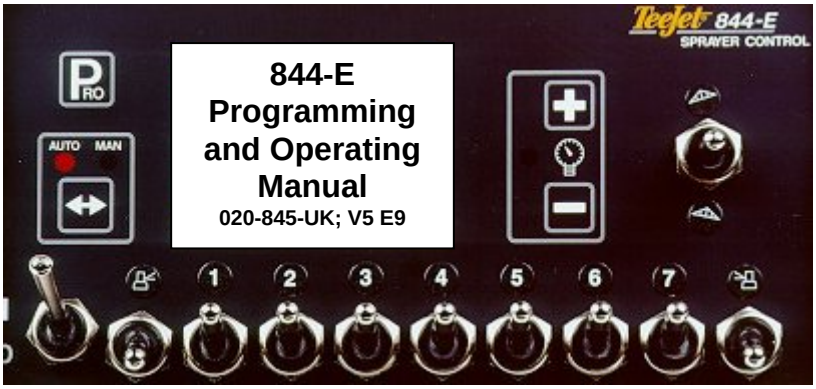

844-E Programming and Operating Manual

020-845-UK; V5 E9

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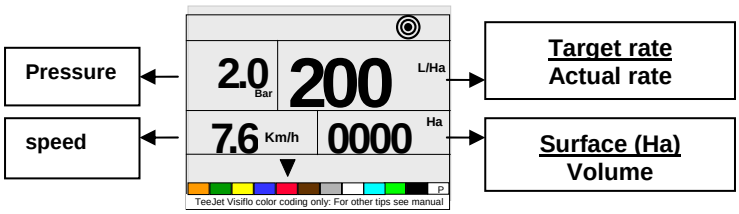
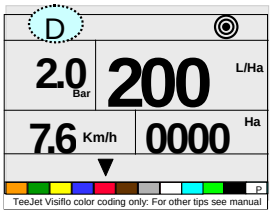
175_4078-EN

Working displays:

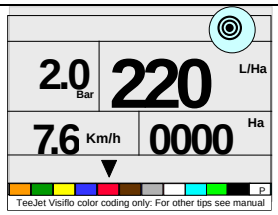
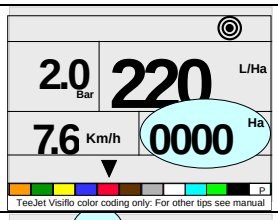
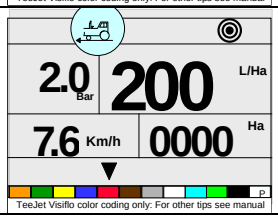
Density = 1.00 (water)



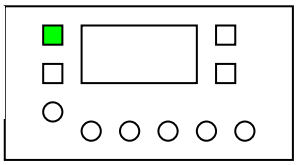
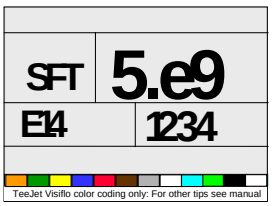
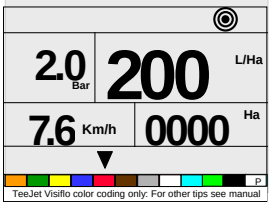
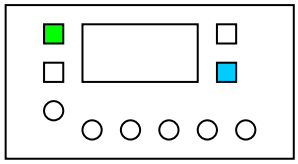
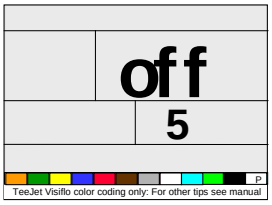
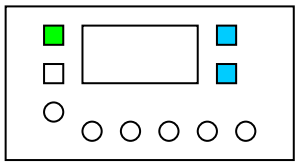
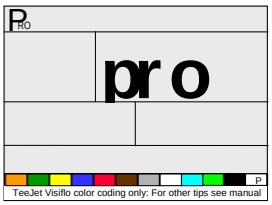
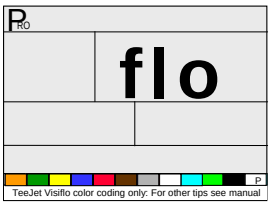
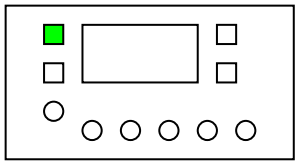
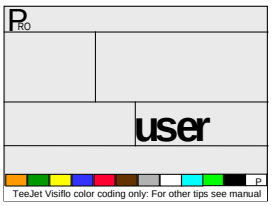
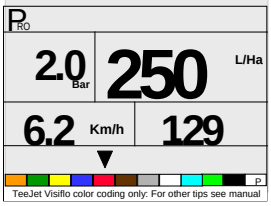
Density ≠ 1.00 (liquid fertiliser)



Working mode functions:

Boost mode: Master switch On **Target dose rate symbol flashes**		While spraying (Auto mode), each subsequent depression of ⊕ or ⊖ will increase, resp. decrease the application rate by 10%. Pressing ