defining the headland, do one of the following:

- Drive the headland until you return to the start point. When you enter the circle around the start point, the headland completes automatically.
- Drive part of the headland and then select . The headland completes with a straight line from the vehicle position back to the start point.

### Reselecting the headland



When you use the headland pattern, you can see either the headland or the internal pattern, not both at once.



When you are driving the internal pattern and want to see the headland guidance again, do one of the following:

- Drive into the headland before the first internal swath or after the final internal swath. The headland appears automatically.
- (Advanced mode only) Drive into the headland and then use the *Select AB Line* option to reload the headland.

### Mapping a Headland



1. Drive to the start point of the headland.
2. Select the  icon and then press  to set the start point of the headland.
3. Begin to drive the circuit of the headland.

**Note:** To ensure straight sides on the headland, you can use the pause feature. See [Straight sections on curves](#).

4. While you are driving the circuit, set the A point of your guidance line.

When you have defined the internal pattern guidance line, the start–point circle appears around the start point of the headland.

**Note:** If you return to the start of the headland before you define a guidance line, the headland will not complete.

5. To complete the headland, do one of the following:
  - ◆ Drive around the rest of the headland and then drive back into the start–point circle. When you drive into the start–point circle, the headland is defined.
  - ◆ Select the  icon and then press  . The headland completes with a straight line from the vehicle position to the start point.

The headland guidance line appears.


When the vehicle moves out of the headland and into the interior of the pattern, the interior is populated with guidance lines (straight AB or A+, depending on which internal pattern you selected).

## FreeForm

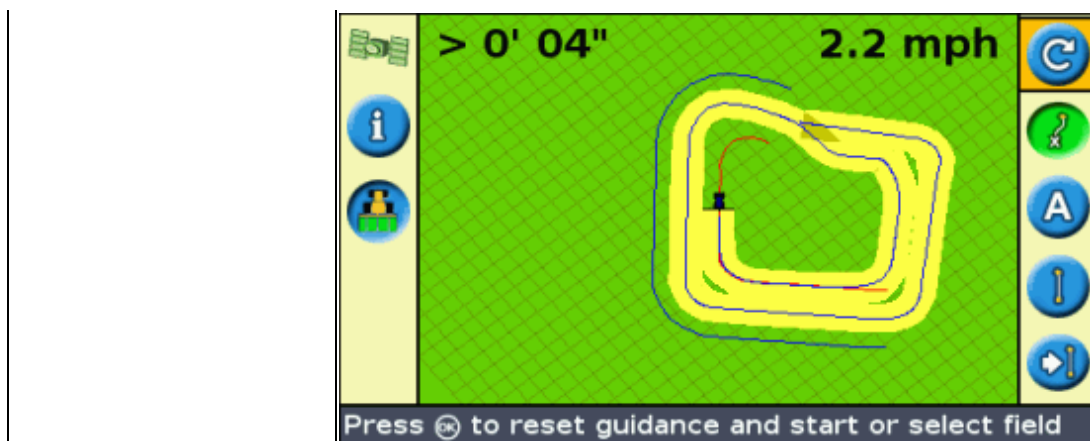
The FreeForm(TM) guidance pattern is an advanced pattern that enables you to create multiple lines of different types in a single field to obtain guidance in fields of any shape. You need to record each line that you drive, to generate the next guidance line. You can create:

- Curved line segments
- Straight line segments in the form of straight AB lines

With this combination, the FreeForm pattern can be useful for creating non–circular spirals or multiple curved guidance lines for irregular–shaped fields.



PATTERN	EXAMPLE
	





### The *FreeForm Recording* option

When you are driving a curve, you need to record your path so the lightbar can create your next guidance line. There are several different options that control when the lightbar records your path:




ITEM	DESCRIPTION
Manual	The  icon enables you to manually start recording a FreeForm curve and the  icon enables you to manually end recording.
Coverage	A FreeForm curve is recorded whenever coverage logging is enabled.





To adjust the *FreeForm Recording* option:

1. Set the lightbar to Advanced mode.
2. Select *Configuration / System / Guidance / FreeForm Recording*.
3. Select the appropriate setting.



### Recording a FreeForm curve

It is necessary to record each curved pass, so the lightbar can create the next guidance line.

1. Set the *FreeForm Recording* option.
2. Drive to the start point of the FreeForm curve.
3. Begin logging your path:
  - ◆ Select the  icon and then press .
  - ◆ If the *FreeForm Recording* mode is set to Coverage, select the .



When your current path is being recorded, the FreeForm recording icon  appears. To get guidance on your next pass, the icon must be green.
4. Drive the curve. To record straight sections in the FreeForm curves, you can use the pause feature. See [Straight sections on curves](#).
5. To complete the FreeForm curve, do one of the following:
  - ◆ Perform a tight U–turn.
  - ◆ Select the  icon and then press .
  - ◆ If the *FreeForm Recording* mode is set to Coverage, select the .



**Note:** When the FreeForm Recording mode is set to coverage, you can use either the  icon or the  icon method for recording.



**Note:** If the Auto U–Turn Detection option is set to Off, you must manually stop recording at the end of each pass and then start recording again at the beginning of the next pass.

### Defining a straight AB Line with the FreeForm pattern

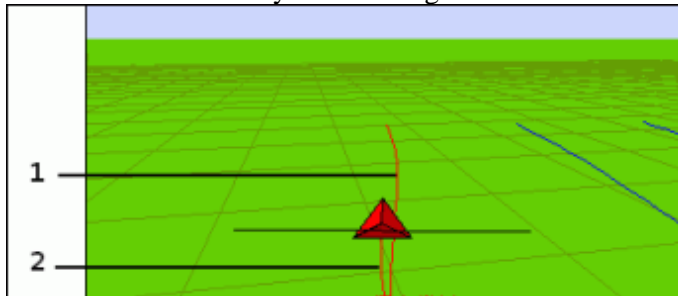
1. Select the  icon to set the A point.
2. Drive to the other end of the line.
3. Select the  icon to end the line.

### Getting guidance on curved segments

After you have defined a guidance line, there are two ways to get guidance:

- Drive the vehicle through a tight U–turn. The next guidance line appears.
- If you are manually logging a FreeForm curve, select the  action icon (to stop defining the current line) and then press  .

The FreeForm curve is similar to an adaptive curve. You must record your line on each pass to receive guidance on the next. If the vehicle is not drawing a line behind it, you are not logging your path and therefore your next guidance line will not appear. Do not confuse the existing guidance line with the guidance trail appearing behind the vehicle that shows your current guidance. You need to be creating a new guidance line:




ITEM	DESCRIPTION
1	Existing guidance line
2	New guidance line

### Getting guidance on straight segments

When driving on straight AB Lines, you do not have to record your path as the guidance lines are generated automatically.

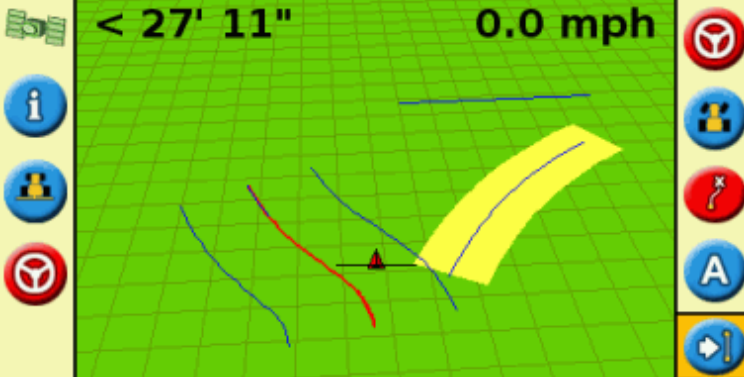
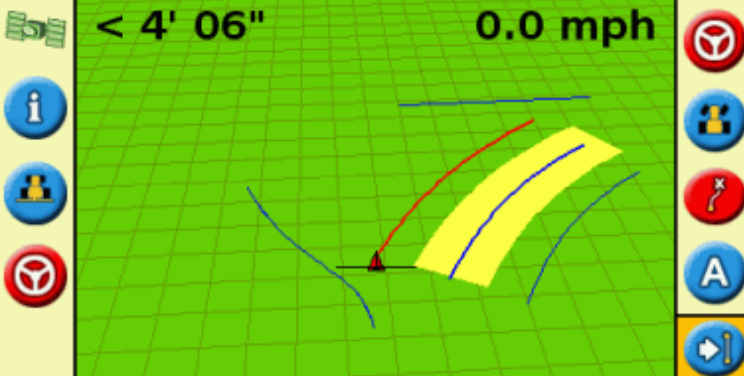
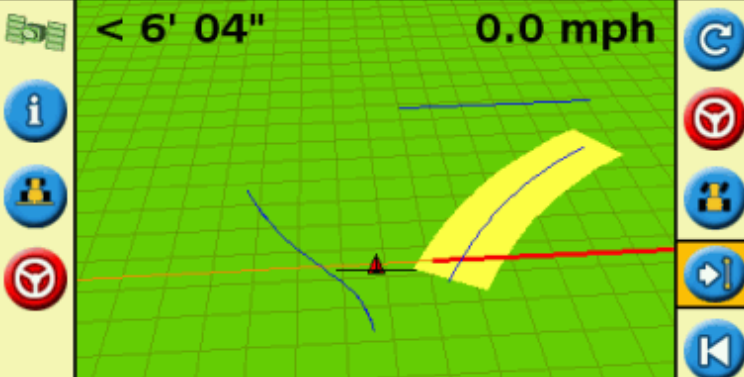
### The Next AB icon

To switch from the current FreeForm guidance line to another, select the Next AB  icon. The first time that you select the icon, guidance snaps to the next nearest curve. Keep selecting the icon to cycle through any other

guidance lines.

To use the Next AB icon, the vehicle must be within 1.5 swath widths of a FreeForm curve.

The following example shows how the Next AB icon works:


ITEM	EXAMPLE
<p>There are three guidance lines available. The system is currently showing guidance on the closest FreeForm curve, but you want guidance on the line that curves to the right.</p> <p>To snap guidance to the next nearest FreeForm curve, press the Next AB icon.</p>	
<p>Guidance snaps to the line that curves to the right.</p>	
<p>To snap guidance to the straight line at the top of the screen, press the next AB icon again.</p>	


### Using FreeForm curves in spiral fields (round and round)

If you are creating a spiral into the center of the field, drive the full circuit and then back onto the start of the FreeForm curve. Continue to record your guidance path as you spiral toward the center of the field.


If you encounter an obstacle in the field, continue to record your path as you drive around it and on the next pass the guidance line will adjust to reflect this.

## Using FreeForm curves in fields with variable terrain

Start and stop recording guidance at the ends of each pass. If there are 2 guidance lines in close proximity, use the Next AB icon  to snap to the correct line.

At any point, you can add a straight AB Line for repeated straight line guidance. Use the  icon to switch between straight AB and FreeForm curve guidance lines.



## Getting Guidance

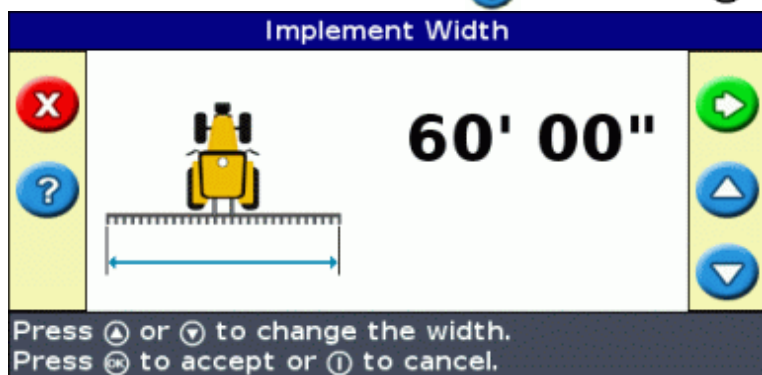
The  icon enables you to create a guidance line and begin driving in the field.







Depending on which pattern you select, follow these steps:

1. Enter the vehicle information.
2. Select a pattern.
3. Enter any additional pattern information (if necessary):
  - ◆ Set the A+ heading (for A+ patterns only)
  - ◆ Define the number of headland circuits (for headlands only)
4. Define the pattern on the field.

### Step 1. Entering the vehicle information

1. From the main guidance screen, select  and then press .






2. Enter the implement width and then press . The *Overlap/Skip* screen appears.
3. Do one of the following:
  - ◆ If you want your passes to meet so you have full coverage without overlaps, use the default setting.
  - ◆ If you want your passes to overlap, press  to enter an overlap distance.
  - ◆ If you want a space between your passes, press  to enter a skip distance.
4. Press . The *Forward/Back Offset* screen appears.
5. Enter the distance that the implement is offset back from the antenna and then press . The *Left/Right Offset* screen appears.
6. Enter the distance that the implement is offset to the left or the right of the antenna and then press .

The *Pattern Type* screen appears.

## Step 2. Selecting a pattern

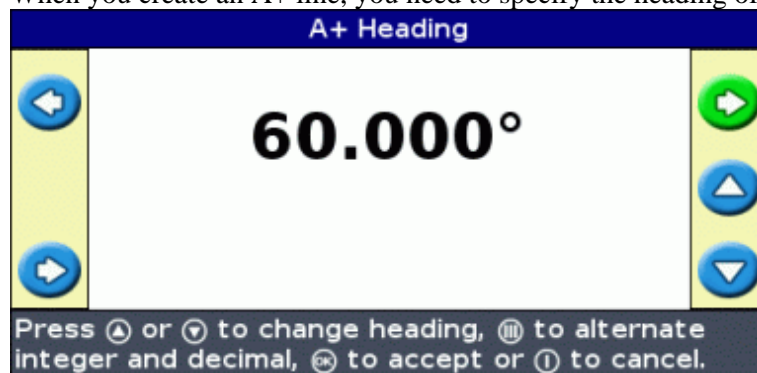
**Note:** You automatically create a new field when you select a pattern.

1. On the *Pattern Type* screen, press  or  until you have selected the type of pattern that you want to create. For a detailed description of each guidance pattern, see [Guidance Patterns](#).
2. Press  .
  - ♦ If you selected A+, the *A+ Heading* screen appears. See Step 3.
  - ♦ If you selected Headland, the *Headlands Circuits* screen appears. See Step 3.
  - ♦ If you selected Straight AB, Identical Curve, Adaptive Curve, FreeForm, or Pivot, the main guidance screen appears. To begin driving, see Step 4.

## Step 3. Setting any additional line information (if necessary)


### Setting the A+ line heading

When you create an A+ line, you need to specify the heading of the line:



1. On the *A+ Heading* screen, press  or  until the screen displays the required heading.

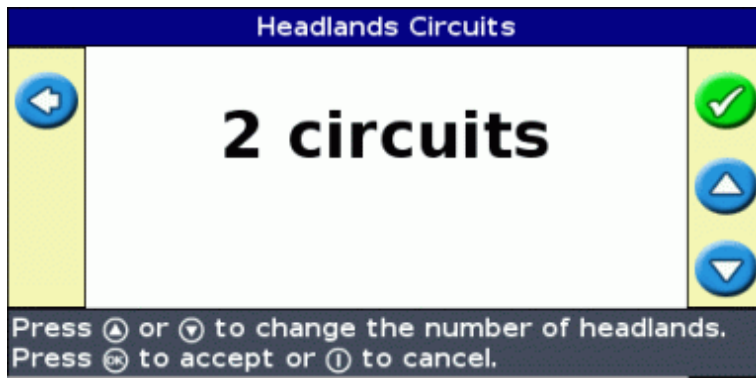
**Note:** The default heading is the heading of the previous AB Line.

2. Press  . The main guidance screen appears.

### Defining the number of headland circuits

When you create a headland, you need to specify the number of circuits.

This is the number of headland circuits that will be generated after you have driven the first headland circuit.



1. On the *Headlands Circuits* screen, press ▲ or ▼ until the screen displays the required number of circuits.
2. Press OK . The main guidance screen appears.

#### Step 4. Defining the pattern on the field


1. Drive to the start point.

*Note: For a headland, set the start point and begin to drive.*

2. Set the A point.
3. Drive the guidance line.

*Note: To accurately define a pivot, put the vehicle wheel in a center pivot near the outside edge of the field.*

4. Map the B point (if necessary).

*Note: For a headland, select the  icon or drive back into the circle around the start point.*


5. Turn and follow the guidance.

## Coverage Logging

Coverage logging draws a solid block of color behind the vehicle to show the area that you have applied. When you pass over an area for the second time, the color of the covered area changes. This is useful for viewing any overlap.

To begin coverage logging, press the  function button while you are driving:



- The coverage logging icon changes to show that logging is enabled.
- On the lightbar screen, the logging trail is drawn behind the vehicle.

Press the  function button to turn off coverage logging.

**Note:** There can be a delay between the time when you start or stop applying coverage onscreen, and the time when the implement actually starts or stops coverage. To compensate for this, you can add a time delay to the drawing of coverage logging so the lightbar more accurately shows what is actually occurring. This requires the lightbar to be in Advanced mode. See [Coverage Logging Delay](#).

## Creating straight sections on Headland or Curve swaths

You can create straight sections when recording headland or curve swaths:

1. Select the  action icon to start recording the straight section.
2. Drive the section.
3. Select the  action icon to finish recording the straight section and to start recording a curve again.

## Pause / Resume Icon

When you select the pause icon, an icon appears on the screen to show your exact location when guidance was paused. This enables you to drive somewhere and then return to your current position in the field, for example to refuel the vehicle or to stop driving for the night.



The two status text items at the top of the screen show your current position relative to the pause position:



ITEM	DESCRIPTION
Distance	The vehicle's current distance from the pause position.
Heading	The vehicle's current direction relative to the pause position. For example: 0° = pointing directly toward the pause position 180° = pointing directly away from the pause position

To pause guidance, select the  icon and then press .

When you pause guidance:

- The current guidance line that you were on is displayed, even if you drive onto another swath.
- The pause function remembers your position even if the lightbar is turned off.
- A straight, dotted line is drawn from the pause position to the position of the vehicle.

### Returning to the pause position

1. Turn the vehicle until the *Heading* status text item is  $0.0^\circ$  (so you are heading directly toward the pause position).
2. Drive forward until the *Distance* status text item is close to 0.00 m (0' 0"). This means you are nearly back at the pause position. The paused vehicle outline should be visible on the lightbar screen.
3. Position the vehicle directly over the paused vehicle outline.
4. Select the  icon and then press  to resume guidance.

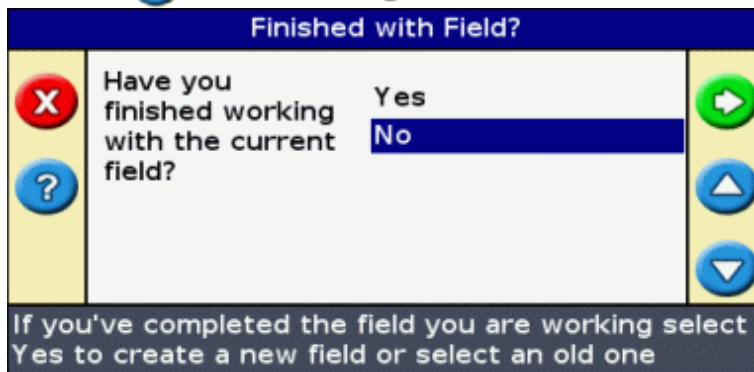
# Advanced Mode Guidance

## Resetting Guidance

Use the  icon to create or load a field or line.

To reset guidance:

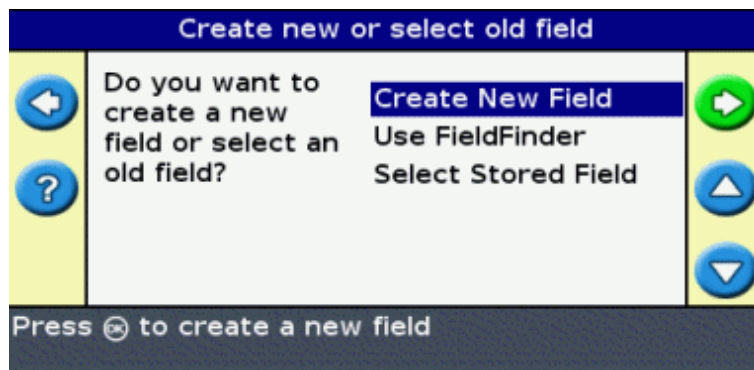
1. Select the  icon and press . The *Finished With Field?* screen appears:



2. Select one of the two options and then press  :
  - ◆ Yes – To map a new field (see [Creating a New Field or Line](#) ) or select an existing field (see [Selecting a Field](#) ).
  - ◆ No – To map a new AB Line (see [Creating a New Line](#) ) or select an existing AB Line in the current field (see [Selecting an AB Line](#) ).

**Note:** If you select 'Yes', the field is immediately closed. This means that you cannot cancel out of the New Field wizard and go back to your current field.

## Creating a New Field



To create a new field, the New Field wizards takes you through the following steps:

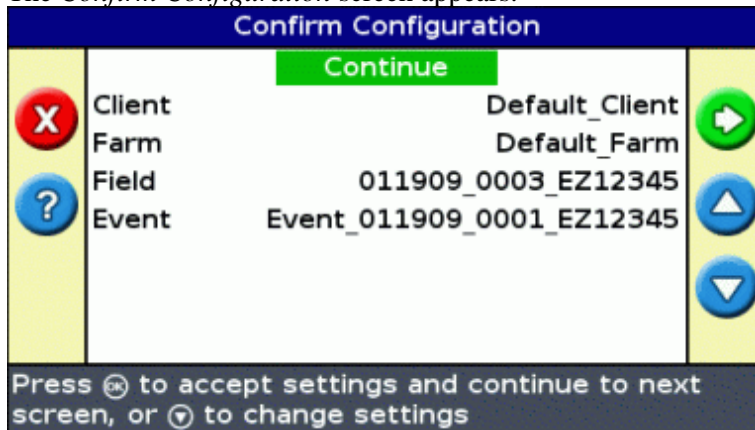
1. [Enter the field and event names.](#)
2. [Configure the implement.](#)
3. [Select the pattern type.](#)



#### 4. Drive and define the guidance line.

##### Step 1: Enter the field and event names

The *Confirm Configuration* screen appears.

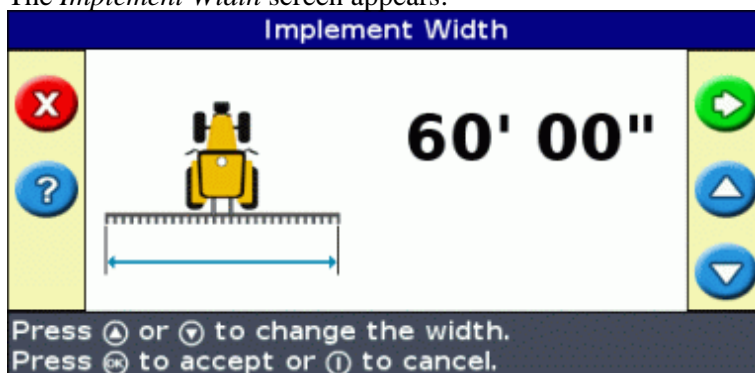


The *Confirm Configuration* screen has a blue header with the title. Below the header is a green button labeled "Continue". The screen is divided into two main sections. The left section has a yellow background and contains a red "X" button at the top and a blue "?" button below it. The right section has a yellow background and contains a green right arrow button at the top, a blue up arrow button below it, and a blue down arrow button at the bottom. The central area is white and contains the following text: "Client" followed by "Default\_Client", "Farm" followed by "Default\_Farm", "Field" followed by "011909\_0003\_EZ12345", and "Event" followed by "Event\_011909\_0001\_EZ12345". At the bottom of the screen is a dark blue bar with white text that reads: "Press [OK] to accept settings and continue to next screen, or [Cancel] to change settings".

1. Select the *Client* option and then press [OK] .
2. Do one of the following:
  - ◆ Select an existing client from the list.
  - ◆ Enter a new client name.
  - ◆ Accept the default name.
3. Repeat Step 2 for the Farm, Field, and Event options.
4. Select Continue and then press [OK] .

##### Step 2: Configure the implement

The *Implement Width* screen appears:







The *Implement Width* screen has a blue header with the title. Below the header is a yellow background area. On the left side of this area is a red "X" button at the top and a blue "?" button below it. On the right side is a green right arrow button at the top, a blue up arrow button below it, and a blue down arrow button at the bottom. In the center of the yellow area is a yellow tractor icon positioned above a horizontal ruler. To the right of the ruler, the text "60' 00\"" is displayed in large black font. Below the ruler is a blue double-headed arrow indicating the width. At the bottom of the screen is a dark blue bar with white text that reads: "Press [Up] or [Down] to change the width. Press [OK] to accept or [Cancel] to cancel."

1. Press [Up] or [Down] to adjust the implement width and then press [OK] . The *Overlap/Skip* screen appears.

**Note :** *If you want to eliminate all skips in coverage, you can insert an overlap value to compensate for GPS errors.*

2. Do one of the following:
  - ◆ If you want your passes to meet so you have full coverage without overlaps, use the default *Overlap/Skip* value.
  - ◆ If you want your passes to overlap, press [Up] to enter an overlap distance.

- ♦ If you want a space between your passes, press  to enter a skip distance.
- 3. Press . The *Forward/Back Offset* screen appears.
- 4. Enter the distance that the implement is offset back from the antenna and then press . The *Left/Right Offset* screen appears.
- 5. Enter the distance that the implement is offset to the left or right of the antenna and then press . The *Pattern Type* screen appears.

### Step 3: Select the pattern type

Select which of the seven guidance patterns you want to base guidance on. For a description of the different field patterns, see [Guidance Patterns](#).




Some guidance patterns require additional information:

IF YOU SELECTED...	YOU NEED TO...
A+	define the heading.
Headlands	define the number of circuits.

When you have entered any additional pattern information, the main guidance screen appears.

### Step 4: Driving and defining the guidance line

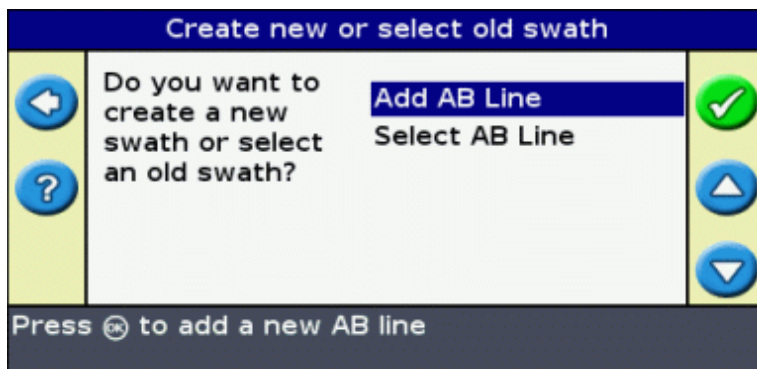
Depending on the pattern type that you selected, one of the following icons is now available:

-  (start AB Line, A+, Identical Curve, Adaptive Curve, or Pivot)
-  (start Headland)
-  (not currently recording FreeForm curve – select to start recording)

Drive to the start point and then select this icon to begin defining guidance.

For more information about the various field patterns, see [Guidance Patterns](#).

## Creating a new line

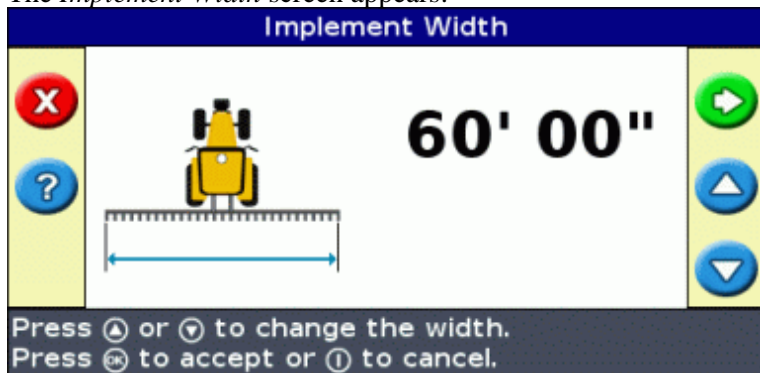


Follow these steps in the wizard:

1. [Configure the implement.](#)
2. [Select the pattern type.](#)
3. [Drive and define the guidance line.](#)

### Step 1: Configure the implement

The *Implement Width* screen appears:



1. Press ▲ or ▼ to adjust the implement width and then press ⓧ . The *Overlap/Skip* screen appears.
2. Do one of the following:
  - ◆ If you want your passes to meet so you have full coverage without overlaps, use the default *Overlap/Skip* value.
  - ◆ If you want your passes to overlap, press ▲ to enter an overlap distance.
  - ◆ If you want a space between your passes, press ▼ to enter a skip distance.
3. Press ⓧ . The *Forward/Back Offset* screen appears.
4. Enter the distance that the implement is offset back from the antenna and then press ⓧ . The *Left/Right Offset* screen appears.
5. Enter the distance that the implement is offset to the left or right of the antenna and then press ⓧ . The *Pattern Type* screen appears.

### Step 2: Select the pattern type

Select which of the seven guidance patterns you want to base guidance on. For a description of the different field patterns, see [Guidance Patterns](#).




Some guidance patterns require additional information:

IF YOU SELECTED...	YOU NEED TO...
A+	define the heading.
Headlands	define the number of circuits.

When you have entered any additional pattern information, the main guidance screen appears.

### Step 3: Driving and defining the guidance line

Depending on the pattern type that you selected, one of the following icons is now available:

-  (start AB Line, A+, Identical Curve, Adaptive Curve, Pivot, or FreeForm straight section)
-  (start Headland)
-  (not currently recording FreeForm curve – select to begin recording)

Drive to the start point and then select this icon to begin defining guidance.

For more information about the various field patterns, see [Guidance Patterns](#).

## Selecting (Loading) an AB Line

When you create multiple lines in a field, you need to select the appropriate line. You do not have to actively save an AB Line for it to be stored. AB Lines are stored automatically.

To load an AB Line:

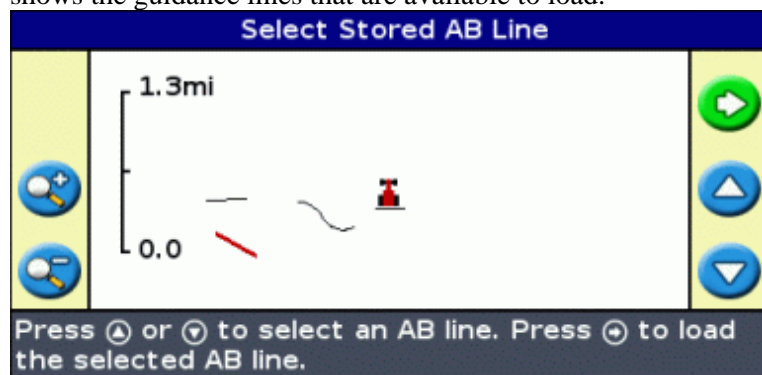
1. [Select the AB Line](#)
2. [Set up the implement](#)
3. [Select the number of headland circuits \(if necessary\)](#)



### Step 1. Selecting the AB Line



1. On the *Create new or select old swath* screen, choose *Select AB Line*.


If there is only one guidance line in the current field, the main guidance line appears with the guidance line loaded. See [Implement Setup](#).

If there is more than one guidance line in the current field, the *Select Stored AB Line* screen appears and shows the guidance lines that are available to load.






2. To choose an AB Line to load:
  - a. Press  or  to cycle through the available lines.

**Note:** You can select only from those lines that were created within the range shown on the left of the screen. To increase or decrease the range, press the  or  function buttons.




- b. Selected the appropriate line and then press  . The *Create New Field* screen appears.
- c. If necessary, change the implement settings.

## Step 2: Setting up the implement (if necessary)

To make optimal use of the EZ-Guide 250 system, correctly configure the implement that is attached to the vehicle. If the implement is offset and you do not configure it, there will be gaps and overlaps in your coverage.

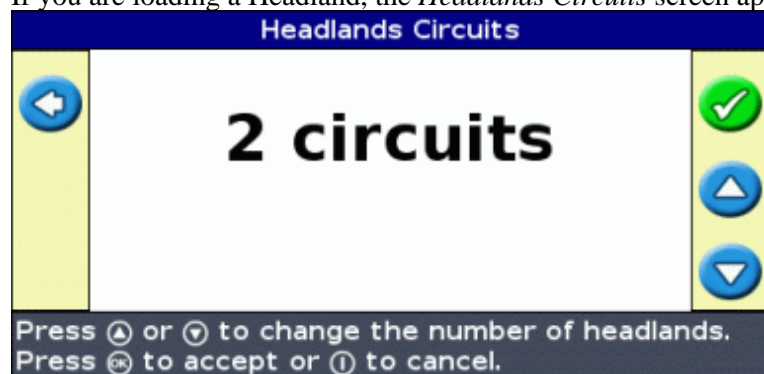
1. Press  or  to adjust the implement width and then press  . The *Overlap/Skip* screen appears.




**Note:** *If you want to eliminate all skips in coverage, you can insert an overlap value to compensate for GPS errors.*

2. Do one of the following:
  - ◆ If you want your passes to meet so you have full coverage without overlaps, use the default Overlap/Skip value.
  - ◆ If you want a space between your passes, press to enter a skip distance.
  - ◆ If you want your passes to overlap, press to enter an overlap distance.
3. Press  .The *Forward/Back Offset* screen appears.
4. Enter the distance that the implement is offset back from the antenna and then press  . The *Left/Right Offset* screen appears.
5. Enter the distance that the implement is offset to the left or right of the antenna and then press  .

## Step 3: Selecting the number of headland circuits (if necessary)

If you are loading a Headland, the *Headlands Circuits* screen appears:



1. Press  or  until you set the appropriate number of circuits.
2. Press  . The main guidance screen appears with the headland loaded.

## Selecting (Loading) a Field

**Note:** *You do not have to actively save a field. Fields are stored automatically.*

To load a field, do the following:

1. Select the field to load.
2. Select or create the event.
3. Select the line to load.
4. Set up the implement (if necessary).

These steps are described below.

### Step 1. Selecting the field to load

There are two ways you can select a field to load:

- Using FieldFinder
- Selecting the Field name from a list

#### Using FieldFinder

The FieldFinder option allows you to choose a field from a map view.

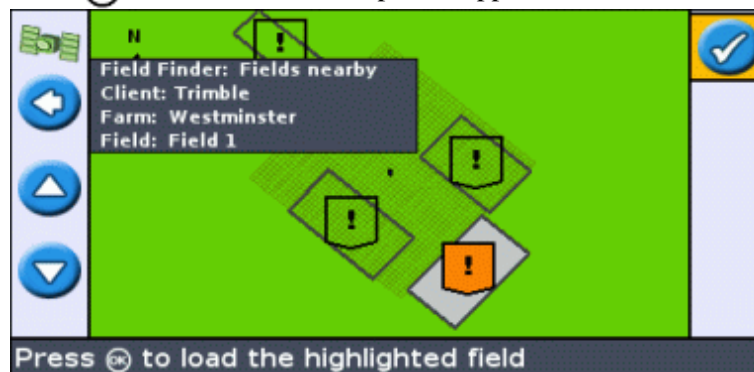
***Note:** The vehicle must be within 200 m of the field for it to appear on screen.*

To use FieldFinder:

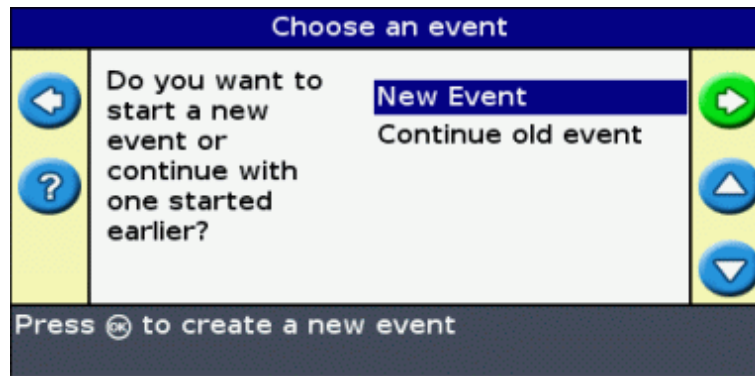
1. From the *Create new field or select old field* screen, select *Use FieldFinder*.



2. Press [OK]. The FieldFinder map view appears.



3. Use the arrow keys on the left of the screen to select the field you want to load.
4. Press [OK]. The *Choose an event* screen appears.



### Selecting the Field name from a list

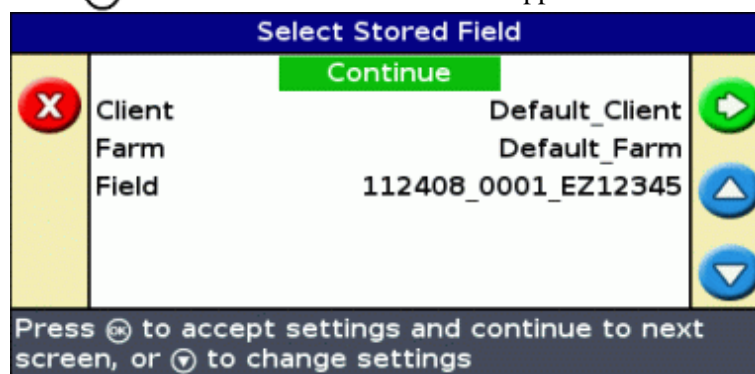
You can select the field from a list of names, instead of a map. This can be useful if the lightbar is not receiving a GPS signal.

To select a field from a list of names:

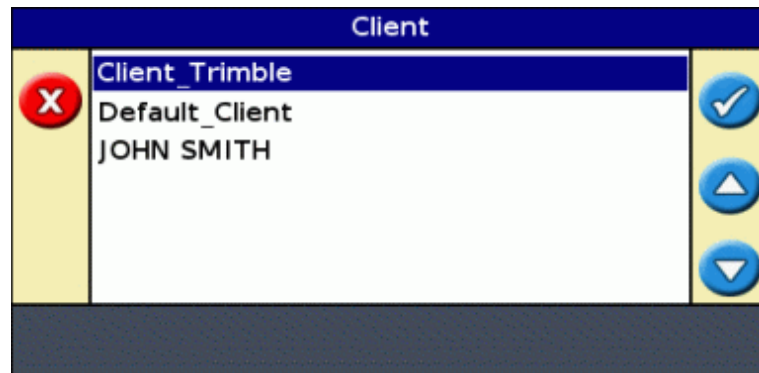
1. From the *Create new field or select old field* screen, select *Select Stored Field*.








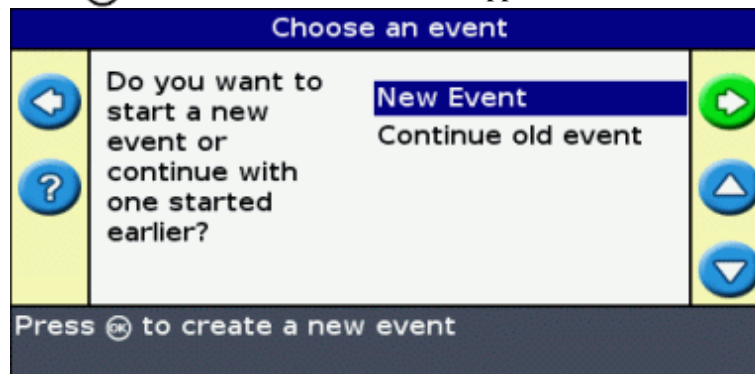
2. Press [OK]. The *Select Stored Field* screen appears.






3. Select the client.
  - a. Press [Down Arrow] to select Client and press [OK]. The *Client* screen appears.



- b. Press  or  until you select the desired Client name.
- c. Press  . The *Select Stored Field* screen reappears.
4. Select the farm, using the same process as for client.
5. Select the field, using the same process as for client and farm.
6. Press  to select *Continue* .
7. Press  .The *Choose an event* screen appears.



## Step 2: Selecting or creating the event

1. Press  or  until you select either New Event or Continue old event:
2. Press  .

If you selected *New Event*, you must enter a name for the new event.

**Note:** If you want to create a new line in this field, load an existing line, select the icon and then create a new line.

One of the following occurs:

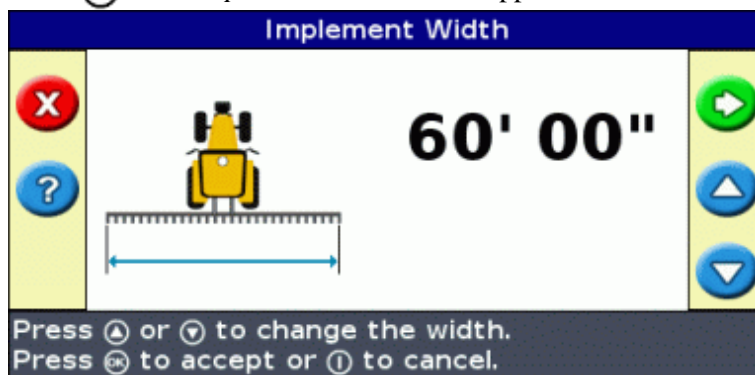
- ◆ If there is only one saved line, it is automatically selected. See Step 4: Setting up the implement.
- ◆ If there is more than one saved line, the *Select Stored AB Line* screen appears.





### Step 3: Selecting the line to load

1. Press ▲ or ▼ one or more times until you select the appropriate line.
2. Press OK. The *Implement Width* screen appears:



### Step 4: Setting up the implement

To make optimal use of the EZ-Guide 250 system, correctly configure the implement that is attached to the vehicle. If the implement is offset and you do not configure it, there will be gaps and overlaps in your coverage.

1. Press ▲ or ▼ to adjust the implement width and then press OK. The *Overlap/Skip* screen appears.

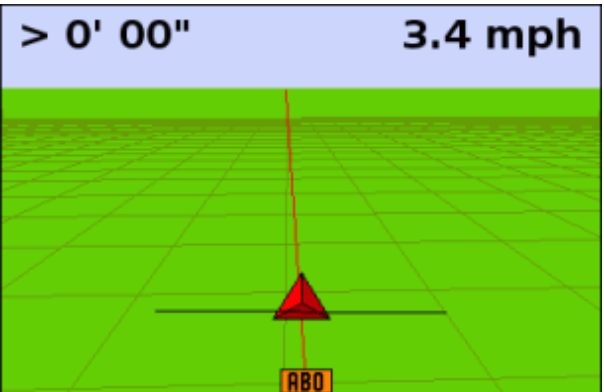
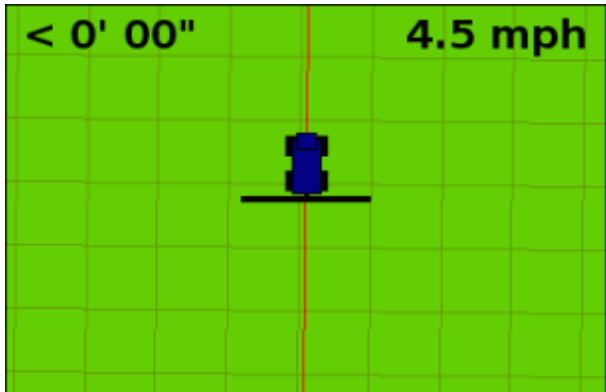
**Note:** If you want to eliminate all skips in coverage, you can insert an overlap value to compensate for GPS errors.

2. Do one of the following:
  - ♦ If you want your passes to meet so you have full coverage without overlaps, use the default Overlap/Skip value.
  - ♦ If you want a space between your passes, press to enter a skip distance.
  - ♦ If you want your passes to overlap, press to enter an overlap distance.
3. Press OK. The *Forward/Back Offset* screen appears.
4. Enter the distance that the implement is offset back from the antenna and then press OK. The *Left/Right Offset* screen appears.
5. Enter the distance that the implement is offset to the left or right of the antenna and then press OK.

# Advanced Mode Additional Information

## Views

There are two possible views when you are driving in the field in Advanced mode:

PERSPECTIVE MAP VIEW	PLAN MAP VIEW
	

The view that is shown is controlled by the view mode:

ITEM	DESCRIPTION
Auto Headlands (default)	Shows the perspective map view on swaths and the plan map view in headlands.
Auto Engage	Shows the perspective map view when the EZ–Steer system is engaged and the plan map view when the system is disengaged.
Manual	You can manually change between the perspective map view and the plan map view using the action icon.

The Auto Headlands and Auto Engage view modes control which view you see. Manual mode enables you to change the view yourself.



### Changing the view mode

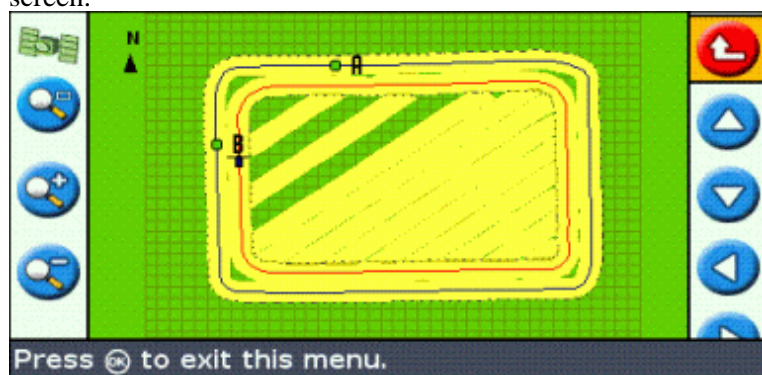
To change the view mode, select *Configuration / System / Display / View*.

## Panning


On the EZ–Guide 250 lightbar, you can pan (move) the screen around to better see parts of the field, for example to check for skips in application coverage or the location of point, line and area features.

**Note:** The vehicle must be stationary when entering panning mode.




To enter panning mode, select the  icon and press  . A new set of panning icons appears on the right of the screen.



**Note:** The map is always displayed North–Up in panning mode.

To move the screen, select one of the arrow icons on the right of the screen and press  . The screen moves in the direction of the arrow. Repeat with the same arrow or change arrows as many times as necessary.

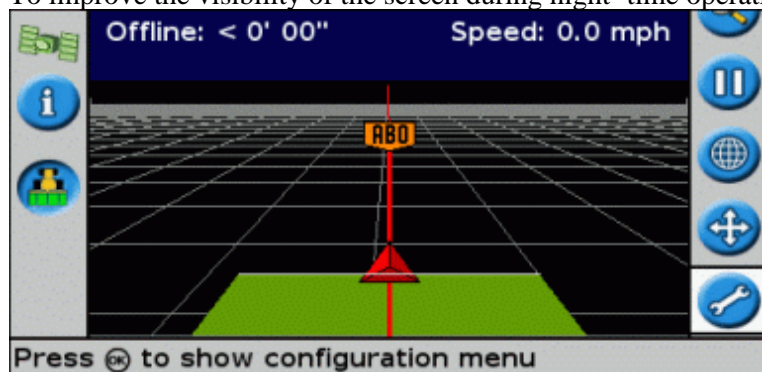
To zoom in or out on the screen, use the buttons on the left of the screen.

ITEM	DESCRIPTION
	Zooms to the extents of the field. This includes the field boundary (if present), coverage logging and any mapped features.
	Zooms in
	Zooms out

**Note:** To ensure all coverage logging is shown, turn off coverage logging before entering panning mode. Otherwise, the coverage polygon currently being recorded will not be shown in panning mode.

## Night Mode

To improve the visibility of the screen during night–time operations, you can change the color scheme.




To change to night mode, select *Configuration / System / Display / Color Scheme* and select *Night Mode* .

# Nudge






Nudge a guidance line if you need to correct for:

- GPS position drift when returning to the field for guidance, for example, after pausing or turning the unit off and on
- GPS satellite constellation changes while driving in the field

Each nudge moves the guidance line by the *Nudge Increment* value. For example, if the *Nudge Increment* value is set to 3" and you press  twice, the total nudge distance is 6" to the right.

## The nudge left and nudge right icons

The Nudge function moves the guidance line slightly to the left or right, relative to your vehicle. Use it if you can see that the vehicle is exactly on-line, but the lightbar is showing that you are slightly offline:

Nudge is always applied to the guidance line relative to the vehicle heading. To nudge, press  or  one or more times until you select the nudge left  or nudge right  icon and then press the  button.

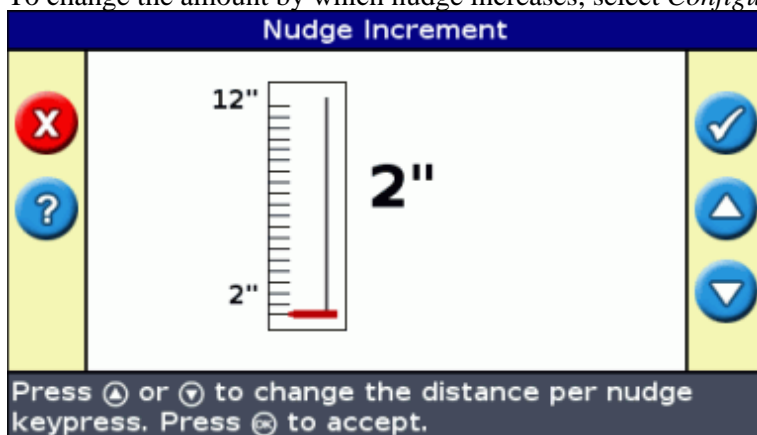
In Easy mode, you cannot adjust the amount of each nudge. The default value is 3 cm (1").

You can change other Nudge features in Advanced mode.

## Changing the nudge increment value

The default nudge increment value is 3 cm (metric) or 2" (US/imperial).

To change the amount by which nudge increases, select *Configuration / System / Guidance / Nudge Increment*.




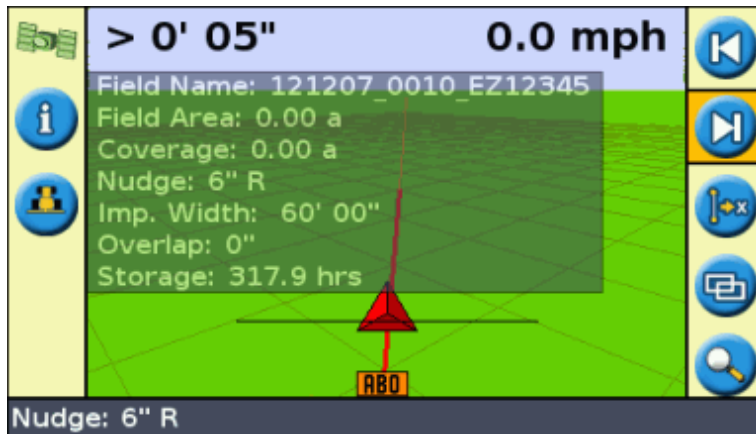
**Note:** The maximum Nudge Increment value is 30 cm (12").

To reset the nudge distance to 0, select *Configuration / System / Guidance / Reset Nudge*.

## Viewing the current amount of nudge


There are two ways to view the current amount of nudge that has been applied:

- The nudge value is displayed on the Tip/Message bar at the bottom of the screen while a nudge icon is highlighted
- The first information tab shows the current nudge value. Press the  function button.



### Resetting nudge after each row

You can configure the lightbar to reset the nudged position each time you change rows:

1. Select *Configuration / System / Guidance / Clear Nudge at Swath End*.
2. Select *On* and then press .

Each time you move from one swath to the next, the nudge value will reset to 0, and the swaths will return to their original position.

### The shift icon

Shift moves the guidance line directly to the vehicle position.

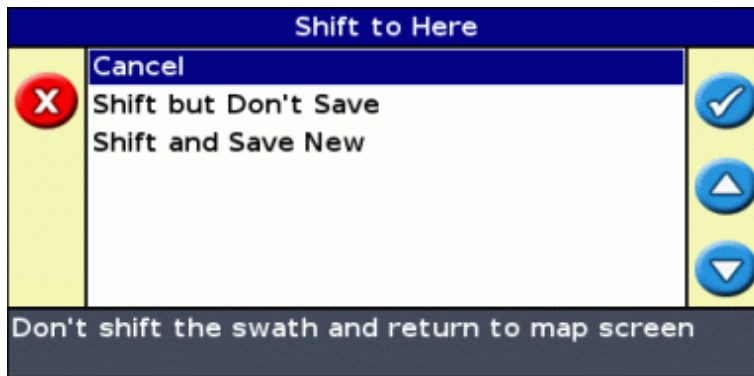
Shift enables you to permanently update the line correction. With the shift and save mode, you can move the line and save it. This can be useful for higher accuracy work, for example, to offset planting by half a swath width from one season to the next.

To shift the lines:

1. Drive the vehicle along the line that you want to map the guidance to.

**Note:** *If you are driving at an angle of more than 10 degrees from the current swath, an error message appears. You must drive at almost the same angle as the guidance line.*

2. Select the  action icon. The *Shift to Here* screen appears:



3. Select one of the following:

ITEM	DESCRIPTION
Cancel	Exit without moving the guidance line
Shift but Don't Save	The line moves to your current location, but when you exit the field the previous line position is retained
Shift and Save New	The line moves to your current position and is permanently saved in the new location

## Configuring the Lightbar

### Setting the LED brightness

You can adjust the brightness of the LEDs on the lightbar. In bright sunlight, increase the brightness to make the LEDs more obvious. In darker conditions, for example, driving at dusk, you can lower the brightness settings to make the LEDs less intense.

To change the LED brightness, select *Configuration / System / Display / LED Brightness*.

### Setting the backlight brightness

The backlight brightness controls the brightness of the lightbar screen.

To adjust the setting, select *Configuration / System / Display / Backlight*.

### Setting the information tab transparency

For a description of the information tabs, see [Information tabs](#).

The information tabs are transparent. To change the level of transparency, select *Configuration / System / Display / Status Popup Transparency*.

10 represents a solid black tab; 1 is barely visible.

### Setting the LED mode

There are two LED modes:

MODE	DESCRIPTION
Chase (default)	Chase the LEDs to stay online. The LEDs represent the swath location relative to the vehicle. For example, if the vehicle moves offline to the left, the lit LEDs move right.
Pull	Center the LEDs to stay online. The LEDs represent the vehicle position relative to the swath. For example, if the vehicle moves offline to the left, the lit LEDs also move left.

To change the LED mode, select *Configuration / System / Guidance / LED Mode*.

### LED spacing

The LED spacing is the distance that each LED represents. The default LED spacing is 30 cm (12").

To adjust the LED spacing, select *Configuration / System / Guidance / LED Spacing*.

### Setting the units

The units that you selected during the *Quick Start Wizard* are set as the units for the lightbar. The default units are US/imperial.

To change the units, select *Configuration / System / Display / Units*.

### Setting the time zone

The lightbar receives the time from the GPS signal, which transmits UTC (Coordinated Universal Time, formerly known as Greenwich Mean Time).

To enter your time offset from UTC so that the lightbar can calculate your local time, select *Configuration / System / Display / Time Zone*.

Common time zones are listed below.

