TeeJet®
TECHNOLOGIES

845 SPRAYER

QUICK START GUIDE

POWER

Power On the Console

To power on the console:

1. Press and release the PROGRAMME [P] button.

The console will initially display the software version at the top of the screen and the serial number of the console at the bottom of the screen. After approximately 3 seconds, the console will enter the work screen.

Power Off the Console

To power off the console:

1. While pressing and holding the MINUS [−] button, press and release the PROGRAMME [P] button.

2. Release the MINUS [−] button.

The console will save new information (area and volume counters) to memory before it powers down. Pressing any key during the power off count down will cancel the shut off function.

Automatic Shutdown

With the Master Switch in the "OFF" position, the console will automatically shut down after 10 minutes of no inputs (or at the time specified in the Automatic Shutdown Time setting in the OEM Setup Mode).

SYSTEM SETUP MODE

Enter the System Setup Mode

The Master Switch must be off.

Press and hold the PROGRAMME [P] button until the Program System Menu screen appears (approximately 3 seconds).
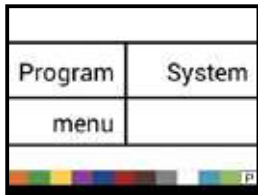
Program	System
menu	

Advance to the Next Option

Press the PROGRAMME [P] button to advance the system to the next Program step. After the final setup option is complete, the console will return to the initial setup option.
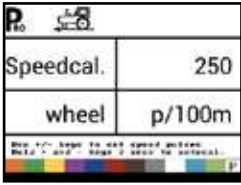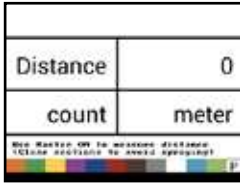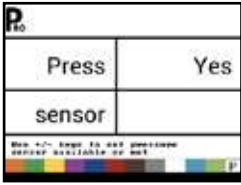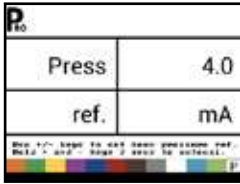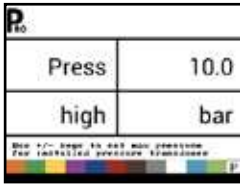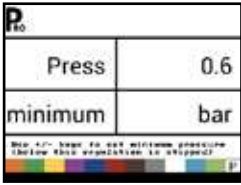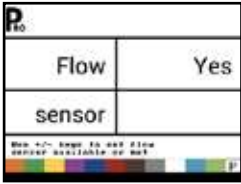
Exit the System Setup Mode
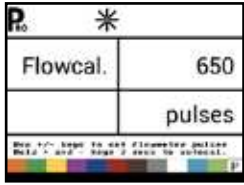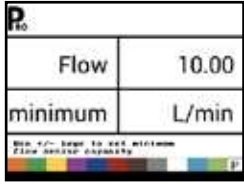
Press and hold the PROGRAMME [P] button for 3 seconds.
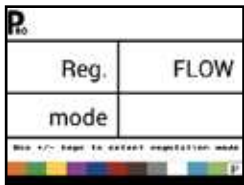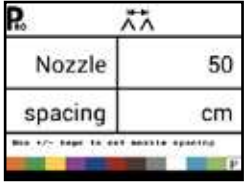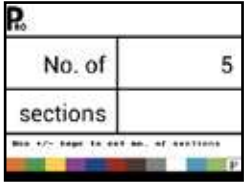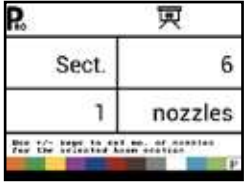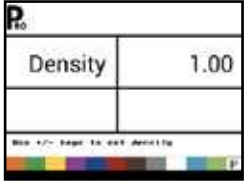
The inputs are stored, and the console will exit the setup mode.

