



## AUTO-GUIDE™ Satellite-Based Steering System



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# Satellite-Based Steering System



# Auto-Guide

## Satellite-Based Steering System For Precise, Automated Machine Navigation



GTA CONSOLE

AUTO-GUIDE

FIELDSTAR  
The science of agriculture.

FALCON II

SGIS

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TERRAGATOR, TYE,  
VALTRA,  
WHITE PLANTERS,  
WILLMAR

CROSS-BRAND  
TECHNOLOGIES, PROVIDING  
A FAST-DEVELOPING,  
COMPREHENSIVE AND FULLY  
INTEGRATED TECHNOLOGY  
PRODUCT RANGE

Auto-Guide™ from Global Technologies by AGCO (GTA) is an easy-to-learn, easy-to-use system with satellite technologies that provide assisted steering for AGCO machines with great precision. The Auto-Guide steering assist system can achieve sub-meter, decimeter or centimeter accuracies in successive passes (see chart). The operator simply turns the machine at headlands.

### Higher Crop Yields

With greater control, your tractors, applicators and other equipment using Auto-Guide will minimize skips, overlaps and compaction on the ground. Key to any precision agriculture effort, Auto-Guide reduces the error in the placement of guess rows, reduces waste, and boosts crop performance.

### Lower Resource Costs

Auto-Guide's precision guidance can help you do the same work in fewer passes and at faster average speeds. Auto-Guide users see benefits in labor, fuel, machine, chemical, seed and environmental compliance costs.

### More Productive Operations

With Auto-Guide, day-to-day operations are easier to manage—and more profitable. Because operators are less fatigued, their performance can improve. And assisted steering means operators can continue working with efficiency into the night or in low-visibility situations.

## Auto-Guide Components

### Fully-Integrated

On Challenger MT700 and MT800 track machines, Auto-Guide is an integral part of these tractors. Through the Tractor Management Center (TMC) terminal, the operator can switch quickly and easily between tractor functions and Auto-Guide controls and monitors. The system's integral design also allows it to work compatibly with other TMC features, such as the one-touch headland management system.

### Transferable Among Auto-Guide Ready Machines

Any machine equipped with Auto-Guide, whether factory- or field-installed, includes one permanent and two interchangeable elements. The first, an Auto-Guide Ready kit, is fitted as a permanent part of the machine. It contains the Vehicle Interface Unit (VIU), hydraulics, cabling and brackets.

The second, TopDock, houses the system's



geographic positioning system GPS antenna; steering controller/receiver; and Dynamic Measuring Unit (DMU).

Third, the Auto-Guide terminal is the in-cab terminal for monitoring and controlling the system. Operators can easily transfer the TopDock unit and Auto-Guide terminal among Auto-Guide Ready machines.

### TopDock Components

#### GPS Antenna

The Auto-Guide antenna receives L1 and L2 GPS signals and OmniSTAR™ differential GPS data signals. The GPS antenna also receives the WAAS correction signal.

#### Steering Controller/Receiver

Auto-Guide's steering controller/receiver deciphers all information from the GPS antenna, the DMU, the terminal, and the optional FM data radio. It generates the control signals that steer the machine.





### Dynamic Measuring Unit

The DMU uses solid state—electronic rather than mechanical—gyro techniques to measure the machine’s position and direction. It continuously calculates the equipment’s “roll” or side-to-side tipping angle, “yaw” or heading direction, and “pitch” or front-to-back tipping angle.

### Terminal Console Components

The Auto-Guide Terminal is an easy-to-read, user-friendly, color monitor and user interface. Operators use the terminal to enter, store and retrieve information. Like personal computers, the terminal combines both icons and keywords for simple and logical interaction.



The satellite-based steering system on Challenger MT700 and MT800 machines is controlled using the Tractor Management Center Display.

### Auto-Guide Accuracy and Flexibility

With Auto-Guide, you’re in control. You can select the system that gives you the accuracy you need:

- Sub-meter – reduces overlaps and skips for greater efficiency
- Decimeter – eliminates guess rows and achieves new levels of ridge-till, zero-till, controlled traffic and input application
- Centimeter – Zone-till, cultivate and band apply with ultimate pass-to-pass accuracy.

Option	Correction Source	Static Accuracy <sup>1</sup>	Dynamic Accuracy <sup>2</sup>
Sub-meter	WAAS <sup>3</sup>	39" (100 cm)	10" (25 cm)
Sub-meter	OmniSTAR VBS <sup>4</sup>	31" (80 cm)	8" (20 cm)
Decimeter	OmniSTAR HP <sup>5</sup>	4" (10 cm)	2" (5 cm)
Decimeter	Local Base DGPS <sup>6</sup>	4" (10 cm)	2" (5 cm)
Centimeter	Local Base RTK <sup>7</sup>	0.8" (2 cm)	0.8" (2 cm)

1. Static Accuracy applies to the GPS measurement alone. It does not include additional errors from the steering control system.
2. Dynamic Accuracy is pass-to-pass accuracy of successive passes completed within a 15-minute time frame.
3. WAAS (Wide Area Augmentation System) – a free satellite service.
4. OmniSTAR VBS (Virtual Base Station) – a subscription satellite service.
5. OmniSTAR HP (High Performance) – a subscription satellite service.
6. DGPS (Differential Global Positioning Systems) – all Auto-Guide options are DGPS solutions.
7. RTK (Real Time Kinematic) – local base station solution. For decimeter and centimeter applications.

With Auto-Guide, it’s cost-effective to upgrade for greater accuracy, a feature that sets the system apart in the marketplace. If your application demands change, achieving the highest accuracy level requires only additional software, subscriptions, or hardware—and no replacement of existing equipment.

Auto-Guide from GTA leads the industry in accuracy, correction and ease of use. It combines the performance and capability of high-end, after-market guidance systems with the value and reliability of a fully integrated solution. Auto-Guide is the way to greater efficiency for your AGCO machine and both economic and environmental benefits for your business—every day.

