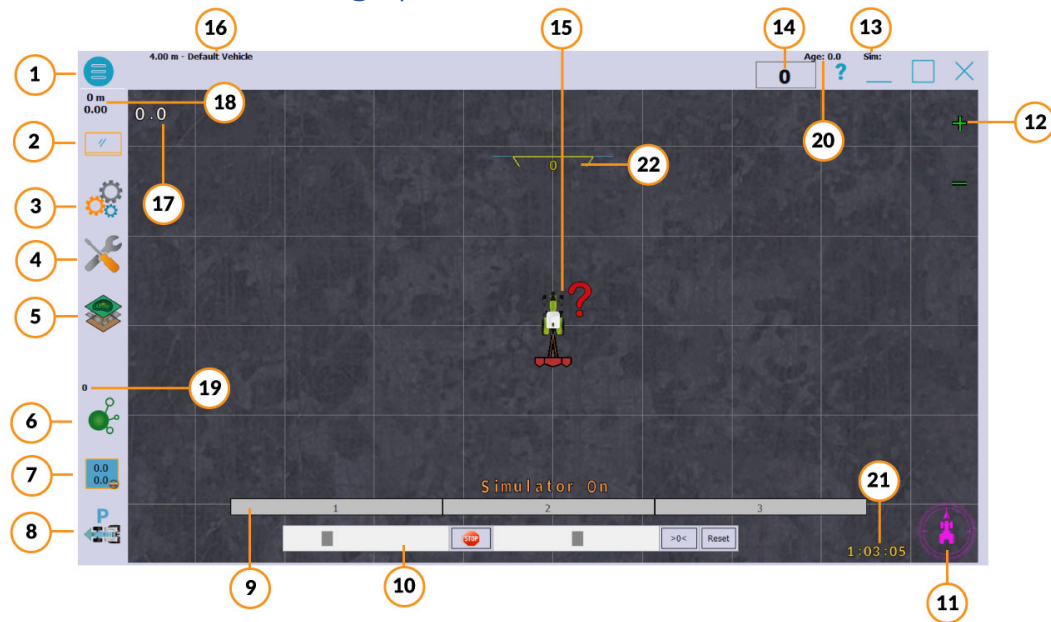




VERSION 5.7

AgOpenGPS MANUAL

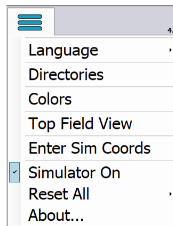
AgOpenGPS Main Screen



- 1.- Main menu
- 2.- Screen options
- 3.- General Configuration
 - 4.- Utilities
 - 5.- Field Menu
 - 6.- AgIO Shortcut
- 7.- Steer Configuration
 - 8.- Steer Mode
 - 9.- Section Display
 - 10.- Simulator Control
 - 11.- Steer Indicator
 - 12.- Zoom Buttons
 - 13.- GPS Mode
 - 14.- Speedometer
- 15.- Virtual button direction reset (restarts forward direction at double push)
- 16.- Field and Vehicle Information
 - 17.- Heading information
 - 18.- Distance counter
 - 19.- Error frames
 - 20.- Age of RTK messages
 - 21.- Clock
 - 22.- Roll display

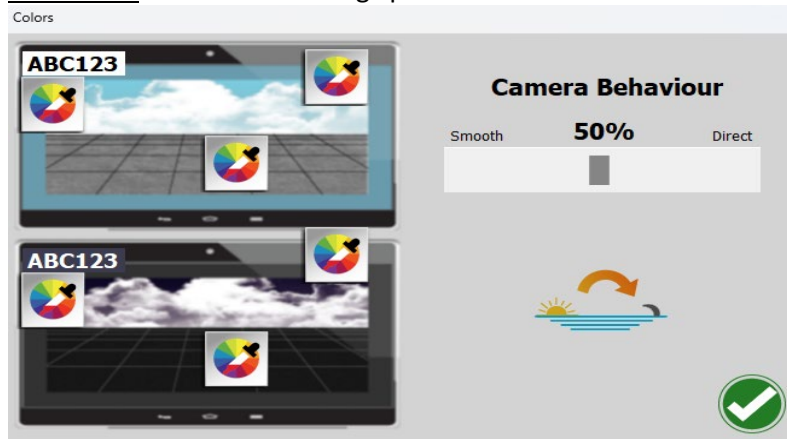
1.- Main Menu

AgOpenGps general configuration.



Language: Available Translations for AgOpenGPS

Directories: Folders used in AgOpenGPS



Colors: Color configuration for all

You can configure the colors for the day and night version, the color of the field, the letter and the windows.

Top Field View:



Small window with the aerial view of the field.

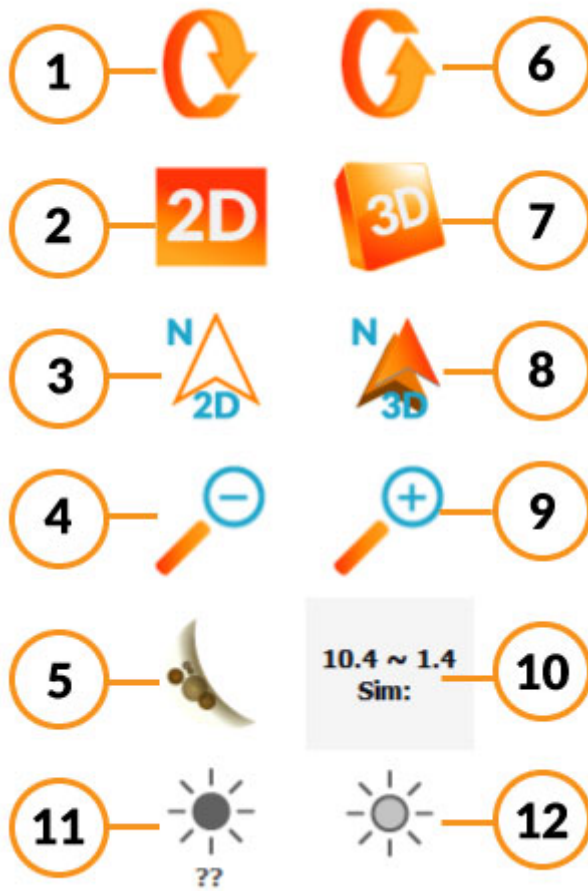
Enter Sim Coordinates: Possibility of modifying the simulation coordinates.

Simulator On: Turn on/off simulator.

Reset All: Reset all configuration to default.

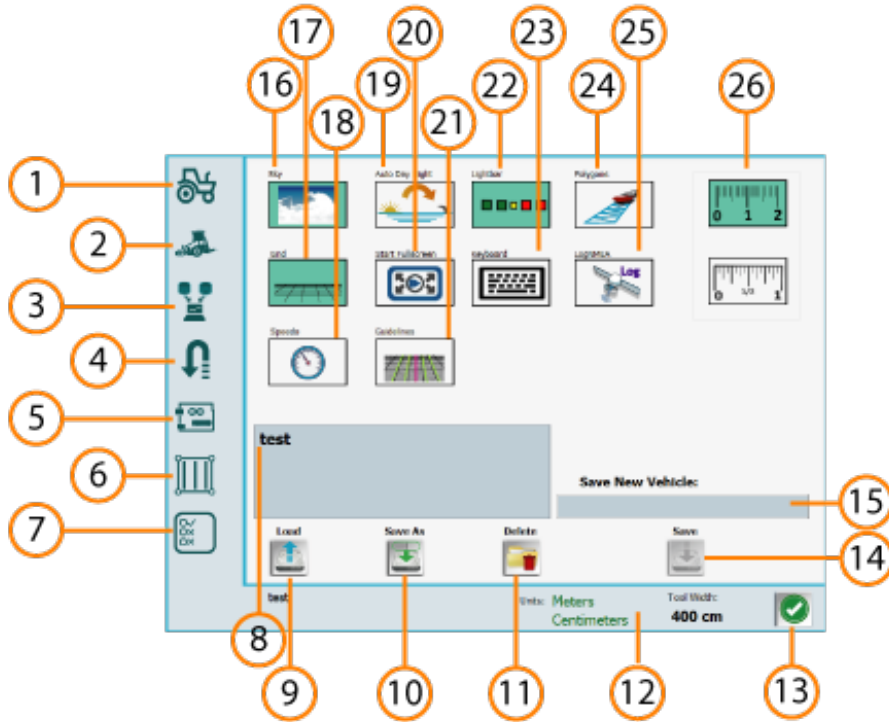
About: Information about AgOpenGPS, Developer Team and License

2.- Screen Options



1	Pitch view down	6	Pitch view up
2	2D view	7	3D view
3	2D view North	8	3D view North
4	Zoon in	9	Zoom out
5	Day/Night	10	Performance Monitor
11	Brightness down	12	Brightness up

3.-General Configuration

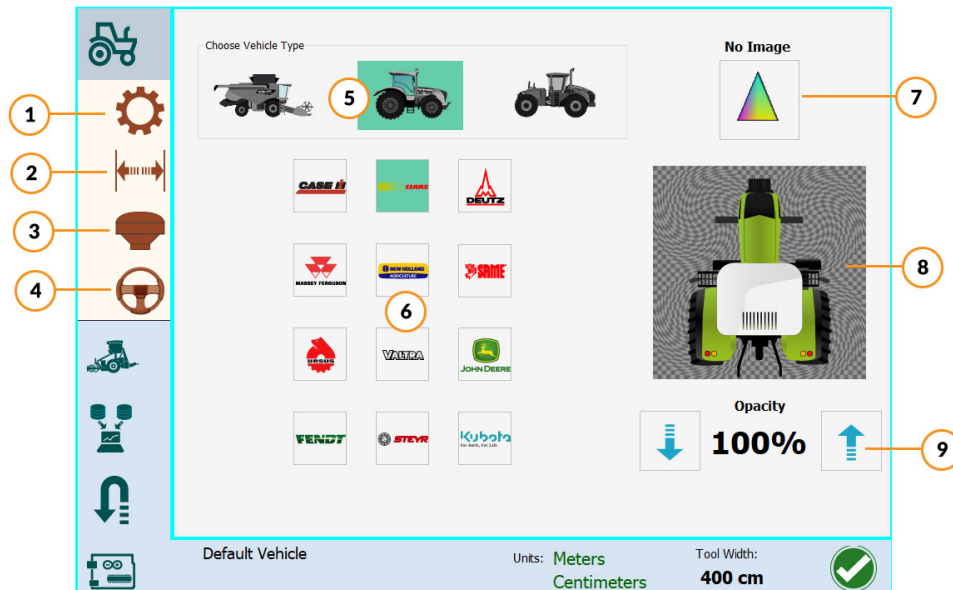


SUBMENU		LOAD/SAVE		EXTRAMENU	
1	Vehicle configuration	8	Saved vehicles	16	Sky view in 3D
2	Implement configuration	9	Load selected vehicle	17	View grid in field
3	Sources configuration	10	Save actual vehicle as	18	View speedometer
4	Uturn configuration	11	Delete selected vehicle	19	Day/Night auto cycle
5	Arduino configuration	12	Vehicle information	20	Start full screen
6	Trams configuration	13	Done and exit	21	View extra guides
7	Icons configuration	14	Save vehicle	22	View lightbar
		15	Name new vehicle	23	Open keyboard
				24	Polygons in mapping
				25	Log NMEA
				26	Units selection (cm/in)

3.1.- Vehicle configuration

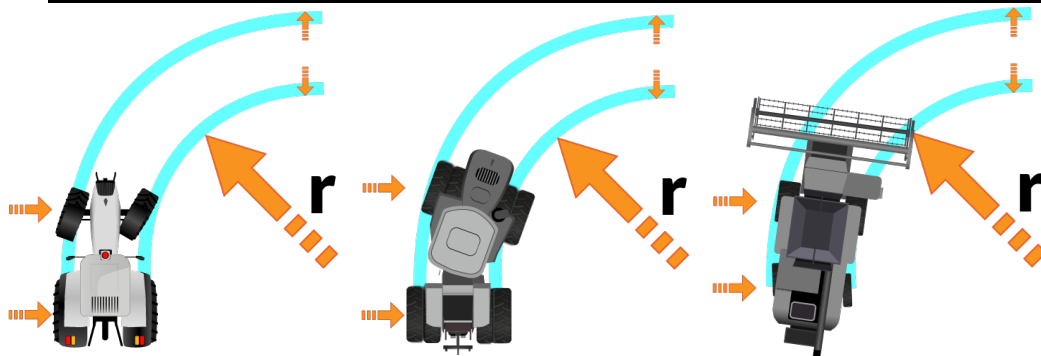
3.1.1	Vehicle type
3.1.2	Vehicle dimensions
3.1.3	Antenna Configuration
3.1.4	Steer options

3.1.1.- Vehicle type	
5	Vehicle type
6	Brand
7	Triangle image icon
8	Preview box
9	Opacity



