Clever Agri components

GPS SOLUTIONS WITH CLEVER AGRI

TRACK GUIDE II – TRACK GUIDE III – TOUCH 12

How it works:

The basic role of a guidance system is to calculate the position of the tractor on a plot of land, by receiving different satellite signals, in order to indicate to the user, the best trajectory to follow in his field. By following this trajectory, the farmer will be able to optimize the working width of the implements used, reduce areas of overlap and therefore better manage inputs and reduce working time.

To start of the system in the plot of land, there are 4 steps:

- Set the working width of the implement
- Draw the first line of work placing points A and B
- The console automatically calculates the location of the Parallel lines to follow in the field.
- Work can begin, the lightbar is visible on the screen and indicates as and when there is any deviation of the tractor from the trajectory recommended.

Manual or automatic guidance:

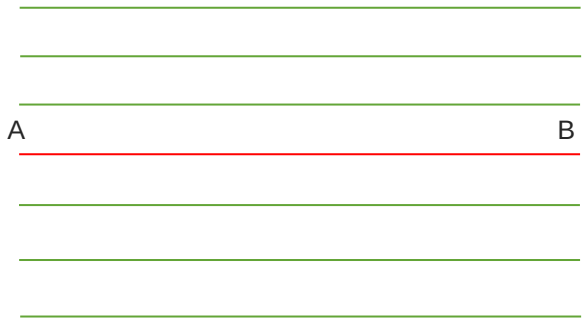
How to choose?

When the working speed is high or when the level of correction is very accurate (RTK +/- 2 cm), manual guidance allows more to correctly transcribe the corrections of path indicated by the lightbar. It is then necessary to use an autoguiding system. In this case, the trajectory the tractor is controlled by the guidance system itself and the farmer takes control only to carry out the maneuvers at the headland. There are two types of autoguiding system, electric (steering wheel electrical) and hydraulic (direct connection to the orbitrol).

What does it bring you

- Save on inputs and mechanization loads in optimizing your passage in the fields and limiting the zones of overlap
- Gain comfort and quality of work: day / night mode, work in reduced visibility, continued work interrupted.
- Increase the traceability of the work done by registration Data: Safeguarding the parcel, implements and work.

According to the study conducted by Arvalis, the savings achieved through the use of an autoguiding system with an RTK signal 2 cm is 10 to 23 € / ha / year depending on the production systems. (Www.arvalis-infos.fr)



Reference line A-B done with tractor

Lines calculated by the GPS

What level of precision do you need?

Positioning Systems and Differential Correction GNSS systems

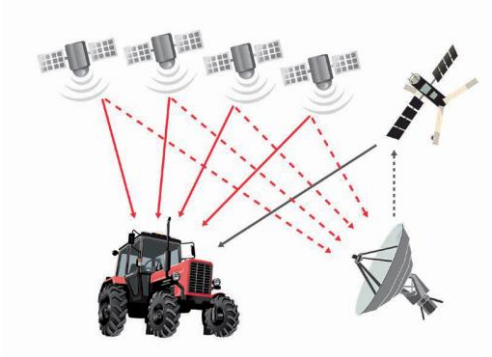
The positioning of the tractor on the field is done thanks to the use of positioning and navigation systems by satellites called GNSS, composed of satellite constellations gravitating around the earth. The US GPS system, Russian GLONASS and the future European network GALILEO or GNSS. The signals emitted by these satellite constellations allow every moment to calculate the position of a point on the surface of the Earth. The accuracy of the location increases with the number of satellites captured and their spatial distributions.

Differential correction or DGPS is essential!

Thanks to the signals emitted by these satellite systems, the position of a receiver can be estimated with a precision of order from 1 to 3 m, which is insufficient for agricultural work. It is
why, it is necessary to use corrections for more than precision.
There are several types of correction signals, free or paying, each having different levels of precision.

Levels of precision

EGNOS DGPS Corrections



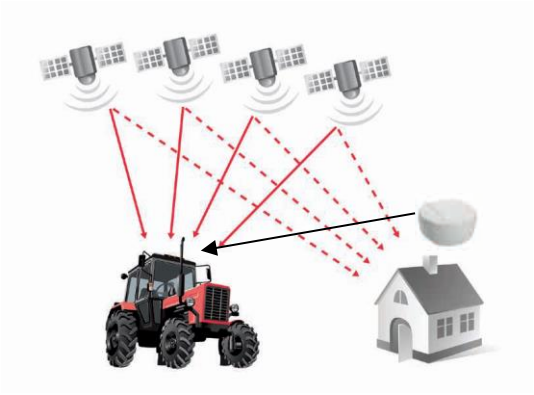
The signal transmitted by the GNSS satellites is picked up by a network of fixed reference EGNOS is spread over the European territory, which calculates correction and routes it to the receiver attached to the tractor via a geostationary satellite.

• Free access.

• Accuracy: +/- 15-20 cm between 2 passes made at 15 minutes interval no repeatability over time.

EGNOS is funded by the European Commission.

RTK corrections

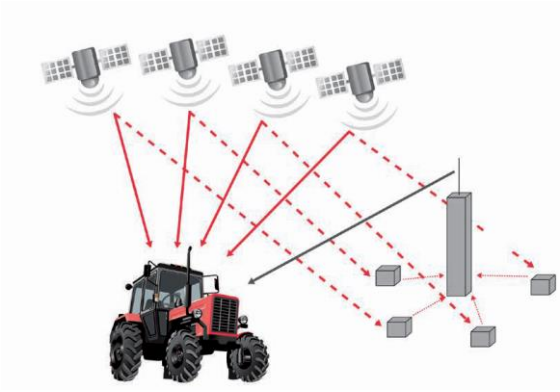


RTK base station: a fixed or mobile beacon present on the farm (or at a dealership) picks up satellites and calculates corrections RTK that it can transmit to the tractor via 2 different technologies:
radio waves or GSM.

• Access: Purchase a base (or pivot) or subscription from a reseller which covers the sector. Caution an RTK base (fixed or mobile) emitting a radio signal, involves the annual payment of a license to ARCEP. GSM reception requires a "data" subscription from a mobile phone access provider.

• Accuracy: +/- 2 cm with perfect repeatability over time (however with a reserve on the movable pivot that needs to be repositioned so to ensure repeatability). We must therefore favor fixed installations carried out by professionals.

RTK corrections with RTK network (CORS)



A network of reference stations quadrille territory (national or local). These reference stations are interconnected to a calculation that makes these corrections available via an Internet server. The tractor connects to the Internet via GSM, it transmits its position to the server, this one then puts personalized corrections to the service of the tractor.

• Access: Subscription to a national provider or reseller which covers the sector. GSM reception requires a subscription "data" from a mobile phone access provider. It is indispensable to be advised by a specialist for subscriptions networks of corrections and data to determine the best solution depending on the material and the territory.

• Accuracy: +/- 2 cm with perfect repeatability over time as these are quality fixed installations.

Glossary

Positioning systems by satellites

GNSS (Global Navigation Satellite System): Systems positioning satellites or GNSS group together navigation and geolocation systems. These systems use satellite constellations to determine the position of a receiver on the earth's surface. GPS systems, GLONASS and soon GALILEO are GNSS.

GPS (Global Positioning System): Constellation of 28 American satellites, developed in the 1980s by the US Defense. This term was also popularized for designate a position calculation apparatus using this network of satellites for its operation.

GLONASS: Constellation of 26 satellites set up by the Russian government in the 80s. A GPS receiver also equipped GLONASS will be able to capture the signal of 2 times more satellites (or GPS + GLONASS). This reduces the risk receiving interrupt and increase the accuracy of the signal.

GALILEO: Constellation of satellites under development by the European Union.

BEIDOU: Constellation of satellites under development by China.

Correction calculation systems

DGPS (Differential GPS): System based on a set reference stations that measure the difference between position calculated by the satellite network and the actual position of the receiver. It thus calculates the correction to be made to the GNSS signals picked up by the receiver on the tractor to refine the maximum position.

EGNOS (European Geostationary Navigation Overlay System): Differential correction system using a network 34 ground reference stations to increase accuracy and the integrity of the GNSS signal across Europe. The measured correction EGNOS reference stations is then retransmitted to the receiver via geostationary satellites. Free correction.

Wide Area Augmentation System (WAAS): System
differential correction of the GPS signal developed by the U.S. WAAS is the U.S equivalent of the EGNOS system. It is consisting of about twenty reference bases spread over the US territory.

RTK (Real Time Kinematic or Kinematic Time real): Correction system allowing a precision of passing through +/- 2 cm and positioning perfectly identical from one year to the next. This system uses a station near the receiver.

CORS / RTK Network (Continuously Operating Reference Station): Set of RTK reference stations spread over a given territory, networked by a computer server. The use of a CORS network saves the user from investing in the purchase of a private RTK tag. These networks are private or public and require the payment of a subscription. The most corrected accurate and most reliable today.

Technical terms

RECEIVER: The receiver captures and analyzes the transmitted satellite signals GPS / GLONASS to determine its position on the surface of the earth. The receiver is most often placed in the antenna fixed on the cab of the tractor.

REFERENCE STATION: A reference station is a stationary GNSS receiver whose fixed position on the surface of the earth is precisely known and serves as a point of reference for calculating the correction to be applied to the GNSS signals.

THE SATELLITE DRIFT: The signals transmitted by the GPS satellites can be altered by different types of errors when they are issued: clock synchronization, error orbit. Then, the signals are altered during the crossing of the atmosphere, it is about the atmospheric error. When the quality of modeling of these 3 types of error is not sufficient, a drift phenomenon is visible. In this case we see an increasingly important shift between the lines drawn by the guide bar and the AB reference line. To level this phenomenon, the farmer must reposition his line AB reference at regular intervals when the drift gets too important. Only the RTK is without drift.

