

IC18 SPREADER JOB COMPUTER USER MANUAL



Software version 1.05
European, Volume Based



A Subsidiary of  Spraying Systems Co.®

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To ensure optimal use of the equipment, please read this manual thoroughly. Please contact TeeJet Technologies Customer Support or an authorized TeeJet Technologies dealer if additional support is required.

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- ▶ Missing or poor signal coverage or a succession hereof from external transmitters/receivers used by the buyer; Functional faults which apply to or from a PC-program or PC equipment not delivered by the seller;
- ▶ Faults that may arise from the buyers' negligence to react to warnings and fault messages from the product or that can be traced to negligence and/or absent constant control of the work carried out in comparison to the planned job.

When implementing any new equipment the buyer must take great care and pay attention. Any doubts as to the correct operation/use should result in contacting the seller's service department.

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CHAPTER 1 – PRODUCT OVERVIEW

Congratulations on the purchase of your new IC18 Spreader ECU built on the ISOBUS architecture. When used within the guidelines of the this manual, the IC18 controller will be a reliable application tool.

This manual covers the European functions of the IC18 ECU. For North America functions, see manual number 98-05173.

Use with your existing VT or the Matrix 570VT for dry product application

- Works seamlessly and displays on any ISOBUS VT
- Easy navigation menu and data rich display
- Add additional ISOBUS ECUs as your needs change
- Provides basic rate control or variable rate if the connecting VT has variable rate task control capabilities
- Standardized plugs, cables and software simplify installation and connectivity and result in true “plug and play” technology. IC18 ECU resides on the implement, reducing hardware in the cab

Figure 1-1: IC18 Job Computer



OPTIONAL SYSTEM COMPONENTS

Matrix 570VT

The Matrix 570VT is a simple to operate, ISOBUS-certified 5.7" color touch screen display suitable for bright daylight and nighttime operation

Figure 1-2: Matrix 570VT



ISOBUS Job Computer : IC18 Spreader European

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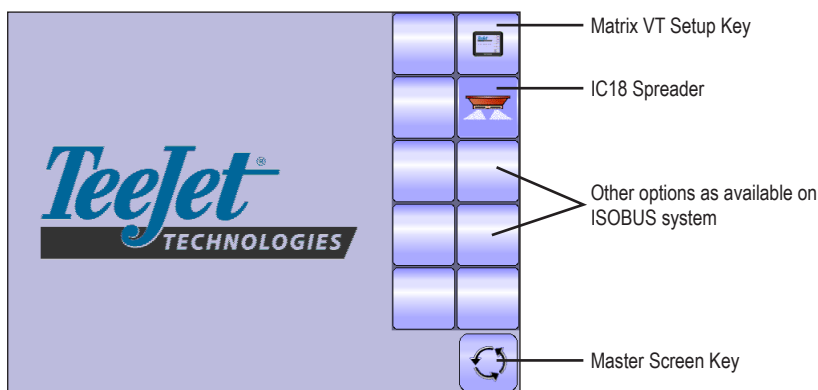
CHAPTER 2 – GETTING STARTED

- A firm touch is required when selecting a screen icon.
- Settings are NOT automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.
- The console needs to be cycled off and back on when changing or attaching equipment to the system.
- The menu structure on your display might vary from the one displayed in this User Manual depending on the virtual terminal being used.

START UP

Power is continuously supplied to the job computer. The virtual terminal will give access to the job computer options and operation.

Figure 2-1: Master Screen



CALCULATION MODE

The IC18 job computer is programmed to calculate calibrations based on European or North American methods.

- ◀ European – Gate Height is NOT calculated into the product application and calibrations will be based on volume per pulse.
- ◀ North America – Gate Height is calculated into the product application and calibrations will be based on pulses per volume.

This setting has been established before leaving the factory, but it can be changed after purchase with assistance from TeeJet Technologies Customer Service or your local dealer through the OEM setup menu options.

Figure 2-2: European

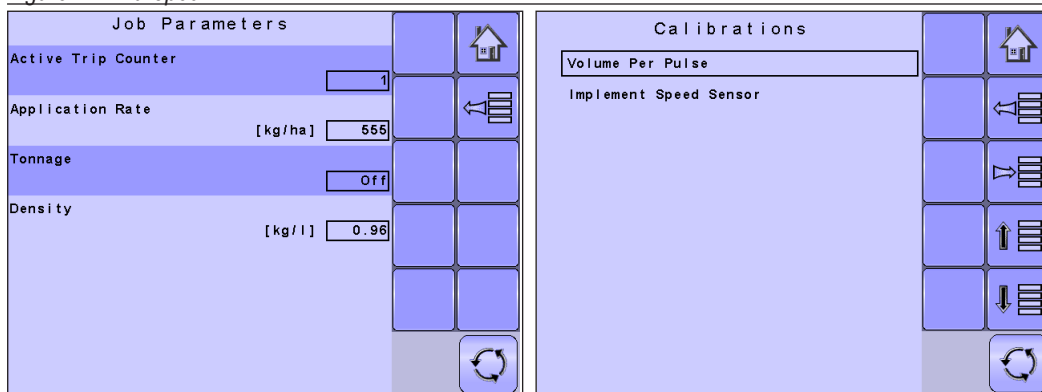
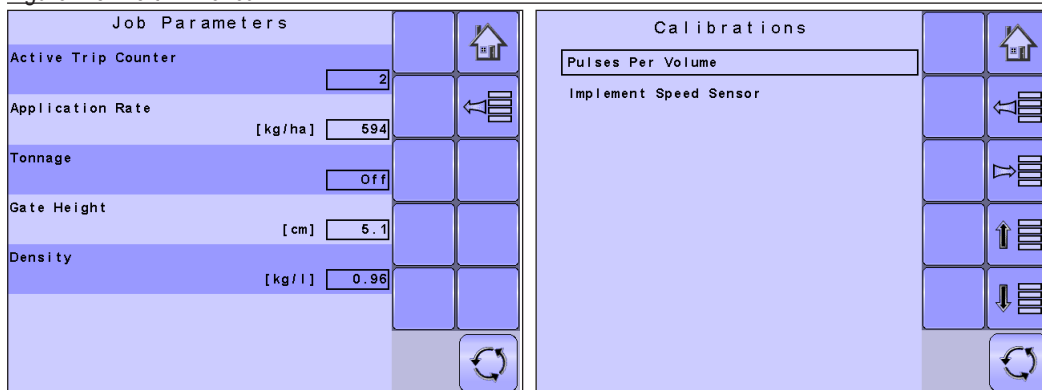


Figure 2-3: North America



This manual discusses specifically the functions and options in European Mode. See the specific IC18 Spreader: North America User Manual for functions and options in North America Mode.

ISOBUS Job Computer : IC18 Spreader European

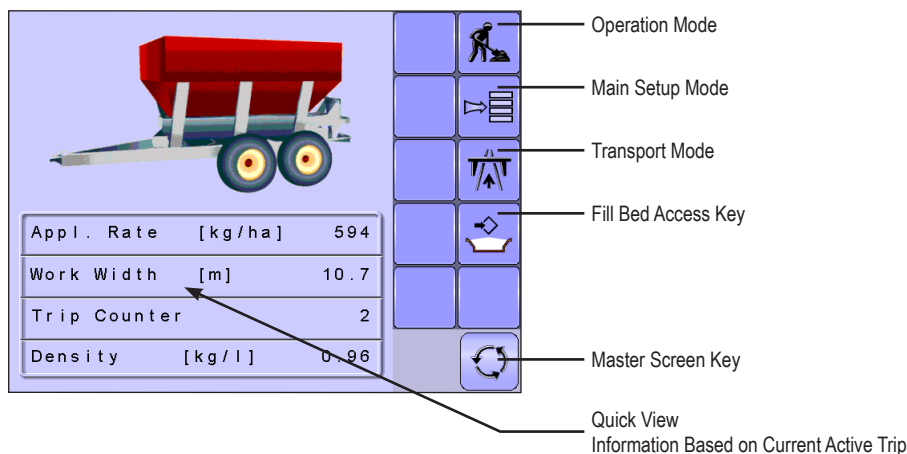
PAGE LAYOUT AND NAVIGATION

The Master Screen gives access to the systems currently available on your VT. From the Master Screen, the Home Screen gives access to the IC18's available functions.

Home Screen

The Home Screen gives access to the IC18's available functions: Operation Mode, Transport Mode and Main Setup.

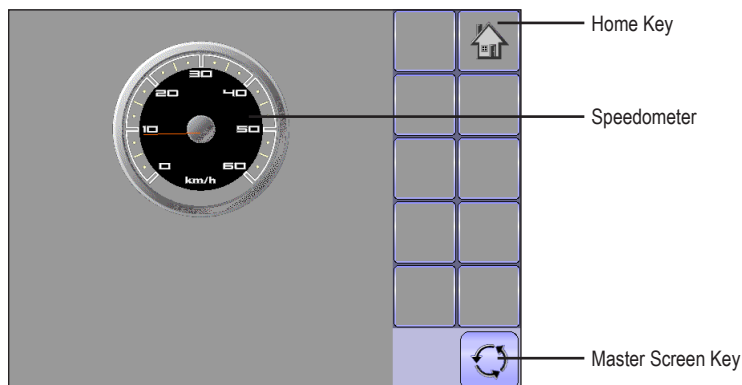
Figure 2-4: Home Screen



Transport Mode

While in Transport Mode, all operation functions are locked off and cannot be activated.

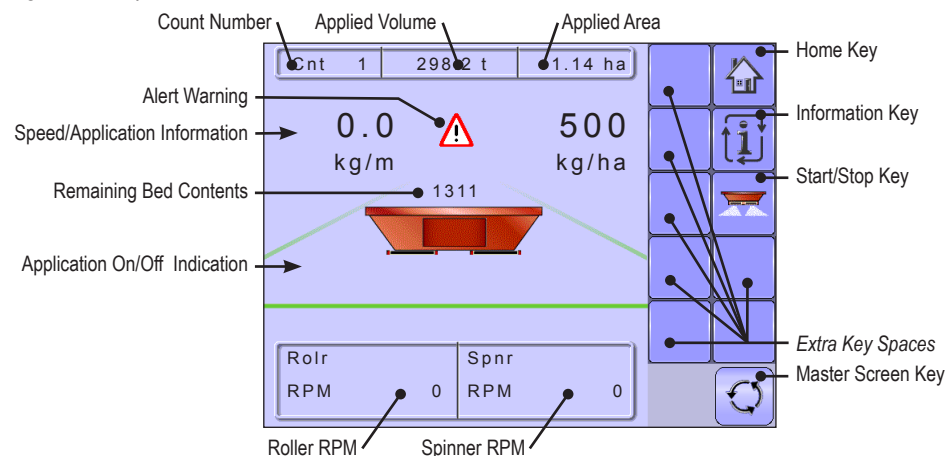
Figure 2-5: Transport Mode



Operation Mode

Information on the Operation screen will vary depending on the parameters set by the user and the OEM.

