



# TECHNOLOGY SOLUTIONS



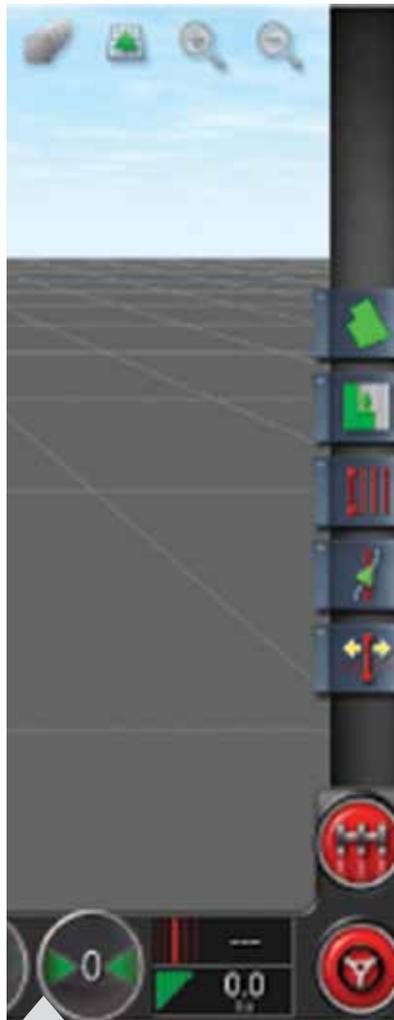
FROM MASSEY FERGUSON



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Enhance your business with machine technology



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In the field, in the machine, in the office



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ISOBUS - Total implement control

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## Straightforward technology to enhance your business

Finding the right agricultural technology can often seem a daunting prospect. Searching for the right product and trying to decide on the best option to suit your needs without the complication and confusion of high-end systems is never easy.

That's why Massey Ferguson has been focusing on the development of systems designed to make farming easier and more effective. Our technology products will enable you to **enhance working practices, efficiency and profitability**; it's as straightforward as that.

**We offer tailored solutions for a wide range of customers.**  
Technology from Massey Ferguson.



### System 110 and Auto-Guide™ 3000

Both guidance systems are designed to increase productivity and reduce costs, offering sophisticated technology for simple operation and industry leading performance.

### AgCommand™ - Your finger on the pulse at all times

The AgCommand™ telemetry system allows you to obtain information about your machinery at all times. Whether it's one machine or a whole fleet. Data collection and machine monitoring are just some of the many features that give you enhanced productivity.

### ISOBUS - Tractor and implement synergy

ISOBUS is the international standard system which allows a single terminal in your tractor to control and monitor a range of implements.



AGCO/Massey Ferguson is a founding member of the AEF (Agricultural Industry Electronics Foundation), an independent international industry organisation, which aims to provide resources and knowledge for enhancing the use of electronics in the farming sector.



## Guidance systems

System 110 is a low cost, manual guidance package offering easy-to-use, accurate technology to enhance and simplify day-to-day operations. Improve efficiency and operating speeds whilst reducing overlap and extending hours of operation



System 110

System 110 delivers maximum operating simplicity in a light bar guidance product. With features such as a detachable light bar for optimum 'field of view' placement and a 5" high-visibility colour display that operates in separate 'day' and 'night' modes.

The screen shows vehicle speed, row numbers offset from guidance line and satellite information. The user can create field boundaries and record the covered area. System 110 allows a pass-to-pass accuracy.

Lightweight, rugged and portable, System 110 is easy to install and use right out of the box with minimal training or instruction.

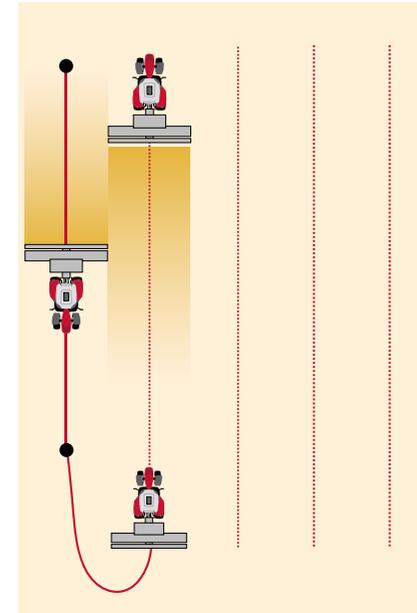
System 110 is easily configured for all Massey Ferguson machines with simple setup. Implement configuration is easy and any implements attached to either the front or rear linkage can benefit.