Step	Display	Description	Default
Units	Units SI ltr/ha	Select the units for operation. Options include: US, SI, Turf, NH3, IMP, LM2, GLM, LKM. *See the manual for unit details.*	US
Restore Defaults	Reset to YES defaults	If the units of measurement are changed, default values for all settings must be restored. ▶ Yes – Units WILL be changed, and value WILL be reset. ▶ No – units will NOT be changed, and value will NOT be reset.	Yes

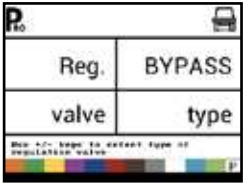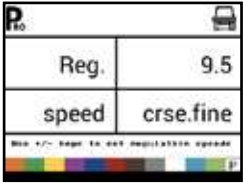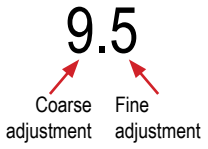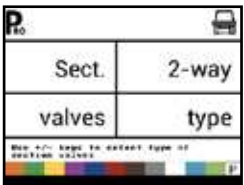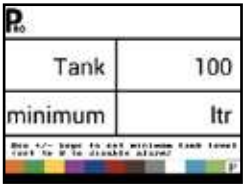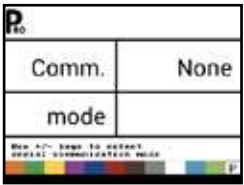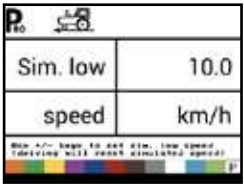| Step	Display	Description	Default
Speed Sensor Calibration	Speedcal. 250 / wheel p/100m	Set number of Pulses per 300 feet/100 metres. While it is difficult to give an accurate starting value for a wheel speed sensor, radar (or simulated radar as with GPS speed) sources usually having a starting value. Make sure the source is set to "rad". ◄TeeJet GPS Speed Sensor – default calibration number is 1300. ◄Matrix Pro GS consoles – default calibration number is 914. ◄Matrix 430 – default calibration number is 1000.	100 metres
Distance Counter	Distance 0 / count meter	The Distance Counter step is not a calibration step. It is a help function that can be used to measure a distance in feet/metres such as to confirm Automatic Speed Calibration. No value can be entered here.	0 m
Pressure Sensor Installed	Press Yes / sensor	Select if a pressure sensor is installed. If a flow sensor is not installed, this step is automatically set to "Yes" and cannot be changed.	Yes
Pressure Sensor-> Zero Pressure Reference	Press 4.0 / ref. mA	This step is available if "Pressure Sensor Installed" is set to "Yes". The Zero Pressure Reference is used to calibrate the zero pressure setting of the pressure sensor installed on the system.	4.0 mA
Pressure Sensor-> Maximum Pressure Rating	Press 10.0 / high bar	This step is only available if "Pressure Sensor Installed" is set to "Yes". The Maximum Pressure Rating is used to establish the maximum rating of the pressure sensor in the system. This number can be found stamped on the pressure sensor itself.	10.0 bar
Minimum Pressure	Press 0.6 / minimum bar	Below the Minimum Pressure value, regulation is stopped, except when using lane spraying (GLM or LKM).	0.6 bar
Flow Meter Installed[1]	Flow Yes / sensor	Select if a flow meter is installed.	Yes

1 If a pressure sensor is not installed this step is automatically set to "Yes" and cannot be changed. If lane spraying is selected under Units (GLM or LKM), this setting will always be set to "Yes" and cannot be changed. If no, skip the next 2 steps.
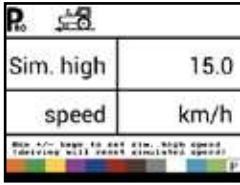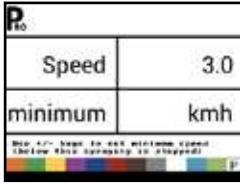
Step	Display	Description	Default
Flow Meter-> Flow Meter Calibration		This step is only available if "Flow Meter Installed" is set to "Yes". Sets the number of pulses per litre. Pressing the AUTO/MAN button will switch between normal value and decimal value (/10). Most flow meters have a tag on the sensor cable which contains the proper flow meter calibration number and units used, whether pulses per gallon, pulses per litre, pulses per 10 gallons, etc. ▶ TeeJet 801 flow meter has a calibration number of 82. ▶ TeeJet 802 flow meter has a calibration number of 21.	650 pulses per litre
Flow Meter-> Flow Sensor Minimum Flow Capacity		This step is only available if "Flow Meter Installed" is set to "Yes" and the console is programmed for use with a pressure sensor. Set the minimum flow capacity for the installed flow sensor. Below the minimum flow capacity, regulation will switch to pressure mode. When flow capacity once again reaches an acceptable level for the flow meter to regulate, the console automatically switches back to flow based regulation.	10.0 l/ min
Regulation Mode		This step is only available when both a Flow Meter and a Pressure Sensor are installed. This step is automatically set to "Flow" and cannot be changed if lane spraying is selected (GLM or LKM). Selecting a regulation mode will determine which sensor is used as the primary mode for regulation.	Flow
Tip/Nozzle Spacing[2]		Select the space between Tips/Nozzles. Spacing must match the physical spacing on the sprayer.	50 cm
Number of Sections[2]		Select the number of sections. The number of sections must match the physical number of sections on the sprayer.	5 sections
Tips/Nozzles per Section[2]		Set number of Tips/Nozzles for each section. Each section programmed in the Number of Sections setting will have a separate setting to set the number of Tips/Nozzles per section.	6 nozzles
Density		Establishes the weight per volume setting based on the type of fertilizer being used. Water = 1.00. The density value equals Weight of the Solution ÷ Weight of Water.	1.00