Figure 2-6: Operation Mode

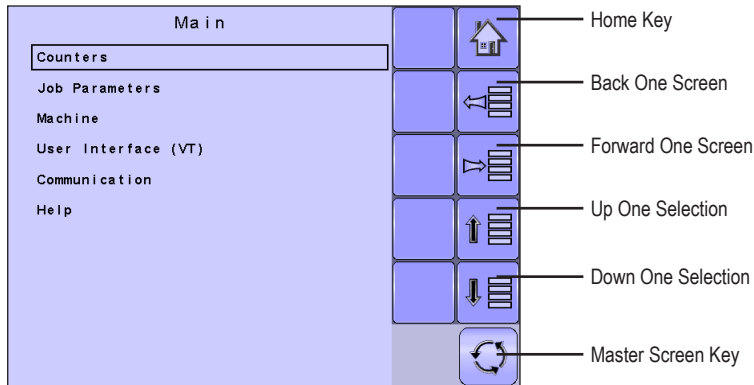


Main Setup Mode

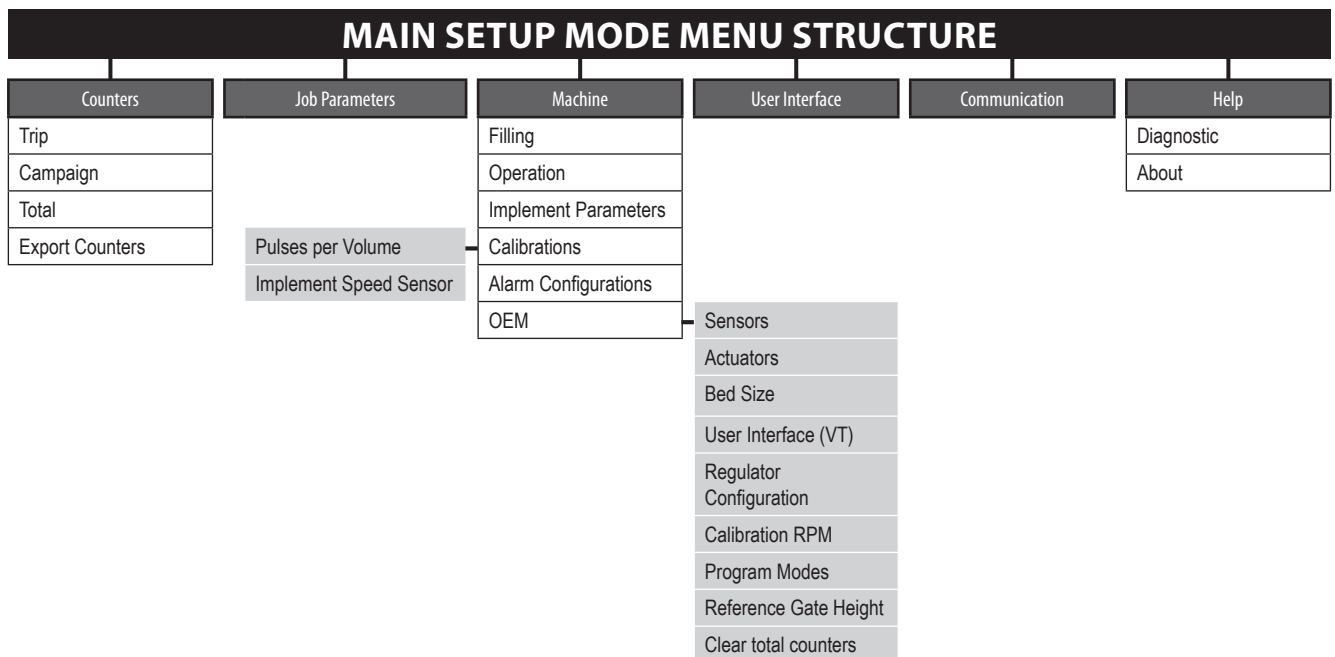


The main setup menu contains six options. Each of these options either directly access settings or additional menus.

Figure 2-7: Main Setup Screen



The table below outlines the additional menus and directs you to the setup pages for further information.



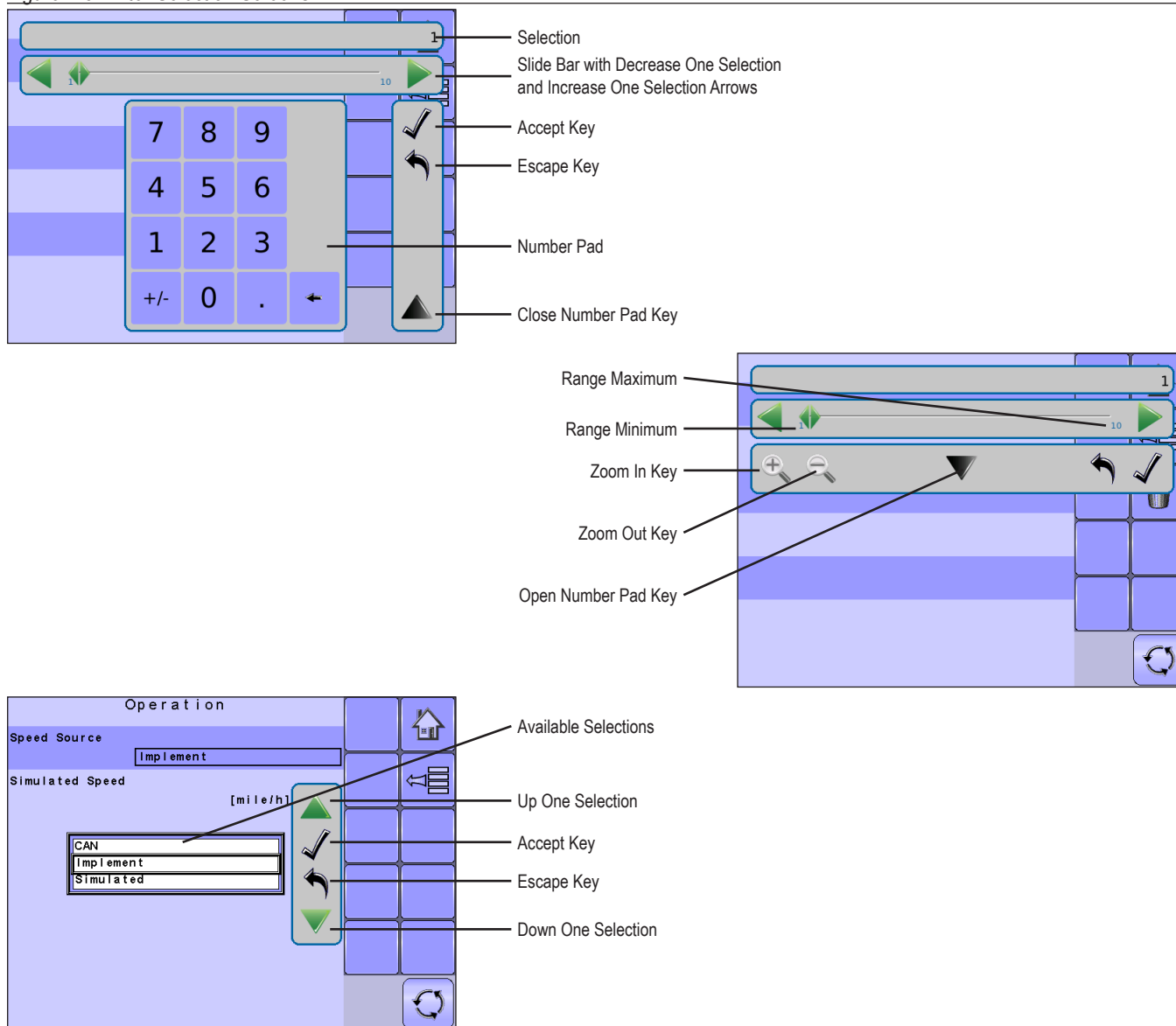
NOTE: Select functions may not be visible due to OEM settings, available equipment or sensors.

The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment.

ISOBUS Job Computer : IC18 Spreader European

Main Setup Menu Icons and Section Overviews

Figure 2-8: Enter Selection Screens



Section or Icon	Description
Accept Key	Accepts the new selection
Close Number Pad Key	Minimizes the number pad
Decrease One Selection Arrow	Decreases the setting
Down One Selection Arrow	Highlights the selection below
Escape Key	Escapes without saving changes
Increase One Selection Arrow	Increases the setting
Number Pad	Use the numbers to set the selection value
Open Number Pad Key	Maximizes the number pad

Section or Icon	Description
Selection	Displays the current or new selection
Slider	Slide to the left to decrease or right to increase the selection
Slide Bar	Selects the setting by pressing and releasing on the slide bar or pressing and dragging the Slider to a designated value. Range for a specific setting is displayed on the slide bar.
Up One Selection Arrow	Highlights the selection above
Zoom In Key	Narrows slide bar range. Gray = maximum zoom level.
Zoom Out Key	Expands slide bar range. Gray = minimum zoom level.

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CHAPTER 3 – MAIN SETUP



Main Setup Mode configures the Counters, Job Parameters, Machine, User Interface, Communication and Help options.

NOTE: The menu structure on your display might vary from the one displayed in this User Manual depending on the virtual terminal being used.