PRECISION PASSAGE AFTER PASSAGE: Precision passage after passage, or "pass to pass", measures accuracy relative to a GNSS receiver on two successive passes made in an interval of 15 min. The higher it is, the higher the risk of having areas of gaps and overlap will be high.

REPEATABILITY OF PRECISION: The capacity of a guidance system to get back on its tracks without limit in time. Unlike the EGNOS correction, RTK corrections guarantee a repeatability of calculated positions from one year to another with the same level of precision.

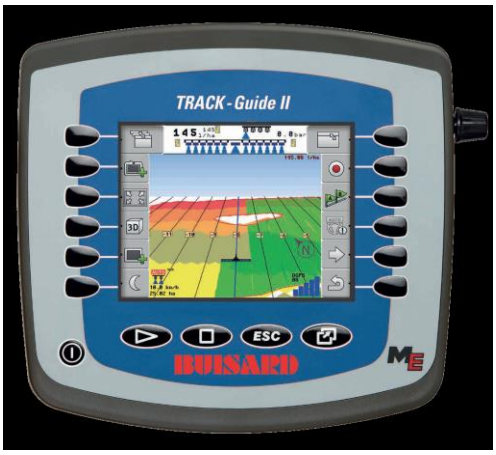
TRACK GUIDE II

The tool that adapts to your needs

The TRACK GUIDE II is a powerful terminal dedicated to functions it is easy to use, intuitive and adapts perfectly to your needs. Whether you are looking for a bar guidance to do simple parallel guidance or a real computer to list all your parcels, (your lines of guidance) and thus ensure the full traceability of your farm, the TRACK GUIDE II will be the perfect tool. As standard, you can count on 8 guidance modes including the headland mode. Exclusive and very appreciated by the users, the function "management of headlands", will guide you to perfection to complete a sowing with the number of laps you have decided.

Save money

The TRACK GUIDE II knows how to adapt to the needs of your farm or your future purchases because it can become an ISOBUS terminal (ISO 11783) with the purchase of a simple optional license (much cheaper than buying a terminal with a new ISOBUS machine). This will allow you with an ISOBUS machine to control the automatic cutting of sections, the modulation of doses, the cutting of ranks ... it is enough to unlock the necessary options. That way you use only the terminal, your cabin is less congested and you will not have to not revise a manual every time you put on a machine !!!



No compromise on quality

Equipped with a new antenna that integrates the reception of GPS and GLONASS constellations, the TRACK GUIDE II will be better on track because it knows how to capture twice as many satellites. It is the difference because you often have to buy this option from competing products.

Supplied with AG-STAR ™ antenna
GPS and GLONASS compatible, the TRACK GUIDE II offers you the best level of accuracy available with correction European EGNOS.
Precision for 15-20 cm

The benefits of TG II

- Simple and intuitive, easy to use
- Ergonomic
- Reliable, precise and solid
- Flexible because allows simple use and very developed
- Evolutionary terminal
- Maintenance of work habits even with evolution software
- Improved productivity
- Input savings
- Facilitates and secures work in reduced visibility
- Optimization of work windows and comfort
- Traceability and proof with map of work done
- Gains in the purchase of ISOBUS machines

Stay on the cutting edge of technology with our free updates: with registration of the guarantee of your TRACK GUIDE II or III, you will be informed directly about updates and important developments of our products, this will allow you to easily upgrade your guide bar no additional cost.
Do not forget: Track Guide II becomes an efficient Isobus terminal with the purchase of a new license

TRACK GUIDE III

The universal guiding terminal

The TRACK GUIDE III is the evolution in touch version of the TRACK GUIDE II but with some more powerful electronics which allows autoguiding management. The TRACK GUIDE III is already a best product in its category because it is truly universal and evolutionary:

• Guide bar
• ISOBUS terminal (with unlocking) + upgradable options: break automatic sections, variation of doses etc ...
• Autoguiding with all types of servos: electric, Can BUS (for pre-equipped tractors) and hydraulic
• EGNOS corrections but also RTK with the antenna version SMART 6L

New ergonomics

The TRACK GUIDE III has the software intelligence that allowed the success of the TRACK GUIDE but its new ergonomics combined with the power of an excellent touchscreen dramatically transforms the user's experience to get to a system even more simple to use. TRACK GUIDE III obeys your finger and eye like no other guide terminal.

2 versions of antennas are suitable:

• The AG STAR ™ version, identical to the TRACK GUIDE II, incorporates the reception of GPS and GLONASS constellations. Nevertheless, this antenna of very high sensitivity cannot evolve towards the accuracy of the RTK.

• The SMART 6L ™ version, compatible GPS and GLONASS uses in standard EGNOS free fixes. On the other hand, this antenna allows to receive RTK corrections by a simple unlocking option.

