



Solsteer Twin-Steer Installation and Set-up Manual

Automatic steering system





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1. Important User Information

1.1 The Solsteer Twin-Steer System

The Solsteer Twin-Steer System actively steers the rear axle so that rear-mounted implements are able to follow the same guidance lines as the tractor itself. This is particularly useful for hillside correction when on a slope, or when there is uneven terrain.

2. Installation Guide

Prior to the installation of the Agri-Steer please verify with the vehicle manufacturer that the vehicle has the following:

- A factory installed steering system such as the Case IH AccuGuide Ready, the New Holland IntelliSteer Ready, the AGCO AutoGuide Ready, the Fendt VarioGuide Ready, the Deutz Agrosky Ready or other manufacturer steering systems.
- Calibrated factory installed components such as a steering valve, steering wheel encoder and wheel angle sensor.
- A steering system in good working order with no play and proportionally steers left and right.
- An electrical system and battery operating correctly and in good working condition.
- A clean internal environment within the vehicle cab to ensure safe installation of hardware and for safe cable routing.

If the vehicle does not satisfy any of the above requirements, then these must be rectified prior to installation of the Solsteer Twin-Steer System.

The Solsteer Twin-Steer System contains the following components:

Part Number	Quantity	Description
JCB/008	1	JCB Rear Receiver Adaptor

Additional parts not provided include, but are still required are the following:

- John Deere GreenStar display and mounting components
- John Deere StarFire receiver and mounting components

2. Installation Guide

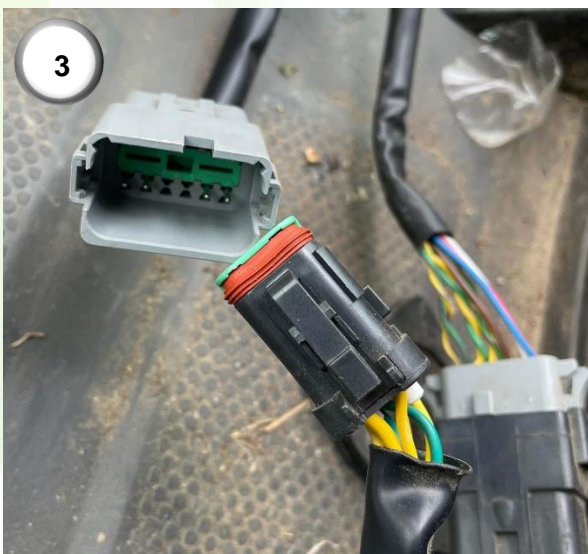
To ensure safe and correct installation of the Solsteer Twin-Steer please adhere closely to the following instructions:



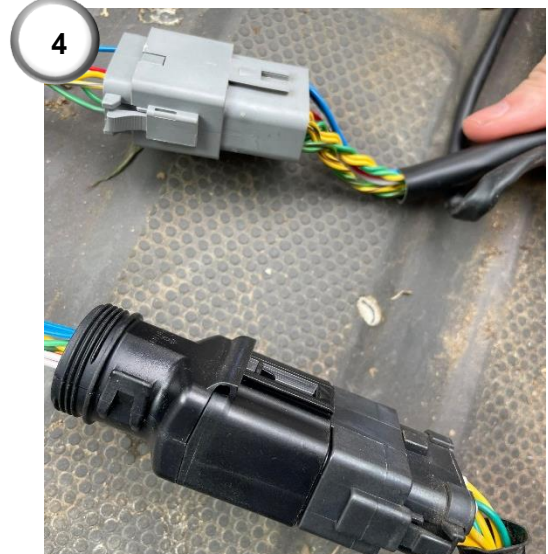
1) Mount the StarFire receiver behind the rear axle (bracket is not supplied).



2) In the tractor cab, remove the cover located on the wheel arch on the right-hand side of the cab.



3) Disconnect the two connectors.



4) Tee into the two 12-way connectors with the JCB Rear Receiver Adaptor harness.

3. JCB Set-up Guide



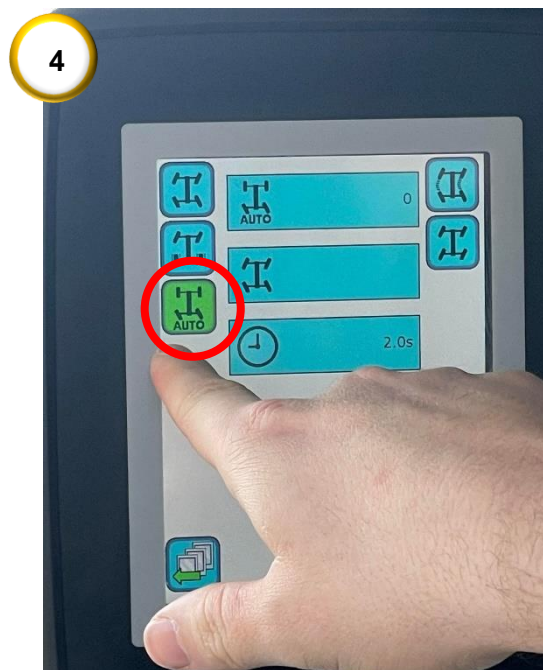
1) Plug in the remaining 12-way Deutsch connector of the JCB Rear Receiver Adaptor Harness into the StarFire receiver.



