New Holland Precision Agriculture

Precision solutions for all seasons, all crops, all terrain, all vehicles – a growing investment
No matter the size of your farming operation or your GPS guidance needs, New Holland has a solution for you. Whether your requirements include industry-leading guidance technology, solutions for water management, software for data management or flow and application control equipment, New Holland provides you with multiple precision farming options.

The increasing input costs and market factors influencing the farming industry today make it imperative for you to maximize your payback in terms of cash, time and yield. New Holland’s precision farming solutions eliminate much of your farming ‘guesswork’ and quickly allow you to realise payback on your investment.

The complete line of New Holland display options ranging from the EZ-Guide® 250 and EZ-Guide 500 lightbars to the FieldManager™ display offer a variety of functionalities and a range of price points from entry-level to high-end. Selecting a display option that best fits your farming needs allows you to utilise a single display in your tractor cab.

New Holland’s precision farming solutions also include a full range of application control systems to pair with our exceptional GPS guidance technology. You can now regulate your planting, seeding, anhydrous, spraying, and spreading applications by utilising the same superior technology you’ve come to expect from New Holland. And, when paired with our data management software solutions, you can easily monitor all aspects of your farming operation from planting to harvesting.

Because New Holland’s precision farming solutions are compatible with thousands of vehicle models, our product line-up is considered ‘colour-blind’. Meaning, no matter the make or model you own, our equipment can be installed on your tractor or implement to improve functionality and productivity.

To ensure that your precision farming investments are future-proofed, New Holland designs equipment to be expandable over time. The decisions you make for your guidance, application and water management needs today will continue to provide payback year-after-year.

New Holland Precision Agriculture. Powered by Trimble.
### CHOOSE DISPLAY

<table>
<thead>
<tr>
<th>EZ-GUIDE 250 LIGHTBAR</th>
<th>EZ-GUIDE 500 LIGHTBAR</th>
<th>FIELDMANAGER DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="EZ-GUIDE 250 Display" /></td>
<td><img src="image2" alt="EZ-GUIDE 500 Display" /></td>
<td><img src="image3" alt="FIELDMANAGER Display" /></td>
</tr>
</tbody>
</table>

- Entry-level lightbar guidance system
- Easy-to-use and most affordable
- Built-in high performance GPS receiver with Trimble® OnPath® filter technology
- Ultra rugged aluminum housing
- Compatible with EZ-Steer® 500 assisted steering system

- Built-in dual-frequency GPS receiver offering multiple accuracy options
- Integrated lightbar with 31 bright LEDs
- Simple control buttons operate easy-to-use software
- USB flash drive to transfer files for printing maps and reports

- A 26.4 cm colour touch screen with plan and 3D views
- Intuitive graphical layout
- Works with any Trimble AgGPS receiver
- Removable data card to transfer files between displays or to the office

### CHOOSE PATTERNS

<table>
<thead>
<tr>
<th>HEADLAND</th>
<th>PIVOT</th>
<th>A-B PATTERN</th>
<th>IDENTICAL CURVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Headland Pattern" /></td>
<td><img src="image5" alt="Pivot Pattern" /></td>
<td><img src="image6" alt="A-B Pattern" /></td>
<td><img src="image7" alt="Identical Curve" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A+PATTERN</th>
<th>MULTI HEADLANDS</th>
<th>FREEFORM</th>
<th>ADAPTIVE CURVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image8" alt="A+Pattern" /></td>
<td><img src="image9" alt="Multi Headlands" /></td>
<td><img src="image10" alt="Freeform" /></td>
<td><img src="image11" alt="Adaptive Curve" /></td>
</tr>
</tbody>
</table>
Following the leader just got easier. And more affordable.

Trimble, the proven leader in GPS guidance technology, is proud to offer the new EZ-Guide® 250 lightbar guidance system. With a common-sense user interface and a colour screen, the EZ-Guide 250 system is easy to operate right out of the box. Plus, you can upgrade to the EZ-Steer® 500 assisted steering system, delivering a total package priced far less than the competition.

www.ez-guide.com
The EZ-Guide 500 system represents revolutionary innovation in lightbar guidance systems. Because it has a built-in dual-frequency receiver, you get to choose the accuracy you need from 30 cm pass-to-pass down to 2.5 cm year-to-year without adding another GPS receiver to your cab. When you need a GPS guidance system that saves you time, fuel and inputs, look no further than the EZ-Guide 500 system – the cornerstone of lightbar guidance, hands-free farming, and boom section control from Trimble.

www.ez-guide.com
The Trimble® FieldManager™ display gives you everything you need at your fingertips on a large touch screen. Capable of handling all your automated steering, mapping and application control functions from the cab, the FieldManager display improves your efficiency where you need it most.

www.autopilotgps.com
EZ-STEER ASSISTED STEERING SYSTEM

EZ-STEER 500 SYSTEM

T2 TERRAIN COMPENSATION TECHNOLOGY

Implements accuracy when driving straight lines across sloping terrain.

Improves accuracy when driving straight lines across sloping terrain.

Position without terrain compensation

Position corrected by T2 technology

AgGPS antenna

Roll angle

Simple, portable hands-free farming for over 600 vehicle models – old and new.

The EZ-Steer® system turns the steering wheel for you by combining a friction wheel and a motor with GPS guidance from the EZ-Guide® 500 or the EZ-Guide 250 lightbars. While the EZ-Steer keeps you on line, you can focus on many different tasks, such as spray or planter performance, improving job quality and crop yields while reducing fatigue.

www.ez-steer.com

FOOT SWITCH

Engage and disengage the EZ-Steer system with the optional foot switch for hands-free farming.

EZ-STEER MOTOR

The EZ-Steer motor receives electrical signals from the EZ-Steer controller and converts them to precise commands that the vehicle’s steering system uses to keep the vehicle on path.

EZ-STEER CONTROLLER

Using data from the GPS receiver the EZ-Steer controller sends precise instructions to the steering wheel motor. T2 technology continually corrects for roll and yaw by using state of the art 4-axis solid state inertial sensors to give you a true on-ground position.
The Trimble® Autopilot™ automated steering system provides 2.5 cm repeatability from plant to harvest with any field pattern, and extends your operating hours with incredible precision.

**RTK GPS Networks**

A network consists of a number of fixed RTK base stations that independently broadcast RTK correction signals so the vehicle can obtain sub-2.5 cm accuracy. Contact the New Holland dealer in your area to find out if they manage an RTK network, or set-up your own RTK base station.
**TrueTracker implement steering system**

The Trimble TrueTracker™ system keeps implements on a repeatable path, even on extremely sloped fields and variable soils. It includes a GPS receiver and T3 terrain compensation technology mounted on the implement. The Trimble FieldManager™ display in the tractor communicates guidance information to the TrueTracker system, instantly adjusting implements such as tillage tools, strip tillers, drills and planters, cultivators, sprayers and harvesters to follow directly in the path of the tractor. With repeatable accuracy the TrueTracker system improves seedbed and nutrient placement helping to enhance crop stands and yields.

[www.autopilotgps.com](http://www.autopilotgps.com)
EZ-BOOM 2010 AUTOMATED APPLICATION SYSTEM

Cut your farm’s input costs immediately using the Trimble® EZ-Boom® 2010 automated boom switching and spray rate controller system for your next field application. Now, using GPS, up to ten boom sections can be automatically turned on and off to avoid overspray and untreated gaps on end rows – resulting in more precise application for all field work and less stress on the operator when navigating headlands, waterways and other demanding driving situations.

AUTOMATED BOOM SWITCHES

Ten user defined boom sections use GPS positions from the Trimble® EZ-Guide® 500 lightbar, EZ-Guide Plus lightbar or the FieldManager™ display to automatically detect boom sections that need to be turned on or off for precise coverage. The ten switches can also be used for manual control of boom sections.

RATE SWITCHES

The R1 and R2 switches can be set to predefined rates so when changing from one application to another it’s just a flick of the switch to change the application rate. With the + and - switch you can increase or decrease the current application rates when your field requires a quick change.