LOCATION	STANDARD TIME OFFSET	DAYLIGHT SAVINGS TIME OFFSET
US Eastern Time	-5:00	-4:00
US Central	-6:00	-5:00
US Mountain	-7:00	-6:00
US Pacific Time	-8:00	-7:00
Australia East	+10:00	+11:00 (except Queensland)
Australia Central	+9:30	+10:30 (except Northern Territory)
Australia West	+8:00	+9:00

A positive timezone indicates a zone that is ahead of Greenwich, England. A negative timezone is behind.

## Driving on Large Fields

At distances greater than 10 km (6.2 miles) from the original AB Line, the curvature of the Earth's surface can cause a reduction in GPS position accuracy. Consequently, the lightbar does not support more than 1024 swaths to the left and 1024 swaths to the right of the original AB Line.

If you need to create more than 1024 swaths either to the left or the right of the AB Line, do one of the following:

- Create a second AB Line
- Use the A+ pattern

This will ensure that you maintain the highest level of steering accuracy.

## Driving Tight Turns

The EZ-Guide 250 system smooths out tight turns. This makes it easier for the driver (or the EZ-Steer system) to follow the curve without overshooting the turn. Because the guidance line is being gradually smoothed out, this can result in minor skips in coverage between the swaths.

### Minimum Turn Radius

The minimum turn radius is used on curved AB lines. It smooths corners to make sure that the autosteering system always has the best chance of steering the curve accurately.


In automatic mode, the radius is set to the larger of 80% of the swath width or 10 metres. In manual mode, you choose the minimum radius. To allow the system to generate tighter curves set this value low.

If you have a small machine that can take sharp corners easily, set this to a low value. If your machine is larger and cannot turn sharply, set this to a high value.

To adjust this setting, set *Configuration / System / Guidance / Minimum turn radius selection* to Manual and then change the *Minimum Turn Radius* setting.


## Configuring Coverage Logging

You can select when coverage logging engages:

ITEM	DESCRIPTION
Disable	Coverage logging is disabled.
Manual	Coverage logging is manually engaged or disengaged with the  icon.
Engaged	Coverage logging is on when an automated steering system is engaged.
Switch	Coverage logging is enabled with an external switch.



To change when coverage logging is enabled:

1. In Advanced mode, select *Configuration / System / Guidance / Coverage Logging*. The *Coverage Logging* screen appears.
2. Select the appropriate setting and then press .

## Adding a Time Delay to Coverage Logging

There may be a delay between the time when you start or stop drawing coverage onscreen and the time when the implement actually starts or stops coverage. For example, some spray valves can take 1.5 seconds to open or close.

To compensate for this, you can add a time delay to the drawing of coverage logging, so that the lightbar more accurately reflects what is actually occurring.

To add a time delay to the drawing of coverage logging, select *Configuration / System / Guidance / Coverage On/Off Delay*.

When you engage coverage logging, the system waits this delay time before beginning to draw the coverage onscreen.

When you disengage coverage logging, the system waits this delay time before stopping drawing coverage logging.

## Setting the Look Ahead Value

The Look Ahead time predicts your future vehicle path to allow for reaction time and vehicle turn speed.

For larger vehicles that take longer to turn, increase the time.

**Note:** For 4WD articulated tractors, always set the Look Ahead time to 0 seconds.

To adjust the Look Ahead value, select *Configuration / System / Guidance / Look Ahead*.

## Enabling Speed Pulse Output (Radar)

The EZ-Guide 250 lightbar guidance system can output simulated radar pulses at a pre-defined speed pulse output rate. This can be useful to:

- replace the radar / true ground speed sensor for speed on the vehicle.
- send speed to any other agricultural device requiring speed pulses, for example, yield monitor or variable rate controller.

To use speed pulse output, you need a radar sensor cable kit and an all-port cable (P/N 64045). To purchase these, contact your local reseller.

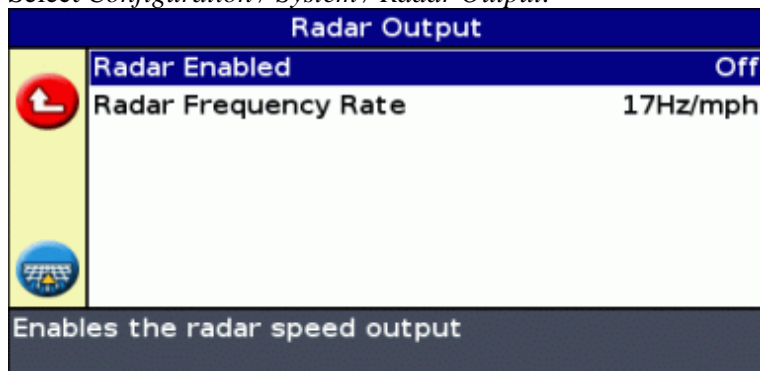
## Connecting a device to receive speed pulses

To connect the lightbar to a spray controller:

1. Attach the R1 end of the radar cable to the P5 connector of the all-port cable (P/N 64045).
2. Attach the P2 end of the radar cable to the device requiring radar speed input.
3. If required, use a fly-lead to connect a spray switch to the P3 connector of the radar cable.

## Configuring the lightbar

1. Select *Configuration / System / Radar Output*:



2. Configure the radar settings:
    - ◆ *Radar Enabled* must be On.
    - ◆ *Radar Frequency Rate* is the output rate expected by your device. Most Raven and Midtech controllers use 58.94 Hz/mph (34.80 Hz/kph).
- For more information, refer to the documentation included with your radar cable.

## Setting up a controller

On a Raven controller:

1. Make sure that the speed input is set to Speed Radar SP2.

You usually choose the speed input setting when you first calibrate the unit; the choices given in most Raven controllers are SP1 or SP2. SP2 is the correct setting for Speed Radar inputs. For more information on how to check this setting, refer to your variable rate controller instruction manual.

2. Make sure that the speed calibration value is set correctly. For the most accurate results, recalibrate the unit to match the lightbar output.

For information on how to calibrate the unit, refer to the controller instruction manual.

**Note:** To check the accuracy of your current settings, compare the speed value indicated on the lightbar guidance system with that on the spray controller.

On a Midtech controller:

1. Make sure that the speed calibration value is set correctly. For the most accurate results, recalibrate the unit to match the lightbar guidance system output.

For information on how to calibrate the unit, refer to the controller instruction manual.


**Note:** *To check the accuracy of your current settings, compare the speed value indicated on the lightbar guidance system with that on the spray controller.*

## Recording Events

The EZ-Guide 250 lightbar can record events for playback. Only use this feature if directed to by your support provider.

## Restoring the Default Lightbar Settings

**Note:** *When you reset the lightbar default settings, your field information remains unchanged.*

1. Select *Configuration / System / Restore Defaults*. The *Restore Defaults* screen appears.
2. Select Yes and then press .

# Advanced Mode GPS Corrections

## Configuring the GPS Corrections


The term GPS corrections refers to the type of GPS signal that you receive.

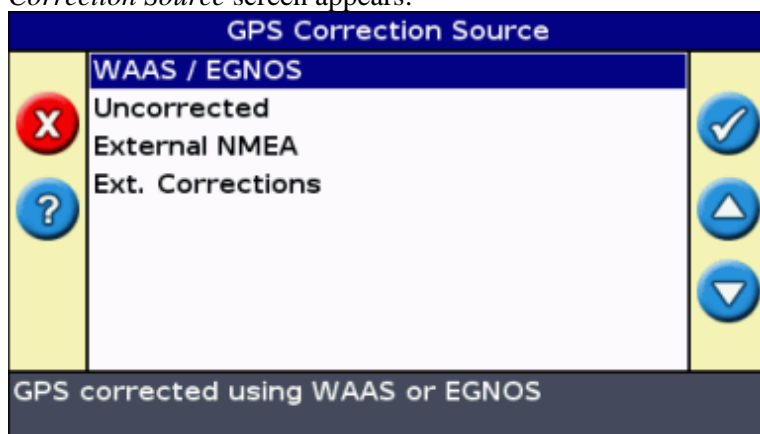
ITEM	DESCRIPTION
WAAS (Wide Area Augmentation System)	WAAS corrections are an overlay to the normal GPS signal to improve accuracy. WAAS is available only in the United States of America, southern Canada, and the northern parts of Mexico. It is free to use. When using WAAS corrections, the EZ-Guide 250 system downloads the WAAS ionosphere model within the first 10 minutes of operation, which improves accuracy significantly. If you turn off the lightbar for less than 20 minutes and restart it, the position drift is limited. If you turn of the lightbar for more than 20 minutes and then restart it, the WAAS ionosphere model needs to be downloaded again. This can result in absolute position errors of up to 3 m (10 ft) within the first 10 minutes.
EGNOS (European Geostationary Navigation Overlay Service)	EGNOS corrections are an overlay for normal GPS signals. They are available only in Europe and can be used free.

**Note:** At mid latitudes, the GPS cross-track errors that occur when you drive East–West are typically double the cross-track errors that occur when you drive North–South. This is a characteristic of all GPS receivers and guidance systems, and occurs because the GPS satellite orbits do not go over the poles. For GPS system status details, go to <http://www.navcen.uscg.gov/ado/GpsActiveNanu.asp>.

The lightbar is initially configured to use the internal GPS receiver with WAAS/EGNOS. It will automatically detect the appropriate satellites.

To change the GPS corrections:

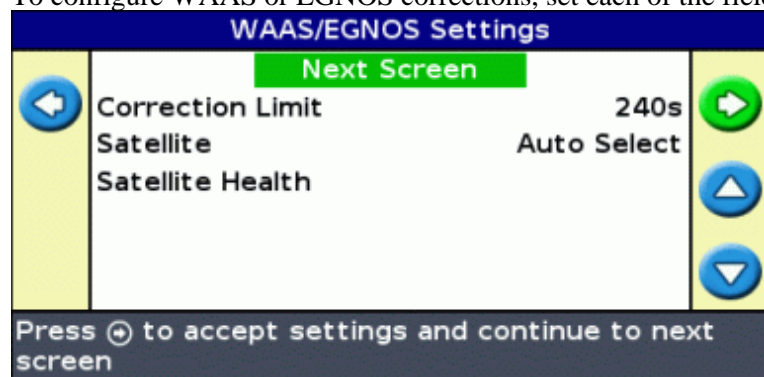
1. Select *Configuration / System / GPS / GPS Setup / GPS Correction Source* and then press . The *GPS Correction Source* screen appears:



2. Select the appropriate correction method and then press **OK** . The *GPS Source* screen reappears. The correction appears as the Source.
3. Press **▲** to select Next Screen and then press **OK** .

## Configuring WAAS/EGNOS

To configure WAAS or EGNOS corrections, set each of the fields on the *WAAS/EGNOS Settings* screen:






ITEM	DESCRIPTION
Correction Limit	The time that the lightbar can run without receiving an updated GPS position, before it drops guidance.
Satellite	The correction satellite that the lightbar will use. To automatically select the satellite, select Auto Select. Otherwise, you can select a specific satellite.
Satellite Health	How the lightbar searches for the satellite: <i>On</i> – The system searches for the satellite, regardless of the region or the satellite health. <i>Off</i> – The system does not search for the satellite. <i>Heed Health</i> – The system searches for the satellite if the satellite is within the appropriate region and is healthy. <i>Ignore Health</i> – The system searches for the satellite if the satellite is within the appropriate region, regardless of satellite health.


## Configuring the GPS Limits

The *GPS Limits* screen enables you to adjust several of the GPS signal strength tolerances. If you are having trouble getting GPS reception, you may be able to receive a signal by lowering the tolerances, but at the cost of lowering signal quality and therefore lowering GPS accuracy.

To adjust the settings, select *Configuration / System / GPS / GPS Limits*.

1. Select the appropriate setting and then press **OK** . The limit adjustment screen appears.

GPS Limits		
	Minimum Elevation	8°
	Minimum SNR	38.0
	Use SBAS satellites in the position fix	No
	Minimum Satellites	5
	Maximum HDOP	3.0
	Minimum Fix Quality	Uncorrected
	OnPath Filter	Off
Set the minimum elevation angle at which GPS satellites will be used		

2. Adjust the value and then press  .

ITEM	DESCRIPTION
Minimum Elevation	Elevation refers to the angle at which a satellite appears in the sky (higher is better). The <i>Minimum Elevation</i> setting is the minimum angle in the sky at which the lightbar will acknowledge satellites. If you are having trouble receiving corrections, lower this setting.
Minimum SNR	SNR (Signal to Noise Ratio) is a measure of the quality of a GPS signal. It is the ratio of useful information received to noise. A high SNR value is better. If you are having trouble receiving corrections, raise this setting.
Minimum Satellites	This is the minimum number of satellites required to provide GPS guidance and auto-steering. If you are having trouble receiving corrections, lower this setting.
Maximum HDOP	The Maximum HDOP (horizontal dilution of precision) is a measure of accuracy based on the geometry of the satellites in the sky. If the satellites are near each other in the sky, the HDOP is higher (lower is better). If you are having trouble receiving corrections, lower this setting.
Minimum Fix Quality	This is the minimum correction level required to provide GPS guidance and auto-steering. If you are having trouble receiving corrections, lower this setting.

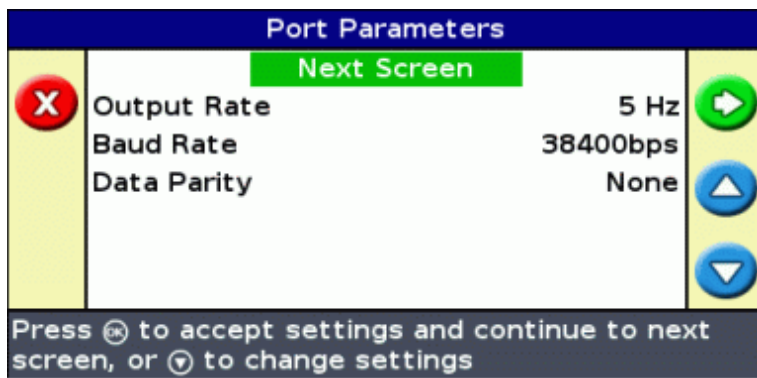
## Configuring NMEA message output

NMEA (National Marine Electronics Association) messages are a standard format that enables GPS devices to communicate.