2 This setting is not available if lane spraying is selected (GLM or LKM).

Step	Display	Description	Default
Regulation Valve Type	Reg. BYPASS valve type	Instructs the console where the regulating valve is plumbed into the system. Options include: Throttle, Bypass and PWM	Bypass
Regulation Speed Factor	Reg. 9.5 speed crse.fine — 9.5 Coarse adjustment / Fine adjustment	The first digit sets the speed for the coarse adjustment in relation to a large percentage outside of the target application rate. The second digit sets the speed for the fine tune adjustment in relation to a small percentage close to the target application rate. ▶ If plumbed in a bypass mode, the Regulation Speed Factor of 9.5 works very well in most applications. ▶ If plumbed in a throttling mode, start with a Regulation Speed Factor of 5.5 and adjust the number according to your application requirements. Low flow situations will require a slower response time.	Coarse: 9 Fine: 5
Section Valve Type[3]	Sect. 2-way valves type	The Section Valve Type distinguishes the type of On/Off boom control valves installed on the machine.	2-way
Tank Size	Tank 1000 size ltr	Sets the maximum tank size.	1000 litres
Minimum Tank Level	Tank 100 minimum ltr	Sets the tank level at which an alarm will trigger. Setting this value to 0 will disable the tank alarm.	100 litres
Communication Mode	Comm. None mode	The Communications step allows for the selection of the type of communications (if any) used.	None
Simulated Ground Speed – Low Speed	Sim. low 10.0 speed km/h	Set simulated low speed.	10.0 km/h

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3 This setting is not available if lane spraying is selected (GLM or LKM).

| Step	Display	Description	Default
Simulated Ground Speed – High Speed		Set simulated high speed.	15.0 km/h
Minimum Speed		Set the minimum speed at which the console automatically shuts the boom sections off to eliminate an operator function when slowing to stop or turn around. There will be no spraying below this speed. When the sprayer speed exceeds the established Auto Master Off Speed, the boom sections turn back on. Set this value to "0" to disable.	3.0 km/h

APPLICATION SETUP MODE

The Application Setup Mode is used to set up application specific parameters.

Enter the Application Setup Mode

The Master Switch must be off.

Press and release the PROGRAMME [P] button once so the Program User Menu screen appears. Press and release the PROGRAMME [P] button again within 3 seconds to enter the setting options.
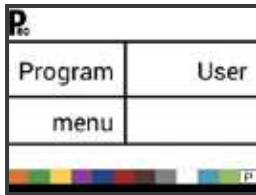
Advance to the Next Option

Press the PROGRAMME [P] button to advance the system to the next Program step. After the final setup option is complete, the console return to the initial setup option.
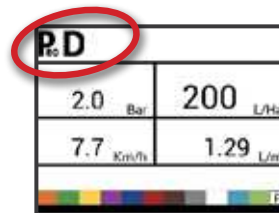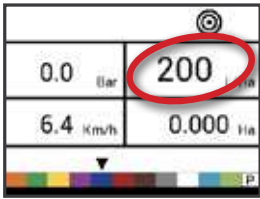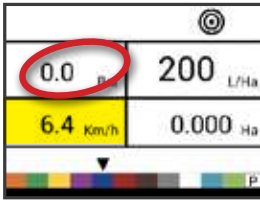
Exit the System Setup Mode

Press and hold the PROGRAMME [P] button for 3 seconds.