We recommend the SMART 6L ™ antenna for autoguiding in EGNOS because it brings exceptional results with a precision of passage to passage very often less than 7 cm! On the other hand, if you want to evolve your system towards a RTK accuracy, you just need to acquire the necessary license for your antenna, you will not have to change this one.

An even more universal product

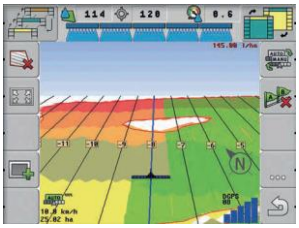
Acquiring the TRACK GUIDE III terminal is sure to give itself ways to work more effectively and improve productivity. Whatever your future projects in terms of guidance TRACK GUIDE III will be the tool you can count on for many years: EGNOS guide bar to the system self-guided RTK. You can also simultaneously make settings and commands from an ISOBUS machine and monitor your work by camera.

The benefits of TG III

• New touch interface
• New ergonomics even easier to use
• Reliable, precise and solid
• Upgradeable terminal to RTK autoguiding
• Maintenance of work habits even with evolutions of software
• Improved productivity and input savings
• Optimization of work windows and comfort
• Traceability and proof with map of work done
• Earnings in connection with the purchase of ISOBUS machines and autoguiding projects (EGNOS or RTK)
• Ability to connect a Visiotrack camera
• RAM mounting
• Protection case

TERMINAL ISOBUS TOUCH 12

The TOUCH 12 is the highest technology available in term on-board electronics for a tractor. Its big screen 12-inch touch allows multiple display for guidance and machine control. You can have simultaneous up to 5 open applications!!! All modern possibilities Precision farming at your fingertips:



• Autoguiding with all types of servos: electric, Can BUS (for pre-equipped tractors) and hydraulic
• ISOBUS terminal as standard + scalable options: break automatic sections, variation of doses etc. ...
• EGNOS corrections but also RTK with the antenna version SMART 6L

The TOUCH 12 comes standard in ISOBUS version, you can order only the options you need and if you opt for a self-guided system, choose the type of servo that you desire. Similarly, you choose the antenna with the precision that suits you!!! Because your operation is unique you will configure your TOUCH 12 according to your current needs, but tomorrow you will be able to evolve your terminal very easily with the unblocking of a simple license or the addition of a new antenna. The result: a tool for working on which you can count on, habits that do not change every time you hitch a machine. Work regularly with a familiar environment brings you real gains time and efficiency. It is also possible to connect simultaneously 2 VISIOTRACK cameras on the TOUCH 12.

One terminal to manage everything

The ISOBUS standard simplifies machine management and saves money. With a TOUCH 12 you can adjust any ISOBUS machine (standard 11783). With only the terminal in the cabin, you save money on the purchase of your next machines and your cabin is no longer cluttered by multiple screens! Manage all the guiding functions and the advanced functions of spreading whether it's automatic cutting and / or modulation of doses. You will optimize your yards and your fields with the accuracy of RTK and will benefit a new working comfort.

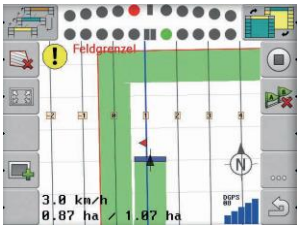
A more flexible terminal

The TOUCH 12 is a state-of-the-art ISOBUS terminal flexibility and versatility. It can be used horizontally or vertically according to your tastes or needs. You can display up to 5 windows simultaneously: no other terminal presents such possibilities and such technology. Specially developed for use in a tractor cab, the capacitive type touch membrane is protected by a tempered glass pane allowing safe use against extreme conditions.

CAN BE USED IN A VERTICAL OR HORIZONTAL POSITION

Software

Visual driving assistance



TRACK-Leader is the guidance software delivered as standard with TRACK-GUIDE II and III. Easy to use, there you assist regardless of the type of your field. You can memorize the limits of your fields, the lines and manage the obstacles. For convenience, fields and machines can be named: it is the terminal that adapts to your operation and not the other way around. Work processes interrupted can be saved and resumed at any moment. The machine is represented with its guideline in the lower area of the screen, the upper part allows to display a guide bar. Auto Lead Tracker: Adds the autoguiding feature.

Advantages

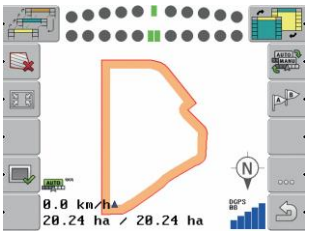
- Less overlap
- More precision
- Night work or poor visibility
- Possibility of working in planks

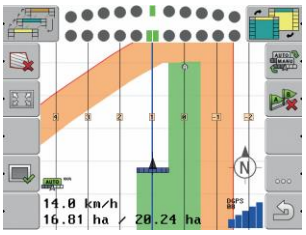
Headland management

The headland control software allows management intelligent and automated steering of the headland. This particular feature is not present on guiding products of US origin. Once round of your completed parcel (or recalled parcel of the

terminal memory), you can determine the width of the pound according to the number of turns you want to achieve with your machine. The software will then determine the heart of your plot. You choose the guidance mode that interests you for this heart (here in green on the screenshot) then you can finish or start with the pound, your terminal

guides you on the turns to be made (in orange on the screenshots).