2) Switch on the ignition of the tractor. On the back-right pillar of the cab lift and twist the knob to the 'custom steering' position.

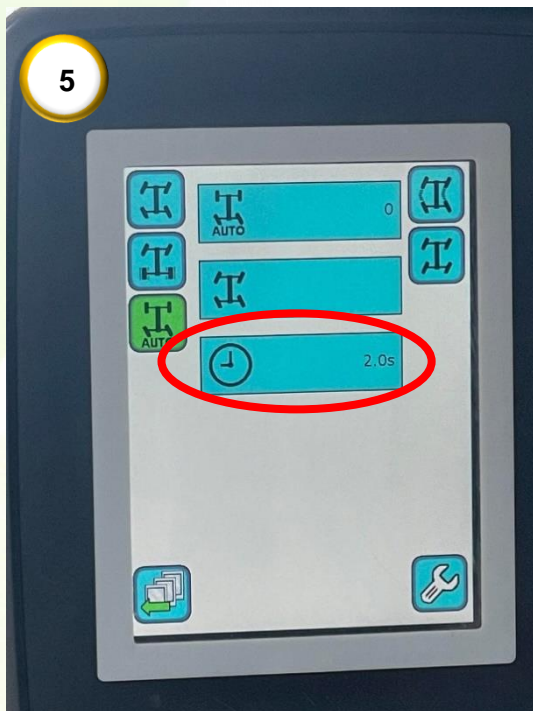


3) On the JCB display select the custom steering button.

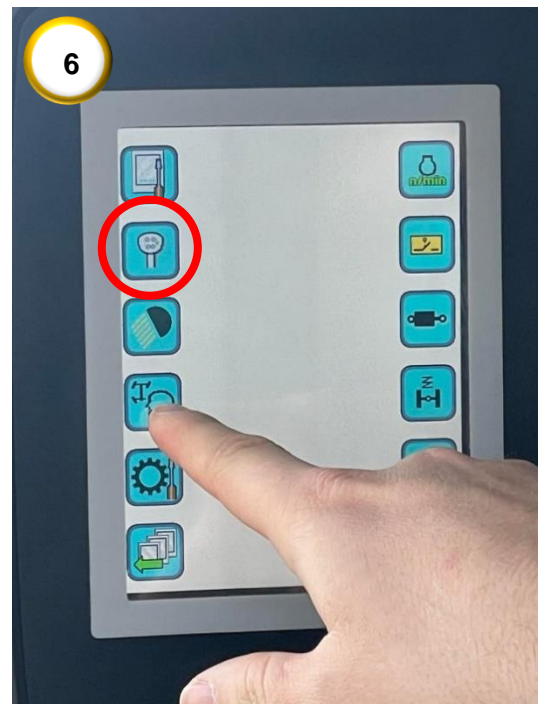


4) Select 'AUTO' from the menu, making sure it turns green.

3. JCB Set-up Guide



5) If using 'auto engage' mode, set the time period between the front wheels engaging and the rear wheels engaging.



6) Return to the main menu again. Select the 'joystick' icon.

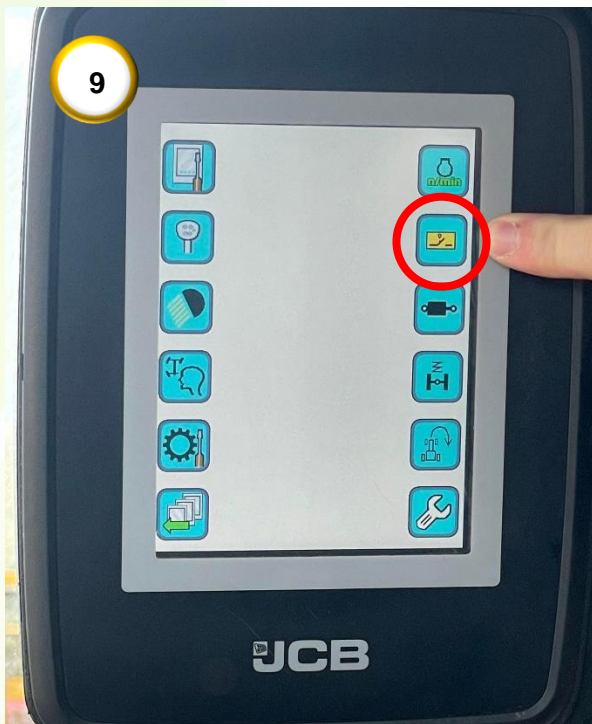


7) If using 'manual' mode, check the two buttons on the left are set up on 'AUTO' for front wheel engagement and rear wheel engagement. If using 'auto' mode check that only the top left button has been assigned to 'AUTO'.



8) Ensure that the 'GPS' button is enabled, ready for auto-steering.

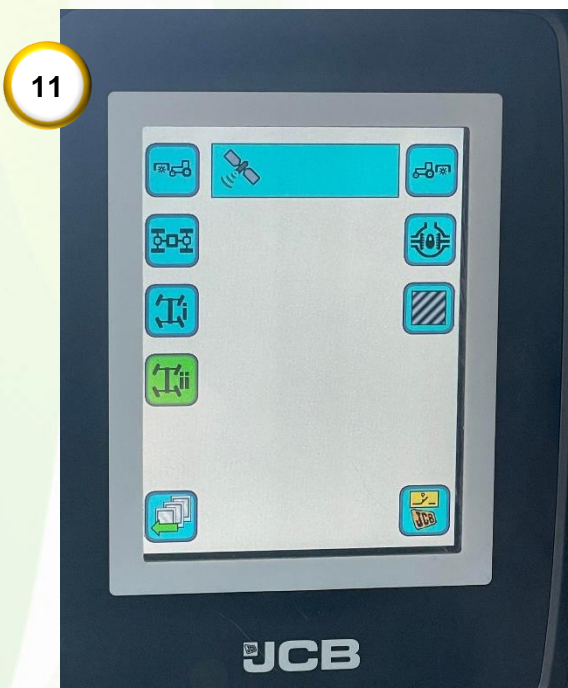
3. JCB Set-up Guide



9) Press the icon shown. This step is to ensure that the rear axle will not lock upon auto-steer engagement.

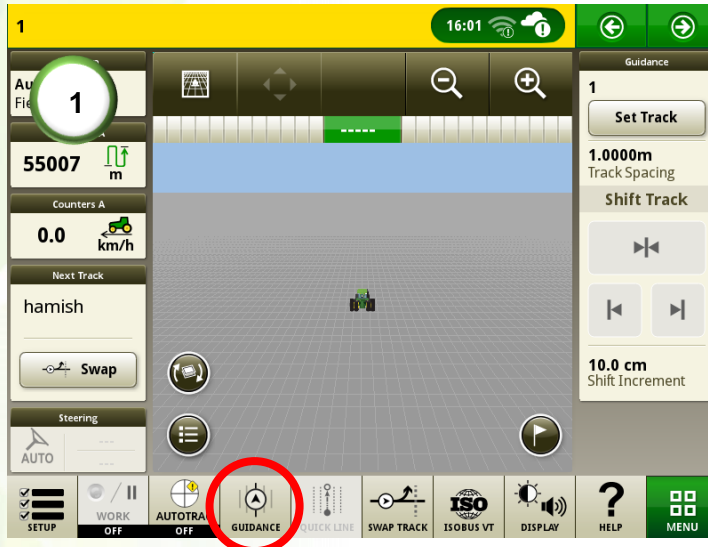


10) Select the shown button.

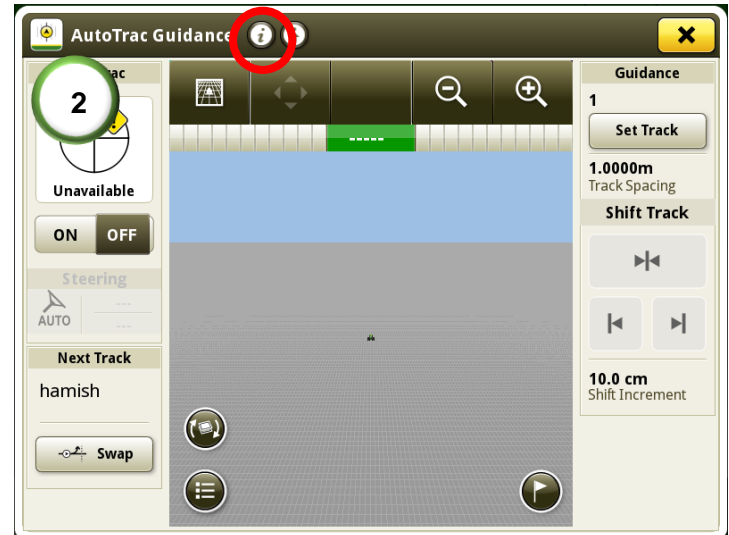


11) Ensure that the satellite icon is shown, and is **not** ticked, otherwise the rear axle will lock automatically upon engagement.

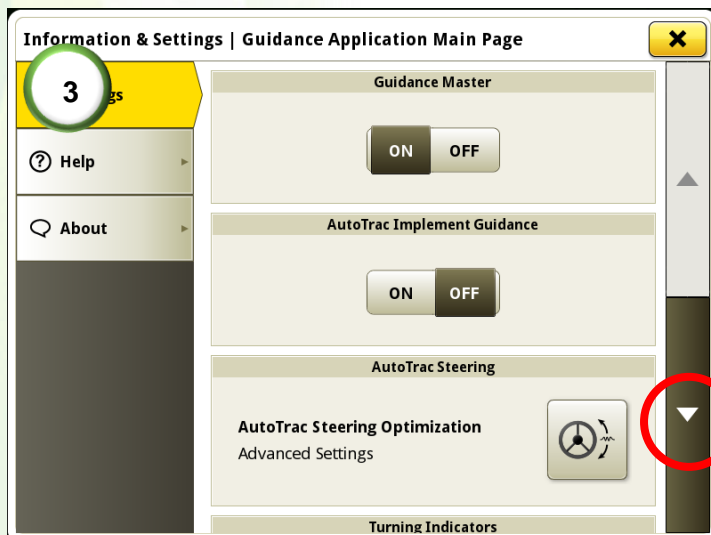
4. Greenstar Set-up Guide



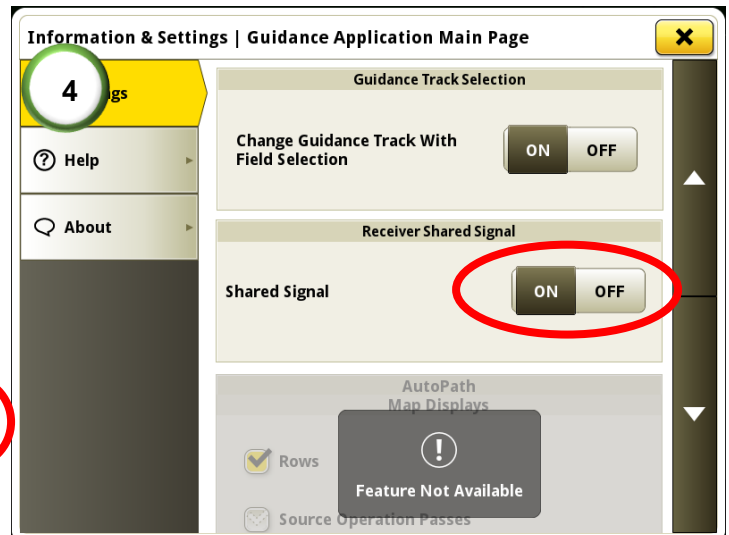
1) On the main Greenstar VT, select 'Guidance'.



2) Select the 'info' button at the top of the screen.

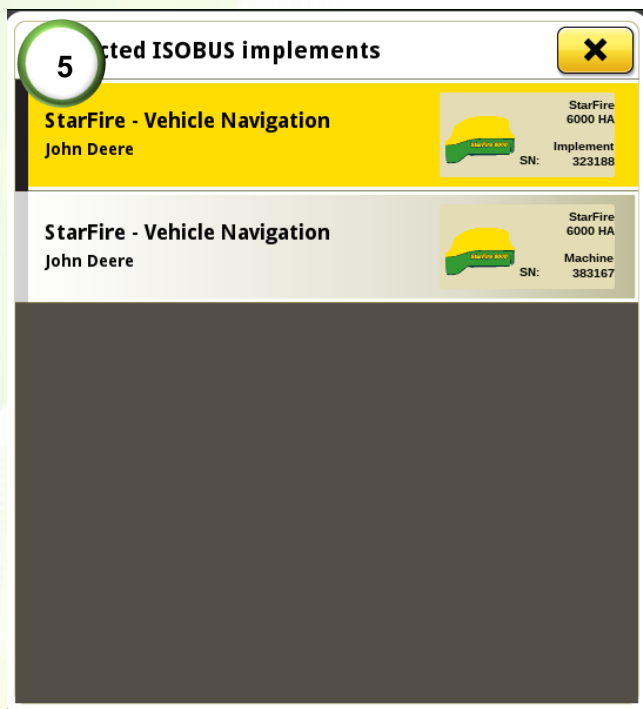


3) Continue to scroll downward in the 'Information & Settings' menu until 'Receiver Shared Signal' is reached.