If you require a more advanced system, an integrated guidance solution can be specified. The hands-free system can be extremely beneficial when working on large areas of land. Suitable for all applications where high levels of in-field driving accuracy are required such as primary and secondary cultivation, seeding and planting, mowing and chemical/ fertiliser application. Operator fatigue is greatly reduced.

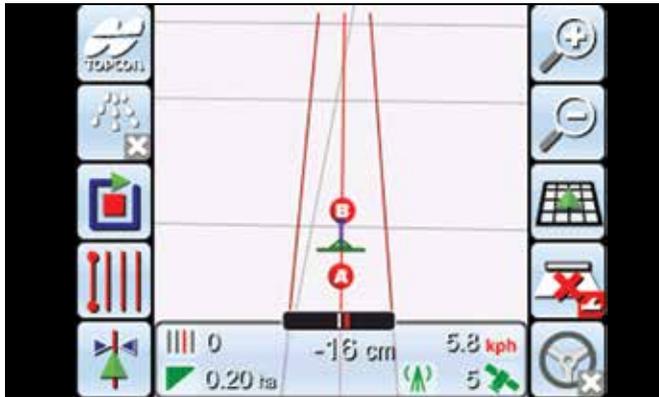


**Guidance patterns**

System 110 and Auto-Guide™ 3000 allow you to create and follow the most efficient and practical guidance patterns. It also provides three basic modes that can be used in a variety of combinations which allows you to work with any field shape.



Hold exact lines, never lose your place, save money and time by eliminating overlap/underlap



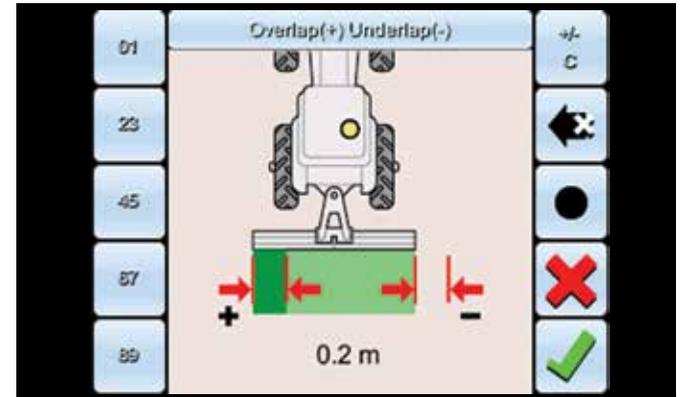
**Field views and guidance patterns**

- Overhead view
- Perspective view
- North Up view
  
- AB lines
- Adaptive curves
- Centre pivot



**Detachable light bar on the GX-45**

This light bar will keep the operator on-track in the field by monitoring the tractors position.



**Overlap/underlap**

For complete accuracy in the field, a feature on System 110 and Auto-Guide™ 3000 ensures that the tractor and implement hold the line so the operator doesn't miss any parts of the field or go over the same part twice.

# Guidance systems

For a more advanced solution that works even harder in the field, choose Auto-Guide™ 3000



Auto-Guide™  
3000

Auto-Guide™ 3000 is a full featured, hands free steering system capable of delivering sub-metre, decimetre, and centimetre accuracy.

Guidance systems are proven to offer an average of 12% in fuel savings, as well as time spent on resources, time spent in the field and much more.

The Auto-Guide™ 3000 TopDock receiver comes factory-fitted as standard with submeter accuracy. Auto-Guide™ 3000 allows you to select the EGNOS correction signal for a no subscription cost sub-metre guidance. You can also contact your Massey Ferguson dealer and purchase an OmniSTAR sub-metre signal (VBS) or a decimetre correction signal (HP).