Advantages

- Facilitates work of the heart of the field
- Speed and improvement of flow rate
- Facilitates sowing

Visual assistance at the break of sections

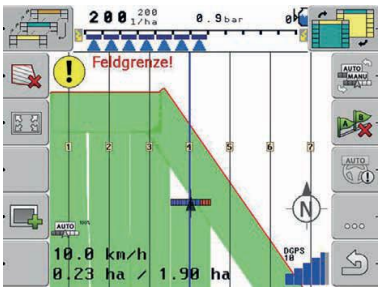
As standard, the TRACK-GUIDE II and III offer the possibility to visualize the state of the sections, as well as
opening and closing recommendation that you can manually manage with the regulation of your sprayer. Once the configuration of the machine entered (number and length of sections) the header the screen shows when the sections need to be activated or disabled.

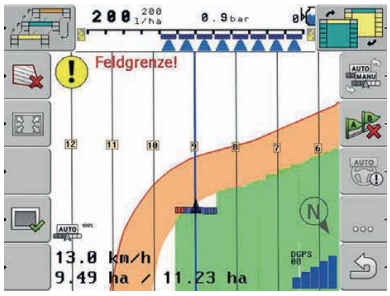
Advantages

- Visual and easy to use
- Economical for a small number of sections
- Easy setting

Section control

This app supports the opening automatic closing of sections of a sprayer by geolocation (GPS). Used in conjunction with an ISOBUS sprayer, this makes it possible to control a ISOBUS sprayer regardless of its brand. Thus, a single application associated with a single terminal allows you to order sprayers, seeders and other spreaders if they meet the ISOBUS standard. You save on all the plots of your exploitation by relieving you of the tedious work of
return all your parcels to multiple terminals or screens.



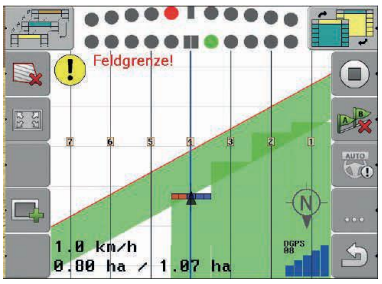


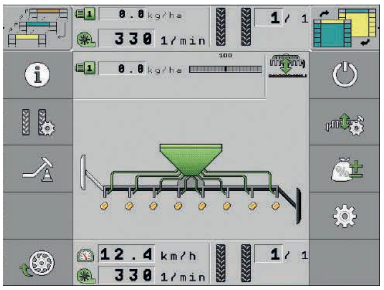
Advantages

- Input and seed savings
- Work comfort
- Safeguarding soil and the environment
- Site rate

ISOBUS Universal Terminal

This optimal software allows control and management ISOBUS machines (standard 11783). By activating this
license you can use any machine ISOBUS on your terminal, it is no longer necessary to buy an extra screen with a new machine. Your tractor cab will be less crowded and you save money while using your usual terminal. Your tractor does not have a plug ISOBUS machine, you can make it compatible with our adaptation kit.



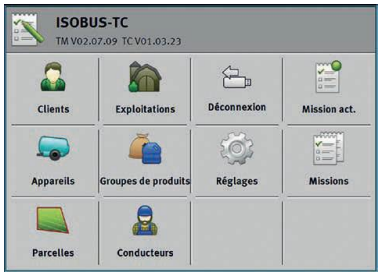


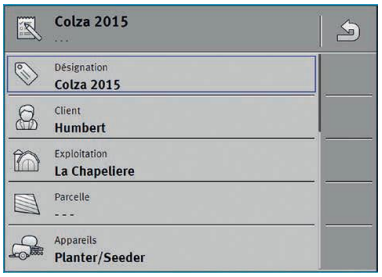
Advantages

- Avoids the multiplication of screens in cabin
- One screen for multiple machines
- Does not change work habits

Management of ISOBUS

This optional application activates the TASK-Controller required for ISOBUS processing. It is the link between farm management software and the control box on the machine *. The application automatically saves the data relating to work done, such as working time, width and the treated surface, the rate of application with its GPS position. The data transfer is done by USB key. Facilitates the management and control of missions by the chief culture, particularly adapted to the management of big farms. This application allows the use on the terminal of Recommendation cards in ISO XML format.