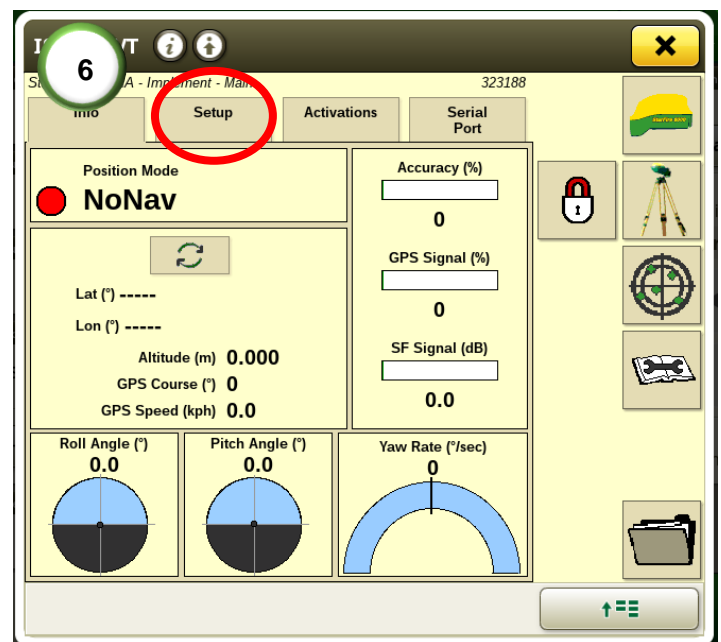


4) Make sure that the 'Shared Signal' is on.

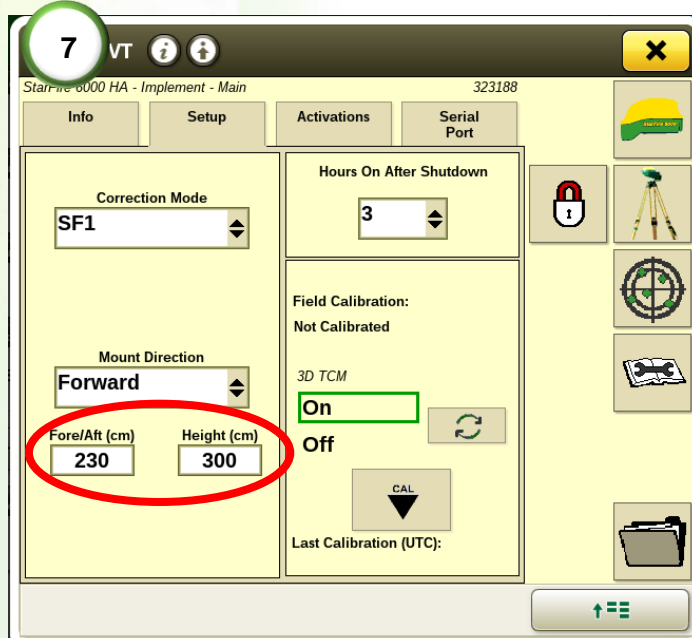
4. Greenstar Set-up Guide



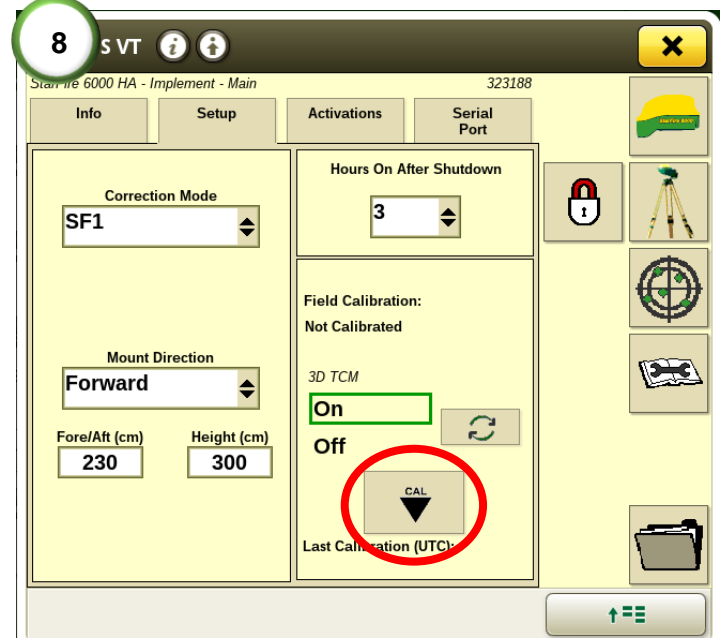
5) Return to the GreenStar home page and select 'ISOBUS VT'. Ensure that one receiver says 'machine' and the other says 'implement'. Select the implement StarFire receiver.



6) Select the 'Setup' page.