**Note:** To access the NMEA messages that are output, you require the all-port cable (P/N 64045) or the serial port add-on cable (P/N 63076).

The lightbar can output NMEA messages. This means that the lightbar can communicate with other devices, even those created by other manufacturers, so long as the other device is also compatible with NMEA messages.

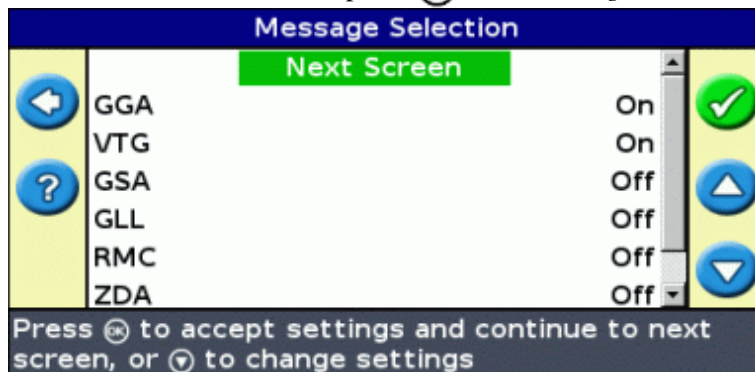
To configure NMEA output, select *Configuration / System / GPS / NMEA Output*.



1. Set the lightbar port parameters.

**Tip** – To be able to communicate, the parameters must match those of the device.

2. Select Next Screen and then press [OK]. The Message Selection screen appears.



3. Set the various message formats to On or Off, depending on whether they are required.
4. Select Next Screen and then press [OK].
5. If you turned GGA on, then select the number of decimal places in the GGA message.

**Note:** Some external devices cannot read the GGA message if there are too many decimal places in the string.

## External Receiver Support

The EZ-Guide 250 lightbar can receive GPS positions from TSIP-compatible receivers. This enables you to use any of the correction types available on your receiver, including OmniSTAR, Beacon, and RTK.

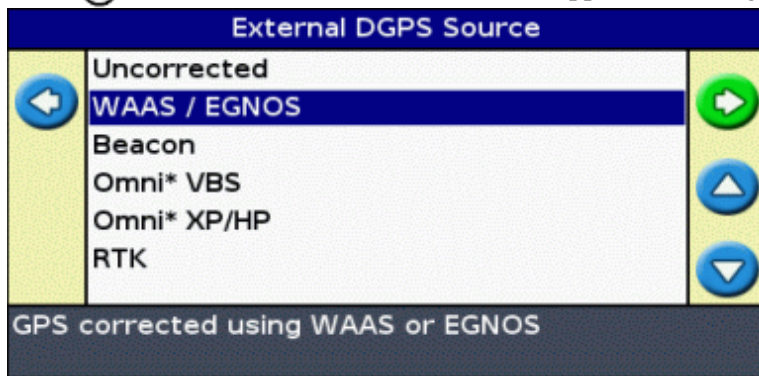
The following TSIP-compatible receivers are supported by the EZ-Guide 250 lightbar:

Trimble	Case IH	Ag Leader	New Holland
AgGPS 252	AFS 252	GPS 5100	NH 252
AgGPS 332	–	–	–

To enable TSIP messages as the correction source:

1. Connect the receiver to the lightbar and then turn them on.

2. Select *Configuration / System / GPS / GPS Setup*.
3. Change the *GPS Correction Source* option to *Ext. TSIP*.
4. Select Continue and press **OK**. The *Connecting to External Receiver* screen appears. The lightbar connects to the TSIP receiver. The message *Connection Established* appears.
5. Press **OK**. The *External DGPS Source* screen appears, showing the available corrections on the receiver.



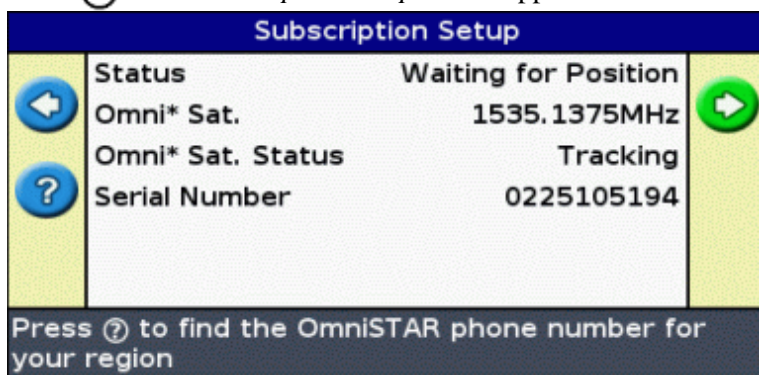
6. Select the appropriate correction source and then press **OK**. The wizard for that correction type appears.

**Note:** When the lightbar is receiving GPS positions from the TSIP-compatible receiver, additional entries appear on the *Info* tab.

### Using OmniSTAR corrected positions over TSIP

To configure the lightbar to use OmniSTAR corrected positions from a TSIP receiver:

1. When the *OmniSTAR Satellite Settings* screen appears, press **?** to view the Help.; It lists the available satellites and their frequencies and baud rates.
2. Write down the frequency and baud rate for the appropriate satellite and then press **OK**. The *OmniSTAR Satellite Settings* screen re-appears.
3. Enter the satellite frequency and baud rate.
4. Press **OK**. The *Subscription Setup* screen appears:



5. Press **?**. The help displays a list of contact phone numbers for OmniSTAR.
6. Phone OmniSTAR and then press **OK**. The *Subscription Setup* screen re-appears.
7. Tell the OmniSTAR representative the number that is listed in the *Serial Number* field. They will enable your receiver.

**Note:** Do not manually disconnect the lightbar from the receiver. The lost signal causes the lightbar to perform an incorrect fast restart.

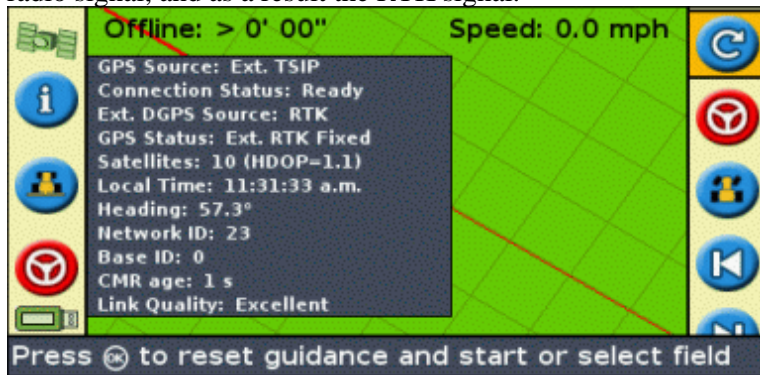


When the lightbar receives OmniSTAR corrections from a TSIP-compatible receiver, the convergence time is reported differently.

### Using RTK corrected positions over TSIP

When you use RTK positions from an external receiver, you can configure the network ID using the Network ID setting.

On the main map screen, the Info tab shows a diagnostic called *Link Quality*. This describes the quality of the radio signal, and as a result the RTK signal.



Depending on the quality of the signal coming in, the *Link Quality* item will show one of the following indicators:

- Excellent
- Good
- Fair
- Poor

# Advanced Mode Data Management

## USB Drive Compatibility

The EZ–Guide 250 lightbar saves data to and from a USB drive using a FAT file system.

**Caution** – *Multi–function devices, for example iPods or MP3 players, are not compatible with the lightbar. Do not reformat these devices to use the FAT file system, as this may delete their firmware and prevent them from operating correctly.*

The following drive is compatible with the lightbar:

- Lexar Firefly 1 GB (P/N 64268–1G). For more information, contact your local reseller.

The following drives are not compatible with the lightbar:

- Apple Ipod
- MP3 player
- Kingston flash drive
- PNY Attache flash drive
- USB extension cables
- USB to CompactFlash adaptors

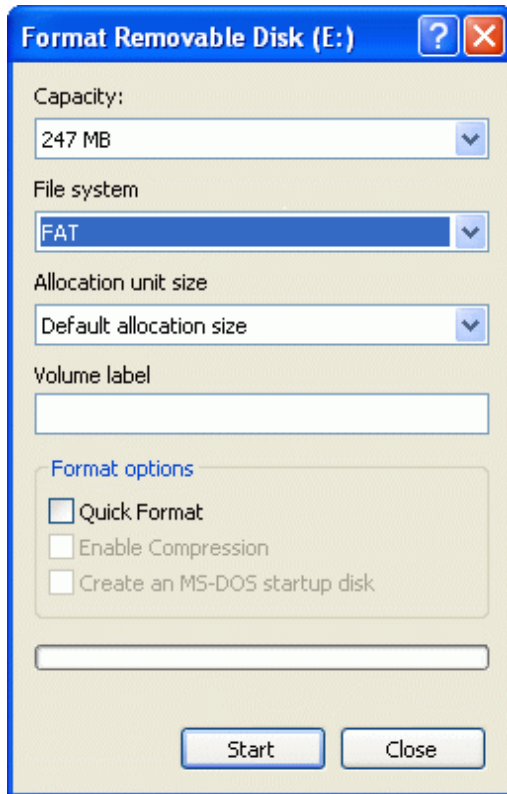
**Note:** *Newer versions of the SanDisk Micro Cruzer USB drive are not compatible. Versions of the drive that have worked in the past will continue to work.*

**Note** – *Because USB to CompactFlash card adaptors are not supported, AgGPS Autopilot(TM) system users must transfer field data from their CompactFlash cards to the USB drive using a laptop or office computer.*

If you are having trouble importing or exporting data to a USB drive, reformat it with the FAT file system.

**Note** – *This deletes any data on the drive. Before you complete these steps, copy any data that you want to keep.*

1. Insert the USB drive in the USB port of an office computer. The drive is recognized by the computer.
2. Open the File Manager.
3. Right–click on the USB drive letter and then select Format. The *Format Removable Disk* dialog appears.



4. In the *File system* list, select FAT and then click **Start**.

The USB drive is formatted with the FAT file system.

### Inserting a USB drive

You can connect a USB drive to the USB port on the back of the lightbar:

1. Ensure that the lightbar is turned off.
2. Insert the USB drive into the USB port.
3. Turn on the lightbar.

**Note:** To reduce any delay caused by the lightbar scanning the USB drive, keep the number of fields on the USB drive to a minimum.

### Removing a USB drive



**Caution** – If you remove a USB drive from the lightbar while the lightbar is turned on, you risk corrupting the data. To avoid this, do the following:

1. Turn off the lightbar.
2. Remove the USB drive from the USB port.

## Getting Data from the USB Drive

You can get data from a USB drive:

1. Connect the USB drive. See [USB Compatibility](#)
2. Select *Configuration / Data Management / Manage Fields / Get Fields from USB*.
3. Do one of the following:
  - ◆ Select the specific client, farm, and field to import.
  - ◆ Select All to get all of the data in a category to the USB drive.

**Note:** *If you select All, you do not need to select the later options.*
4. Select Import Files and then press . A warning message appears.
5. Press  to continue. A screen with an hourglass appears.

The files are imported from the USB drive.

## Importing Data from the AgGPS FieldManager Display

The AgGPS FieldManager display uses a CompactFlash card to record field data. The EZ–Guide 250 system uses a USB drive. Therefore, the storage devices are not interchangeable.

To import data from the AgGPS FieldManager display to the EZ–Guide 250 system:

1. Insert the FieldManager display data card into the card reader of your office computer.
2. Copy the field data to a temporary directory on the computer.
3. Insert the EZ–Guide 250 system USB drive into the office computer.
4. Copy the field data from the temporary directory to the USB drive.
5. Insert the USB drive into the lightbar.
6. On the lightbar, select *Configuration / Data Management / Manage Fields / Get Fields from USB*.

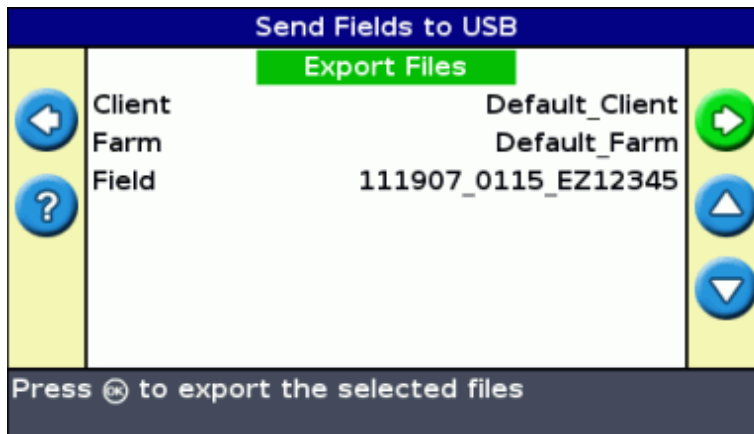
You cannot import old field data into the EZ–Guide 250 system from the AgGPS 170 Field Computer or an RDL.

## Sending Data to the USB Drive

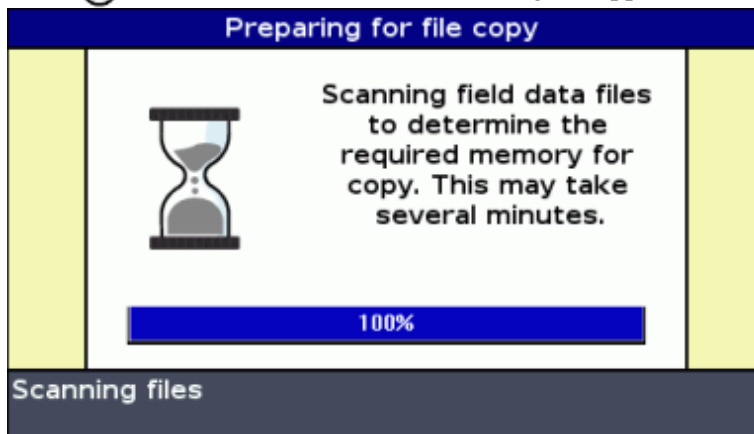
You can export data to a USB drive. This can be useful for backing up your data, or viewing the data in a GIS software application.