CALCULATION MODE

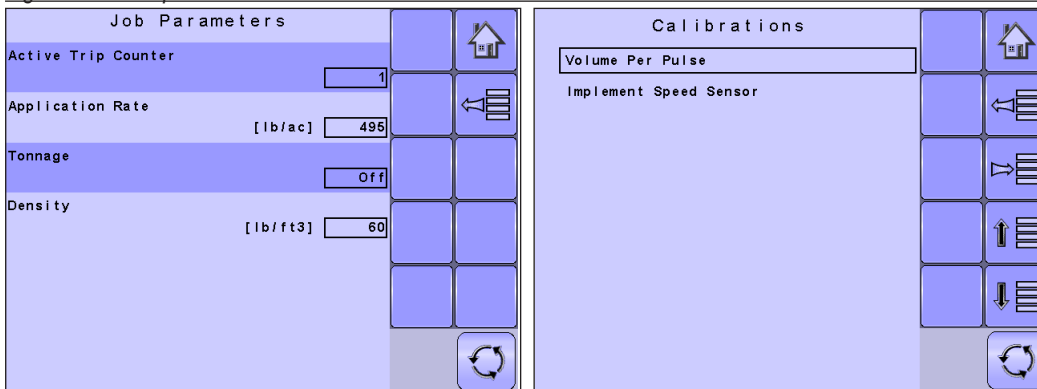
The IC18 job computer is programmed to calculate calibrations based on European or North American methods.

◀ European – Gate Height is NOT calculated into the product application and calibrations will be based on volume per pulse.

◀ North America – Gate Height is calculated into the product application and calibrations will be based on pulses per volume.

This setting has been established before leaving the factory, but it can be changed after purchase with assistance from TeeJet Technologies Customer Service or your local dealer through the OEM setup menu options.

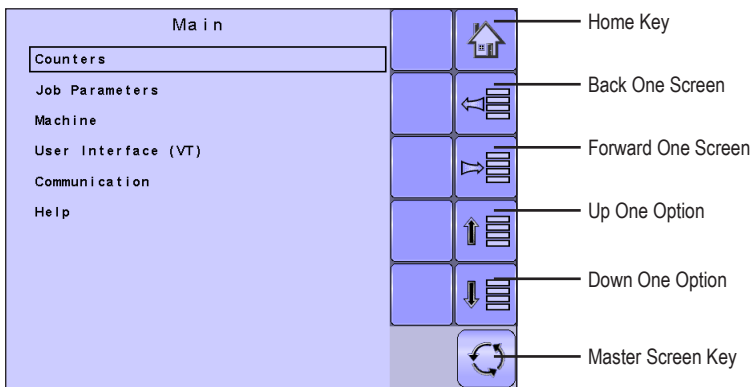
Figure 3-1: European



This manual discusses specifically the functions and options in European Mode. See the specific IC18 Spreader: North America User Manual for functions and options in North America Mode.

MAIN SETUP MODE OVERVIEW

Figure 3-2: Main Setup Screen





MAIN SETUP MODE MENU STRUCTURE

Counters (pages xx-xx)	Job Parameters (pages xx-xx)	Machine (pages xx-xx)	User Interface (pages xx)	Communication (pages xx)	Help (pages xx-xx)
Trip		Filling			Diagnostic
Campaign		Operation			About
Total		Implement parameters			
Export Counters	Pulses per Volume	Calibrations			
	Implement Speed Sensor	Alarm configurations			
		OEM			



The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment. Refer to the OEM Setup Manual for information regarding OEM settings.

ISOBUS Job Computer : IC18 Spreader European

Main Setup Screen

NOTE: Settings are NOT automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.

To access the Main Setup screens:

1. Select IC18 JOB SPREADER KEY  from the Master Screen.
2. Select MAIN SETUP SCREEN KEY  from the Home Screen.
3. Select from:
 - ▶ Counters – used to provide an overview of various system counters:
 - ◀ Trip – used to display information regarding area, distance, time and amount applied.
 - ◀ Campaign – used to display information regarding area, amount applied and time for all trips
 - ◀ Total – used to display information regarding area, amount applied, and time for all activity
 - ◀ Export Counters – allows counter information to be exported in HTML or CSV format
 - ▶ Job Parameters – used to configure application settings including trip counter, application rate, tonnage, gate height and density:
 - ▶ Machine – used to configure machine settings:
 - ◀ Filling – establishes the amount of material remaining in the tank.
 - ◀ Operation – establishes Speed Source, and Simulated Speed
 - ◀ Implement Parameters – establishes the Working Width, Fast Empty Bed RPM and Master Switch location
 - ◀ Calibrations – establishes either manual or automatic settings of the sensors
 - ◀ Alarm Configurations – establishes alarms on or off as well as sets their trigger level
 - ◀ OEM – the OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment. Refer to the OEM Setup Manual for information regarding OEM settings.
 - ▶ User Interface – used to allow the operator to select the system virtual terminal (VT) if more than one VT is available on the ISOBUS CAN:
 - ▶ Communication – used to establish the IC18's ability to communicate with an external computer:
 - ▶ Help – allows the operator to choose between Diagnostics and the About screen:
 - ◀ Diagnostic – used to troubleshoot input/output of the controller (sensor or actuator).
 - ◀ About – used to provide information on the console such as software version, build number, etc

NOTE: The menu structure on your display might vary from the one displayed in this User Guide depending on the virtual terminal being used. This User Guide will display all possible options.

Master Screen



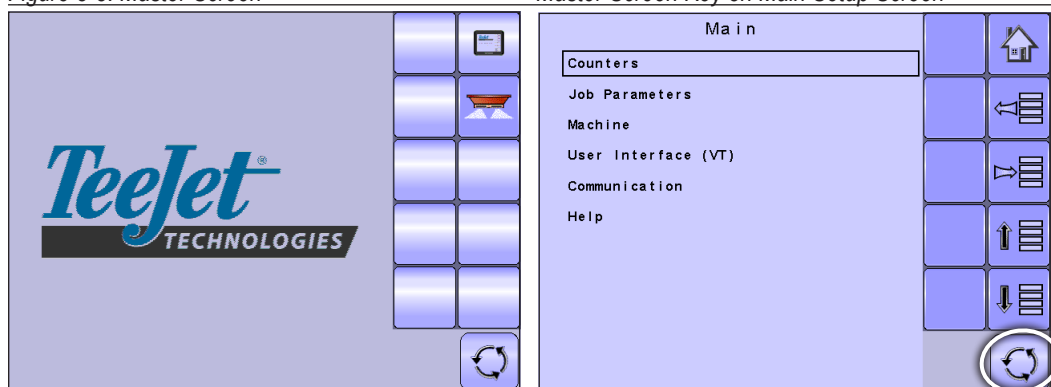
-  The Master Screen gives access to the systems currently available on your VT.
- To view the Master Screen options, select MASTER SCREEN KEY  in bottom right corner of any screen.

Figure 3-3: Master Screen

Master Screen Key on Main Setup Screen



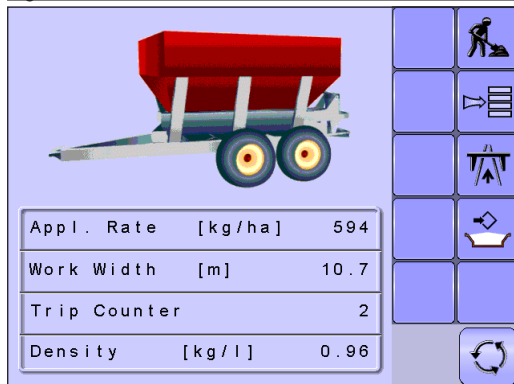
Home Screen



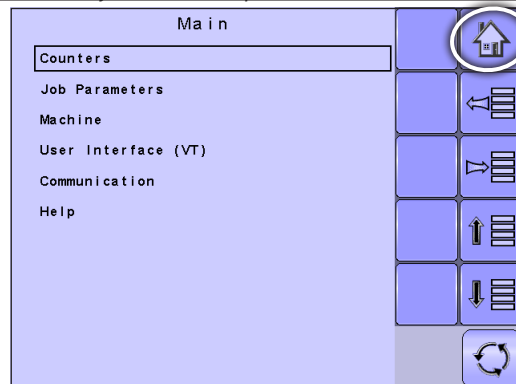
The Home Screen gives access to the IC18's available functions: Operation Mode, Transport Mode and Main Setup.

- To view the Home Screen, select HOME KEY in the top right corner of any screen.

Figure 3-4: Home Screen

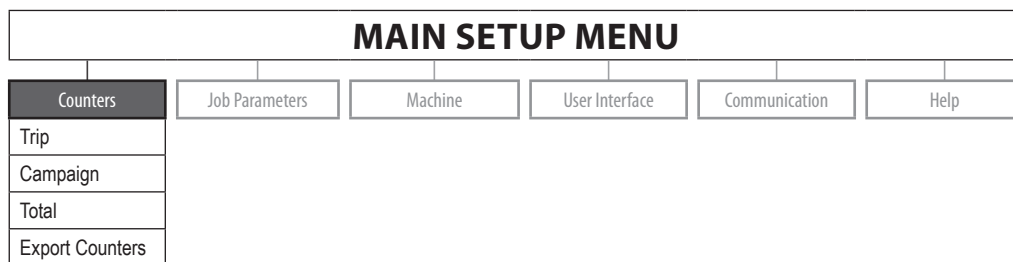


Home Key on Main Setup Screen



COUNTERS

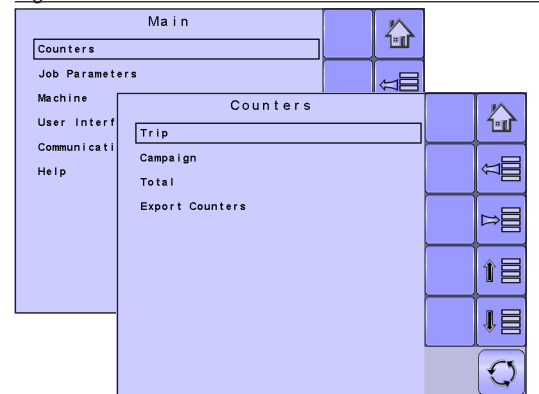
The Counters Menu provides an overview of various system counters including Trip Counters, Campaign Counters and Total Counters. From this screen one can also Export Counters.



- From the Main Setup Screen , select COUNTERS.
- Select from:
 - ▶ Trip – used to display information regarding area, distance, time and amount applied
 - ▶ Campaign – used to display information regarding area, amount applied and time for all trips
 - ▶ Total – used to display information regarding area, amount applied, and time for all activity
 - ▶ Export Counters – allows counter information to be exported in HTML or CSV format

NOTE: Settings are NOT automatically saved when selected. The ACCEPT KEY must be selected to save the setting. Select the ESCAPE KEY to escape without saving settings and return to the previous menu.

Figure 3-5: Counters




Trip Counters

Trip Counters displays information regarding area, distance, time and amount applied. The trip that is active is displayed/active on the Operations Screen.

Active Trip Counter

One of up to ten (10) Active Trip Counters can be selected to view the desired trip information. The trip that is "active" is displayed/active on the Operation Screen.

- To select the Active Trip Counter, use the number pad or slide bar.
- To clear the Trip Counters, select TRASH CAN KEY . A confirmation screen will be displayed.

Area Counter

Displays applied area for the selected Active Trip.

Distance Counter

Displays distance traveled for the selected Active Trip.

Time Counter

Displays time traveled for the selected Active Trip.

Amount

Displays amount of material applied during the selected Active Trip.

Campaign Counters

Campaign Counters display information regarding area, amount applied and time for all trips.

- To clear the Campaign Counters, select TRASH CAN KEY . A confirmation screen will be displayed.

Area Counter

Displays total applied area for all trips.

Amount Counter

Displays total amount of material applied during all trips.

Time Counter

Displays total time traveled for all trips

Figure 3-6: Trip Counters Menu

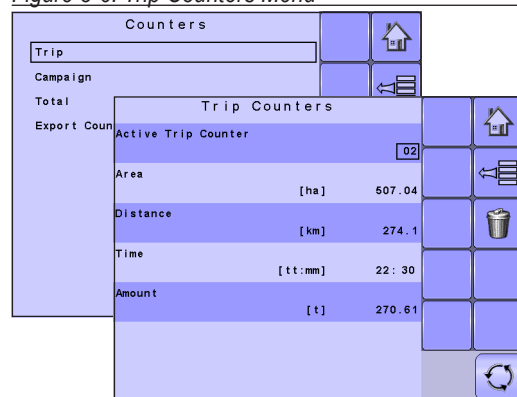


Figure 3-7: Confirm Counter Clearance

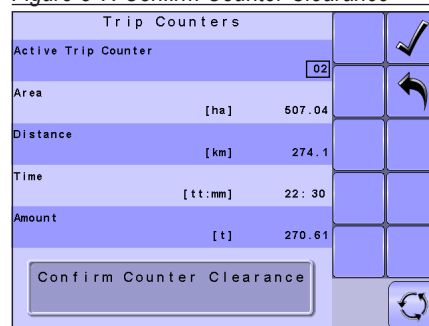


Figure 3-8: Campaign Counters

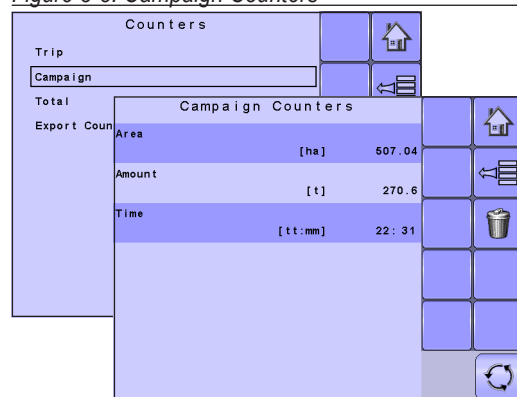
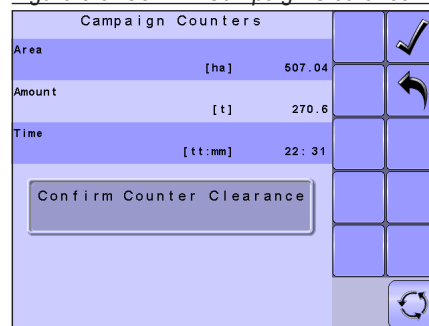


Figure 3-9: Confirm Campaign Clearance



Total Counters

Total Counters displays information regarding area, amount applied, and time for all activity. Total Counters can only be cleared in the OEM menu.

Area Counter

Displays total applied area for all trips. Total Counters cannot be cleared.

Amount Counter

Displays total amount of material applied during all trips. Total Counters cannot be cleared.

Time Counter

Displays total time traveled for all trips Total Counters cannot be cleared.

Figure 3-10: Total Counters

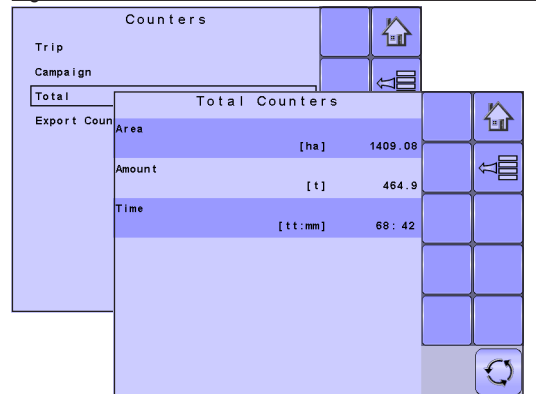




Figure 3-11: Export Counters



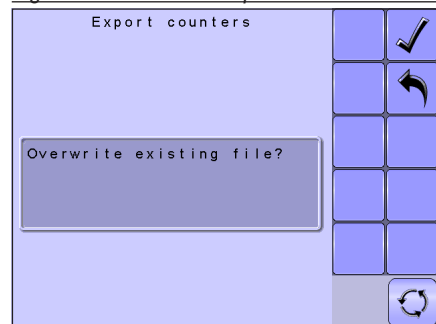
Export Counters

Export Counters allows counter information to be exported in HTML or CSV format. HTML files can be viewed from an internet browser. CSV files can be viewed as Excel sheets.

- To export a HTML file, select HTML KEY . A confirmation screen will be displayed.
- To export a CSV file, select CSV KEY . A confirmation screen will be displayed.

For data transfer, an optional cable is required. Contact your local dealer for additional information.

Figure 3-12: Confirm Export Counters





JOB PARAMETERS

Job Parameters configures application settings. Options include Active Trip Counter, Application Rate, Tonnage, Gate Height and Density.



1. From the Main Setup Screen , select JOB PARAMETERS.

NOTE: Settings are NOT automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.

Active Trip Counter

Active Trip Counter selects one of up to ten (10) active trip counters to view the desired trip information. The trip that is "active" is displayed/active on the Operation Screen.

- To select the Active Trip Counter, use the number pad or slide bar.

NOTE: The selected trip counter will have all data modified (added too) when additional operations are activated. If current trip counter is not cleared, the new data will be added to the existing data.

Application Rate

Application Rate defines a target rate of product being applied per hectare/acre. This setting will set the same for all active trips. Range is 0 - 9999 kg/ha.

- To select the Application Rate, use the number pad or slide bar.

Tonnage

Tonnage converts pounds/kilograms to tons. It is used when the application rate exceeds the number of digits allowed on the screen display.

- To select the tonnage mode, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

Gate Height

Gate Height is the height of the gate opening. Range is 0.0 - 99.9 cm.

- To select the gate height, use the number pad or slide bar.

Density

Density is the weight of the material being applied. Range is 0.00 - 5.00 kg/l

- To select the density, use the number pad or slide bar.

Figure 3-13: Job Parameters

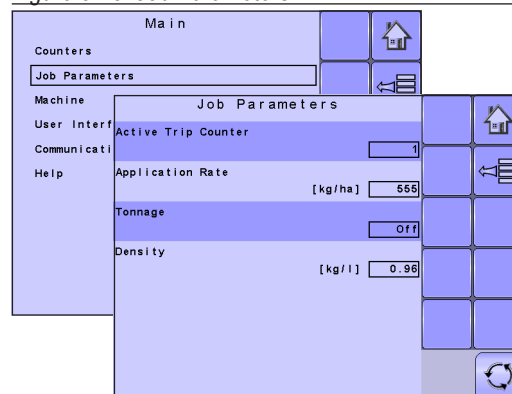
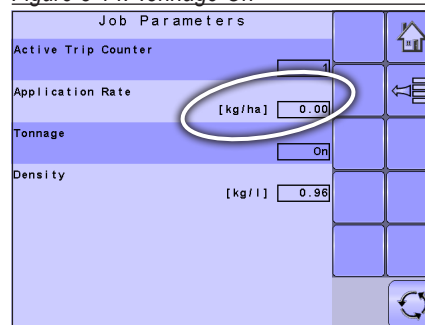
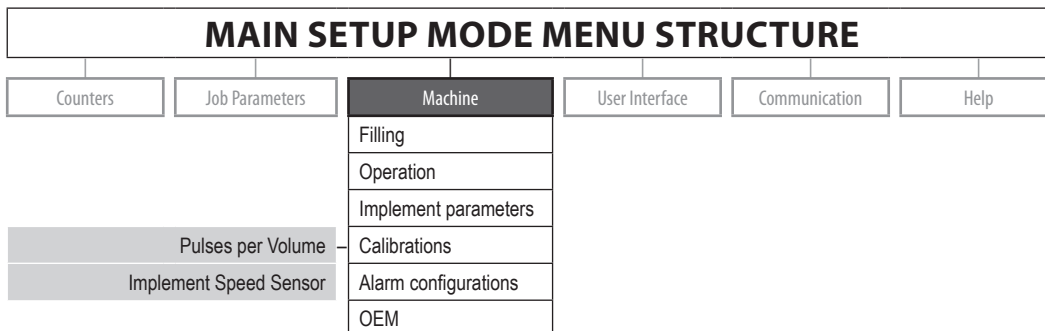


Figure 3-14: Tonnage On



MACHINE

Machine configures machine settings. Options include Filling, Operation, Implement Parameters, Calibrations, Alarm Configurations and OEM.



The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment.


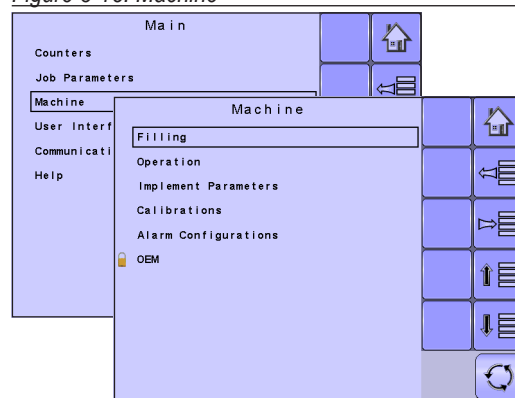


1. From the Main Setup Screen , select MACHINE.
2. Select from:
 - ▶ Filling – establishes the amount of material remaining in the bed.
 - ▶ Operation – establishes Speed Source, and Simulated Speed.
 - ▶ Implement Parameters – establishes the Working Width, Fast Empty Bed RPM and Master Switch location.
 - ▶ Calibrations – establishes either manual or automatic settings of the sensors.
 - ▶ Alarm Configurations – establishes alarms on or off as well as sets their trigger level
 - ▶ OEM – The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment. Refer to the OEM manual for information regarding OEM settings.


Figure 3-15: Machine



NOTE: Settings are NOT automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.

Filling

Filling establishes the amount of material remaining in the bed.

NOTE: The size of the tank is established in the OEM menu. This is the number that will repopulate when the Full Bed Key  is pressed.

Amount Remaining

Actual Content displays the current volume of content in the tank. The volume can be manually adjusted.

- To adjust the volume, use the number pad or slide bar.

Full Bed

Full bed returns the amount remaining value to the maximum volume of the bed.


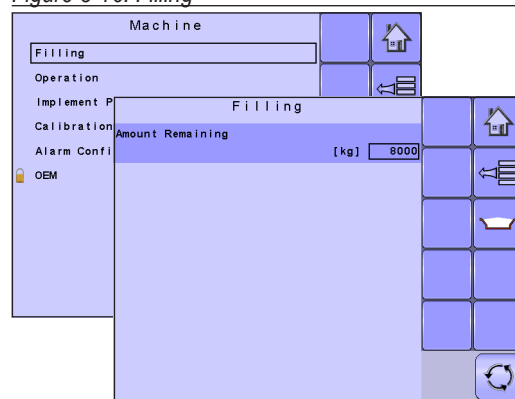
- To reset the Amount Remaining value, press the FULL BED KEY .

Figure 3-16: Filling



Operation

Operation establishes Speed Source and Simulated Speed.

Speed Source

Speed Source selects whether to base the machine's speed on input from the CAN, an Implement or a Simulated source. Selecting "Implement" will allow for the configuration of pulses per 100 meters. Selecting "Simulated" will allow for simulated speed to be entered using the "Edit Value" option. Selecting "CAN" allows for speed being supplied by the ISOBUS CAN (usually from the TECU) to be used.

- To select the Speed Source, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

NOTE: If "Implement" is selected, refer to the Calibrations section for further instructions.

Simulated Speed

Simulated Speed establishes a speed to be used when using the Simulated Speed source.

- To select the Simulated Speed, use the number pad or slide bar.

Implement Parameters

Implement Parameters establishes the the Working Width, Fast Empty Bed RPM and Master Switch location.

Working Width


Working Width establishes the desired distance between each adjacent pass while spreading.

- To select the Working Width, use the number pad or slide bar.

Fast Empty Bed RPM

Fast Empty Bed RPM establishes the revolutions per minute of the roller used to drive the conveyor during the Fast Empty.

- To select the RPM, use the number pad or slide bar.

The availability of Fast Empty is established in the OEM menu under Program Modes. When set to "On", the Fast Empty Key  will be available on the Home Screen.

Master Switch

Master Switch is used to allow the operator to choose between a "remote master" switch or the Start/Stop Key.

- To select the Master Switch, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

Figure 3-17: Operation

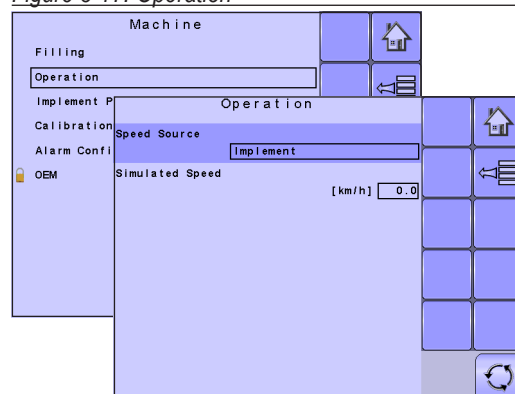


Figure 3-18: Implement parameters

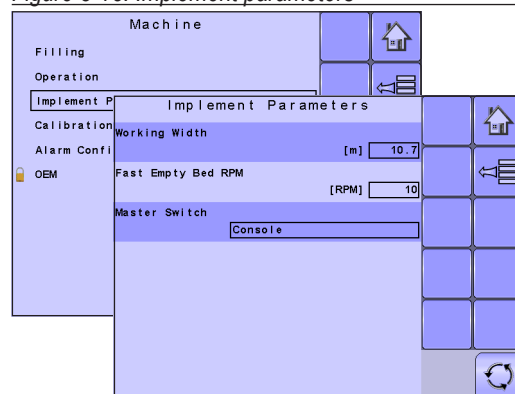
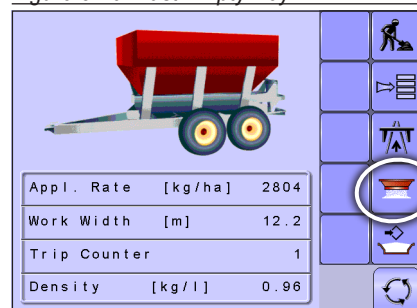


Figure 3-19: Fast Empty Key



Calibrations

Calibrations establishes either manual or automatic settings of the sensors.

NOTE: For specific calibration options to appear, a specific sensor needs to be installed. Sensor availability is activated on the Sensor Presence screen in the OEM section.

Volume Per Pulse

Volume Per Pulse establishes the amount of cubic centimeters per one (1) pulse. This value can be established manually or calibrated automatically. Each type of spreader has a variety of variables that factor into the volume per pulse number (roller diameter, sensor type, type of belt or chain, etc.). The volume per pulse number factors these variables into the spreader output


Manual Calibration

Manual calibration establishes the volume based on a user entered value.

- To select the Pulses per Volume, use the number pad or slide bar.

Automatic Calibration

Automatic calibration establishes the volume using the automatic calibration function.

- To calibrate the pulses per volume, select CALIBRATION KEY .
- Follow the series of instructions displayed.

NOTE: Material will be dispensed during this procedure. Be sure that a collection device is in place so that a proper volume can be determined.

Figure 3-20: Calibrations

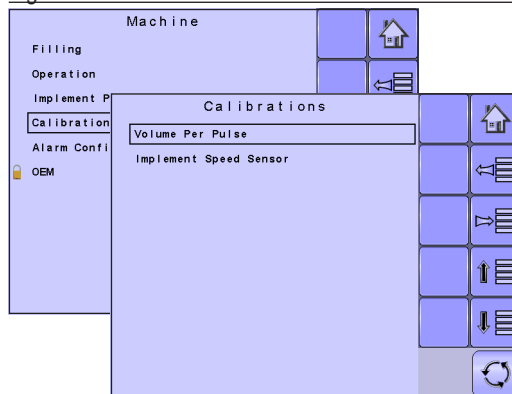


Figure 3-21: Pulses per Volume

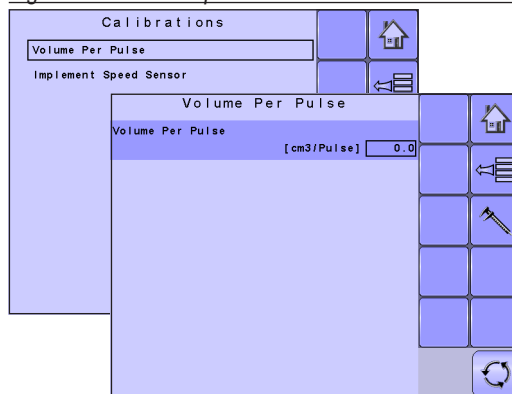
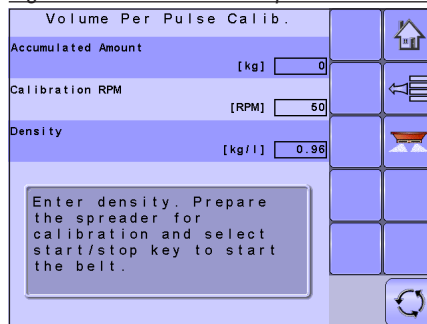


Figure 3-22: Calibration Step One



Implement Speed Sensor

The Implement Speed Sensor establishes the wheel pulses over a specified distance. This value can be established manually or calibrated automatically.



Manual Calibration

Manual calibration establishes the pulses based on a user entered value.

- To select the Pulses per Distance, use the number pad or slide bar.

Automatic Calibration

Automatic calibration establishes the pulses using the automatic calibration function.

- To calibrate the pulses per distance, select CALIBRATION KEY .
- Follow the series of instructions displayed.
- Select the ACCEPT KEY  to complete the calibration

The counted wheel pulses will be displayed during the automatic calibration.

Alarm Configurations

Alarm Configurations establishes alarms on or off as well as sets their trigger level.

Amount Remaining Alarm On/Off

The Amount Remaining Alarm will appear if the hopper amount has reached the low limit level entered. Select either “On” to activate the alarm, or “Off” to deactivate the alarm.

- To select the Amount Remaining Alarm mode, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

Amount Remaining Trigger Level

Amount Remaining Trigger Level establishes the low limit that will trigger the Amount Remaining Alarm.

- To select the Amount Remaining Trigger Level, use the number pad or slide bar.

CAN Speed Source Timeout

CAN Speed Source Timeout establishes the number of seconds the system will continue to run on CAN speed without receiving CAN input before the alarm triggers.

- To select the CAN Speed Source Timeout time, use the number pad or slide bar.

Active Trip Count Information

The Active Trip Count Information Alarm will appear on power up to identify to the user which trip counter is active and that this specific counter will be used for storing work data. Select either “On” to activate the alarm, or “Off” to deactivate the alarm.

- To select the Active Trip Count Information alarm mode, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

Figure 3-23: Calibrations

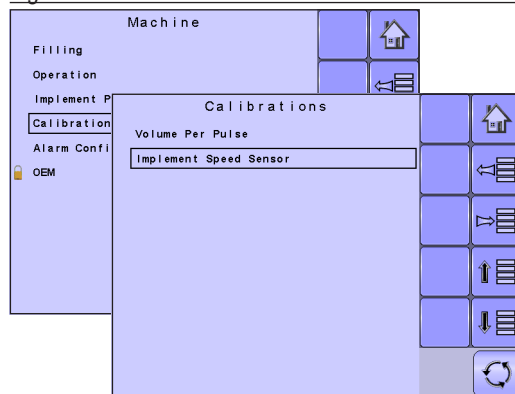


Figure 3-24: Implement Speed Sensor

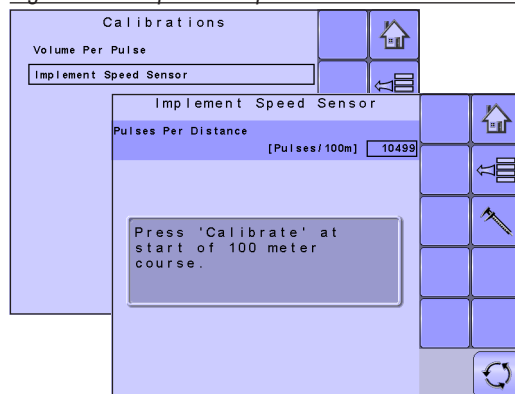
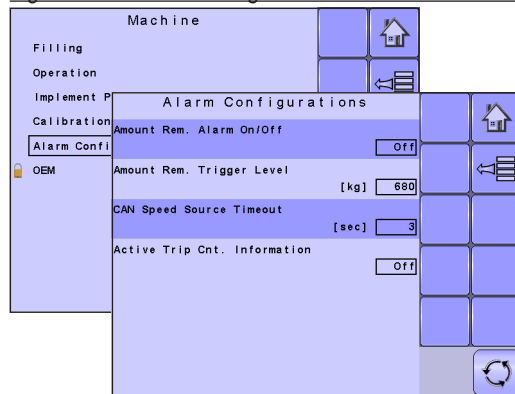




Figure 3-25: Alarm Configurations



OEM

The OEM setup menu is password protected and the settings in this menu are directly related to the fitted OEM equipment. To obtain an access code, contact your local dealer or TeeJet Technologies Customer Service.

To access the OEM screens:

1. From the Main Setup Screen , select MACHINE.
2. Select OEM.
3. Select the Access Code Entry Box to the right of the menu option.
4. Use the number pad or slide bar to enter the access code.
5. Select the ACCEPT KEY  to complete the unlock process
6. Select from:
 - ▶ Sensors – used to establish the parameters for Spinner RPM, Spinner RPM Revolution, Hydraulic Motor RPM Revolution, and Weighing systems
 - ▶ Actuators – used to select the type of valve used to control the spreader belt
 - ▶ Bed Size – used to establish the maximum load capacity of the spreader
 - ▶ User Interface (VT) – used to establish the displayed tolerance for application rate
 - ▶ Regulator Configuration – used to establish:
 - ◀ Regulator Test – used to verify the regulation control matches theory and actual settings.
 - ◀ Valve Configuration – sets the control settings for the regulation valve.
 - ◀ PID Parameters – sets the course and fine adjustments of the regulation valve.
 - ▶ Calibration RPM – used to program the desired roller RPM, the bed chain speed, used during the calibration process
 - ▶ Program Modes – used to designate various options that impact system functions including program style, calibration type, flow factor, step percentage and fast empty
 - ▶ Reference Gate Height – used to establish the actual gate height used during the calibration process
 - ▶ Delete Total Counters – used to clear the Total Count system counter for Area, Volume and Time



NOTE: Settings are **NOT** automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.

Figure 3-26: Machine to OEM

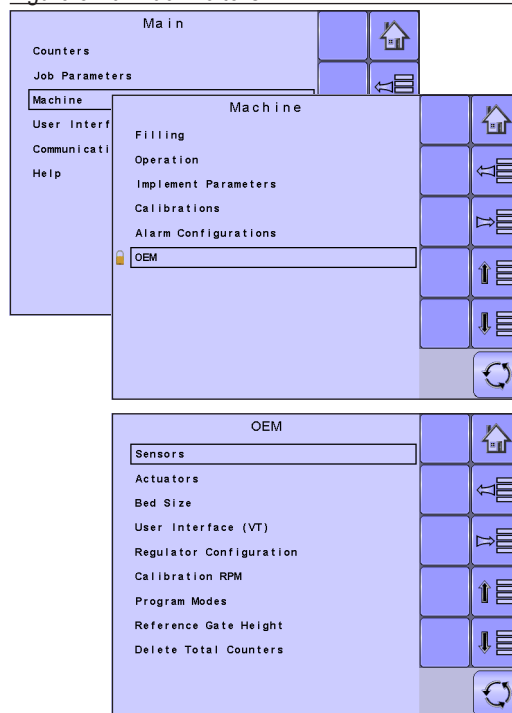
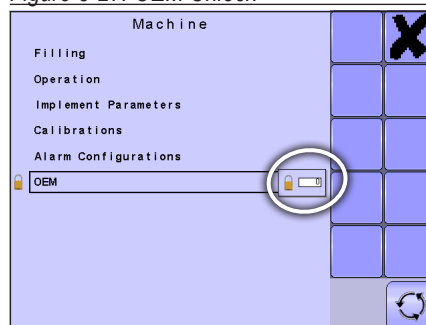


Figure 3-27: OEM Unlock





USER INTERFACE

User Interface allows the operator to select the system virtual terminal (VT) if more than one VT is available on the ISOBUS CAN.



1. From the Main Setup Screen , select USER INTERFACE.

NOTE: Settings are NOT automatically saved when selected. The **ACCEPT KEY**  must be selected to save the setting. Select the **ESCAPE KEY**  to escape without saving settings and return to the previous menu.

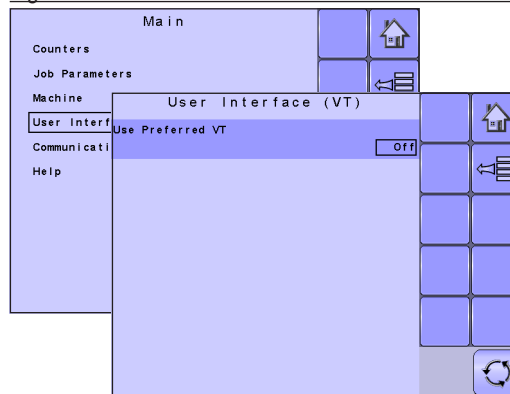
Use Preferred VT

Use Preferred VT sets the virtual terminal preference to either on or off. If “On” is selected, the preferred VT will be used. If “Off” is selected, the system will arbitrarily select which VT to use (if more than one VT is available on the ISOBUS CAN).

NOTE: This should always be set to “off” unless another VT is on the CAN bus.

- To set the Use Preferred VT mode, select an option from the drop down menu or use the UP/DOWN ARROWS to highlight the option.

Figure 3-28: User Interface



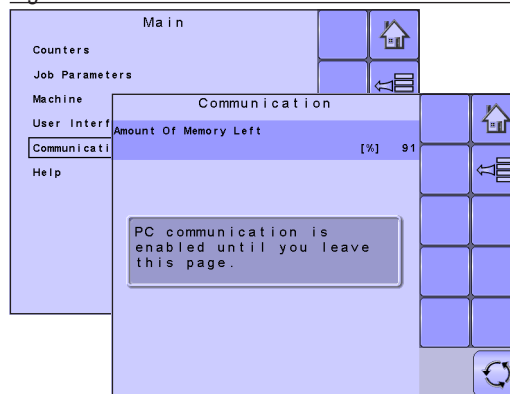
COMMUNICATION

Communication establishes the IC18's ability to communicate with an external computer.



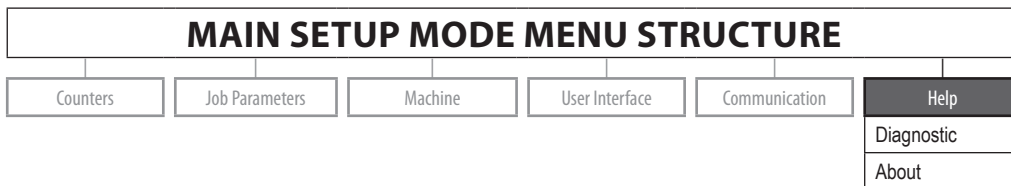
1. From the Main Setup Screen , select COMMUNICATION.


Figure 3-29: Communication



HELP

The Help menu allows the operator to choose between Diagnostics and the display of information about serial number, CAN BUS information, etc. These menus are typically accessed upon Customer Service personnel request only.



1. From the Main Setup Screen , select HELP.
2. Select from:
 - ▶ Diagnostic – used to troubleshoot input/output of the controller (sensor or actuator).
 - ▶ About – provides information on the console such as software version, build number, etc.



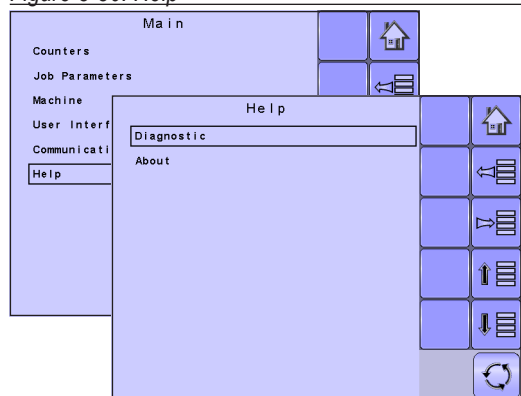
NOTE: Settings are NOT automatically saved when selected. The ACCEPT KEY  must be selected to save the setting. Select the ESCAPE KEY  to escape without saving settings and return to the previous menu.

Figure 3-30: Help

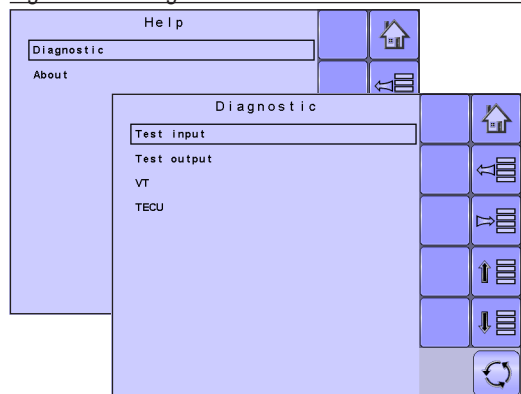


Diagnostic

Diagnostic is used to troubleshoot input/output of the controller (sensor or actuator).

- ▶ Test Input – displays the input high and low values on the installed sensors.
- ▶ Test Output – allows the regulation valve to be tested at different percentages of duty cycle..
- ▶ VT – provides information regarding the virtual terminal controller.
- ▶ TECU – provides information regarding the TECU.

Figure 3-31: Diagnostic



Test Input

Test Input displays the input high and low values on the installed sensors.


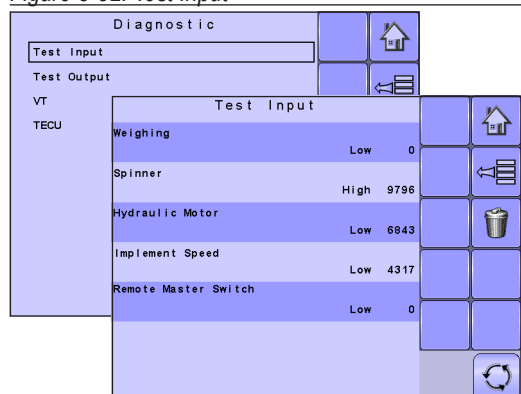
- To reset the sensors to "0", select TRASH CAN KEY .

Figure 3-32: Test Input



ISOBUS Job Computer : IC18 Spreader European

Test Output

Test Output allows the regulation valve to be tested at different percentages of duty cycle.

Test PWM Duty cycle

Liquid Valve PWM Duty cycle is used to test the regulating valve at different percentages of duty cycle.

- To set the percentage, use the number pad or slide bar.
- Press the PLUS/MINUS KEYS **+** **-** to test the regulation valve at the specified duty cycle percentage increase/decrease.

VT Data

The Virtual Terminal (VT) menu provides information regarding the virtual terminal controller (i.e., address version, etc.).

- If more terminals/controllers are used, switch between these by pressing the GO TO NEXT VT KEY **Go To N**.
- Press the DELETE OBJECT POOL KEY **Del Obj Pool** to force the VT to delete saved data and upload new information from the IC18 Job Computer on the next power cycle.

NOTE: Restart the IC18 Job Computer to implement and display changes.

TECU

The TECU is a control unit, residing on the tractor, that performs basic functions such as power handling, speed info, etc. The TECU data are displayed on this page.

Figure 3-33: Test Output

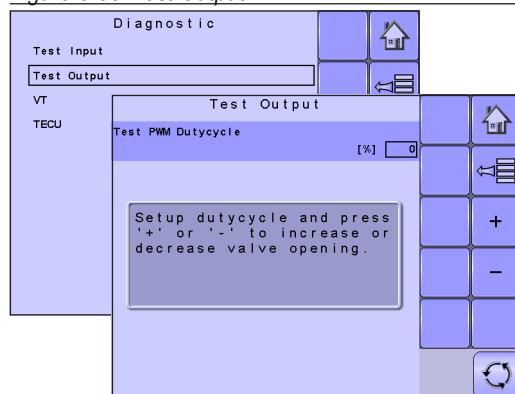


Figure 3-34: VT Data

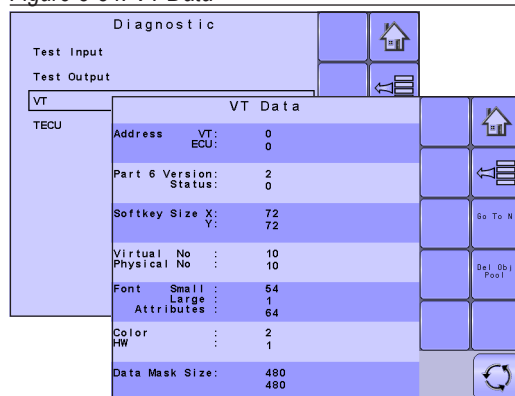


Figure 3-35: TECU

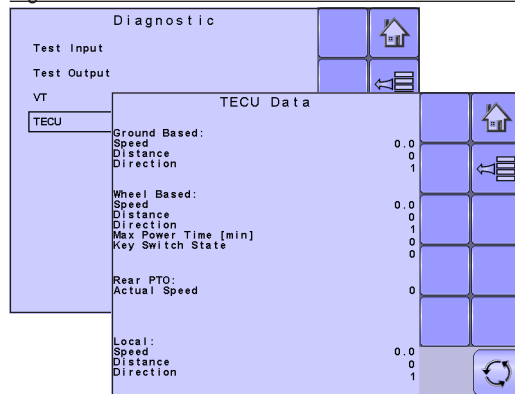
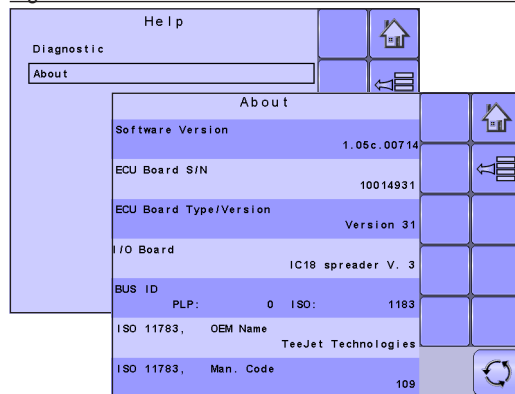


Figure 3-36: About



About

The About screen provides information on the IC18 such as software version, build number, etc. This information may become useful in case of technical support.

CHAPTER 4 – OPERATION MODE



The Operation Screen accesses the working aspects of the IC18 including boom section control, rate control and trip/count application information.

NOTE: Settings are automatically saved when selected.

NOTE: The menu structure on your display might vary from the one displayed in this User Manual depending on the virtual terminal being used.

EUROPEAN OR NORTH AMERICA CALCULATION MODE

The IC18 job computer is programmed to calculate calibrations based on European or North American methods.

◀ European – Gate Height is NOT calculated into the product application and calibrations will be based on volume per pulse.

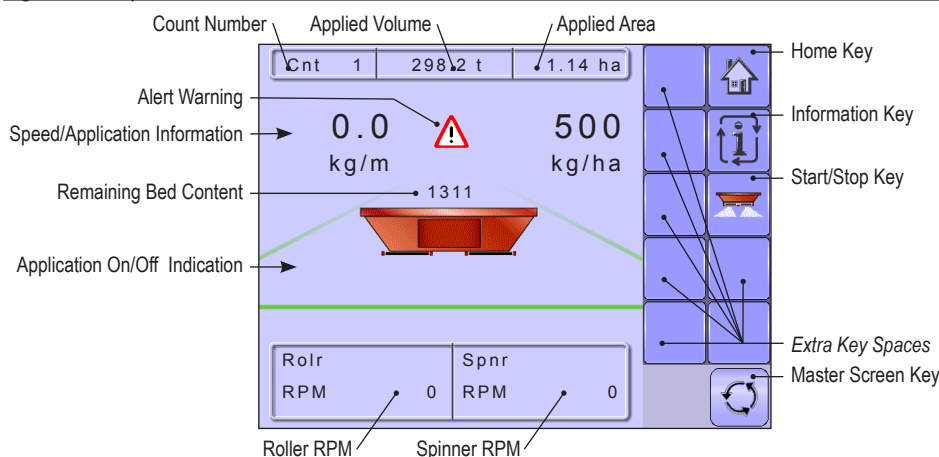
◀ North America – Gate Height is calculated into the product application and calibrations will be based on pulses per volume.

This setting has been established before leaving the factory, but it can be changed after purchase with assistance from TeeJet Technologies Customer Service or your local dealer through the OEM setup menu options.

OPERATION MODE OVERVIEW

Information on the Operation screen will vary depending on the parameters set by the user and the OEM.

Figure 4-1: Operation Mode Screen Overview




Keys Descriptions

Icon	Description
	Home Key Press to return to the Home Screen
	Information Key Press to toggle between display modes
	Start/Stop Key Press to start or stop spreader
	Extra Key Spaces
	Master Screen Key

Section and Icon Descriptions

Section or Icon	Description
Job Information	This information bar displays the active count number, applied volume and applied area
Count Number	Displays the current active trip or job number
Applied Amount	Displays amount applied for the selected count number
Applied Area	Displays applied area for the selected count number
Speed/Application Information	Displays vehicle speed or amount applied per minute or RPM. The Information Key toggles between display modes.

ISOBUS Job Computer : IC18 Spreader European

Section or Icon	Description
Remaining Bed Contents	Displays the remaining bed content <i>NOTE: If no bed sensor is fitted or the contents are not entered in the Filling Menu prior to spraying, Bed Contents will display "0".</i>
Application Rate	Displays the actual application rate per hectare/acre <i>NOTE: When the Master is "On" the actual application rate per hectare/acre will be displayed. When the Master is "Off" the target rate is displayed.</i>
Alarm 	Displayed if an alarm condition is active
Roller RPM	Displays the RPM of the belt roller
Spinner RPM	Displays the RPM of the spinner

Master Screen



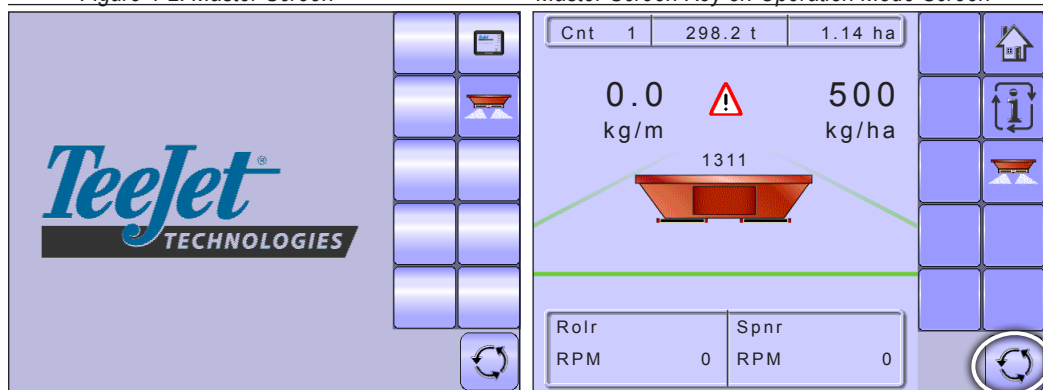
-  The Master Screen gives access to the systems currently available on your VT.
- To view the Master Screen options, select MASTER SCREEN KEY  in bottom right corner of any screen.