The inputs are stored, and the console will exit the setup mode.
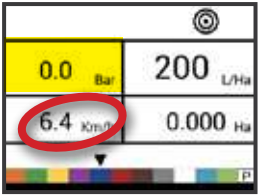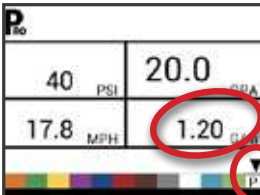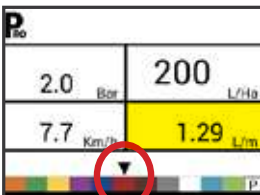
Activate Density Factor

At any time in Application Setup Mode, pressing the AUTO/MAN [↔] button will toggle the density symbol ('D') on or off. When the density symbol is on, the density value (set in System Setup mode) will be used in the regulation algorithms. If the density symbol is off, the density factor will not be used.

Step	Display	Description	Defaults
Target Application Rate		Set target application rate.	200 l/ha
Known Pressure Value[4]		The console will calculate the speed for the selected pressure, Tip/Nozzle type and target rate. ▶ If the indicated speed is too high, a set of smaller Tips/Nozzles is required. ▶ If the indicated speed is too low, a set of larger Tips/Nozzles is required.	2.0 bar

4 This setting is not available if units are set to "NH3" or lane spraying (GLM or LKM). The pressure field will show "NH3", "GLM", or "LKM" when set to these units.
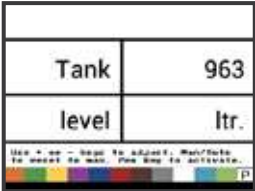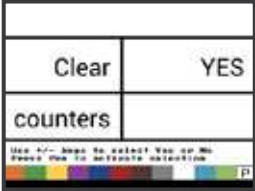
REFERENCE GUIDE

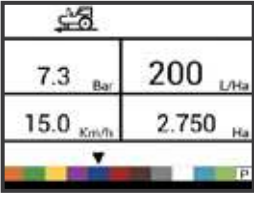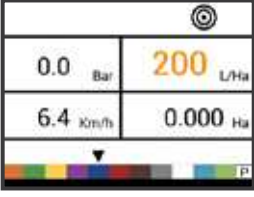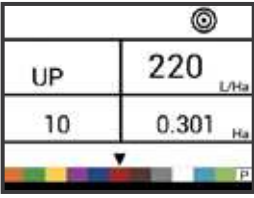| Step	Display	Description	Defaults
Known Speed Calculation[5]		The console will calculate what the pressure must be to maintain the target application rate at the entered speed.	*No defaul value*
Programmable Tip/Nozzle Reference Flow[6]		This step is only available if programmable Tip/Nozzle ('P') has been selected. Adjust reference flow at 2.75 bar for programmable Tip/Nozzle.	1.29 l/min
Predefined Tip/Nozzle Selection[7]		The console will show the reference flow for the selected Tip/Nozzle.	red tip/nozzle

5 This setting is not available if units are set to "NH3" or lane spraying (GLM or LKM). The speed field will be blank.
6 This setting is not available if units are set to "NH3" or lane spraying (GLM or LKM). The reference flow field will be blank.
7 This setting is not available if units are set to "NH3" or lane spraying (GLM or LKM). The Tip/Nozzle indicator will not be available.
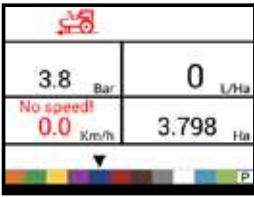
OPERATION FEATURES

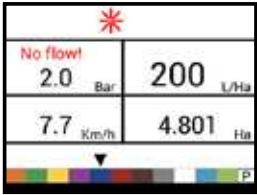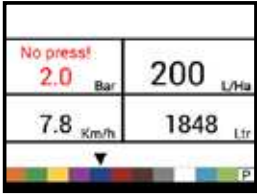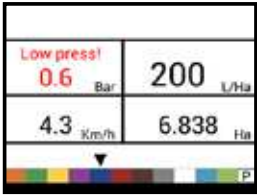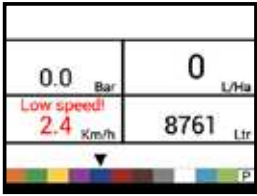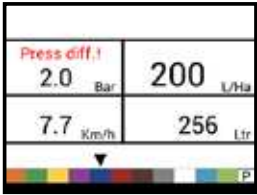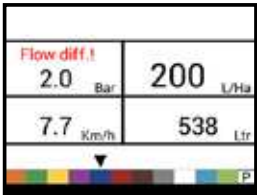| Feature and Display	Description
Tank Level	Used to show and/or set the actual content level in the tank. This level will decrease by the amount being sprayed. If the minimum tank level has been set to a value greater than zero and the actual level becomes less than the minimum level, a tank alarm will be triggered. Setting minimum tank level to zero will disable tank alarm function. View Tank Level – Start from the work screen with the Master Switch "OFF". 1. Press and release the PLUS + button and MINUS − button simultaneously. Adjust Tank Level – Start from the work screen with the Master Switch "OFF". 2. Use the PLUS + and MINUS − buttons. Or Press the MAN/AUTO button to reset tank level to maximum. 3. Press the PROGRAMME button to confirm the selection and exit to normal work screen.
Clear Counters	Used to reset the total area, total volume and total distance counters to zero. Start from the work screen with the Master Switch "OFF". 1. Press and hold the MAN/AUTO button for 3 seconds. 2. Use the PLUS + or MINUS − buttons to select "YES". 3. Press the PROGRAMME button to confirm the selection and exit to normal work screen.