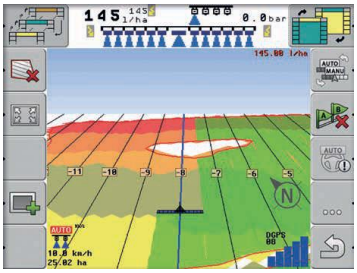
Advantages

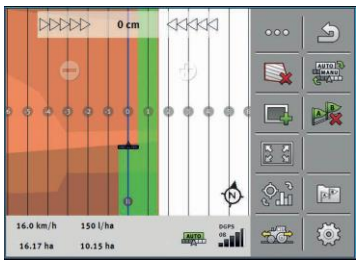
- Documentation of work and machine counters
- Better organization of jobs
- Economics of resources and materials first, traceability

Modulation of inputs

Variable Rate-Control (optional) easily input application maps. The machine thus automatically knows which dose should be applied to a specific place which allows for savings and therefore increase productivity.

Application cards can be imported directly via USB key. The different zones are visible by graduated tones, depending on the setpoint. The application rates predefined by zones can be adjusted independently or simultaneously for all areas.





Advantages

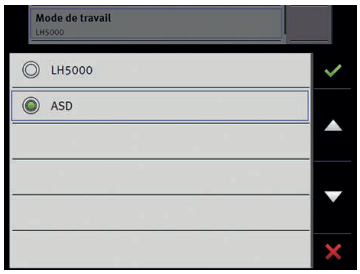
- Saving resources
- Increased yields
- Improved product quality
- Safeguarding soil and the environment

The ASD application activates a Serial type interface with of the ASD protocol

This makes it possible to transmit the values and the state of the sections between a terminal and another control unit. This control unit must be compatible with the ASD protocol. On the other hand, to use the cut of sections, the section control application must be activated on the terminal. The LH 5000 application is of the same nature but integrates the LH5000 protocol which allows to extend to other accounts.

Advantages

- Extends compatibility to other materials
- Low cost
- Work comfort



Of all the software presented on this page, some are included as standard with the terminal, but these programs differ depending on the type of terminal.

You can consult the table on the last page to know the software that is included as standard with the terminal and the possible options.

ISOBUS TOUCH 800 AND SMART 430 TERMINALS

The ISOBUS standard simplifies machine management and reduces number of screens present in the cabin. You save money on the purchase of your next machines because you already have a screen compatible. You save time because you do not have to move anymore a console with each machine as well as to remember each operation. The ISOBUS standard simplifies your daily life and accompany you during all types of work throughout of the year.

TOUCH 800

The TOUCH 800 is the ISOBUS tactile reference terminal on the market. As standard it comes with UT and TC applications, which makes it compatible with farm management software who are able to export missions to the ISOBUS TC standard. It is also possible to add with simple applications, intelligent functions such as guiding, cutting sections and modulation of doses ... Connecting a VISIOTRACK camera on this screen allows you to monitor a tool at a lower cost. With a simple touch of your finger, you can switch from one function to another.

SMART 430

THE SMART 430 is a non-touch ISOBUS economical terminal of compact size. It is intended for machine settings / settings simple ones that do not require intelligent functions. In standard it comes with ISOBUS UT software (Universal Terminal), it is equipped with a 4.3 "color screen which allows to house it easily in the cabin. This is probably the ISOBUS terminal on more economical market.

Electric steering servo eSteer®

A simple and effective solution

The eSteer® electric steering system is a very simple solution to use. Thanks to a clever system of electric motor and crenellated crown attaching themselves to steering wheel, the system is designed to be moved from one
vehicle to another without dismounting the original steering wheel. Mounting is fast and there are many adaptation kits for more 700 vehicles. This makes it possible to benefit from a nomadic system between several tractors at the best cost. Indeed, the purchase of a simple additional kit (notched crown + tractor support) simplifies the movement of the system in minutes.

A widely proven technology

Benefiting from the latest electronic and electrical technologies, the eSteer® system provides very close results of a hydraulic system. Compared to old roller systems, there is no wear and no slippage. The electric motor is very powerful and the lines taken with the tractor are more faster and more accurate. Used around the world, this is the new benchmark of electrical servo systems. It is the ideal solution for several tractors, or to equip non-predisposed tractors autoguiding whether in precision EGNOS or RTK.

A versatile system

Associated with the guidance calculator, the settings allow to optimize the system perfectly. Saving settings following the vehicles used allows you easy passage of a vehicle to another with the assurance of a completely operational. Just go to the menu and select the right vehicle and you can immediately work.
All the experts of the autoguiding will confirm it to you: the quality of settings is at least as important as hardware. With the eSteer® steering wheel, the settings are perfectly identified thanks to a very intuitive graphical interface that simplifies considerably all the settings actions.

Hydraulic servo, CanBus link for pre-equipped tractors A servo solution very high quality

The hydraulic servo system is the most
effective so far. Recent tractors with pre-equipment
can easily be controlled by a CanBus connection from the console and the computer guidance. With many bundles and kits available, it is possible to quickly equip the tractors of the largest marks, the settings are facilitated and the results are the same performance level as the original guide kits first mounted.