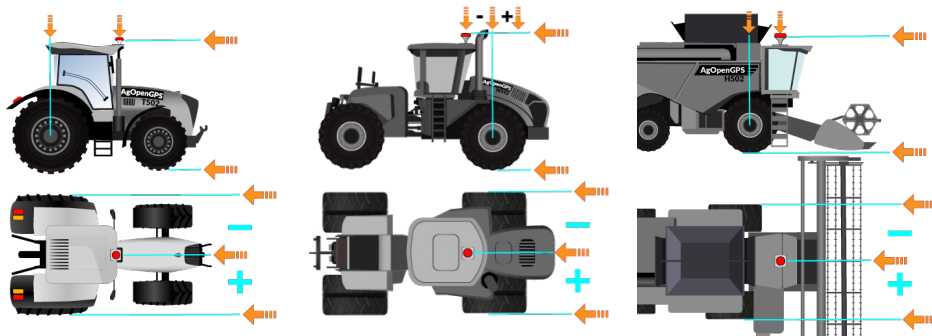
3.1.2.- Vehicle dimensions

Wheel Base	Horizontal distance between centres of the front and rear wheels in cm/in
Track	Distance measured across an axle from the centre line of one tyre tread to the centre line of the opposite tyre tread in cm/in
Radius	Minimum turn radius in cm/in



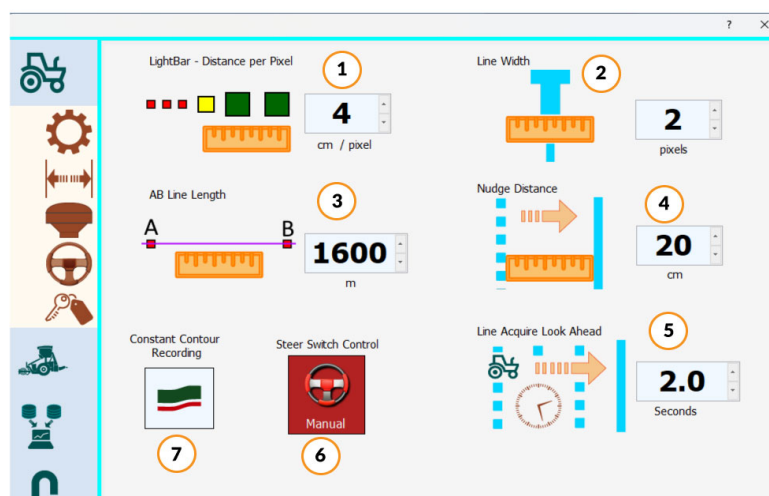
3.1.3.- Antenna configuration

Antenna distance	Antenna distance to pivot point in cm/in
Antenna height	Distance between antenna and ground in cm/in
Offset antenna	Distance between the antenna and the central axis of the vehicle, positive to the right, negative to the left in cm/in

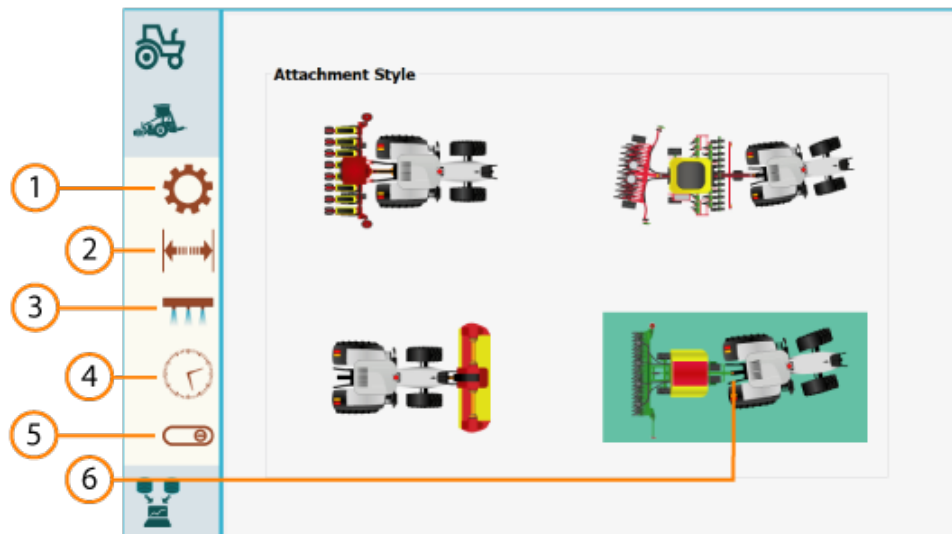


3.1.4.- Steer options

1	Lightbar	Distance in cm/in for each frame
2	Lines width	In pixels
3	AB Line Distance	In meters distance A to B
4	Snap Distance	Default distance to snap
5	Button to let the software button follow the steer switch/button status	Default snap distance in cm/in
6	Look Ahead to line acquire	Time in sec
7	Constant Contour Recording	



3.2.- Implement configuration

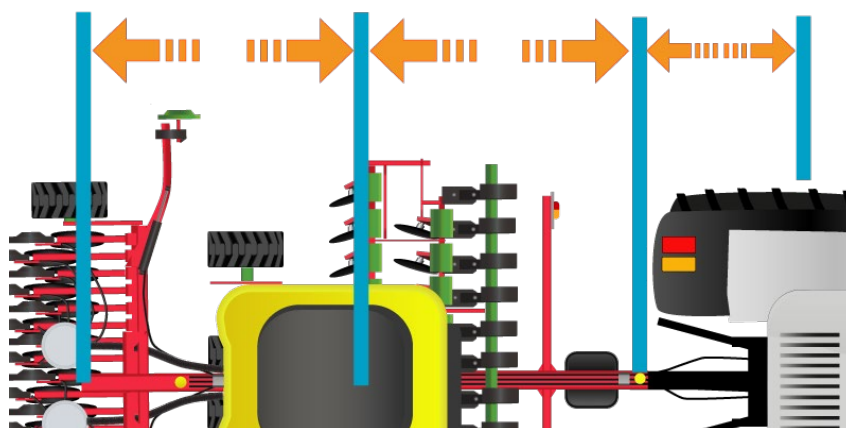


3.2.1	Attachment style
3.2.2	Attachment dimensions
3.2.3	Attachment sections
3.2.4	Attachment options
3.2.5	Work switch
3.2.6	Attachment selected

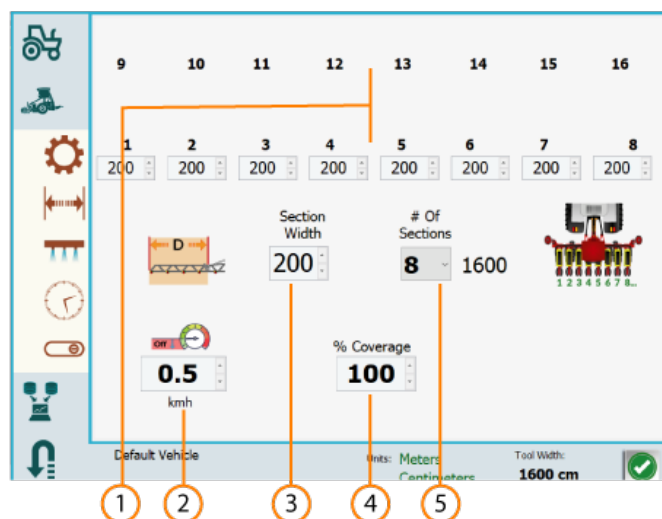
3.2.1.- Attachment style
Rear fix
Doubled trailed
Front
Trailed

1

3.2.2.- Attachment dimensions
 Distance from tractor pivot point to attachment, different distances for each type of attachment



3.2.3.-Attachment sections	
1	Length for each section in cm/in
2	Speed below which sections are deactivated
3	Length of default section, if you change number of sections, all new sections have this length, in cm/in for each section
4	% Coverage all sections
5	Number of sections, and total length for attachment, in cm/in



3.2.4.-Attachment options

1	Time in seconds for activate deactivate, and delay
2	Offset attachment Distance between the central axis of attachment and the central axis of the vehicle, positive to the right, negative to the left in cm/in
3	Overlap/Gap Overlap distance in positive (cm/in) Gap distance in negative (cm/in)

On (secs) **1.0**

Off (secs) **0.5**

Delay (secs) **0.0**

Offset **0**

Overlap / Gap **3**

Default Vehicle

Units: **Meters**
Centimeters

Tool Width: **400 cm**

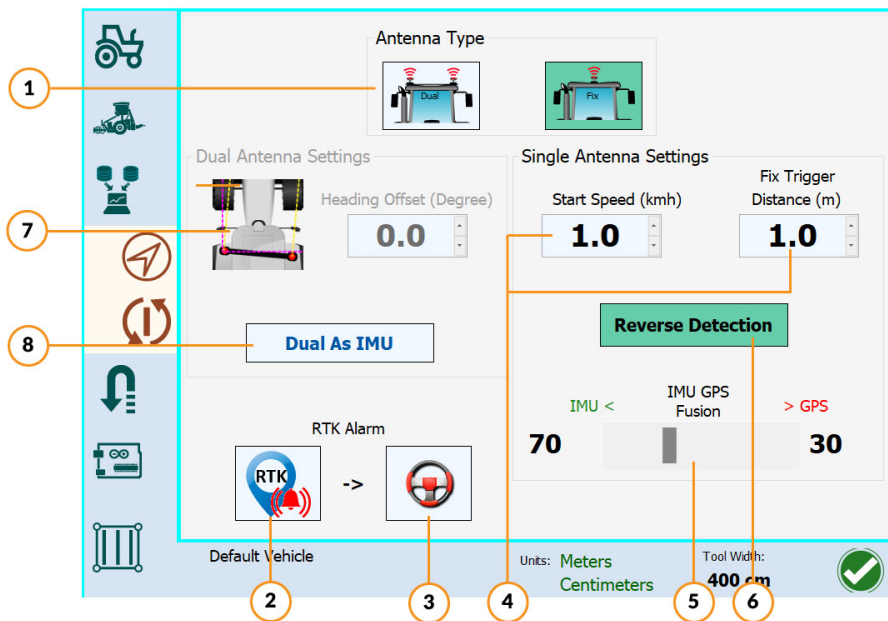
3.2.5.- Work Switch

Work Switch	Steer Switch
Enable Work Switch	Enable Steer Switch
Work switch enable manual sections	Steer switch enable manual sections
Work switch enable auto sections	Steer switch enable auto sections
How switch works	

The screenshot displays a control interface with a vertical sidebar on the left containing icons for a tractor, a combine harvester, a gear, a double-headed arrow, a fan, a clock, a battery, and a person. The main area is divided into two columns: 'Work Switch' and 'Steer Switch'. The 'Work Switch' column contains four items: a green button with a red switch icon labeled 'Work Switch', a white button with a red switch icon labeled 'Manual Sections', a green button with a red switch icon and 'A' 'B' labels labeled 'Auto Sections', and a white button with a red switch icon and a lightbulb icon. The 'Steer Switch' column contains three items: a white button with a red steering wheel icon labeled 'Steer Switch', a white button with a grey steering wheel icon labeled 'Manual Sections', and a green button with a red steering wheel icon and 'A' 'B' labels labeled 'Auto Sections'.

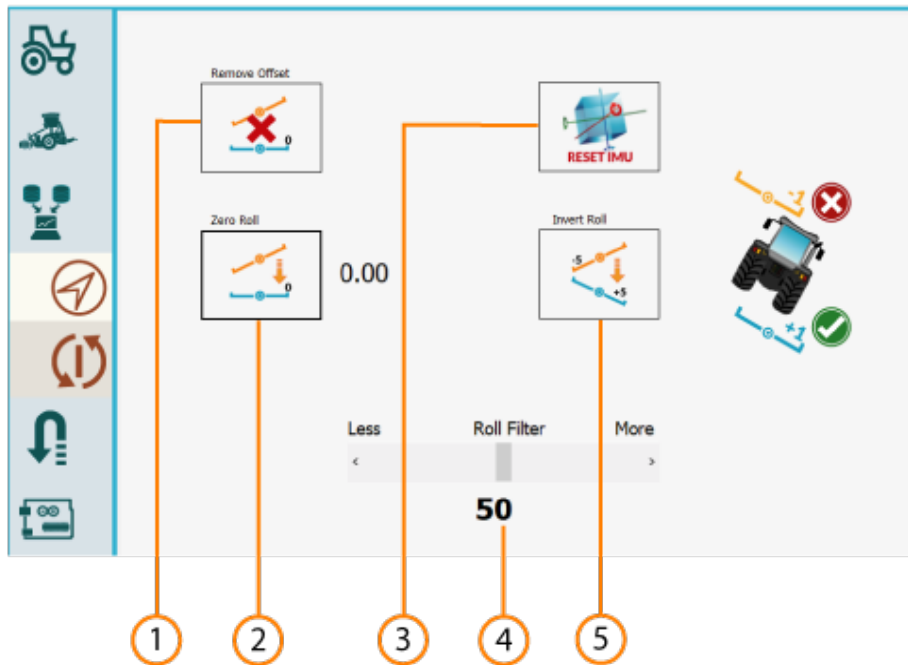
3.3.- Sources configuration

3.3.1.- Heading		
1	Antenna Type	Single: Fix or VTG Dual
2	RTK alarm	Screen message when RTK lost
3	Kill Autosteer	When RTK lost, program deactivate autosteer
4	Single antenna settings	Fix trigger distance: Distance in meters to start recognizing movement Start speed: Minimum speed to start recognizing movement Forward: Distance to start recognizing forward movement Reverse: Distance to start recognizing reverse movement
5	Heading filter	Fusion heading filter, more GPS or more IMU
6	Reverse detection	Program detect reverse movement
7	Dual Heading offset	Offset in degrees for dual heading. The slight variation between what the antennas say are 90 degrees but may be slightly off - like 89.6. So the offset would be 0.4
8	Dual as IMU	Enable for using the heading from the dual antenna as an IMU. Will only work with FixToFix