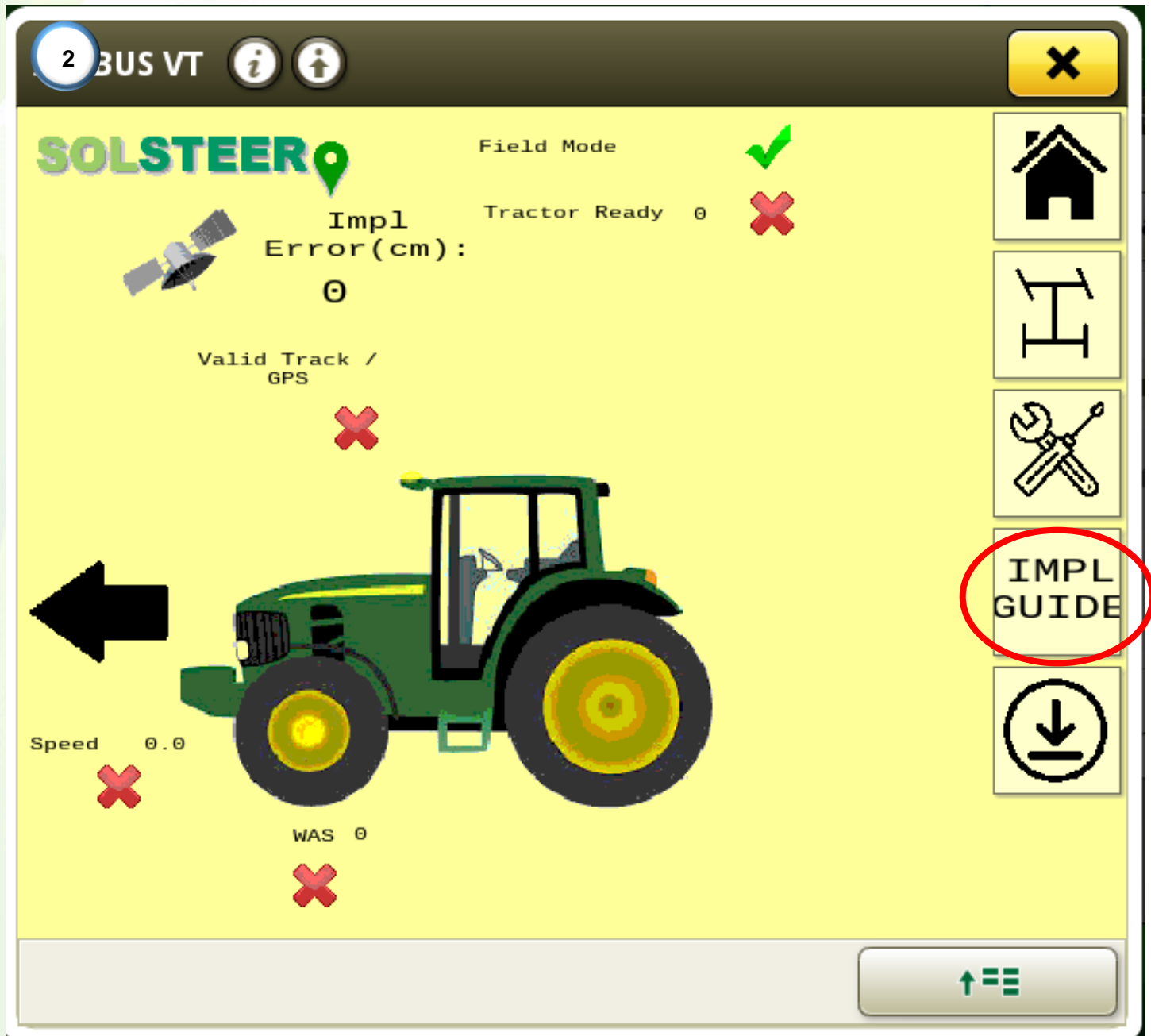
7) Ensure the vehicle is on level ground. Measure the Fore/Aft distance and the height of the implement receiver and enter it into the two boxes shown.



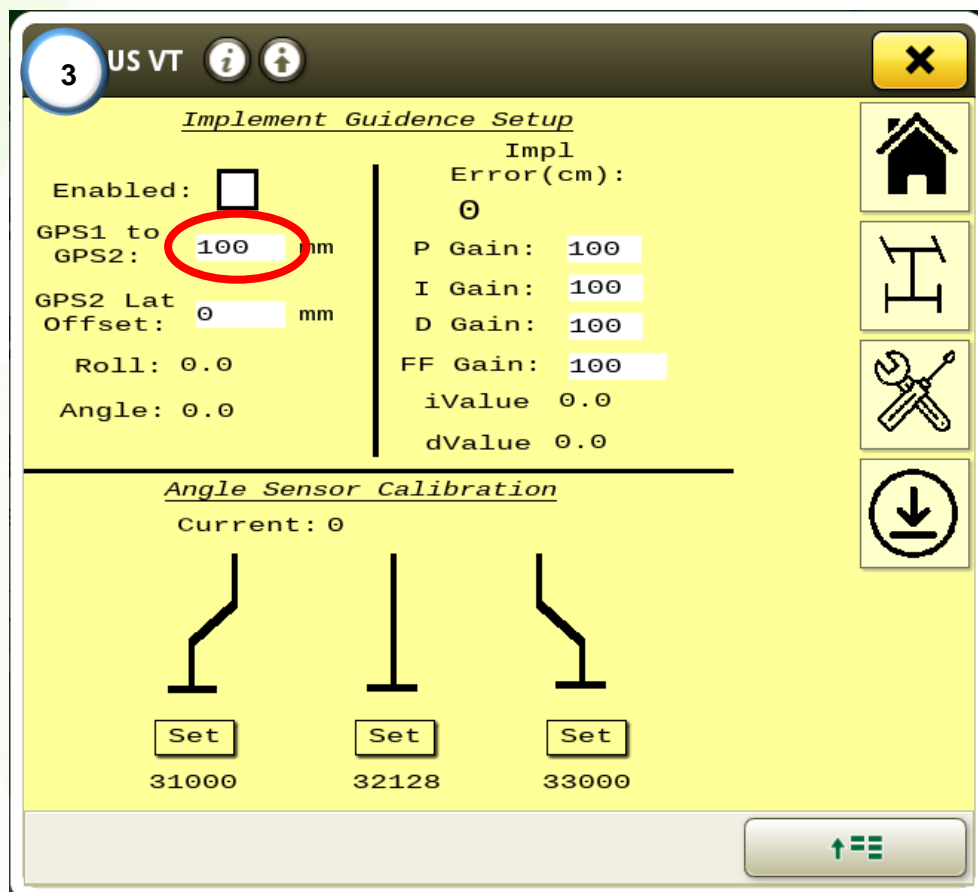
8) Select the 'Cal' button. This will bring the TCM calibration routine. Follow the on-screen instructions. Repeat steps 5-8 for the machine receiver.

5. Solsteer Twin-Steer Set-up

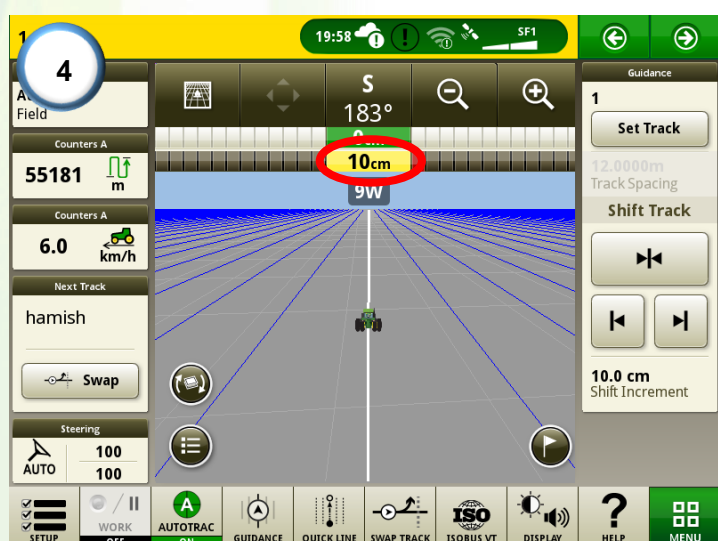
1) Return to the GreenStar home page and select 'ISOBUS VT'. Select the Solsteer VT and the following page will be shown.



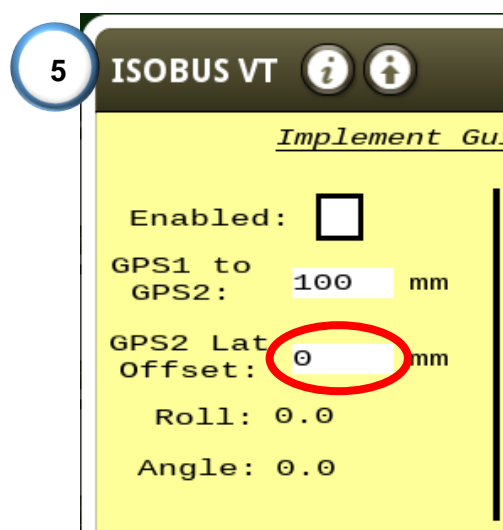
2) Select 'IMPL GUIDE' softkey and the following page will be shown (see next page).