A universal system that evolves with your needs

The benefits of the CanBus link system associated with one of our consoles are very numerous:

• Evolutionary system according to the tractors of the farm. Just buy the CanBus kit for the new pre-equipped vehicle, which is much cheaper than a new system full. On the other hand the habits related to the control of console do not change, you are immediately operational.

• In connection with the purchase of a new standard machine ISOBUS, it will not be necessary to invest in the console ISOBUS of the machine, it will be enough just to use the possibilities ISOBUS of the steering console and even advanced functions like: automatic cut of sections for a sprayer, but also modulation of doses, cut of rank etc....

Example of settings

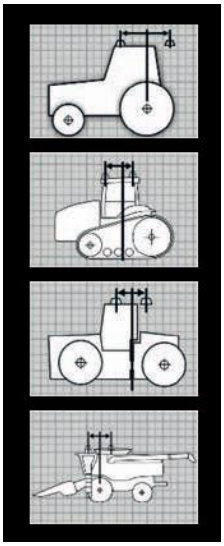
Some examples of the data to be entered in the calculator guide: the axis of rotation according to the types of vehicles, the distance with the antenna, identification according to the type of vehicle.

Tractor with front axle directional: the axis of rotation corresponds to the axis of the axle of the rear wheels.

Tracked tractor: the axis of rotation corresponds to the middle of the machine.

Articulated tractor: the axis of rotation of the vehicle corresponds to the center of the articulation.

Combine harvester with rear steering: the axis of rotation corresponds to the axis of the front wheels.



Must start by identifying where the axis of rotation is located according to the types of vehicles then enter the system guiding distance between the antenna and this axis.

High precision servo

For a tractor not equipped with a hydraulic pre-equipment for autoguiding, we offer a wide range of kits specially designed to facilitate this task. this allows you to integrate a professional system of autoguiding at a very high level of precision. The equipment brings a result equivalent to an original built-in guide kit.

The guarantee of an assembly and professional adjustments

The quality of the material is a guarantee of guiding accuracy but it is absolutely not necessary to hide the settings and therefore the optimization of the system which guarantees the best result possible. As for the hydraulic system with connection CanBus, our equipment brings you all the advantages related to ISOBUS functions.

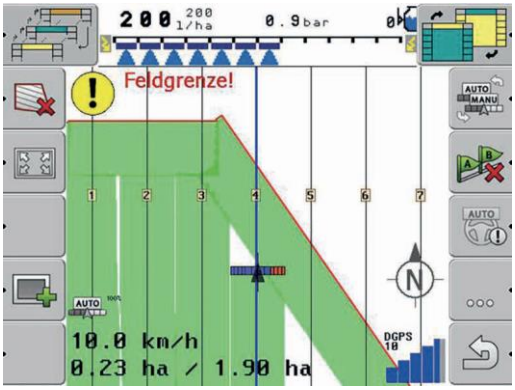
SECTION-View:

Visual assistance to cut sections

As standard, Track-Guide II and III offer the possibility to visualize the state of the sections as well as a recommendation opening and closing that you can manually manage with the regulation of your sprayer. Once the configuration of the entered machine, the screen header shows when the sections must be enabled or disabled.

CONTROL SECTION:

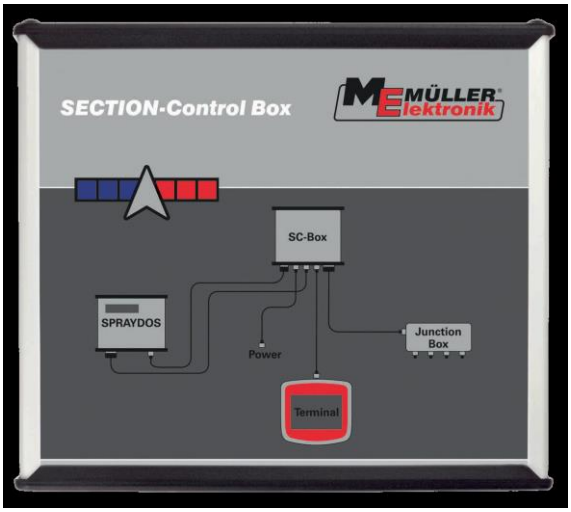
Automatic cutting of sections

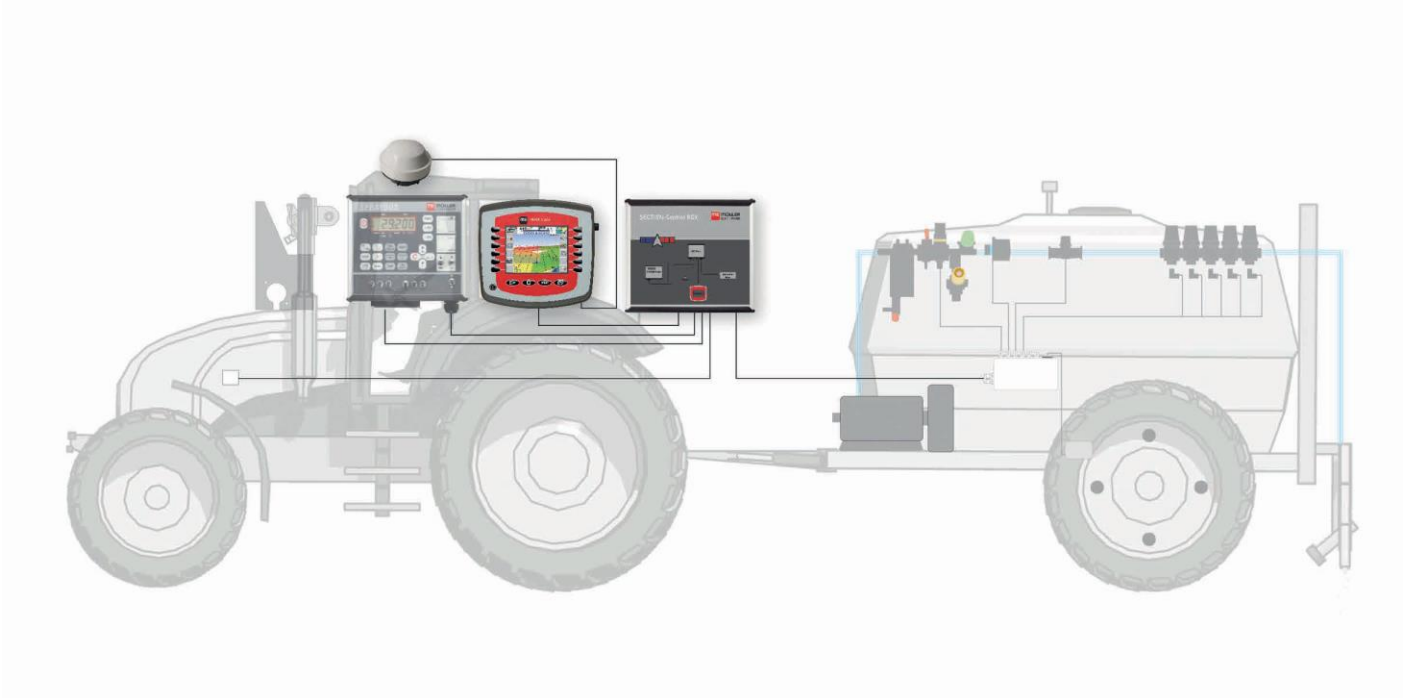


Available for all our consoles, the Section Control app supports, automatic opening and closing of sections of a sprayer (up to 18) by geolocation (GPS).
The advantage of our consoles and using the ISOBUS standard so the Section Control application, allows you to control the sections of any machine to the ISOBUS standard and regardless of the manufacturer of the sprayer.
This application has other advantages because it allows you to control also seeders, fertilizer spreaders in order to benefit from more comfort, accuracy and realize more savings.
The automatic control of sections by geolocation has become a must with modern sprayers. The return on investment is fast because the savings realized on the purchase of inputs are quickly substantial and the comfort brought to work ensures a higher work rate.

SECTION-Control Box: The cut automatic sections without DIY

The SECTION-Control Box (SCBox) module allows you to make certain non ISOBUS sprayers compatible with cutoff function automatic sections thanks to our terminals equipped with the application SECTION-Control. The assembly is extremely simple because it rests on the principle of "plug and play". Simply connect the SCBox between the terminal and the original control by plugging in the outlets. SCBox is compatible with many sprayers present on the market with the original Müller Elektronik and TEEJET regulations 844. This is the guarantee of professional editing and adjustments.





Accessories and options

TERMINAL / SOFTWARE	 TRACK GUIDE II	 TRACK GUIDE III	 SMART 430	 TOUCH 800	 TOUCH 12
TRACK LEADER	+	+	-	O	O
HEADLAND CONTROL	+	+	-	O	O
SECTION VIEW	+	+	-	O	O
SECTION CONTROL	O	O	-	O	O
PROTOCALE ASD	O	O	-	O	O
VARIABLE RATE CONTROL	O	O	-	O	O
TRACK LEADER AUTO	-	O	-	-	O
ISOBUS UT	O	O	+	+	+
ISOBUS TC	O	O	-	O	+

+ = *Application delivered as standard with the terminal*

O = *Application as an option*

- = *Incompatible*

Tilt corrector

Essential to correct the GPS position when the ground is not flat, high precision.

Ref. 721147

Camera

Usable only on TG III and Touch 12.

High quality camera with INOX structure.

92 ° viewing angle - Ref. 745277

120 ° viewing angle - Ref. 745278

External display bar

Allows you to deport information from manual guidance directly to the field visual of the driver.

Multi-function handle

Allows comfortable control of all functions Ref: 721370