Upgrades are made by adding a snap-in module to the base of the TopDock. An Inertial Measurement Unit (IMU) will improve the positioning of the tractor for decimetre and centimetre accuracy. Submeter accuracy does not require exact positioning of the tractor, sensors already installed in the receiver are more than adequate to pinpoint position.

If centimetre accuracy is required, a radio snap-in can be plugged into the TopDock. The snap-in module allows you to work with radio correction sources or NTRIP correction through the GSM network. This scalable offer gives you high-end capabilities and ensures precision and productivity at all times. The system can be easily upgraded at anytime, no unlock code is needed.



Accuracy	30 cm	20 cm - 5 cm	2 cm
Correction signal	EGNOS* OmniSTAR VBS	OmniSTAR VBS/HP OmniSTAR G2	RTK Base station NTrIP
Receiver	Auto-Guide™ 3000 TopDock	Auto-Guide™ 3000 TopDock with IMU	Auto-Guide™ 3000 TopDock with IMU and Radio snap-in
Cost	EGNOS*	Subscription	Subscription/licence/Base station
Applications	Spraying/spreading Harvesting Cultivation Mapping	Spraying/spreading Harvesting Cultivation Mapping	Seeding/planting Strip tillage Weeding

Our receivers work with GPS and GLONASS satellites at all levels of accuracy. From -30 cm pass-to-pass accuracy using a free EGNOS signal down to 1-2 cm static accuracy using RTK correction signals.

\*Free of charge



**Datatronic CCD console**

Auto-Guide™ 3000 can be displayed through the Datatronic CCD rather than through a separate screen, this allows increased visibility for the driver. Thanks to this integration, no additional wires are needed. Inside the Datatronic CCD, the guidance application offers a simple way of operation called "Go mode". This mode is simple to use so even if an operator has no knowledge or experience of guidance systems, they can be up and running in minutes.



**TopDock receiver with snap-in module**

Multiple Constellation support for GPS, GLONASS and GALILEO Global Navigation Satellite Systems. The receiver supports the Real-Time Kinetic (RTK) Base Station and GSM corrections using optional snap-in RTK module.

**Fully integrated technology within the receiver provides unmatched accuracy**



**RTK Base Station**

Precision down to +/- 2cm can be achieved in row crop work, such as where high value salad crops are being grown and when bed-forming for potatoes and other root vegetables. For this level of accuracy, an RTK base station or an NTRIP correction is required. Growers often have a very tight window in which to plant these crops, so the higher work rates enabled by Auto-Guide™ 3000, can make a huge difference.

## What will System 110 and Auto-Guide™ 3000 do...

With the world's population now reaching 7 billion, there is more and more emphasis on food production. Farm machinery and food production go hand in hand so the machinery we use needs to be more precise and more productive in order to meet the world's demands.





### ...for me?

- Less tedium, stress and fatigue through what can often be long working days and nights
- Gives the operator the time to optimise the performance of machine and implement, and to monitor screen settings and gauges
- Enables less experienced operators to achieve higher work rates and better productivity
- Allows the operator to work efficiently in poor visibility



### ...for my machine?

- By optimising the implement's full working width, System 110 and Auto-Guide™ 3000 increases the field area covered every hour
- Higher machine work-rates result in lower fixed costs
- Fewer hours needed to complete the job means reduced machine and implement wear, and so lower maintenance costs
- Fewer hours worked per season increases residual values of both machine and implement



### ...for my business?

Because Automatic Guidance virtually eliminates overlaps and misses, the most noticeable difference the system makes is in the farm's bottom line, through meaningful savings in diesel, fertiliser, sprays, time and labour. In addition, it helps minimise harvest losses

Subsequent benefits include reduced weed growth and disease, thanks to more precise spray applications. In addition, soil compaction is minimised as a result of vehicles being guided along exactly the same tramlines and through controlled traffic routes.

## Efficiency at your fingertips

Introducing the new optional C3000 Touch screen terminal - advanced capabilities with straightforward operation.