**Note:** *The lightbar will not send data to a USB drive that is over 90% full.*

1. Connect the USB drive. See [USB Compatibility](#)
2. Select *Configuration / Data Management / Manage Fields / Send Fields to USB*. The *Send Fields to USB* screen appears:



3. Do one of the following for each of the *Client*, *Farm*, and *Field* options:
  - ◆ Select the specific item to export.
  - ◆ Select All to export all of the entries.
4. Select Export Files and then press **OK**. A warning screen appears.
5. Press **OK** to continue. A screen with an hourglass appears:



The data is exported.

### Exporting large fields

**Tip:** To export a large field, create a temporary new A+ field with no logging in it and then export the large field. This will ensure that the large field is correctly closed before it is exported.



## Clearing Storage Space

To avoid the lightbar's internal memory from becoming full over time, use one of the following methods available on the *Data Management* screen:

- Occasionally delete old fields.
- Export data to a USB drive and then store it on an office computer.
- Delete the coverage logging. See below.

### Deleting Fields





You can delete fields that you no longer require:

1. Select *Configuration / Data Management / Manage Fields / Delete Selected Fields*.
2. Select the Client, Farm, and Field to delete. You can also select to delete "All".
3. Select Delete Files and then press . A warning message appears.
4. Press  to continue. A screen with an hourglass appears.

The files are deleted.

## Deleting coverage logging

You can delete coverage logging to free up space in the lightbar's internal memory:

1. From the main guidance screen, select the  icon and then press . The *Configuration* screen appears.
2. Select *Configuration / Data Management / Manage Fields / Delete Coverage Logging*.
3. Select the Client, Farm, Field, and Event. If you choose to delete the coverage logging from all of the fields in a farm, the events are deleted automatically.
4. Select Delete Files and then press . A warning message appears.
5. Press  to continue. A screen with an hourglass appears.

The coverage logging files are deleted.

## Exporting Diagnostic Logs

The EZ-Guide 250 system records operating information in diagnostic logs. You can export these logs to a USB drive:

1. Connect the USB drive. See [USB Compatibility](#)
2. Select *Configuration / Data Management / Manage Diagnostic Logs / Export Diagnostic Logs to USB*.  
A screen with an hourglass appears for a few seconds while the files are exported. A message appears to confirm that the diagnostic logs have been exported.

## Field Name Structure

The EZ-Guide 250 system stores data in a directory hierarchy of client, farm, field, and event.

ITEM	DESCRIPTION
Client	The customer for whom the work is being done
Farm	A collection of "fields" (see below)
Field	A specific area of land where events are carried out

Event	The event or application that is being applied on a particular "field" (see above). For example: – Spraying – Harvesting
-------	--

A client may have several farms, each of the farms may consist of several fields, and each field may be broken into a number of events.

## Default Field Names

By default, the client, farm, field, and event names are automatically generated. The default names are:

ITEM	DESCRIPTION
Client	Default_Client
Farm	Default_Farm
Field	<i>Date _ Increment _EZ SerialNumber</i>
Event	<i>Event_ Date _ Increment _EZ SerialNumber</i>



**Note:** *Date is in the format YYMMDD and Increment is a number that increases for each new field. Only the last five digits of the serial number are used.*

## System Configuration Files


Once you configure the system, you can save and load those configuration settings. Saved system configurations can be useful if you want to:



- move the lightbar from one vehicle to another
- drive in the same vehicle but with different settings (for example, with a different implement)
- try adjusting the settings to improve performance

### Saving the system configuration

1. Select *Configuration / Data Management / Save/Load Configurations / Save Current Configuration*.
2. Select one of the following:
  - ◆ Save to internal memory – Save the current configuration to the lightbar internal memory.
  - ◆ Save to USB drive – Save the current configuration to a USB flash drive.
  - ◆ An existing configuration – Saves the current configuration over the existing one. A warning message appears. Press  to proceed, or press the  function button to exit without saving.

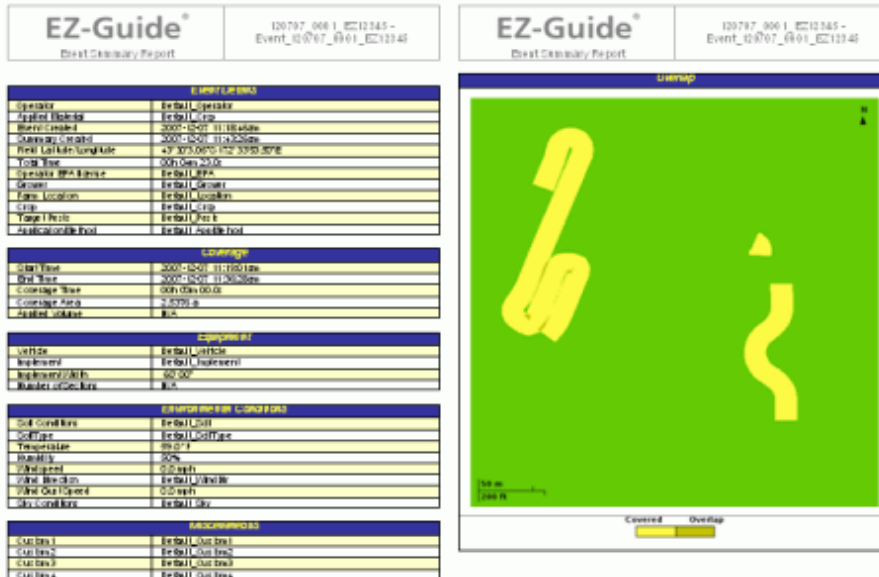
### Loading a system configuration

1. Select *Configuration / Data Management / Save/Load Configurations / Load a Configuration*. The *Load a Configuration* screen appears.
2. Select the configuration to load from the list and then press .

A message appears to warn that you will load the configuration over the current configuration. Press  to proceed, or press the  function button to exit without loading.

## Summary Report

The lightbar can produce multi-page field summaries that contain a field map and report.







These summaries are in RTF format and can be viewed on an office computer. The summary report is automatically created when you close the field. (A field is closed when you run the New Field Wizard). The summary report has the same name as the field.

**Note:** To view the graphics in the files, you may need to install the Microsoft® Word viewer utility from the EZ-Guide 250 Documentation CD.

The summary shows the current implement width. If you create a summary of a field that was driven with an implement of a different width, change the current implement width to match that of the field before you continue.






**Note:** A field must contain convergence for you to be able to generate a summary report.

To manually create a field summary:

1. Open the appropriate field.
2. From the main guidance screen, press  one or more times until you have selected .
3. Press . The *Configuration* screen appears.
4. From the *Configuration* screen, select *Data Management / Summary Reports*. The *Summary Reports* screen appears.
5. Select *Create Summary Report Now* and then press . The summary report is saved to the lightbar's internal memory.



To export the summary reports to the USB drive:

1. From the main guidance screen, press  one or more times until you have selected .
2. Press . The *Configuration* screen appears.
3. From the *Configuration* screen, select *Data Management / Summary Reports*. The *Summary Reports* screen appears.
4. Ensure that a USB drive is inserted into the EZ–Guide 250 USB slot.
5. Select *Send Summary Reports to USB* and then press . The *Send Summary to USB* screen appears.
6. Do one of the following:
  - ♦ Select the name of the summary report to send.
  - ♦ Select *All* to send all summary reports to the USB drive.
7. Select *Send* and then press .

To view the summary report:

1. Insert the USB drive into an office computer.
2. On the USB drive, locate the appropriate RTF file in the `\AgGPS\Summaries\` directory.
3. Double-click on the field that you want to load.

To save the file, copy it to the office computer.

## Viewing/Editing Data with Office Software

The EZ–Guide 250 lightbar guidance system saves field information in shapefile format. Each shapefile is made up of three files:

- example.shp – position information
- example.shx – index file that links the position information with its attributes
- example.dbf – feature attributes




Keep these files together when you copy or move the data.

Data collected by the EZ–Guide 250 lightbar can be opened directly into the EZ–Office(TM) software. For more information, go to [www.EZ–OfficeSoftware.com](http://www.EZ–OfficeSoftware.com).


## Upgrading the Lightbar Firmware

To view the current lightbar firmware version:

1. Select *Configuration / About the EZ–Guide*.
2. Check the *Version* number:

About the EZ-Guide		
	ID	EZ-Guide 250
	Version	1.00.014.2[3.00] 
	Version Date	11/16/2007
	Serial Number	0224012345
	Part Number	55555-01
	Monitor Version	0.00
This information may be helpful for support		

To upgrade the lightbar firmware:

1. Download the self-extracting firmware file from [www.EZ-Guide.com](http://www.EZ-Guide.com) to your office computer.
2. Run the file and extract the contents to a temporary directory.
3. Copy the files from the temporary directory to the USB drive.
4. Insert the USB drive in the lightbar.
5. Turn on the lightbar. When the USB drive is detected, the lightbar runs the upgrade wizard.
6. Select the EZ-Guide firmware .img file and then press . The wizard installs the new firmware.

**Caution:** Do not turn the lightbar off while the firmware is being updated. This could render the lightbar inoperable.



The lightbar restarts with the new firmware installed.

# Mapping

## Introduction to Mapping




The EZ–Guide 250 can map point, line and area features.

*Note: Mapping is disabled if you do not have good quality GPS.*

To enter mapping mode, select the  icon and press .

While in mapping mode you can map point, line and area features.



In mapping mode, the following feature mapping icons appear on the right of the screen:

ITEM	DESCRIPTION
	Display point feature mapping icons
	Display line feature mapping icons
	Display area feature mapping icons

Mapped features are saved with the field. To see mapped features when you return to a field, you must reload the field and start a new event or continue with an existing event.

The mapped features are exported with the field and can therefore be imported into the EZ–Guide 500 lightbar and the AgGPS FieldManager display. For more information, see [Sending Data to the USB Drive](#).

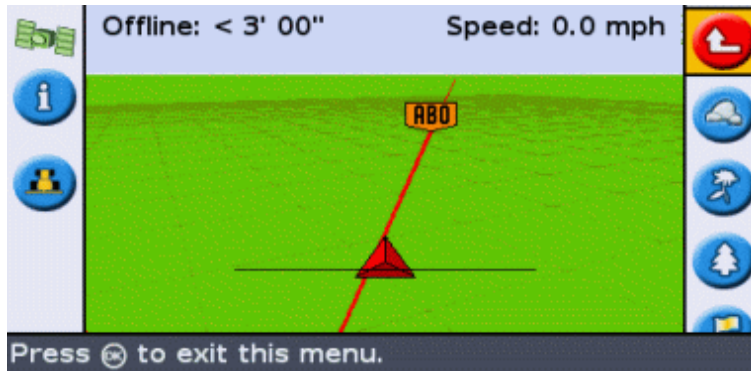
## Mapping Features

To map features, you must be in mapping mode. To enter mapping mode, select the  icon and press .





### Mapping point features


To map a point feature:

1. From mapping mode, select  and press . The point feature mapping icons appear.



2. Press  to select the appropriate point feature icon.



ICON	DESCRIPTION
	Map a rock point feature
	Map a weed point feature
	Map a tree point feature
	Map another generic point feature

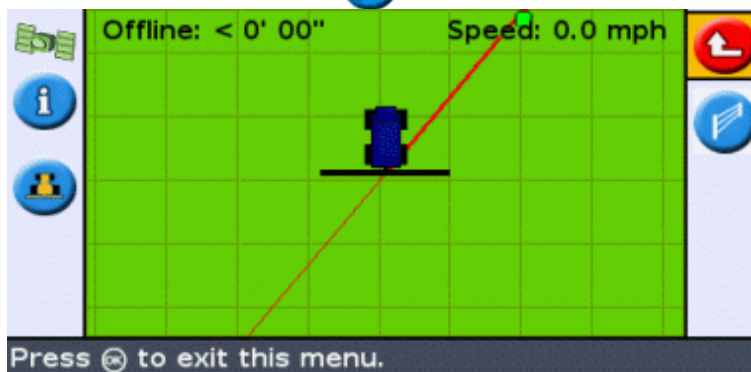
3. Press  . The point feature is mapped.






***Note:** By default, the point feature is mapped at the antenna location. To change where a feature is mapped, see [Recording Position](#) .*

## Mapping line features

To map a line feature:

1. From mapping mode, select  and press  . The line feature mapping icon appears.



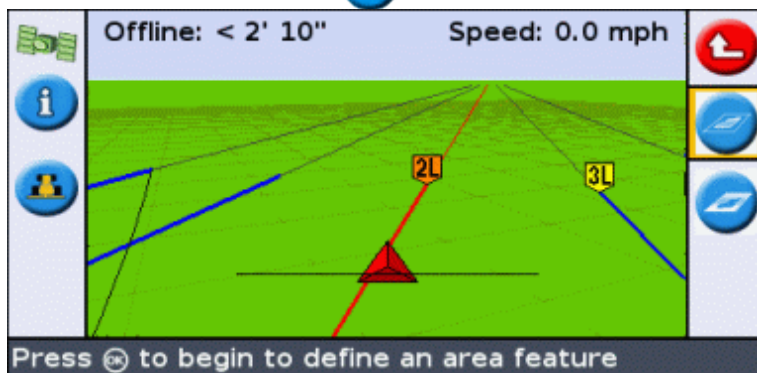
2. Press  to select  .
3. Press  . The lightbar begins recording the line feature.
4. Drive the length of the line feature.
5. At the end of the line feature, check that  is selected then press  . The lightbar completes mapping the line feature.