CONNECTORS

- One cable connects the EZ-Boom 2010 system to the display.
- Another cable connects the EZ-Boom 2010 system directly to existing flow meters and valves, so the EZ-Boom system is simple to plug and play into your sprayer system – adding automatic boom switching all in the same box.

GPS INPUT

The EZ-Boom 2010 system uses GPS to measure the speed and position of the vehicle, which determines the flow rate and the on-off boom switching.

DISPLAY OPTIONS

<table>
<thead>
<tr>
<th>EZ-GUIDE PLUS LIGHTBAR</th>
<th>EZ-GUIDE 500 LIGHTBAR</th>
<th>FIELDMANAGER DISPLAY</th>
</tr>
</thead>
</table>
THE INTERNET

The vehicle with a GPS antenna receives GPS signals from the GPS satellite constellation. The OmniSTAR services have many GPS receivers at known reference locations that send the correction messages to control stations which then uplink the message to a geostationary satellite (OmniSTAR). The geostationary satellite (OmniSTAR) then sends the correction message to the GPS antenna on the vehicle, which applies the correction.

**Correction Message**

This is a highly precise technique that results in 2.5 cm year-to-year accuracy. RTK GPS requires two specialised GPS receivers and two radios. One GPS receiver is set up as a base station within range of the field you are working so it can send the correction message to the roving receiver. Both receivers collect extra data from the GPS satellites, known as L2 Band, that enables better precision. All Trimble RTK base stations and RTK rover receivers are dual-frequency, meaning improved accuracy and shorter acquisition times.

**Differential GPS (DGPS) with OmniSTAR Correction**

The vehicle with a GPS antenna receives GPS signals from the GPS satellite constellation. The OmniSTAR services have many GPS receivers at known reference locations that send the correction messages to control stations which then uplink the message to a geostationary satellite (OmniSTAR). The geostationary satellite (OmniSTAR) then sends the correction message to the GPS antenna on the vehicle, which applies the correction.

**RTK (Real Time Kinematic)**

**Differential GPS (DGPS) with OmniSTAR Correction**

**Why is GLONASS and L2C Important for High Accuracy?**

GLONASS is a partially operational satellite navigation system developed by the Russian government. GPS refers to the U.S. Department of Defense (DOD) NAVSTAr constellation. The new GPS satellites include additional civilian GPS signals – L2c – for more robust signal tracking.

RTK requires reliable satellite availability to get a position fix, and the addition of GLONASS and L2C signals gives the user improved constellation acquisition capabilities.

The New Holland 442 GNSS receiver, with the ability to process GLONASS and L2C satellite signals, offers users a higher level of “productivity insurance” than other receivers. This new capability will help improve signal availability for certain RTK applications that rely heavily on “z” or vertical axis satellite positioning data, and for RTK users at certain times in some areas.

**GPS Accuracy Definitions**

**Pass-to-Pass accuracy** measures the relative accuracy over a 15 minute interval. This is usually thought of as guess row error when driving rows, or skip/overlap from one pass to the next when driving swaths. A Trimble GPS receiver with pass-to-pass accuracy of 10 cm means you get less than 10 cm skip or overlap, 95% of the time.

**Year-to-Year accuracy** is the measure of repeatable accuracy that you can drive the same rows a day, week, month, or year later. So, 2.5 cm year-to-year accuracy means you can drive the same rows next year within 2.5 cm of this year’s rows, 95% of the time.

**GLONASS** is a partially operational satellite navigation system developed by the Russian government. GPS refers to the U.S. Department of Defense (DOD) NAVSTAr constellation. The new GPS satellites include additional civilian GPS signals – L2c – for more robust signal tracking.

**RTK (Real Time Kinematic)** requires reliable satellite availability to get a position fix, and the addition of GLONASS and L2c signals gives the user improved constellation acquisition capabilities.