3.3.2.- Roll

1	Remove offset	
2	Roll zero	
3	Reset IMU	Reset IMU to default settings
4	Roll Filter	For PANDA messages set value in 0 or 1
5	Invert Roll	Positive for tilt to the right, negative for tilt to the left



3.4.-Uturn configuration	
1	U-Turn Radius
2	Distance Uturn legs
3	Distance to boundary
4	Smooth entry and exit

The screenshot displays a software interface for configuring a U-turn. On the left is a vertical toolbar with icons for various agricultural machinery and settings. The main area shows four numbered steps:

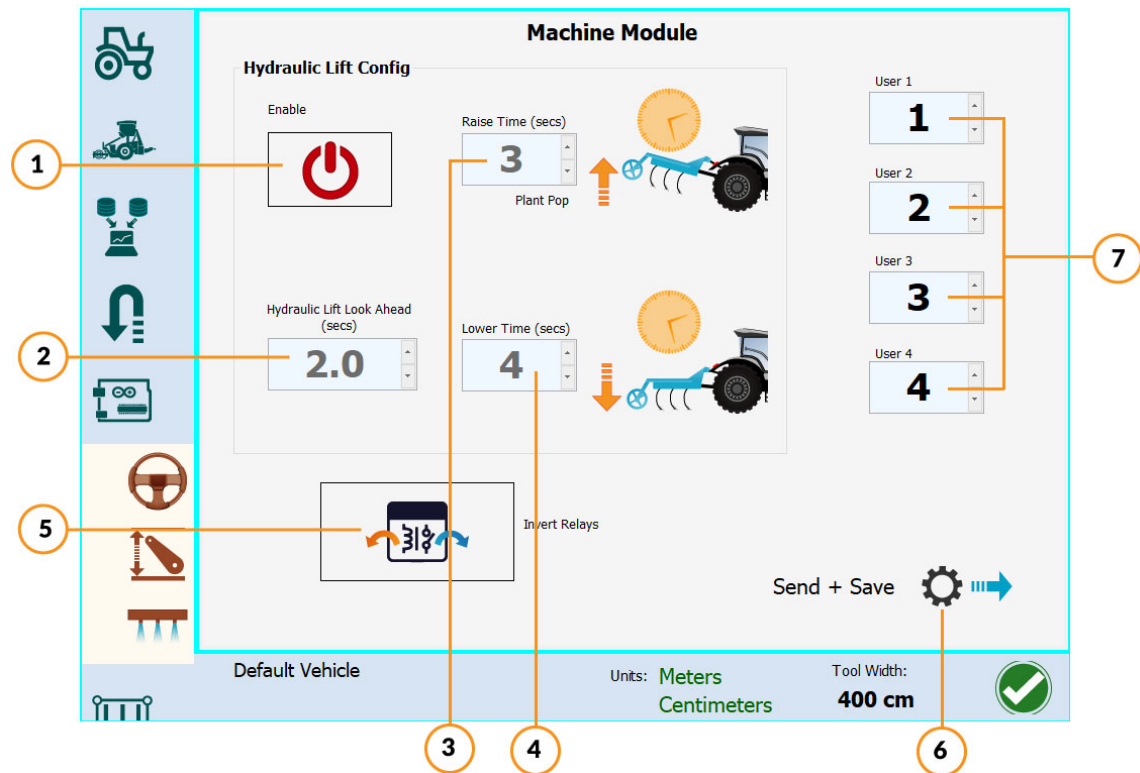
- Step 1:** U-Turn Radius. A diagram shows a semi-circular path with a red arrow and the letter 'R'. Below it is a numeric input field containing **8.10** m.
- Step 2:** Distance Uturn legs. A diagram shows two vertical lines with a question mark and an upward arrow. Below it is a numeric input field containing **20** m.
- Step 3:** Distance to boundary. A diagram shows a horizontal line with a question mark and a downward arrow, and a semi-circular path below it. Below it is a numeric input field containing **2.00** m.
- Step 4:** Smooth entry and exit. A diagram shows a semi-circular path with a question mark and a downward arrow. Below it is a numeric input field containing **14**.

Two hints are provided on the right side:

- Hint:** Set extension length to 2 or 3x Radius (located between steps 2 and 3).
- Hint:** Set Smoothing to 3 or 4x Radius (located below step 4).

3.5.2- Arduino lift configuration

1	Enable lift control	
2	Hydraulic lift look ahead	Time in seconds that the program looks forward to operate hydraulic lift
3	Raise time	Time in seconds that the raise of the hydraulic lift advances
4	Lower time	Time in seconds that the lowering of the hydraulic lift advances
5	Invert relays	
6	Send and save	<u>Mandatory for any change in this menu</u>
7	User Pins	These are 4 user generated values that the machine module can use. They are just bytes sent

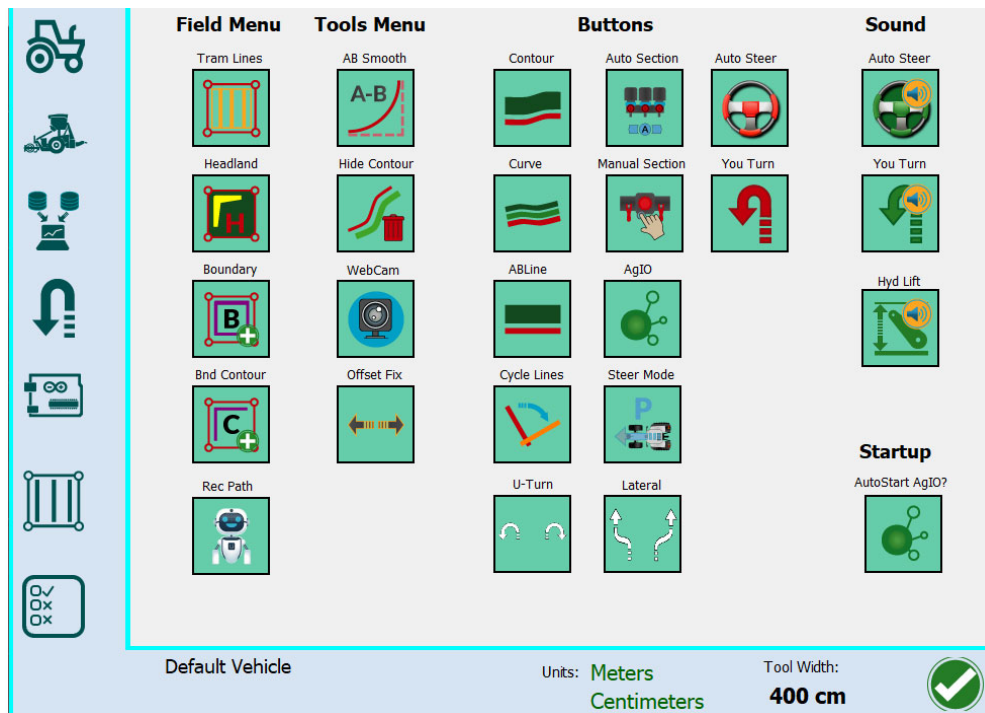


3.5.3- Sections configuration

Pin configuration for each section

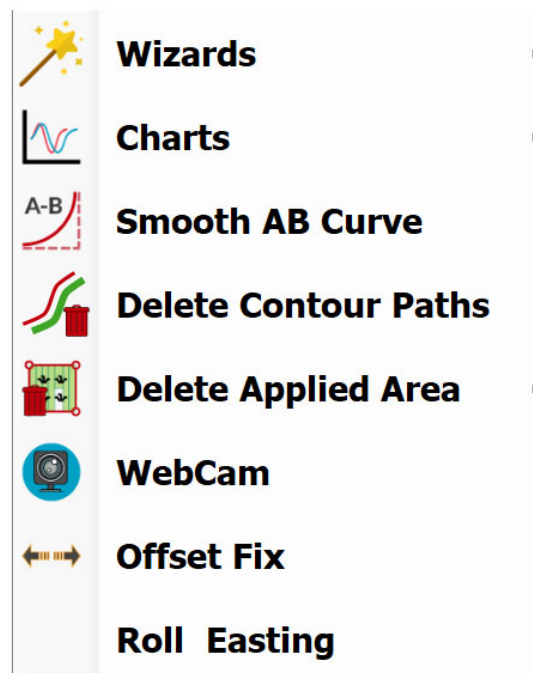
3.6.- Tram Lines configuration		
1	Enable Tram line	
2	Tram width	Distance between two tram lines in cm/in

3.7.- Icons configuration

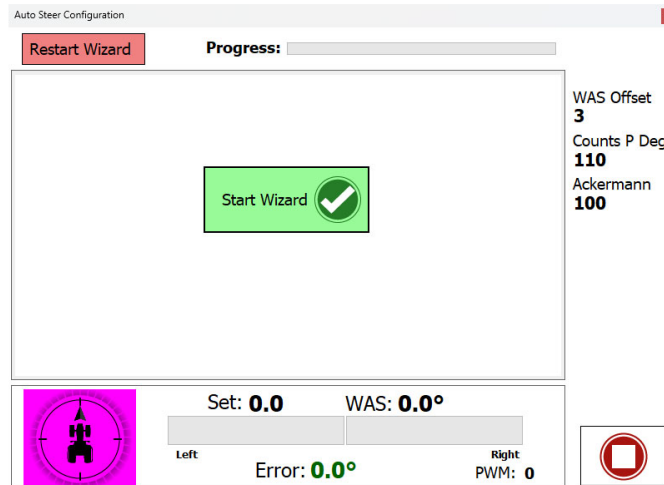


Show or hide icons and alert sound

4.-Utilities

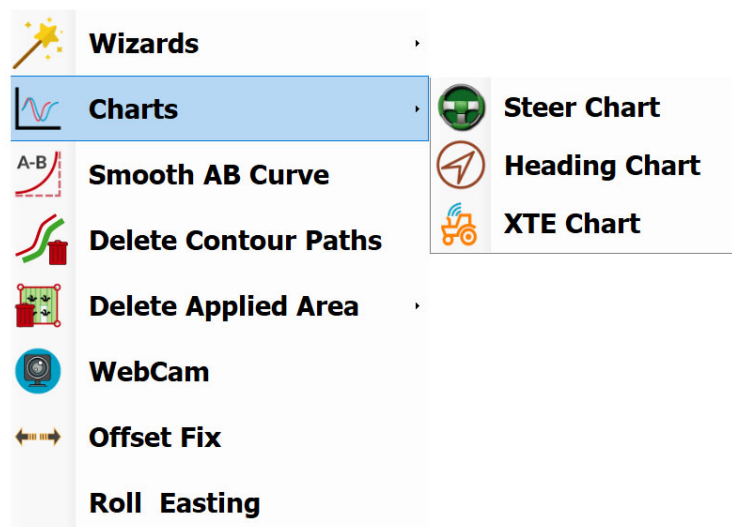


4.1-Wizards (Steer wizard)



Steer Setup Wizard, follow the steps to the end.

4.2.- Charts	
Steering chart	Comparative graph of the real heading with the calculated one
Heading Chart	Comparative graph of the fix2fix and IMU heading
XTE Chart	Graph that shows the XTE (cross track error), and compares the ideal line with the actual route





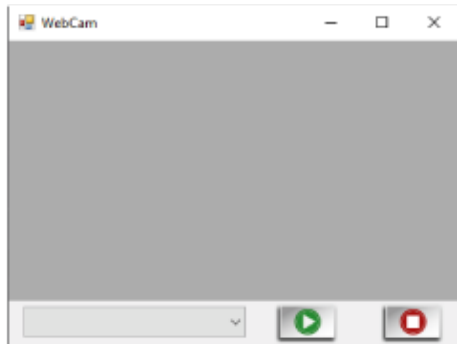
4.3.- Smooth AB Curve	
1	Activate AB Curve
2	Use arrows to modify AB Curve
3	Save only for now (this use), Or save to file, or cancel operation



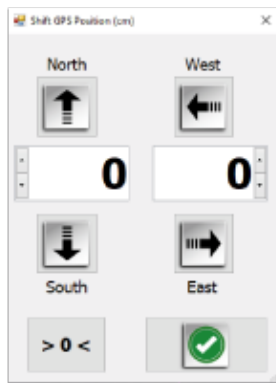
4.4.- Delete contour paths	
1	Delete all contour paths created



4.5.- Delete applied area	
1	Delete all sections and contours (cleans all painted areas)

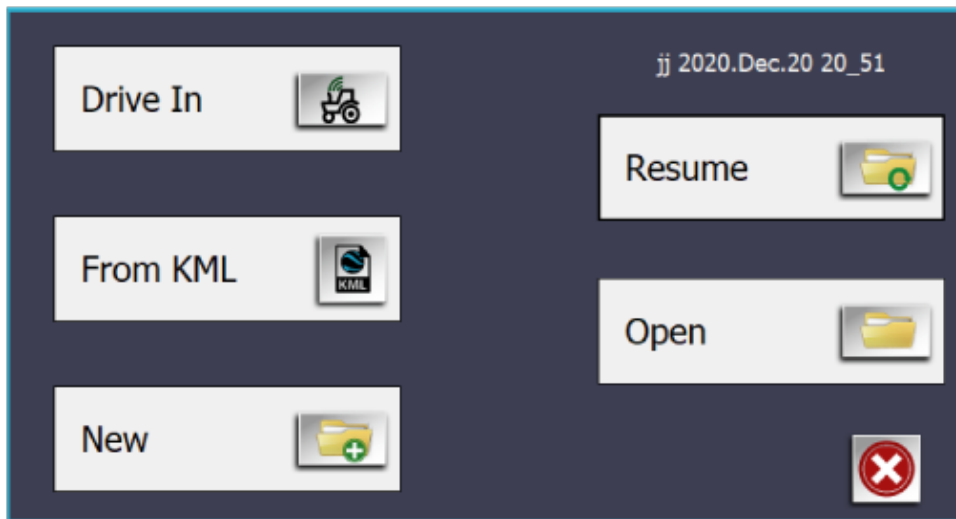


4.6.- Webcam	
1	Small window for webcam output signal

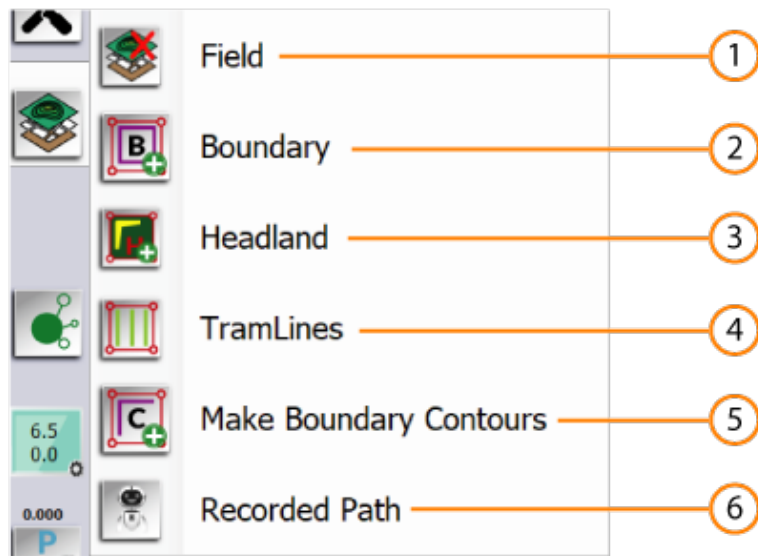


4.7.- Offset fix	
1	Shift GPS Position in cm/in
2	North/South
3	West/East
4	Reset

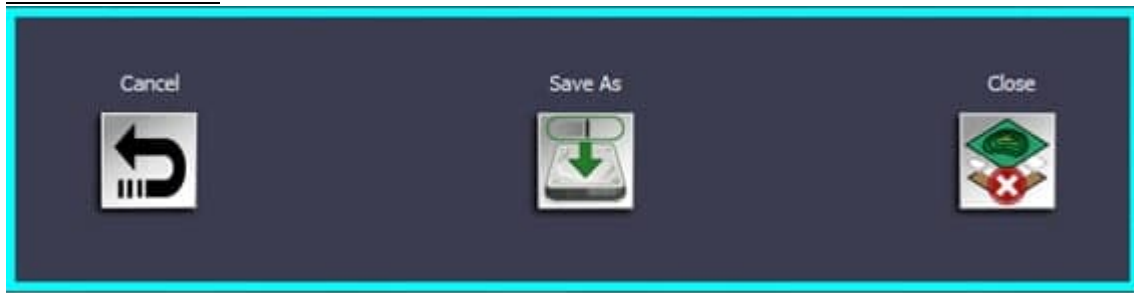
5.1.a- Field menu (none field opened) This window appears if you don't have any field opened		
1	Drive in	Drive to create new field
2	From KML	Import KML file created with Google Earth
3	New	Create a new field file, add name, date...
4	Resume	Resume work in last field opened (last field displayed in top right corner)
5	Open	Open field previously saved
6	Cancel	



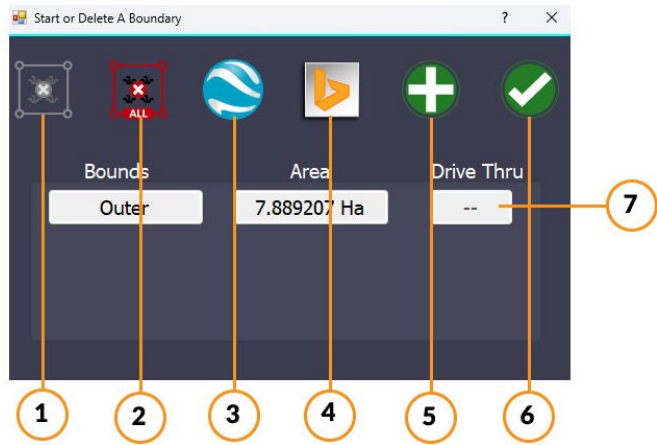
5.1.b.- Field Menu



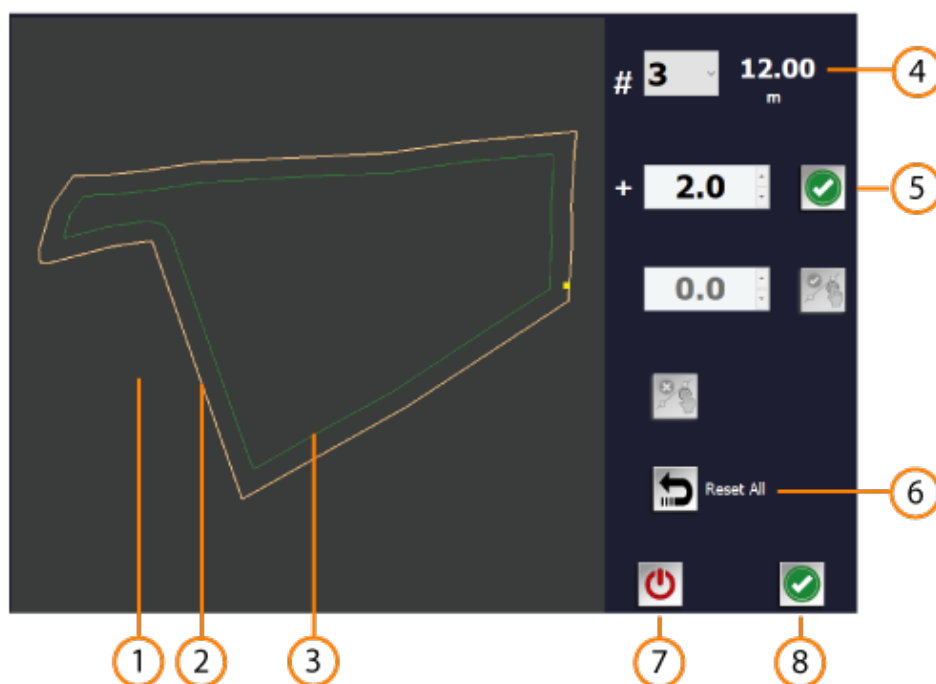
5.1.1.- Field Close



5.1.2- Boundary		
1	Delete selected boundary	
2	Delete all boundary list	
3	Import Google Earth file	Import KML file created with Google Earth
4	Import from Bing Maps App	
5	Add new boundary	You can add new boundary driving in or with KML file
6	Done	
7	Boundary List	



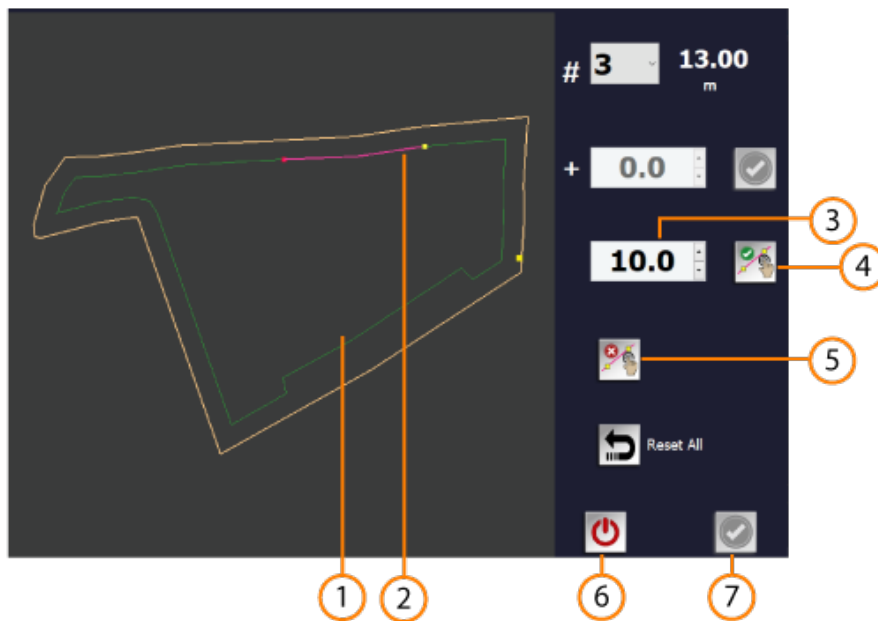
5.1.3.a- Headland (make)		
1	Field Map	
2	Boundary	
3	Headland	
4	Number of passes	Headland distance calculated by the number of passes multiplied by the width of the implement
5	Extra Width	You can add extra width in metres
6	Reset all	
7	Cancel	
8	Done	



When the headland is active new buttons appear at the bottom edge of the window, see point 32

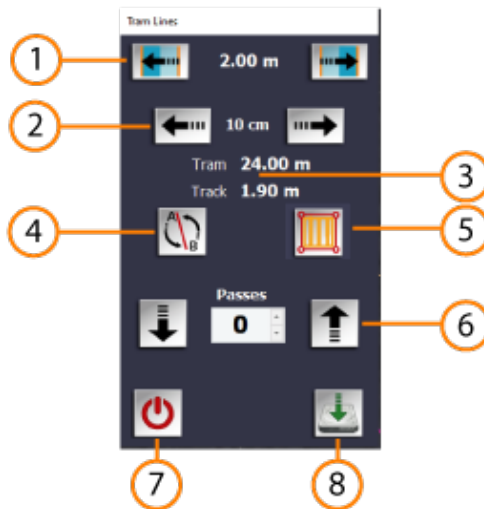
5.1.3.b- Headland (modification)

1	Modified Headland	
2	Headland selected ready to modification	Selection by touching two points in map
3	Distance	Distance in meters for modification, positive for inward direction, negative for outward direction
4	Validate modification	
5	Cancel Modification	
6	Cancel	
7	Done	

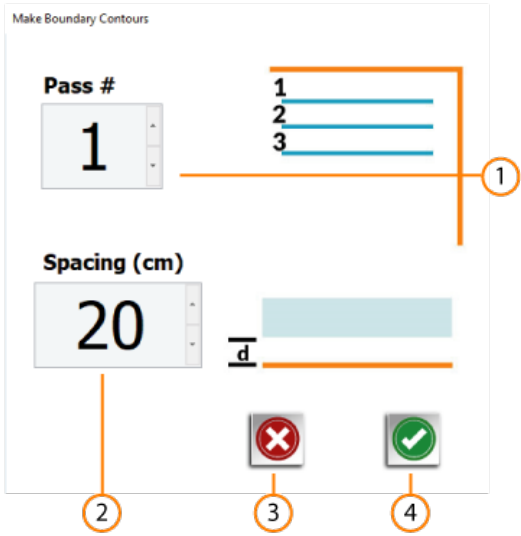


5.1.4-Tramlines

1	Arrows for modifying the starting line of the tram lines	Distance in meters, half of attachment
2	Arrows for modifying the starting line of the tram lines	Distance in cm
3	Tram lines information	Tram spacing configured in General configuration of Tram lines (3.6) Track configured in General configuration of vehicle (3.1.2)
4	Change direction the starting line	
5	Type of tram lines	Only tram lines All tram lines with headland Only headland tram lines Cancel tram lines
6	Number of passes	
7	Shut Off	Turn Off Tramlines
8	Done	



5.1.5.-Boundary Contours		
1	Number of passes	
2	Spacing	Distance in cm between boundary and first passe
3	Cancel	
4	Done	

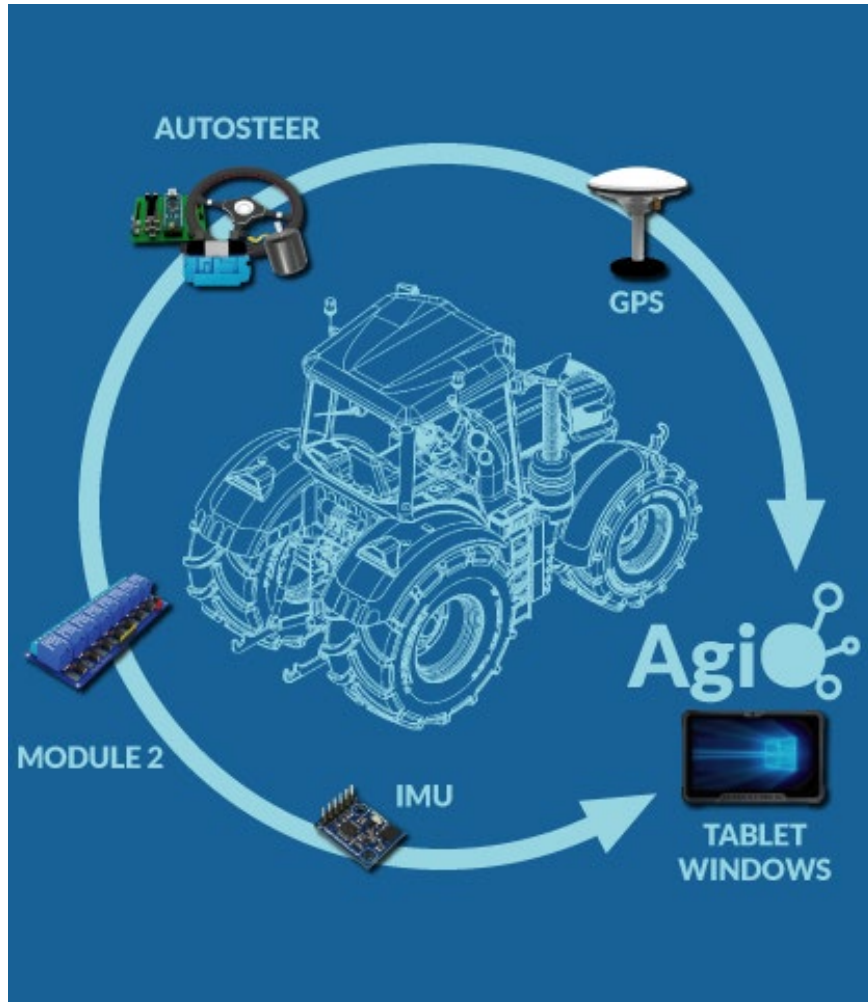


5.1.6.-Recorded Path		
1	Play	
2	Style	Three styles: Start at beginning, Closest point, Last stopped position
2	REC	Once pressed, it changes to stop, to be able to stop recording
3	Cancel	



This function allows you to register any route to execute it

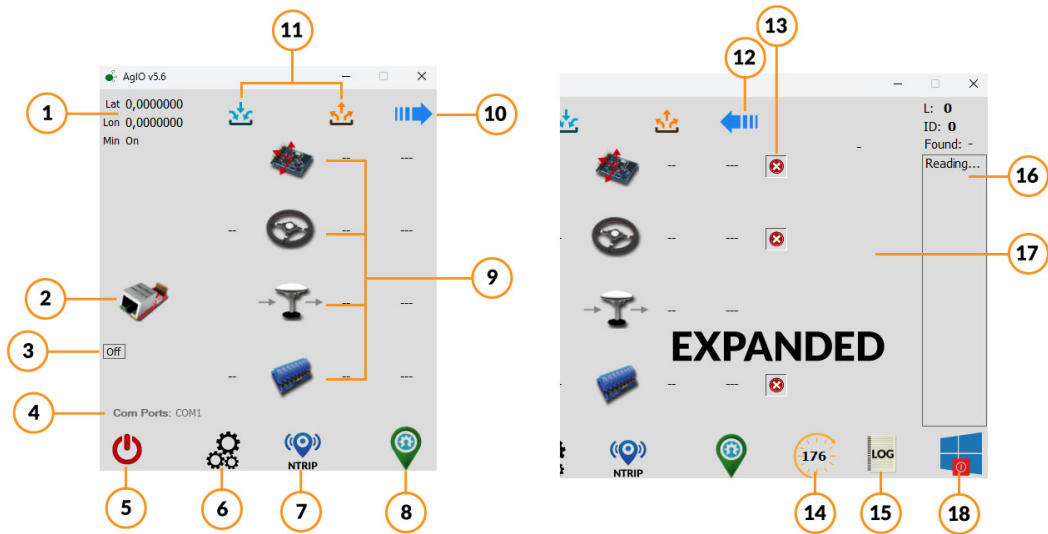
6.- AgIO



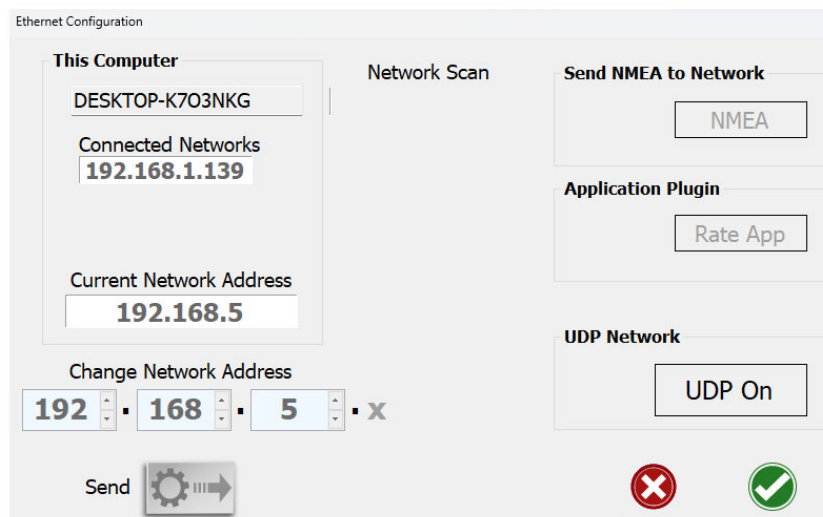
Program that controls communications between AgOpenGPS and all components:
Tablet with AgOpenGPS
GPS
AutoSteer (PCB, DC Motor, Hydraulic valves)
Machine modules

6.-AgIO

6.-AgIO		
1	Coordinates information	
2	UDP icon	It is also a virtual button that opens a window that opens a window for UDP configuration, when UDP it's active the icon turns green
3	UDP network	Shows network status, OFF or IP of active network
4	Ports information	Active COM ports
5	Turn Off	
6	Extra configuration	
7	NTRIP configuration	
8	AgOpenGPS icon	Shows AgOpenGPS or start it if it's closed
9	Component icons	It is also a virtual button that opens a window for the configuration and connection of the components
10	Expand arrow	Expands window to show more information
11	In/Out information for each component	It is also a virtual button that opens a window with information on GPS, speed, height, satellites, ...
12	Close Arrow	Close expanded window
13	Hide/Show component	
14	Timer	Countdown to hide expanded window
15	Log	Creates a log file named zAgIO_log.txt with all NMEA messages on program folder
16	NTRIP info box	Shows info about NTRIP, type of NMEA messages, length and number of each message
17	Extra UDP info	Only available if you are using UDP, show info about relays, CDP, WAS,...
18	Shutdown	Button to shutdown Windows



6.2.-UDP configuration

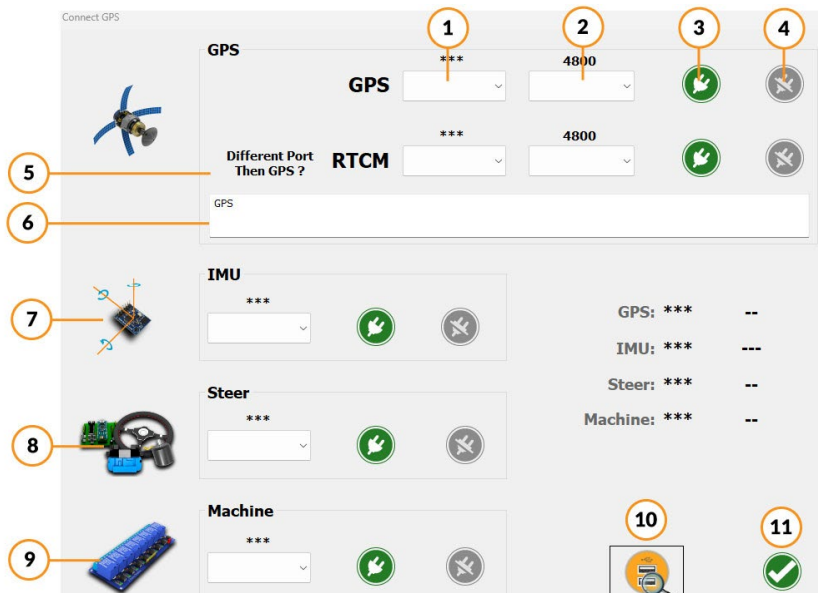


Press the UDP On button and Send to enable UDP, accepting configuration restarts AgIO

Standard sketches use 192.168.5 network address

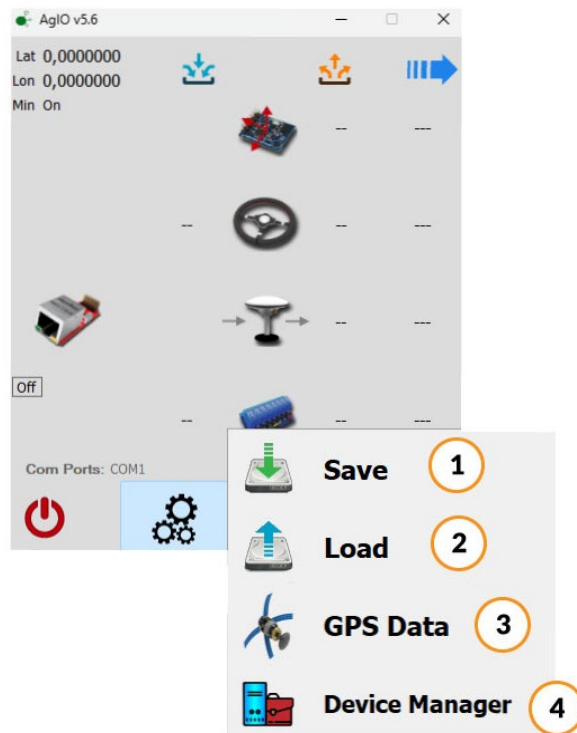
6.9-AgIO Components

1	GPS Port	
2	Bit Rate connection	
3	Connect	
4	Disconnect	
5	RTCM Port	If you use a different port for RTCM messages
6	GPS Information	Box shows information about GPS messages (NMEA string)
7	IMU Module Port	If you connect IMU directly to PCB don't have port for IMU
8	Steer Port	
9	Machine Module Port	
10	Scan Ports	
11	Done	



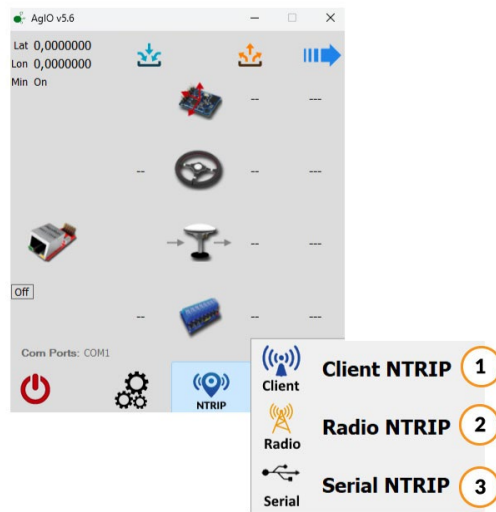
6.6.-AgIO Extra configuration

1	Save	Save AgIO config
2	Load	Load AgIO config
3	GPS Data	Shows GPS information, same as related in point 6. (11)
4	Device Manager	Opens Windows Device Manager



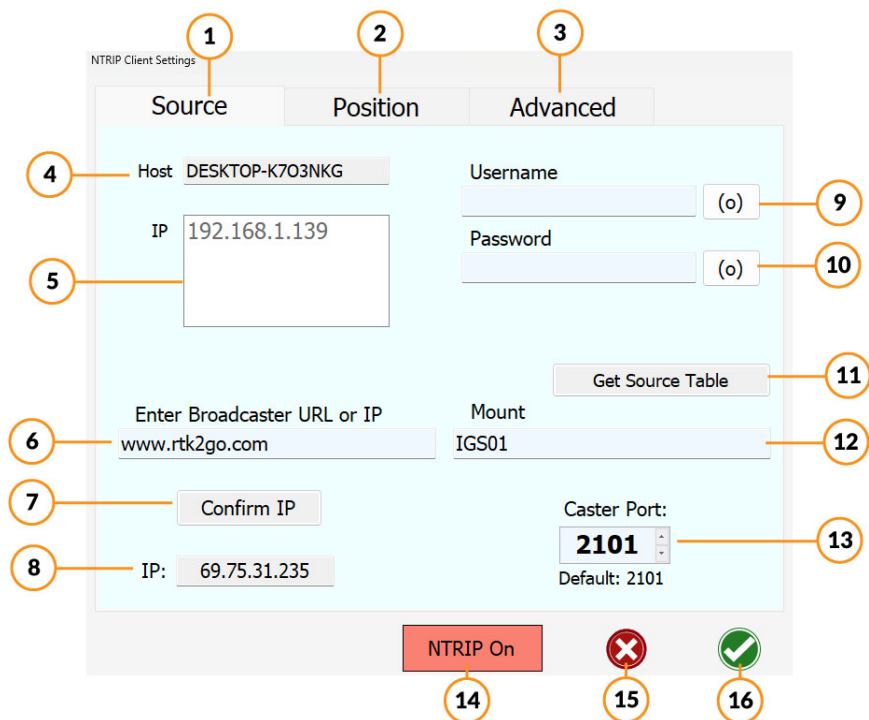
6.7.-AgIO NTRIP

1	Client NTRIP	NTRIP in same port of GPS
2	Radio NTRIP	NTRIP using Radio Link
3	Serial NTRIP	NTRIP using Serial Port



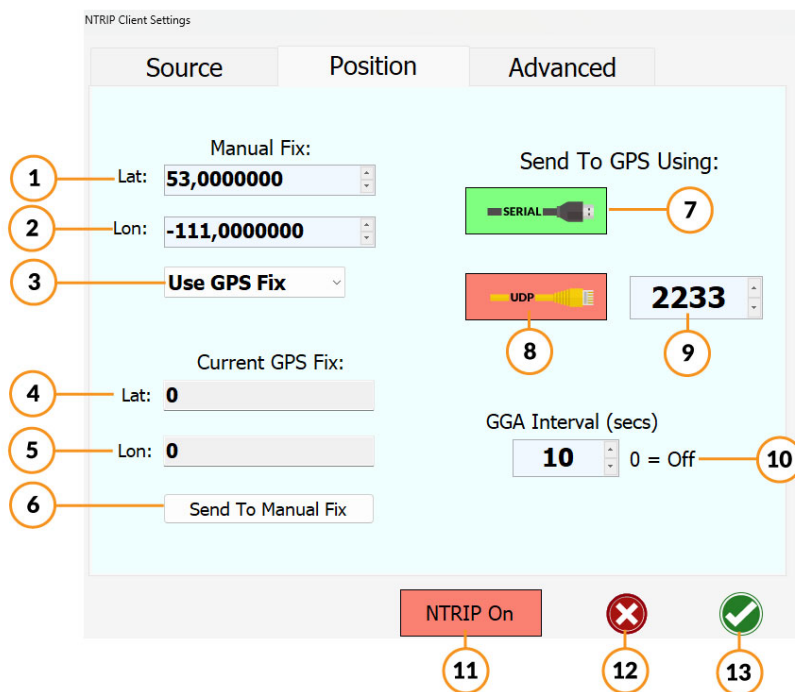
6.7.1.1-NTRIP Configuration (Source tab)

1	Source Tab	
2	Position Tab	
3	Advanced Tab	
4	Host	
5	IP address	
6	Broadcaster	Enter Caster URL or IP
7	Confirm IP	
8	Caster IP	When confirmed shows IP
9	Username	Enter your Username for caster, (o) shows password
10	Password	Enter your password for caster, (o) shows password
11	Get source table	Shows all mounts available from your caster
12	Mount	Shows selected mount
13	Caster port	
14	NTRIP On	Turns on/off NTRIP
15	Cancel	
16	Done	



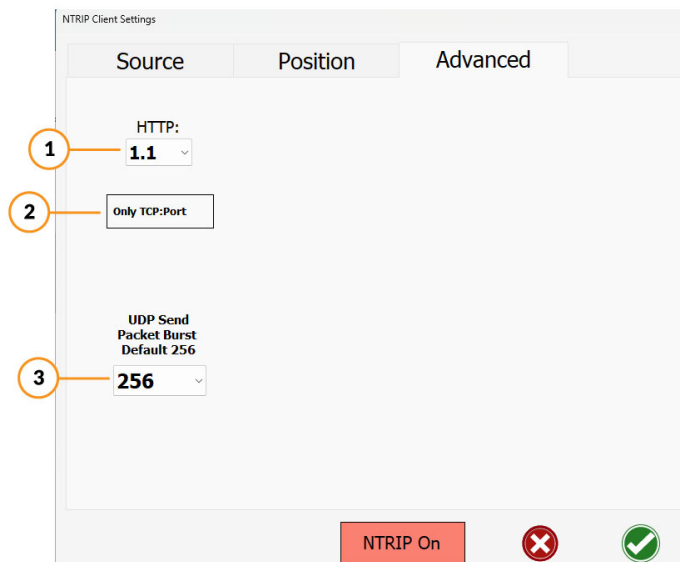
6.7.1.2.-NTRIP configuration (Position tab)

1	Latitude for manual fix	
2	Longitude for manual fix	
3	Select fix type	Use GPS Fix Use Manual Fix
4	Latitude current GPS fix	
5	Longitude current GPS fix	
6	Send GPS fix to Manual fix	
7	Serial	Send to GPS using Serial (USB. RS232)
8	UDP	Send to GPS using UDP
9	UDP Port	Port number for UDP
10	GGA interval	Some providers like VRS Systems (Maschinenring, Sapos...) need your position, without your position they are not able to send you data. Here you can set the time how often you send back your position in seconds, 0 for turn off
11	NTRIP On	Turns NTRIP ON/OFF
12	Cancel	
13	Done	



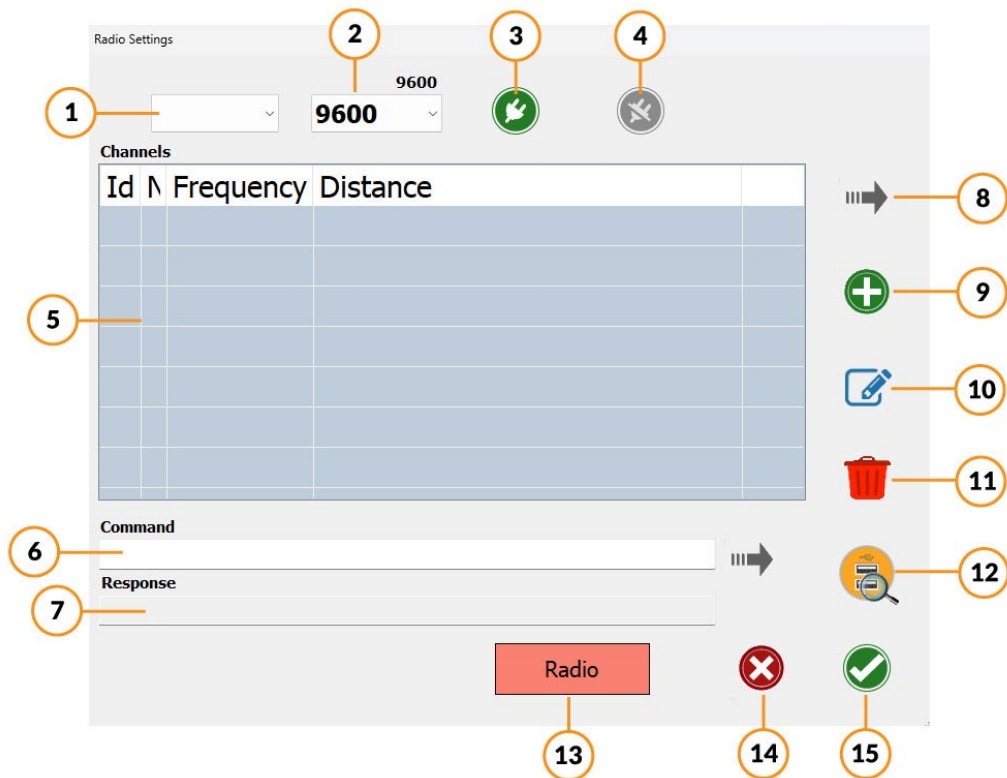
6.7.1.3.-NTRIP configuration (Position tab)

HTTP	Protocol
Only TCP Port	
UDP Packets	Default 256



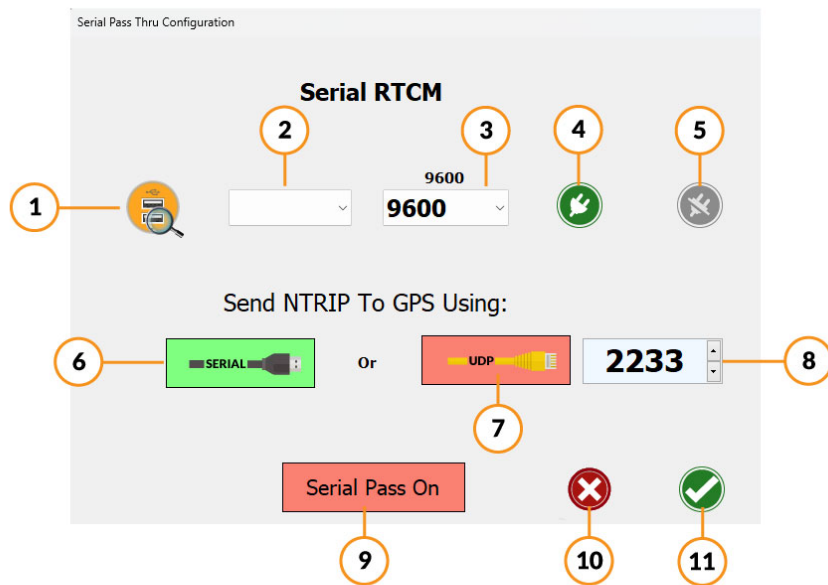
6.7.2.- Radio NTRIP

1	Port	
2	Baudrate	
3	Connect	
4	Disconnect	
5	Channels	Channel identification and information
6	Command Line	
7	Response	Shows response of radio channel
8	Send	Sends the frequency to the radio modem
9	Add Channel	
10	Edit Channel	
11	Erase Channel	Turns NTRIP ON/OFF
12	Scan Ports	
13	Enable Radio	
14	Cancel	
15	Done	



6.7.3.- Serial NTRIP

1	ScanPorts	
2	Port	
3	Baudrate	
4	Connect	
5	Disconnect	
6	Serial Mode	USB or RS232
7	UDP Mode	Shows response of radio channel
8	Port UDP	Default 2233
9	Serial Pass ON	Enable Serial RTCM
10	Cancel	
11	Done	

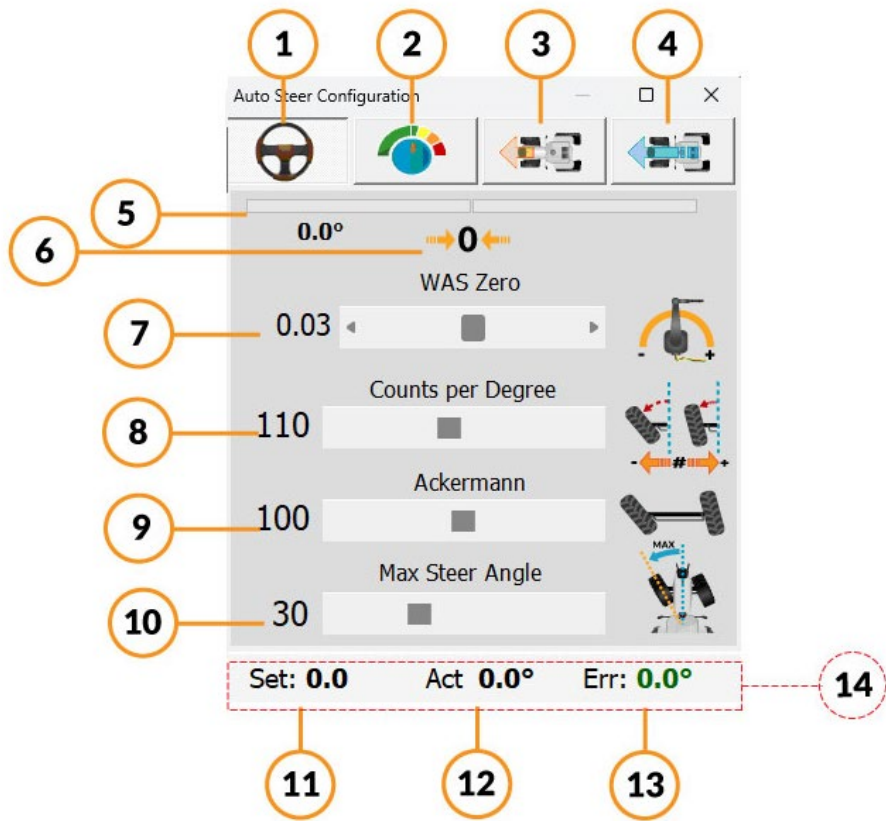


7.-Steer Configuration



Icon that shows the current angle and the setpoint angle, and is the button to open the steer configuration

7.1.-Steer configuration (Steer Tab)		
1	Steer Tab	
2	Power Tab	
3	Stanley Tab	
4	Pure Pursuit Tab	Also known as PP
5	WAS Angle indicator	WAS: Wheel Angle Sensor
6	WAS Zero	Allows the steering angle to be zero degrees when driving forward. This setting must be done and be zero degrees when driving straight ahead in order to be properly set. Wheel Angle Sensor (WAS) zero allows you to remove that non-zero steering angle so it is zero degrees. This is a very important setting and must be accurately set.
7	WAS Zero slider	For manual calibration, or tweak calibration
8	Counts per Degree	Also known as CPD The A/D converter puts out -4000 to +4000 (8000 in total) levels as the Wheel Angle Sensor puts out 0 to 5v. To convert that into steer angle degrees - because we don't visualize counts very well, we now divide those levels by counts per degree. So, when the CPD is increased, the wheels turn farther for each degree needed. When lowered, the wheels don't turn as far.
9	Ackermann	Ackermann steering geometry is a geometric arrangement of linkages in the steering of a vehicle designed to solve the problem of wheels on the inside and outside of a turn needing to trace out circles of different radius.
10	Maximum steer angle	
11	Steer angle setpoint	Steer angle requested by AgOpenGPS
12	Actual steer angle	Read by WAS
13	Error Angle	Error between setpoint angle and actual angle
14	Expand Steer Config	Virtual Button (double push) shows Drive function in Steer configuration



7.2.-Power configuration

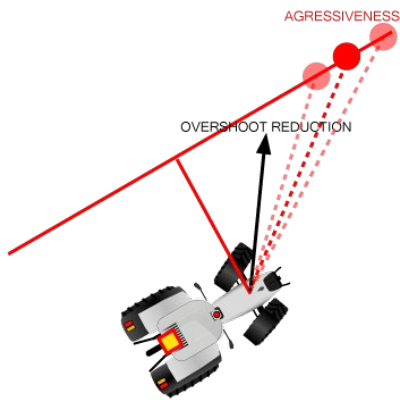
1	Proportional gain	The proportional gain are multiplied by the error then added to the minimum PWM value to generate the final output value. The higher this value the faster the motor will correct the steering. However, if it is too high, the steering will overshoot the line and then oversteer the other way again. Too low of a value and it will either take too long or never get to the guidance line
2	Maximum PWN power	The maximum PWM value to generate the final output value
3	Minimum PWN power	Minimum PWM value is used to apply a minimum amount of power to overcome friction of the valve/motor

The screenshot displays the 'Auto Steer Configuration' window. At the top, there are four icons: a steering wheel, a gauge, a car with a steering wheel, and a car with a steering wheel and a blue arrow. Below the icons is the title 'Motor or Hydraulic Gain'. There are three sliders with corresponding numerical values and percentage indicators:

- 1** Proportional Gain: 50% (indicated by a gauge icon)
- 2** Maximum Limit: 180 (indicated by a gauge icon with 'MAX')
- 3** Minimum to Move: 25 (indicated by a gauge icon with 'MIN')

At the bottom of the window, the status is shown as: Set: 0.0, Act: 0.0°, Err: 0.0°.

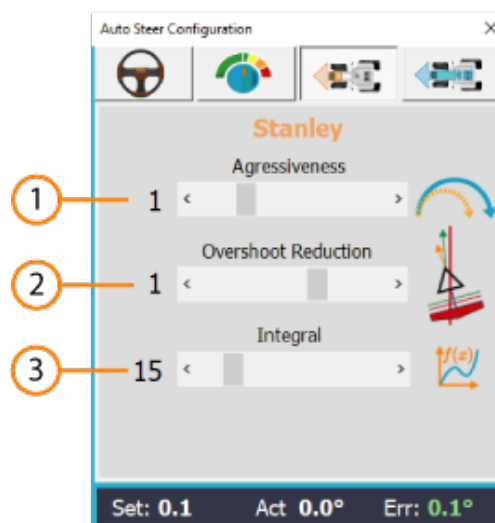
7.3.- Steer Configuration (Stanley Tab)



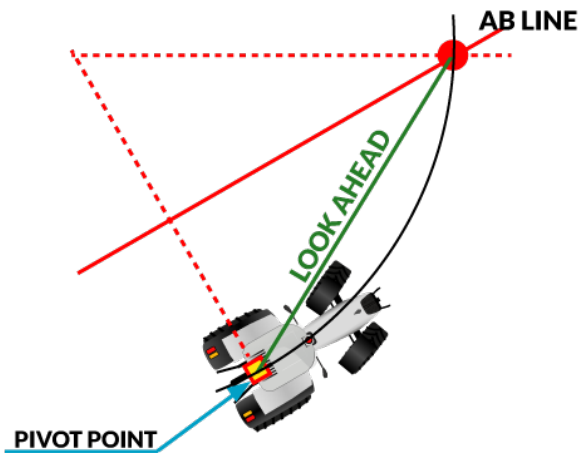
Stanley method use the front axle as its reference point. Meanwhile, it looks at both the heading error and cross-track error. In this method, the cross-track error is defined as the distance between the closest point on the path with the front axle of the vehicle.

7.3.-Stanley configuration

1	Aggressiveness	The aggressiveness works with distance. The more aggressive the faster it tries to steer towards the line with the risk of crossing over the line
2	Overshoot reduction	The overshoot affects how much opposition to aggressiveness there is by keeping the vehicle turning away from the line. It's the winner of the two, heading and distance away that determines the length of time to get to the line. Ideal is to balance them so you get quickly to the line without going too far over the line or oscillating back and forth (too aggressive).
3	Integral	Uses 2nd order derivatives (non-linear steering methods) to bring the vehicle back to the line. As in, as they approach the line it needs to start steering away from the line to prevent crossing back and forth over the line and never getting on course, like an icy road. the opposite is taking way too long to get back on the line.



7.4.-Steer configuration (Pure Pursuit Tab)



Pure Pursuit mode uses a look-ahead point which is a fixed distance on the reference path ahead of the vehicle as follows. The vehicle needs to proceed to that point using a steering angle which we need to compute. In this method, the centre of the rear axle is used as the reference point on the vehicle.

7.4.-PP configuration

1	Look Ahead	Distance in meters how far is reference point
2	Look Ahead Speed Gain	How far the look ahead goes ahead based on speed
3	Sidehill degrees	Sidehill compensation in degrees for each degree in roll
4	Integral	Uses 2nd order derivatives (non-linear steering methods) to bring the vehicle back to the line. As in, as they approach the line it needs to start steering away from the line to prevent crossing back and forth over the line and never getting on course, like an icy road. the opposite is taking way too long to get back on the line.

1 — 2,5

2 — 1,1

3 — 0,00

4 — 15

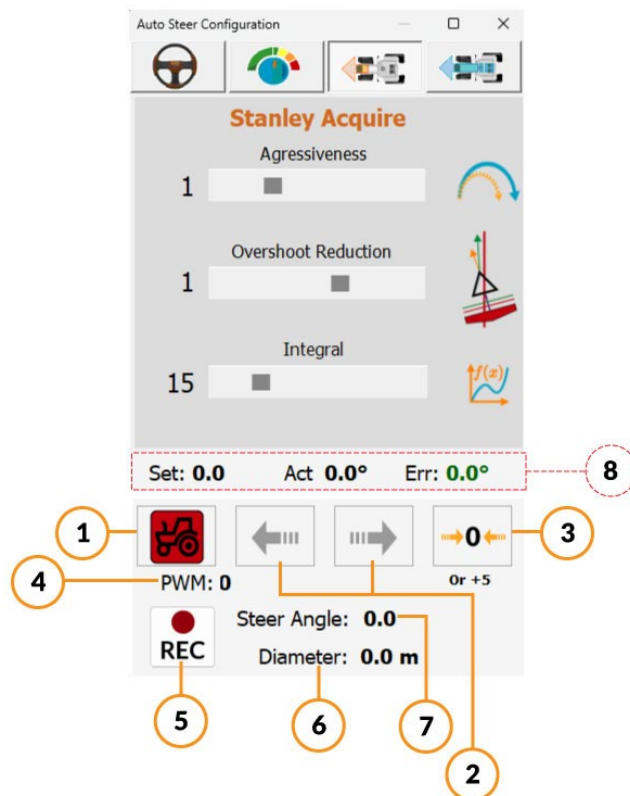
Set: 0,0 Act 0,0° Err: 0,0°

7.5.-Drive and test

If you touch the lower edge (double touch), the drive and test function appears

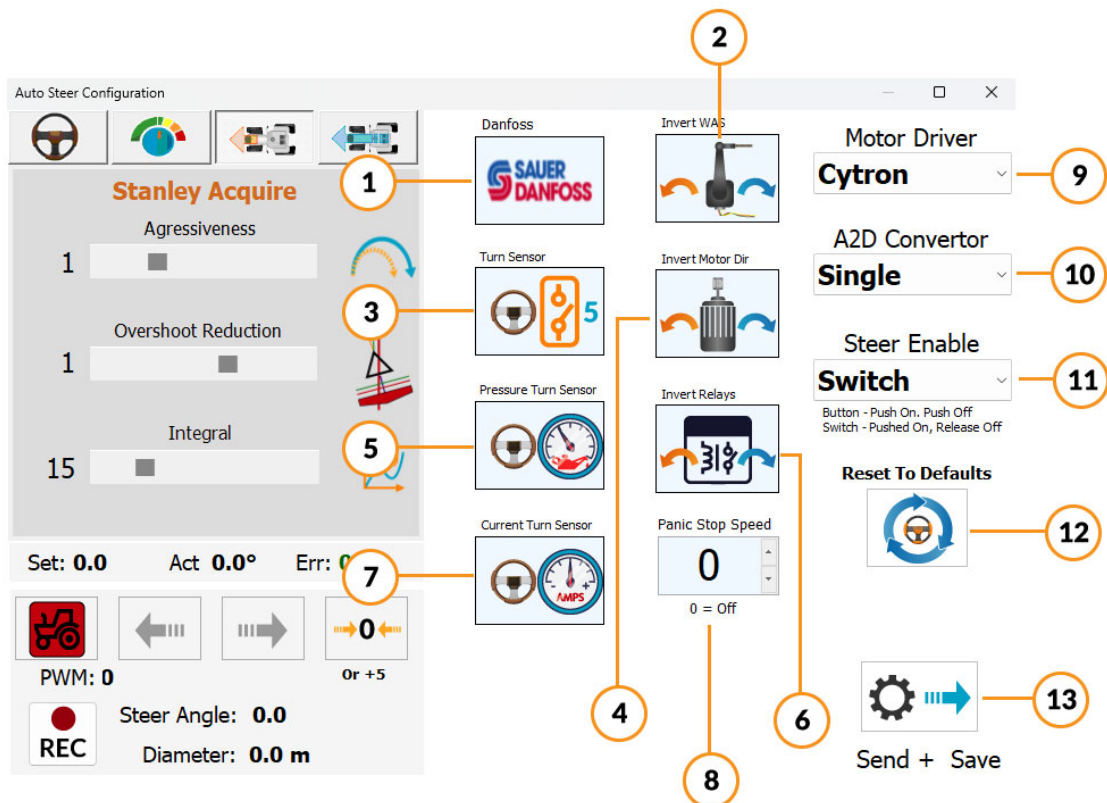
1	Drive	Connect the autosteer even if we don't have a line, drive straight. We can change the angle with the arrows.
2	Snap Left/Right	Increases by one degree in the selected direction
3	Zero	Set angle to zero, or if the is zero to +5
4	PWN	Shows PWM used to run motor/valves
5	REC	Function to calculate the real steering angle, drive steady and show the angle when finished.
6	Diameter	Shows calculated diameter for REC function
7	Steer Angle	Shows Steer angle Shows that is used to calculate the diameter, is very important to keep it steady
8	Expand Steer Config	Virtual Button (double push) shows all options in Steer configuration

With all these functions they help us to correctly configure the parameters of the Steer tab (7.1), WAS Zero, CPD, Akerman and Maximum Steer angle



3.5.1- Arduino steer configuration

1	Danfoss	Activate special configuration for Danfoss
2	Invert WAS	Turn right positive value/ Turn left negative value
3	Turn Sensor	When activated, box appears for counts selection
4	Invert Motor	
5	Pressure Turn Sensor	When activated, slider appears for pressure selection
6	Invert relays	
7	Current Turn Sensor	When activated, slider appears for amps selection
8	Panic Stop Speed	Stop autosteer at value, in Km/h
9	Selection Motor driver	Cytron or IBT2
10	A2D Convertor	Single or differential modes
11	Steer enable	None, switch or button
12	Reset	Reset to default values
11	Send and save	Mandatory for any change in this menu



8.- Steer Mode



By pressing the button, you can change the steering mode, the active mode is the one shown, P for Pure Pursuit and S for Stanley.

The small numbers above the icon are the integral correction calculations

11.-Steer Indicator

The direction indicator gives you information about the direction module. It also rotates like the wheels of the vehicle do.

There are four colors to know the status of the autosteer.