**Note:** By default, the line feature is mapped at the antenna location. To change where a feature is mapped, see [Recording Position](#).



## Mapping area features




To map an area feature:

1. From mapping mode, select  and press . The area feature mapping icons appear.



2. Press  to select the appropriate area feature icon:

ITEM	DESCRIPTION
	Map a generic area feature.
	Map an exclusion zone.


3. Press . The lightbar begins recording the area feature.
4. Drive around the area feature.
5. To complete the area feature, check that  is selected then press .

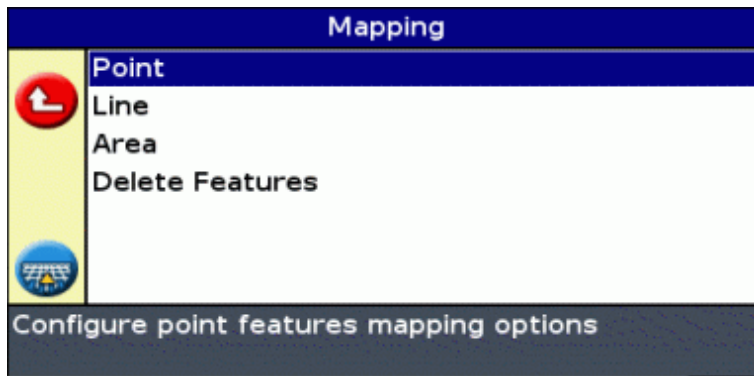
**Note:** By default, the area feature is mapped at the antenna location. To change where a feature is mapped, see [Recording Position](#).

## Recording Position

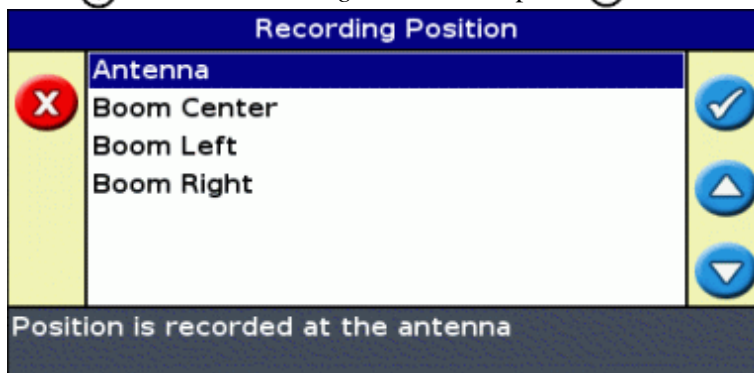
By default, all point, line and area features are recorded at the antenna position. You can independently configure the recording position for point, line and area features.

To change the recording position of features:

1. If the lightbar is not already in Advanced mode, change it to Advanced mode by selecting *Configuration / User Mode*.
2. Select *Configuration / Mapping* and then press . The *Mapping* menu appears.



3. Press to select Point, Line or Area and press to display the configuration screen for the feature type.
4. Press to select *Recording Position* and press . The *Recording Position* screen appears.



5. Select the appropriate recording position and press .

## Warning Zones


When a point, line, or area feature is mapped, you can configure a warning zone around the feature.

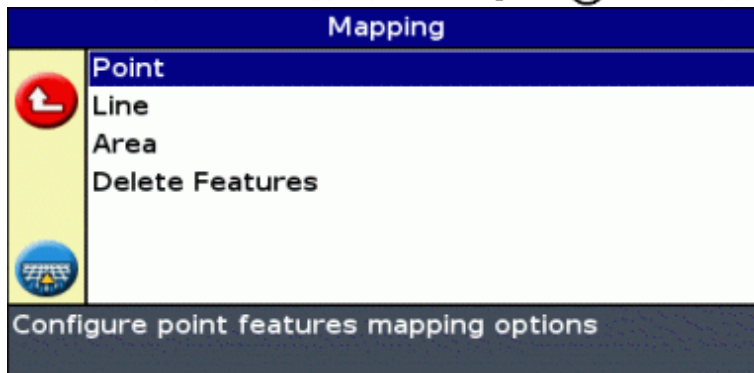
When the vehicle enters the warning zone around a feature, the lightbar provides a visual and audible warning (if Sonalert alarm is connected)





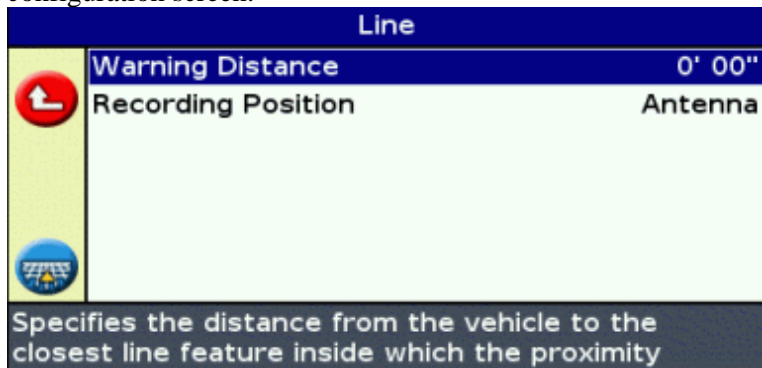
You configure the warning zone as a distance around a point feature, or as a distance around line or area features.





To configure a warning zone for a point, line or area feature:

1. If the lightbar is not already in Advanced mode, change it to Advanced mode by selecting *Configuration / User Mode*.
2. Select *Configuration / Mapping* and then press . The *Mapping* menu appears.



3. Press  to select *Point*, *Line* or *Area* and press  to display the Point, Line or Area feature configuration screen.

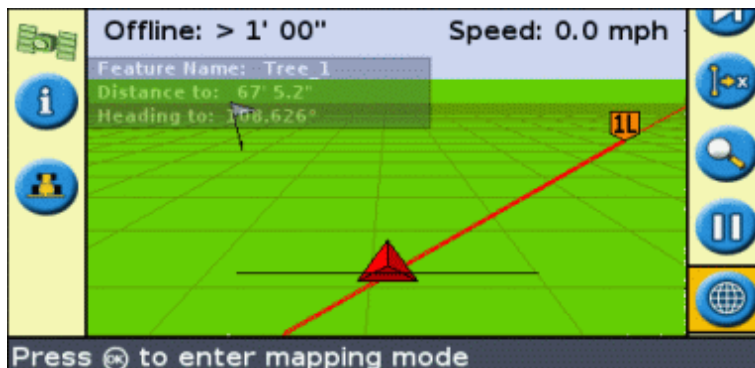


4. Press . The *Warning Distance* screen appears.
5. Press  or  to change the warning distance.
6. Press .

**Note:** Set the warning distance large enough to be safe for the entire vehicle length. You should consider the implement length as well as the tractor length.

## Displaying Feature Information

To display information about the closest feature in the field, press  until the Features information tab appears.




# Deleting Features


You can delete mapped features in two ways:

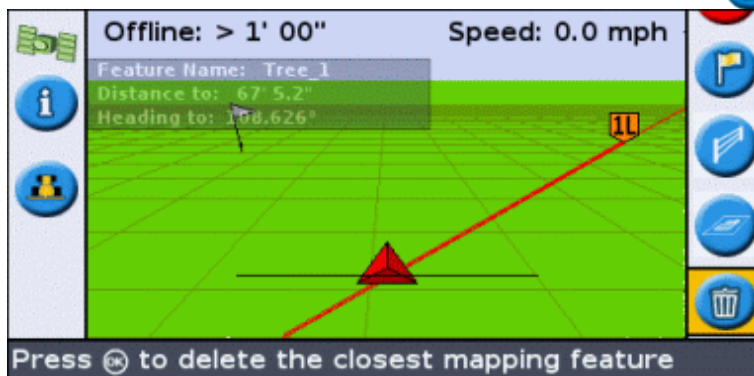
- Manually delete the closest feature in the field
- Delete all the features in a selected field.

## Manually deleting the closest feature

To manually delete the closest feature:

1. Enter mapping mode. Select the  icon and press **OK**.

While features are mapped in the field, the Delete Features (  ) icon is shown.



2. Drive towards the feature you want to delete, until it is selected as the closest feature. The closest feature is indicated by a flashing white boundary.

**Tip:** Ensure that the correct feature is selected by checking on the Features Information Tab.

3. Press  to select the  icon and press **OK**.

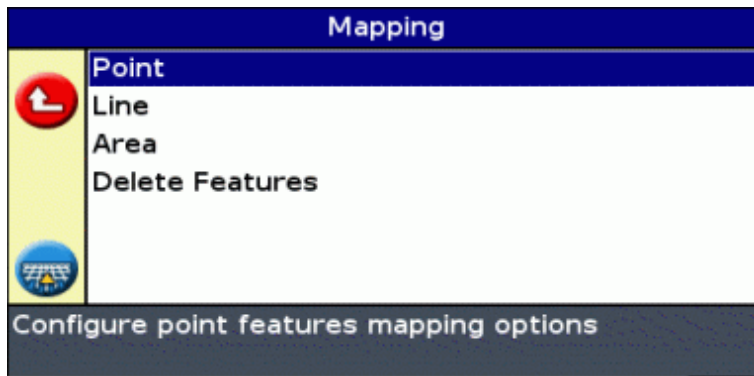
The closest feature is deleted.



## Deleting all features in a field

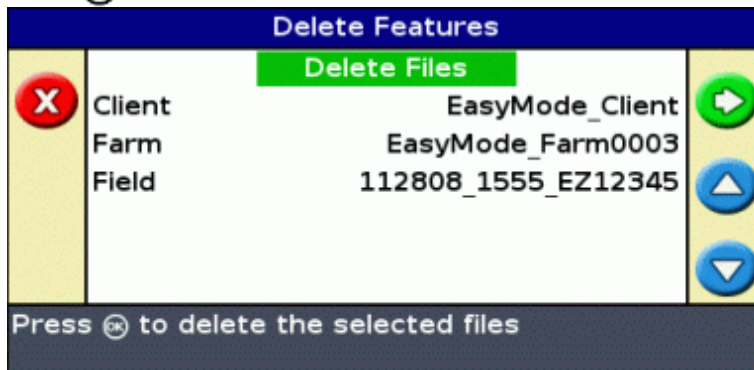
To delete all mapped features in a field:



1. Select *Configuration / Mapping* and press **OK**. The Mapping menu appears.





2. Press  to select Delete Features.
3. Press . The *Delete Features* screen appears.



4. Select the Client, Farm and Field containing features you want to delete.
5. Select Delete Files and press . A confirmation screen appears.
6. Press .

The mapped feature files for the select field are deleted.

# Obtaining Information from the Lightbar

## The About the EZ-Guide Screen

You can view the *About the EZ-Guide* screen in Easy or Advanced mode.

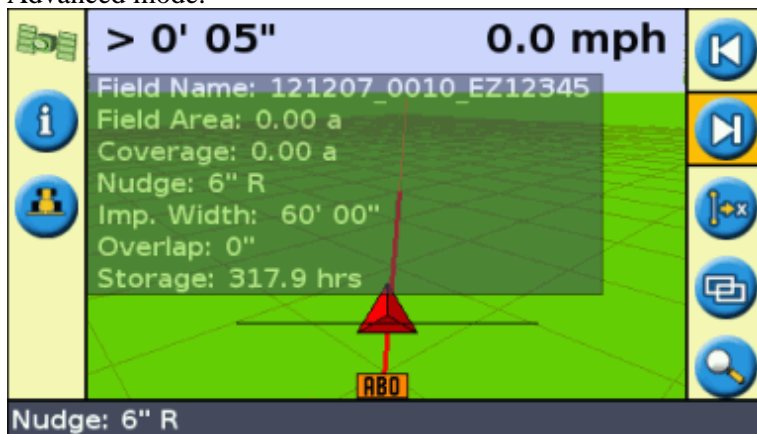
About the EZ-Guide		
X	ID	EZ-Guide 250
	Version	1.00.012.1[3.00]
?	Version Date	11/04/2007
	Serial Number	0224012345
	Part Number	55555-01
	Monitor Version	0.00
This information may be helpful for support		

To view the *About the EZ-Guide* screen, select *Configuration / About the EZ-Guide*.


If you need to ask for support, have this information available.

## Information Tabs

The lightbar has several information tabs that you can display over the screen. They can be viewed in Easy or Advanced mode.



The tabs are see-through, so you can still see the vehicle underneath.

To view an information tab, press the  function button. To cycle to the next tab, press the function button again.

## Status Screens

The Status screens can be viewed in Advanced mode. To display the *Status* menu, select *Configuration / Status*.


You can access seven screens from the *Status* menu:

SCREEN	DESCRIPTION
GPS Status	Displays information about your position and the current GPS signal strength.
Satellite Status	Displays information about the current GPS satellites.
DGPS Status	Displays which DGPS signal is selected. It is set at <i>System / GPS / GPS Setup</i> .
System Status	Displays information about the lightbar.
Language Pack Status	Displays information about which language packs are installed.
Terrain Compensation	Displays the current T2 terrain compensation technology information from an EZ–Steer controller.
EZ–Steer Status	Displays information about the EZ–Steer system, if one is connected.
Faults History	Displays any faults that have occurred on the lightbar or an attached EZ–Steer system. <i>Listed faults are not currently active.</i>

These screens are non–interactive. They only display information about the system.

## Warning Messages

The lightbar has two types of warning message:

ITEM	DESCRIPTION
Full screen	The message covers the full screen. Press  to clear it.
Message bar	The message appears at the bottom of the screen, over the message bar. Some warnings disappear after several seconds. For others, press the top function button.

## Troubleshooting

ISSUE	CAUSE	SOLUTION
The implement does not appear on the screen.	The implement offset is too big for the current view.	Zoom the view further out.
Point B does not appear.	While you were defining a headland, you set the A point and then paused guidance mapping.	At the point where you want to set the B point, resume the guidance mapping. The B point appears.