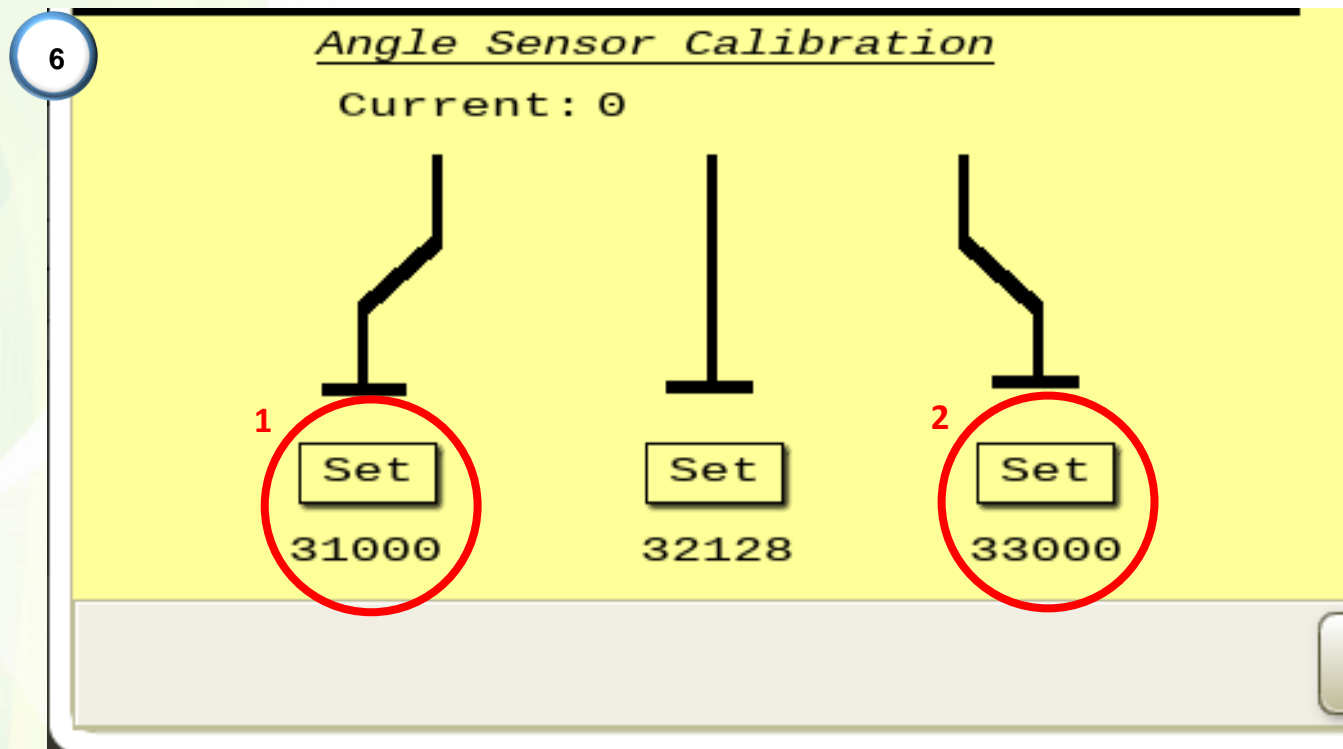
3) Measure the distance between the machine receiver and the implement receiver. Enter the value into the 'GPS1 to GPS2' box. Tick the 'Enabled' tickbox to active implement steering.



4) Lock the rear axle of the machine and engage the steering. Record the value of the implement receiver cross track error.



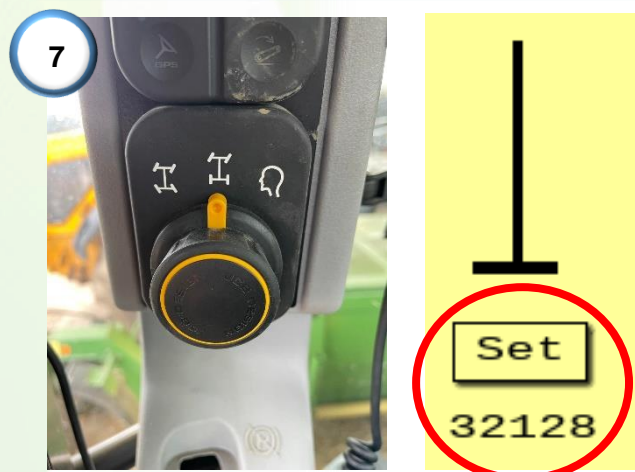
5) Return to the Solsteer VT page. Enter the value into the box shown, making sure it is the **negative** version of the value. For example for a cross track error of 10cm enter **-100mm** into the box.



6) Ensure the tractor is in a wide open space and is on a level surface. For the angle sensor calibration routine, the wheel angle sensor at the **rear** of the tractor is calibrated.

To calibrate the rear full lock left (1) turn the front wheels full lock to the **right**, ensuring that the value changes as you turn. Once reaching full lock left press the 'Set' value.

To calibrate the rear full lock right (2) turn the front wheels full lock to the **left**, ensuring that the value changes as you turn. Once reaching full lock right press the 'Set' value.



7) To calibrate the straight lock position, lift and twist the knob on the upright pillar in the cab. This will lock the rear wheels in position. Turn the front wheels to the straight position and press the 'Set' button.

6. Troubleshooting



The following contains a series of common problems, their causes, and the solutions to be carried out to resolve them. The problems and causes are listed in order of likelihood in occurring.

The SolSteer ISO user interface will not display

Causes	Solutions
ISOBUS is disabled in the John Deere Display	Check ISOBUS is enabled in the John Deere Display
The priority number is incorrect	Check the priority number and set it as the highest priority number possible
The CANBUS connection is faulty on the GCAN side of the steering controller	Check CANBUS connections are working with 2.5 volts on CAN high and CAN low respectively