The C3000 offers advanced capabilities and allows you to achieve more. It's the ideal solution for anyone wanting to keep a constant record of job and tasks. C3000 allows you create fields to measure the total area, store and export all the data collected. You can recall this vital information for future tasks. The C3000 interface is straightforward to operate and easy to navigate around with simple menu structures. It has a 12.1" colour, touch screen for easy recognition plus a excellent view of fields and applications. The touch screen allows for quick menu selection and general operation and can be split into 3 smaller screens for more efficient monitoring of tasks.

The C3000 also has an integrated lightbar for manual guidance.





### C3000 console features include:

#### Mapping -

- Field boundaries
- Field exclusion boundaries allow precise calculation of the area worked and can also be used to trigger the switching of section control systems (depending on implement control systems fitted)
- Record or import from Shape/ISO XML files
- Export work already done or job from PDF files
- Simple job recording allows you to collect:
  - Covered area (This counter excludes overlapped area)
  - Field size (when boundary was drawn)
  - Remaining area (when boundary was drawn)
  - Distance travelled: Distance with trigger active (distance is measured once work trigger is activated)
  - Worked time: Total time and pure working time
  - Efficiency (ha/hr)

#### Fields

- Automatic Field Recognition
- Storage of data by farm or field can allocate exactly a job per field

#### Guidelines

- Straight A/B
- Adaptive curves
- Identical curves
- Centre pivot



# AGCOMMAND™

## Your finger on the pulse at all times Introducing AgCommand™.

The AgCommand™ telemetry system from AGCO is ideal for large businesses, contractors or anyone who needs to maintain high visibility of their machinery at all times. If you need consistent, concise information concerning your fleet then AgCommand™ is the perfect choice.

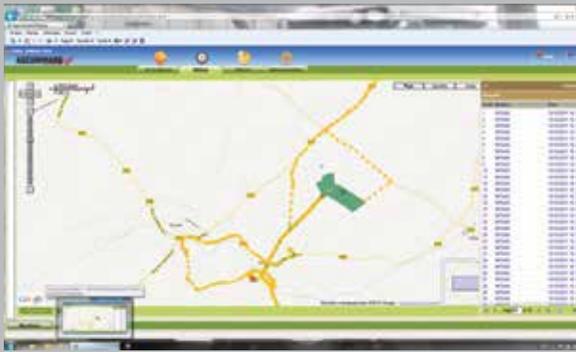
AgCommand™ is a leading edge data recording and transmission tool that allows you to optimise fleet performance by monitoring and reporting vehicle position, history and status. Also, monitor operating costs and enhance productivity.

Every ten seconds AgCommand™ Advanced collects machine performance data and GPS location, this is then transmitted to the storage server and is then viewable on your desktop computer, laptop or tablet.



## In the field, inside the machine - in the office

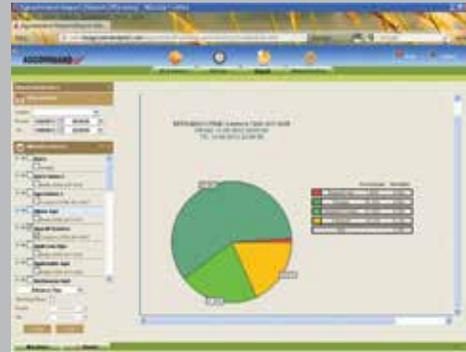
Get essential information sent directly to your computer or hand-held device - so you're in control, whether you're in the field or in the office



### Vehicle history map

The vehicle history map shows you where the tractor has been during a selected period of time. You can view where the tractor stopped, where it was working and travelling from and to via a Google plan or satellite view. AgCommand™ Advanced can show parameters collected with the CANBUS. For example, you can see engine load, slippage, fuel level and consumption.

The machine is traceable at all times.



### Efficiency report

It is possible to create two types of report within this function: **Time efficiency** (percentage of the total engine hours of each status) and **Distance efficiency** (percentage of working/headland/transport of the total distance travelled by the machine).

The report will show the time the machine was working and/or in the headland, in transport mode and not moving. The fleet owner can analyse quickly the efficiency and driving ability of his driver. This report gives total time and distance and can be made for up to five machines at one time. This data can be exported into manageable PDF or excel files to be worked on via PC or laptop.