Feature and Display	Description
Simulated Speed	Allows the verification of console functions and the sprayer without actually moving the sprayer.
	Activate the Simulated Speed – While on the work screen without the machine in motion and the Master Switch in the "On" position:
	▶ Activate Low Simulated Speed – While pressing and holding the PROGRAMME 🅿 button, press and release the MINUS ⊟ button.
	▶ Activate High Simulated Speed – While pressing and holding the PROGRAMME 🅿 button, press and release the PLUS ⊞ button.
	Deactivate Simulated Speed – Once the sprayer begins moving and the console receives actual speed pulses, simulated ground speed is deactivated. Simulated speed will also be deactivated if the console is powered off.
Manual/Automatic Regulation Mode	In manual mode, automatic rate regulation is stopped completely.
	▶ Pressing the PLUS ⊞ button simply moves the regulating valve to increase the flow (or increase the PWM duty cycle) as long as the button is pressed.
	▶ Pressing the MINUS ⊟ button gives the opposite action.
	The valve (or the PWM duty cycle) stays in the position it had when the PLUS ⊞ or MINUS ⊟ button was released. The application rate value shown on the screen is the actual rate for the given speed. Since automatic regulation is stopped, it will appear that the rate value changes when the speed is changed.
Boost Function	Used to increase or decrease the application rate by increments of 10%.
	Increase/Decrease Target Application Rate
	1. Press the PLUS ⊞ button or MINUS ⊟ button.
	2. Within 3 seconds (while the boost activation period is active), use the PLUS ⊞ button or MINUS ⊟ button, to increase or decrease the rate in steps of 10%.
	After the activation period, the display will revert to normal, but if the rate has been changed, the target symbol will stay visible and flashing.
	Reset Target Application Rate – Press the PLUS ⊞ and MINUS ⊟ buttons simultaneously.

ALARM SYSTEM

A number of sensor alarms have been included in the 845 software. The alarm system is only active with Master on. All audible alarm signals can be cancelled by pressing any button. All alarms are reset when Master is switched off.

Alarm Name	Display	Description	Audible Alarm Type
Rate Alarm		Too high difference between target and actual rate.	High Priority (3 short beeps, repeated every second)
No Speed Alarm		If speed is zero with master on, then no speed alarm is triggered and spraying is stopped.	Medium Priority (2 short beeps, repeated every second)

Alarm Name	Display	Description	Audible Alarm Type
No Flow Alarm		If no flow pulses are received with master on and flow meter installed, a no flow alarm is triggered.	Medium Priority (2 short beeps, repeated every second).
No Pressure Alarm		If no pressure is measured with master on and pressure sensor installed, a no pressure alarm is triggered.	Medium Priority (2 short beeps, repeated every second).
Low Pressure Alarm		If pressure drops below minimum value with master on, a low-pressure alarm is triggered.	Medium Priority (2 short beeps, repeated every second).
Low Speed Alarm		If speed drops below minimum value with master on, a low-speed alarm is triggered and spraying is stopped.	Medium Priority (2 short beeps, repeated every second).
Pressure Difference Warning		With flow based regulation, the controller (if pressure sensor installed) will compare the actual measured pressure with the calculated pressure (based on flow and nozzle type).	No audible alarm.
Flow Difference Warning		With pressure based regulation, the controller (if flow meter installed) will compare the actual measured flow with the calculated flow (based on pressure and nozzle type).	No audible alarm.
Tank Level Alarm		Current tank level drops below tank minimum.	Low Priority (1 short beep, repeat every second).

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