The New Holland 442 GNSS receiver, with the ability to process GLONASS and L2C satellite signals, offers users a higher level of “productivity insurance” than other receivers. This new capability will help improve signal availability for certain RTK applications that rely heavily on “z” or vertical axis satellite positioning data, and for RTK users at certain times in some areas.
New Holland’s leading-edge receiver solutions are more than just receivers. They are a range of receivers, antennas, and smart antennas that offer an accuracy and price point to suit any farming operation, budget and vehicle. Built to withstand harsh agricultural conditions, these GPS solutions combine with Trimble’s guidance systems to enable farmers worldwide to work more efficiently, reduce input costs, and allow them to work in extreme conditions.

**OUR COMMITMENT...**

The addition of GLONASS and L2C signals gives the 442 receiver excellent performance in tough satellite environments and areas with intermittent periods of GPS signal availability.

With advanced 72 channel L1/L2/L2C/GLONASS/RTK capabilities, the 442 receiver is an excellent high accuracy RTK receiver using a local RTK network or base station.

The addition of GLONASS and L2C signals gives the 442 receiver excellent performance in tough satellite environments and areas with intermittent periods of GPS signal availability.

The New Holland 432 receiver utilises the same receiver hardware as the New Holland 442 but does not have GLONASS tracking capability enabled.

The New Holland 432 can be upgraded with a passcode to track GLONASS satellites.

The integrated display and keypad gives you quick access to configuration.

Repeatable year-to-year accuracy.

**Complete flexibility for better accuracy when you need it from the latest in high performance dual-frequency receiver technology.**

Your choice of accuracy level depending on your operation including DGPS Beacon, OmniSTAR VBS, high accuracy OmniSTAR HP/XP, or RTK (with a base station).

Easy upgrade to a higher accuracy level.

Gives you repeatable year-to-year accuracy for row crop operation and makes any operational changes quick and easy.
New Holland is committed to providing the range of GPS accuracy required for optimal productivity in the field. To choose a receiver, the first consideration is the accuracy level required for your operations. The second consideration is what type of real-time correction is available in your area. Use the diagrams and information below to decide what level of GPS accuracy and real-time source your operation requires.

### 252 RECEIVER
- All in one, low profile GPS/ DGPS/RTK receiver and antenna.
- Low-profile, high performance dual-frequency GPS receiver and antenna
- Your choice of accuracy level depending on your operation including Omnistar VBS or high accuracy Omnistar HP/XP or RTK (with a base station)
- Easy upgrade to a higher accuracy level
- Gives you repeatable year-to-year row crop operation

### 900 RADIO
- 900 MHz frequency range
- 10 Hz frequency hopping feature with automatic synchronisation ensures uninterrupted coverage
- License free in Australia, and New Zealand

### 450 RADIO
- 450 MHz frequency range
- Highly reliable even in the most demanding radio frequency environments
- Requires a license for operation in Australia and New Zealand

### Omnistar XP
- +/-15 cm pass-to-pass
- +/-20 cm year-to-year repeatable
- 332 receiver
- 252 receiver

### Omnistar VBS, Beacon
- +/-20 cm pass-to-pass
- +/-50 cm year-to-year repeatable
- 332 receiver
- 252 receiver (VBS only)
For 2.5 cm accuracy you can use the RTK network provided by the New Holland dealer in your area, or set-up an RTK base station on your farm to send corrected GPS positions to your tractor via radio.
**TRUETRACKER IMPLEMENT STEERING SYSTEM**
- 252 RECEIVER

**NAVCONTROLLER II**

**IMPLEMENT GUIDANCE SYSTEM**

**EZ-BOOM 2010 AUTOMATED APPLICATION CONTROL SYSTEM**

**DISPLAY OPTIONS**
- EZ-GUIDE PLUS LIGHTBAR
- EZ-GUIDE 500 LIGHTBAR
- FIELDMANAGER DISPLAY

**RECEIVERS**
- 332 ULTIMATE CHOICE RECEIVER WITH ANTENNA OPTIONS
- 442 AND 432 GPS RECEIVERS
- 252 RECEIVER
- 900 RADIO AND 450 RADIO

**RTK SYSTEM**
For 2.5 cm accuracy you can use the RTK network provided by the New Holland dealer in your area, or set-up an RTK base station on your farm to send corrected GPS positions to your tractor via radio.