### Text message alarm

It is also possible to set up alarms that go directly to your mobile phone. A **Geofence** alert tells you if the tractor is going in or out of a predefined area on the website. It can let you know when the operator is coming back to the farm or if the fuel level is very low and the tractor needs refuelling.

AgCommand™ advanced allows you to set up alarms on CAN parameters.



### Dashboard

AgCommand™ Advanced allows you to view machines up to 30 minutes a day in near real time. You can view the main parameters available through the virtual dashboard via a PC or laptop. For example you can alert the driver, without having to call them, if the fuel consumption appears too high or even to adjust settings to achieve maximum output. If working with a combine harvester, you can view the sieve and concave position, rotor speed, vehicle speed, productivity, output and grain loss. For exceptional performance whilst combining, parameters can be set up in order to obtain the highest efficiency. AgCommand™ Advanced is the perfect tool to help contractors and managers ensure that even less experienced combine drivers get the best out of their machine. This also works with several combines in the field at one time, enabling you to check parameters for continuous improvement.

### Features and Benefits

- **Near Real Time Access** – AgCommand™ collects and transmits data providing accurate and precise information regarding machine performance and location optimising machine utilisation and efficiency
- **Fully Automatic Data collecting and Transfer** – AgCommand™ requires no operator input, the operator can concentrate on the task in hand maximising in-field performance whilst the data is continuously transferred
- **Universal Installation** – AgCommand™ is not limited to AGCO branded machines and vehicles
- **Alarms** – AgCommand™ GEO-fences allow the customer to monitor machine position and check that the machine is working in the correct location. Service alarms allow routine maintenance to be planned and actioned with a minimum impact to machine productivity
- **Maintenance** – AgCommand™ allows the requirements for machine maintenance to be directly monitored and managed by the customer or passed over to the dealer
- **Maps** – AgCommand™ provides maps showing a machines' working history - historic locations, area worked, travel patterns, etc., allowing productivity to be measured in specific fields or over a specific length of time
- **Comparisons** – AgCommand™ allows the direct comparison of the performance and efficiency of up to five machines in the same fleet working in any location or application
- **Reports** – AgCommand™ allows a number of reports to be generated, ranging from individual field reports up to a full season efficiency report allowing productivity to be studied and maximised
- **AgCommand™ Advanced** - For those who wish to collect more accurate data, AgCommand™ Advanced collects a point every 10 seconds plus an abundance of extra information to assist your business with data capture
- AgCommand™ is now available for large square balers. For example, you can find out such information as number of bales produced per field, moisture content and bale weight
- Generate important reports on completed work for customers





Scan me to get the app!

"The farmers and dealers were impressed with the AgCommand™ app and liked the weather and navigation features. Most notably, they just liked access to information to manage their operation on-the-go, and they did not have to use a desktop computer or have to use their browser on their tablet. They liked that it was a clean and easy to use interface."

**David Swain, ATS Marketing Manager – North America.**

# The power of **AGCOMMAND™** in the palm of your hand

Get on-the-go flexibility with the new AgCommand™ app and take the office to the field.



The AgCommand™ app allows on-the-go access to the system so you can monitor machinery wherever you are and whenever you want as well as use the history and report function to run analysis on the field.

It has all the same functions of the usual AgCommand™ system and capabilities include near real time access to the machine with a home page that supplies fast information and a quick overview of machine data like position, address and weather conditions.



Home page



Machine details

## History information

The system gives the same information that is available on your desktop, like the previous location and status of the machine.

**Report tab:** Gives the reports only by total time, distance or efficiency. It offers the ability to quickly compare up to five machines and the duration they have been working. It will also allow two drivers who are working with two identical machines to identify ways of working more efficiently with each other.



Efficiency reports



History reports

# ISOBUS

Total implement compatibility





ISOBUS

Machine  
Management

# Plug and play



ISOBUS socket -  
Tractor to implement



ISOBUS screen



Control ISOBUS implements  
with the MultiPad joystick

Most combine and tractor consoles are fully ISOBUS compatible. This international standard brings an end to cluttered cabs by allowing a single terminal to control and monitor implements designed to the same standard.