Purple

No steer module connected



Red

Steer module connected, not enabled



Orange

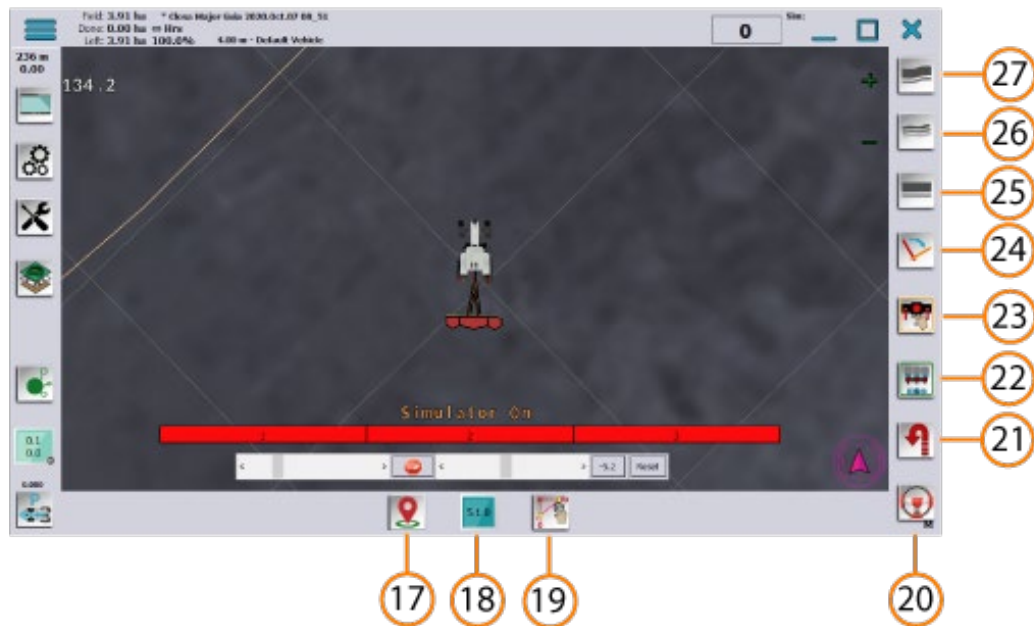
Steer Module connected and enabled; steer switch off



Green

All connected and enabled

AgOpenGPS Main Screen (Field Opened)



17.- Flags

18.-Version/Paint color Mapping

19.-AB line

20.-Autosteer

21.-Uturn

22.-Automatic sections

23.-Manual sections

24.-Cycle AB line

25.-AB line

26.- AB curve

27.-Contour

AgOpenGPS Main Screen (Field Opened AB Line selected)

Once an AB Line has been selected, new icons appear on the lower edge with new functions, all of them can be hidden from the General configuration, Icons submenu (3.7)



28.- Snap to pivot

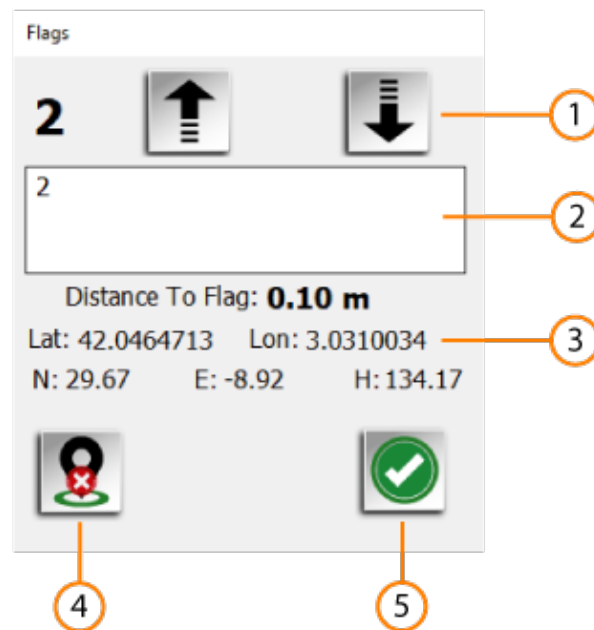
29.- AB Line Edit

30.- Your Skip

31.- Uturn skip

17.-Flags

7.5.-Drive and test AgOpenGPS allows you to flag anything you want to mark		
1	Navigation arrows	Browse through the available flags.
2	Flags list	
3	Flag information	
4	Delete Flag	
5	Done	



18.-Version/Paint color Mapping



Icon that shows the current version, and is the button to open the color picker for mapping.

In AgOpenGPS you can choose anything color for mapping



1.-Day mode

2.-Night mode

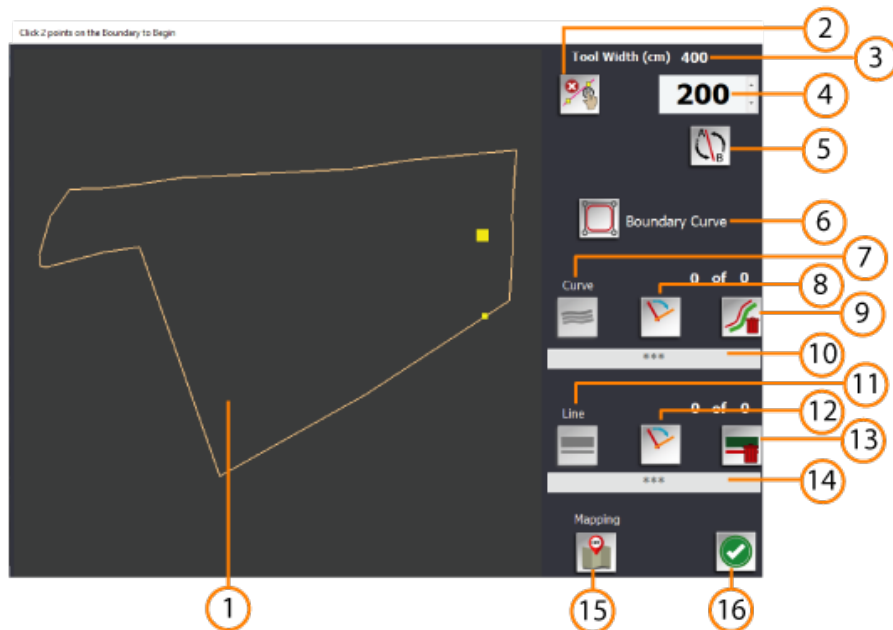
3.- Lock/Unlock colors

4.-Done

5.-Preset colors

19.-AB Line

1	Field Map	In the field map you can create all AB lines, existing ones are also shown. To create a new line, you only have to select two points on the boundary (the points can be deleted with the icon 2 "Point delete"). The line between the two points is created using the icon 7 "Curve" or the icon 11 "Line".
2	Delete Point	
3	Attachment width information	
4	Distance to boundary	By default, is half the width of the attachment
5	AB Line Swap direction	
6	Boundary curve	Create a curve line following the boundary limit
7	Curve	For manual calibration, or tweak calibration
8	Cycle Curve Lines	
9	Delete selected curve	
10	Curve information	Heading direction and time.
11	Line	
12	Cycle Lines	
13	Delete selected line	
14	Line Information	Heading direction and time.
15	Mapping	Shows in map paint sections.
16	Done	



20.-Autosteer

This icon is a button to activate the autosteer module (in green), if it is disconnected or deactivated, it is shown in red.

The letter refers to the option in general configuration 3.1.4, M for Manual and R for remote

3.1.4.1.- Button to let the software button follow the steer switch / button status



Green

ON



Red

OFF

21.-Uturn



Green

ON



Red

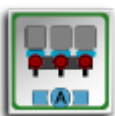
OFF

Uturn configuration in 3.4

22.-Automatic sections



ON



OFF

This button allows control sections with machine module.

You can see sections on or off in section display (9)

23.-Manual sections



ON

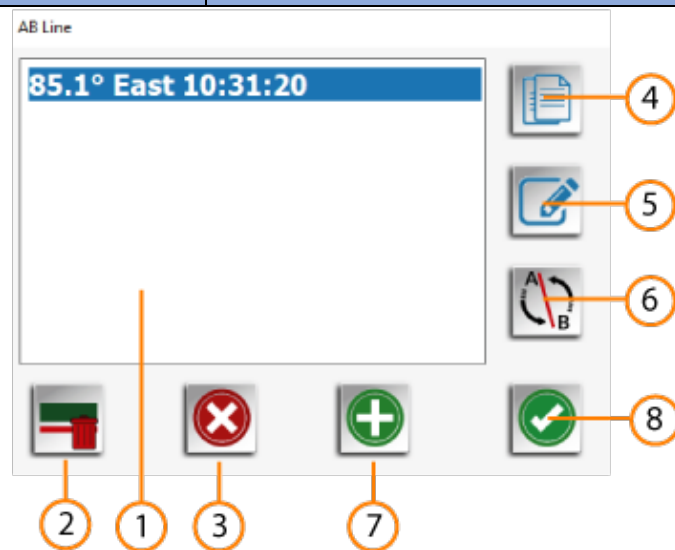


OFF

This button allows you to control sections manually

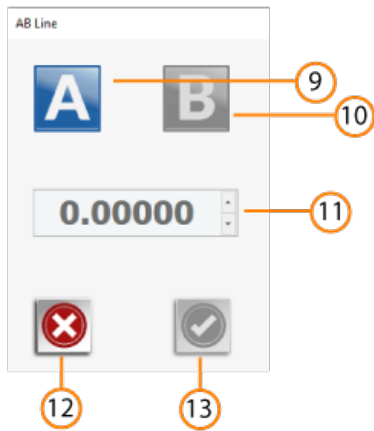
You can see and operate individual sections (on or off) in section display (9)

25/26.-AB Line/Curve		
1	Line list	
2	Delete selected line	
3	Cancel	
4	Duplicate line	
5	Edit Line	
6	Change direction line	
7	Add AB line	New window appears, point 9 and following
8	Done	



This new window allows you to make a new AB Line driving between two points (A to B)

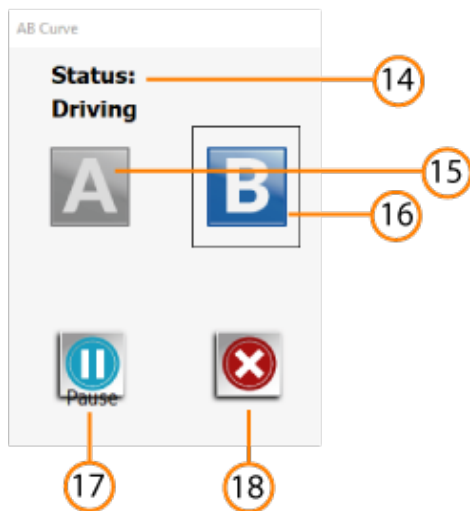
In Line



- 9 A Point
- 10 B Point
- 11 Heading direction
- 12 Cancel
- 13 Done

This new window allows you to make a new path driving between two points (A to B)

In Curve



- 14 Status
- 15 A Point
- 16 B Point
- 17 REC/Pause
- 18 Cancel

27.-Contour

This button change line to contour line

When activated a new button appears.



1 Lock/Unlock

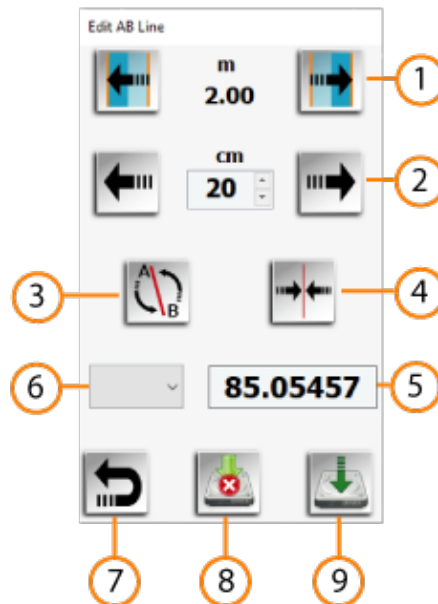
Locks or unlocks the line tracking, forcing to follow the line once it is locked, if it is in the locked position an intermittent message appears on the screen

28.-Snap to pivot



This button sets the line at the pivot point

29.-AB Line Edit		
1	Half Snap	
2	Snap	
3	Change direction line	
4	Snap to pivot	
5	Heading direction	You can manually edit heading direction
6	Presets heading direction	0/90/180/270 Degrees
7	Cancel and return	
8	Done but don't save	
9	Save and done	



30.-Your Skip

Automatic skips in uturn like picture in icon



Enabled

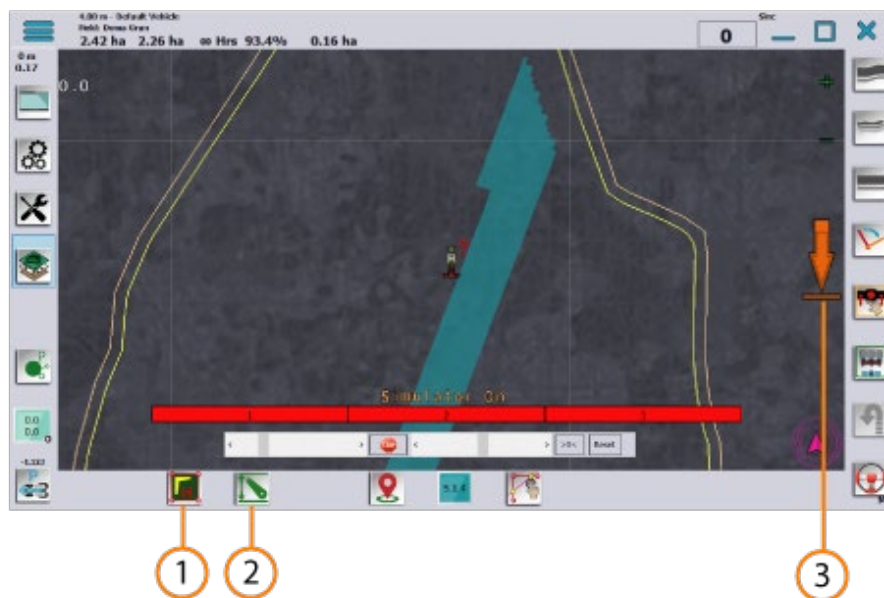


Disabled

31.- Uturn Skips

Drop-down list with skip options in U Turn (0 to 10)

32.- Headland (active)



- 1 Headland ON/OFF
- 2 Lift Control ON/OFF
- 3 Arrow lift control UP/DOWN info