# e-Spreader Controller





## Quick start

- 1. Connect your spreader hydraulics and power cable.
- 2. Check door is closed and choose product.
- 3. Fill spreader and travel to working area.
- 4. Activate hydraulics and increase tractor revs to 1000rpm/min
- 5. Turn floor switch on to begin spreading, you will see green flashing LEDs.
- 6. Activate border control if applicable.
- 7. Travel around working area creating headlands if applicable.
- 8. Use the toggle switch to turn floor mat on/off at headlands.
- 9. Complete working area, close door and turn off hydraulics.

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# 1. Set up and getting started

### Attach the screen mount

Inside the cab, in an appropriate area. Typically users place this on the right-hand side of the cab next to their GPS system if applicable. SAM supply a suction cup system. Or customize your own solution. Run the screen cable tidily, preferably behind panels.





### Connect to 12v power supply

SAM supply a three-pin euro plug. This can be plugged straight in to any tractor and the main key will turn the power on and off automatically. It is preferable for the dealer to wire the three-pin plug directly to the tractor's accessory wiring and conceal it inside the console to avoid damage.

## Mounting the switch

SAM supply a rocker switch with a second set of poles. The second set of poles can be wired to control a third-party GPS System as well as the main floor mat on the spreader. The dealer should ideally wire it directly to the control console and hide the wiring inside to avoid damage.





### Connect to Spreader

Plug the tractor loom into the spreader loom and secure in place inside the cab. When storing after use (to avoid spreader corrosion), store the cable in its home on the spreader.

# 2. Screen layout

### • Welcome greeting

When you turn your tractor key on, the screen will power up and you will see the SAM welcome. Best practice is to have the spreader plugged in at the same time as power up. The LED on the right hand side of the screen will be green if the screen is communicating to the spreader. If it is red, it is likely to be a wiring issue. Check your plugs.





#### Main screen

Your main screen is where you spend most of your time. You have all the information you need to carry out accurate spreading. The colour of the LED lights indicate the mode/s you are in.

### Calibration screen

This screen is designed to work out what you are spreading over any distance and nudge the flow factor as you get into the job. Settings are saved for next time through a 'two click' calibration process.





Menu – SAM Technicians

This screen is where we store all the factory settings for the spreader including: back door set up and Isobus settings. This will only be required if something is wrong. Please call SAM HQ if you require access here.

Note: going into this area and changing settings could void your warranty.

# 3. Spreading mode

### Starting out

When you turn your tractor key on, the screen will power up and you will see the SAM welcome. Then this screen shows: forward speed, Ha spread, weight in the bin, back door height, product selected, floor mat and hectare status, spinner speeds and spread width.





### When spreading

The LED's on the screen buttons will be flashing green when you turn on the floor switch. After 2kph the machine will be expecting to be spreading so make sure you have your hydraulics turned on. **The spinners need 43lpm and the floor needs 25lpm.** The spinners need to be on a priority hydraulic bank (refer to machine set up). You should expect the spinner speed to be 850rpm. Floor status comes up into green and the rate hits the target rate.

### Floor mat status

As you speed up and slow down, you will notice the floor mat status 'rpm' do the same thing. This ensures the same rate is applied at any speed. It is advised to try to spread at a constant speed and rev range to ensure the hydraulic supply is maintained.





### • Ha status

As you spread, the screen will give you the heads up on what is left in the bin in terms of hectares. Once you get down to one hectare left in the bin, the indicator will turn red.

# 4. Border control mode

### Activating border control

Button directly under the Border icon

Toggles the border control on and off. The right-hand spinner will reduce in speed to roughly half and highlight orange along with all the LEDs. The border control icon will pulse.





### De-activating border control

Once the headlands are complete, press the same button to return the spinner speed and the LED lights will indicate normal spreading mode.

# 5. Unload mode

### • Unload mode

Button directly under the Unload icon

Toggles the unload control on and off. Floor mat RPM will highlight red along with all the LEDs. The unload icon will pulse. Note: this mode opens the floor valve fully so the speed will be governed by the tractor's hydraulic flow. This mode is used for unloading into a pile or cleaning the main belt, and also handy for greasing. Remember to reduce hydraulic flow to spinners when using unload mode.



# 6. Product Setup

### • Changing your products

Button directly under the Product icon

This is where you change your product. The screen will always remember what you were doing last, in this case 'UREA' is shown in the top right. Pushing the 'UREA' button takes you to the Products screen.



Product	Product Settings		
Product Name	UREA		
Spread Rate (kg/ha)	100		
Density (kg/m3)	770		
Tractor Centres (m)	18.0		
Flow Factor (%)	100		
Set Door Height (mm) SDH	252 20		
Home	SDH Close		
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### To select a new product

Scroll up until the product is highlighted by using the centre navigator up/down arrow buttons. Then to cycle through the 10 saved products, use the left and right buttons. No need to save or load, whatever product you leave it on is active.

### To change any other settings

Scroll up or down until the row you want to change is highlighted by using the centre navigator up/down arrow buttons. Use the left and right buttons to decrease and increase the values. No need to save or load, whatever you leave it on is active.

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Product Settings		
Product Name	UREA	
Spread Rate (kg/ha)	100	
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Product Settings		
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A kome	SDH Close	

### Door setting

Scroll up or down until the 'Saved Door Height' row is highlighted using the centre navigator up/down arrow buttons. Use the left and right buttons to decrease and increase the values. No need to save or load, whatever you leave it on is active.

# 7. Door Heights

### • Changing your door height

The up and down arrow buttons drive the door up and down from the main screen 'manually'.



Product	Product Settings		
Product Name	UREA		
Spread Rate (kg/ha)	100		
Density (kg/m3)	770		
Tractor Centres (m)	18.0		
Flow Factor (%)	100		
Set Door Height (mm) SDH	252	20	
Home	SDH	Close	
000		00	

### • Door height automation

To make the door close by itself or go to the 'Saved Door Height', go to the Products screen and push 'Close'. The door will drive by itself to the lowest closed position and hit its end stop.

To drive the door to the Saved Door Height, push the SDH button. This will lift the door to the 'Save Door Height' automatically.

### Door height suggestion too high

If the RPM of the main floor mat gets too low, the screen will show the floor mat status in orange. The down arrow on the door indicator will also be orange, suggesting you close the door appropriately.





• Door height suggestion too low

If the door is too low and the floor has reached its maximum rpm for the hydraulic supply, the door indicator up arrow will turn orange, suggesting you open the door appropriately.

The mat status will also turn red.

# 8. Isobus mode

### • Gateway getting started

Plug in the Isobus gateway to the screen and into the Isobus plug in your tractor. Depending on your tractor and plug positioning it is recommended a dealer technician installs this professionally with all cables behind the console and routed with care.





### Initializing

The first time you plug in the system, it will take a few minutes to sync and learn. After that, the system takes about a minute to load. The LED lights will change to blue once the task, sectional and rate controls are synced.

### Task control

This is the connection to the tractors GPS. Indicated by this green outer box.





### Sectional control

This is the connection to the tractor's GPS sectional control and is specifically indicated by this green inner circle. When the tractors GPS wants you to be spreading, the circle will be green. It will go grey and cut off the section when the tractors GPS detects headlands or overlaps. Turn this off on the GPS side if you don't want this feature.

# 8. Isobus mode - continued

### Isobus control settings

It is assumed that most of the time you will want the tractor's GPS to control the spreader. The default is the SAM controller rate is active. If you want the rate to be controlled by the tractor, click the button directly below the Isobus icon in the Product Settings screen.

The products rate will turn blue and change if you have variable rates active.





### • Variable rates

On the front screen you will notice the target rate changes to blue and will change if the tractor's GPS system has variable rate active. The target rate will turn green when the machine is locked onto target.

# 9. Doing a typical job

### Starting out

When you turn your tractor key on, the screen will power up and you will see the SAM welcome. Then this screen shows: forward speed, hectares spread, weight in the bin, back door height, product selected, floor mat and hectare status, spinner speeds and spread width





### • Pre-loading

Before filling the spreader close your door. You can do this by manually driving the door down from the front screen using the down arrow button. Or push the 'Close' button in the Products screen.

### Load your machine

The spreader is equipped with loadcells. As you fill it, the weight will be displayed on the screen.



Product Settings		
Product Name	UR	EA
Spread Rate (kg/ha)	100	
Density (kg/m3)	770	
Tractor Centres (m)	18.0	
Flow Factor (%)	100	
Set Door Height (mm) SDH	252	20
Home	SDH	Close
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### Product confirmation

All the settings from the last time you did Urea will be loaded once you select it. Drive to the spread location and push the SDH button, this will lift the door to the recommended 'Saved Door Height'.

# 9. Doing a typical job 'Urea'

### • Before spreading

Engage both your hydraulic banks. The spinners need 43lpm and the floor needs 25lpm. The spinners need to be on a priority bank (refer to machine set up). You should expect spinners to be at 850rpm, the floor status comes up into green, and the rate hits the target once moving.



Spinners Detected at Zero rpm!		
Trouble Shooting 		
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### Warning

If you forget to turn on your hydraulics for your spinners, you will get this warning. Once the machine detects your spinners are going, this will disappear.

Activate border control

Button directly under the border icon 📃

Toggles the border control on and off. The right-hand spinner will reduce in speed to roughly half and highlight orange along with all the LEDs. The border control icon will pulse. Travel around your work area counter-clockwise until you come out of the first headland.



### Headland control

Use the toggle switch to turn the floor off as you move into the first headland. As you come out of the headland, toggle this switch again to turn the floor back on. This is not needed if you have the Isobus gateway as the section control will do this for you automatically. Continue until the work area is complete. Close the door and move to the next work area or the shed for a well-earned beer.