ISOBUS 11783 allows an implement manufacturer's control system to be displayed on the console screen. Time and money is saved as there is no need for additional terminals in the cab.

## One Console for many machines

Massey Ferguson equipment is being designed to the ISOBUS 11783 standard.

The latest MF 2100 large square balers and the MF 555 planter can now both be controlled via the console.

These two completely different implements can use the same console as Datatronic CCD.

Simply plug the implement lead into the tractor's ISOBUS socket and the system automatically uploads the operating menus and displays them on the screen.

The new, optional C3000 screen\* also offers ISOBUS capabilities if you want to display ISOBUS information on a larger screen. C3000 can handle section control up to 32 sections.

## Simple wiring

With the ISOBUS standard connection there is no need for additional wiring into the cab. Large amounts of information are sent around the network, and while all ECUs (Electronic Control Units) on the data 'bus' see the 'messages', they only read those relevant to their operation. This system greatly simplifies the wiring requirement by allowing a large number of ECUs to communicate with each other, without the need for a complicated network.

## Standardised operation

The information for each implement shown on the console terminal, regardless of manufacturer, follows the same routine of scrolling through menus, selection buttons and activation.

## CAN do it all

An implement connected into the ISOBUS socket utilises the tractor's CANBUS network and shares information. The CAN, or Controller Area Network, is a system that transfers information via a data 'bus'.

The MultiPad joystick on Exclusive cab versions can be converted to an ISOBUS lever. The driver can directly control a compatible ISOBUS implement with the same ease of any other implement.

\* Available to order through AGCO Parts

# Essential extras

Getting the best from well-designed features on a day-to-day basis



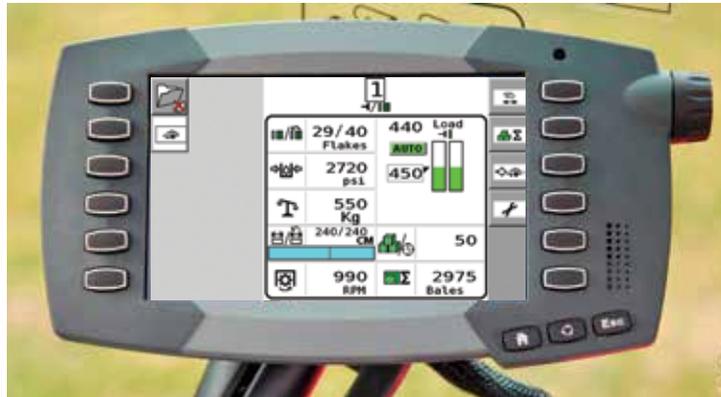
## Remote camera

The optional remote video camera can be fitted anywhere on the tractor or on any front or rear-mounted implement. Used in conjunction with clear on-screen view on the console when reversing enables faster, safer haulage work or, the operator to view any rear or side-mounted equipment.





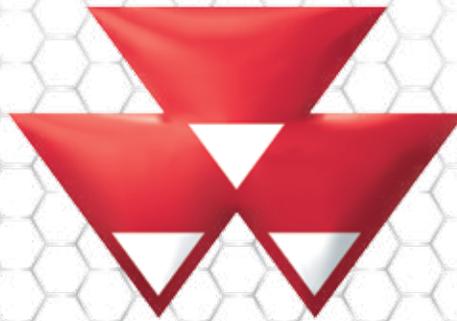
Integrated Bale Weighing System for increased accuracy, profitability and information concerning every bale that leaves your machine.



The new Integrated Bale Weighing System (IBWS) is an option that operates through the C1000 baler monitor. This allows the operator to monitor individual bale weight, flake width, bale length and total bale weight, which provides the great benefit of enabling contractors to buy straw or sell forage by the precise tonnage, rather than on a per bale or area basis.

Another significant advantage of weighing the bales is it allows operators to reduce costs by achieving maximum truck payloads, without the risk of overloading.





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**A world of experience. Working with you.**



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