Figure 4-2: Master Screen

Master Screen Key on Operation Mode Screen



Home Screen



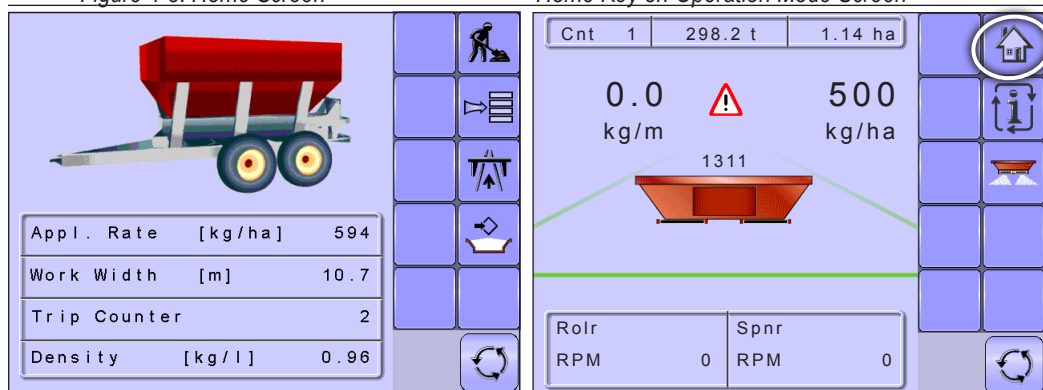
-  The Home Screen gives access to the IC18's available functions: Operation Mode, Transport Mode and Main Setup.
- To view the Home Screen, select HOME KEY  in the top right corner of any screen.

Figure 4-3: Home Screen

Home Key on Operation Mode Screen



OVERVIEW

GETTING STARTED

SETUP

OPERATION

APPENDIX

START/STOP APPLICATION

Starting/stopping application is controlled using the Start/Stop Keys.

- To start or stop the application, press the START/STOP KEYS .

Figure 4-4: Spraying Stopped

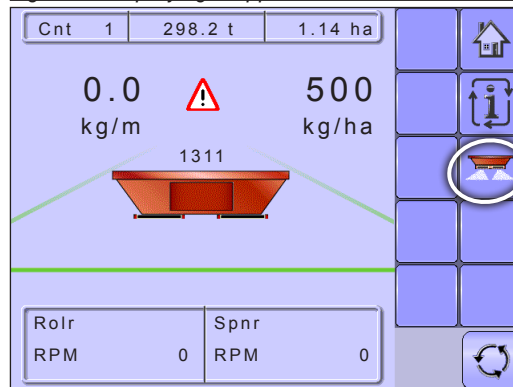
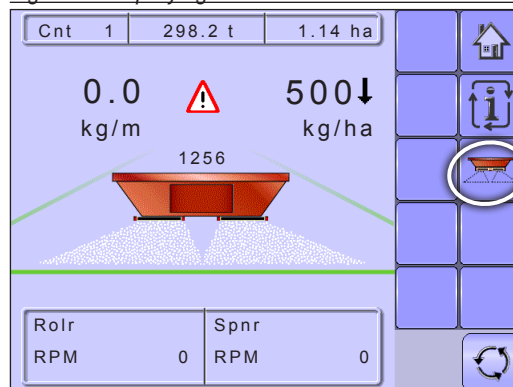


Figure 4-5: Spraying Started

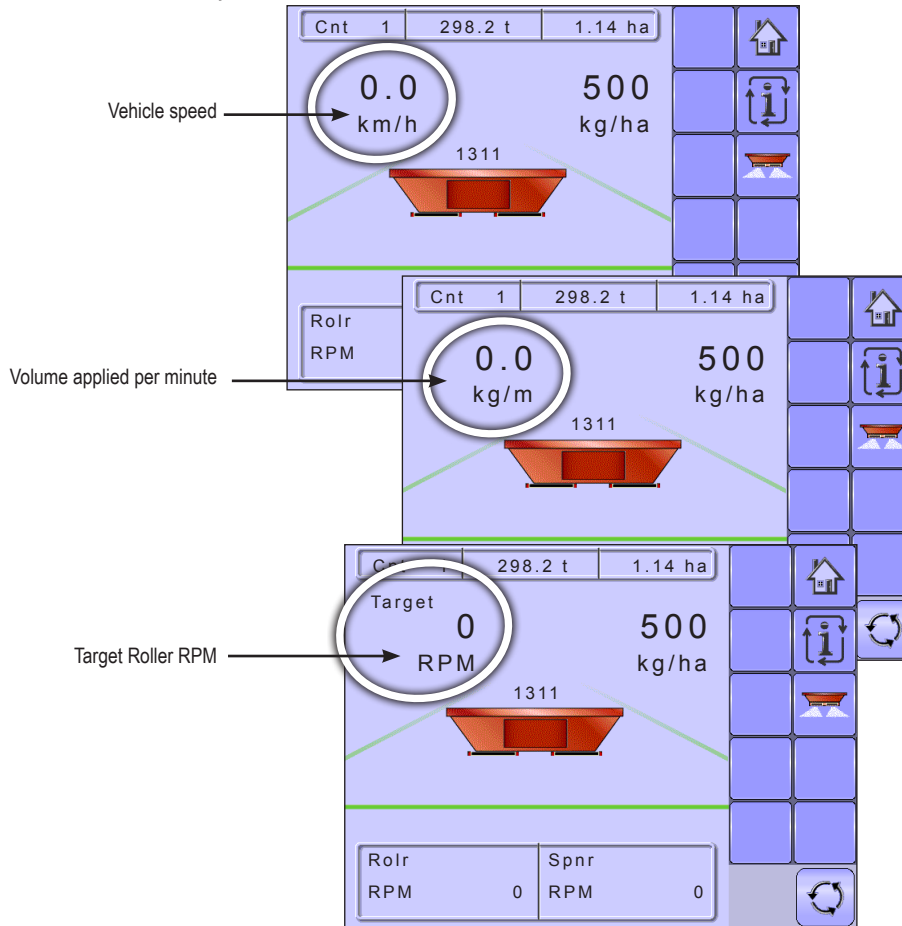


INFORMATION KEY

Information Key toggles the Speed/Application Information section on the Operation Screen between the display modes.

- Vehicle speed
- Volume applied per minute
- Target Roller RPM

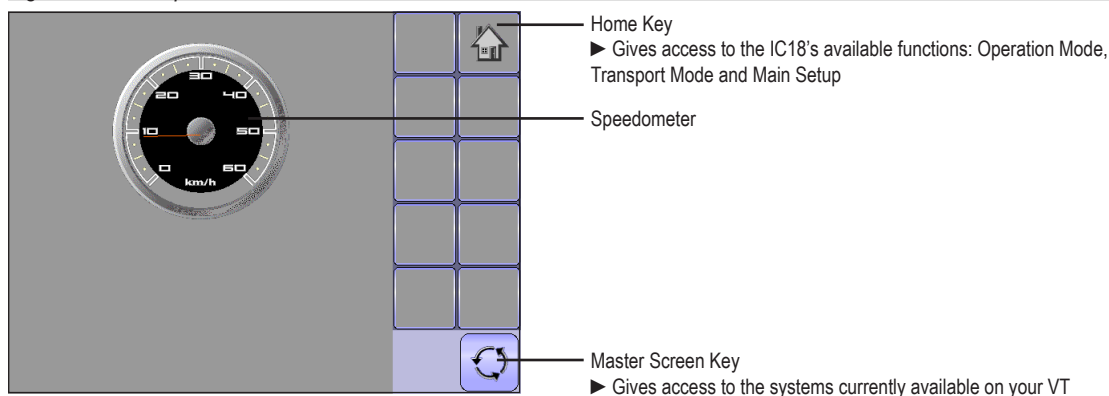
Figure 4-6: Information Key



TRANSPORT MODE

While in Transport Mode, all operation functions are locked off and cannot be activated. Transport Mode displays the speed in analogue mode.

Figure 4-7: Transport Mode



APPENDIX A - FACTORY SETTINGS & RANGES

JOB PARAMETERS

Description	Factory Setting	Range/Options	User Setting
Active Trip Counter	1	1 - 10	1
			2
			3
			4
			5
			6
			7
			8
			9
			10
Application Rate	0.0 lb/ac 0.0 kg/ha	0.0 - 9999 lb/ac 0.0 - 9999 kg/ha	
Tonnage	Off	Off On	
Gate Height	4.0 in 10.0 cm	0.0 - 35.0 in 0.0 - 99.9 cm	
Density	0 lb/ft ³ 0.00 kg/l	0 - 300 lb/ft ³ 0.00 - 5.00 kg/l	

MACHINE

Filling

Description	Factory Setting	Range/Options	User Setting
Amount Remaining	16000 lb 8000 kg	0 - 90000 lb 0 - 45000 kg	

Operation

Description	Factory Setting	Range/Options	User Setting
Speed Source	CAN	CAN Implement Simulated	
Simulated Speed	0.0 mile/h 0.0 km/h	0.0 - 99.9 mile/h 0.0 - 99.9 km/h	

Implement Parameters

Description	Factory Setting	Range/Options	User Setting
Working Width	40.0 ft 12.2 m	0.0 - 290.0 ft 0.0 - 90.0 m	
Fast Empty Bed RPM	50 RPM	0 - 9999 RPM	
Master Switch	Console	Remote Console	

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Calibrations

Pulses per Volume

Description	Factory Setting	Range	User Setting
Pulses per Volume	0.0 /ft ³	0.0 - 5000 /ft ³	
	0.0 /cm ³	0.0 - 1500.0 /cm ³	

Implement Speed Sensor

Description	Factory Setting	Range	User Setting
Pulses per Distance	0 ft	0 - 30000 /300 ft	
	0 m	0 - 40000 /100 m	

Alarm Configurations

Description	Factory Setting	Range/Options	User Setting
Amount Remaining Alarm On/Off	Off	On Off	
Amount Remaining Trigger Level	0 lb 0 kg	0 - 9000 lb 0 - 4500 kg	
CAN Speed Source Timeout	4 sec	0 - 999 sec	
Active Trip Count Information	Off	On Off	
Spinner RPM Alarm On/Off	Off	On Off	
Spinner RPM Trigger Level	0 RPM	0 - 9999 RPM	

USER INTERFACE

Description	Factory Setting	Options	User Setting
Use Preferred VT	Off	Off On	

APPENDIX B - UNIT SPECIFICATIONS

Dimensions	19.05 x 18.42 x 6.03 cm
Weight	0.644kg
Connector	30 position Cinch pins. A1-K3 30 position Cinch pins. L1-Y3
Environmental	Operating -40 to +85°C Humidity 90% non-condensing
Input/Output	ISO 11783 (ISOBUS)
Power Requirement	<9 watts @12 VDC

IC18 SPREADER JOB COMPUTER USER MANUAL

Software Version 1.05
European, Volume Based



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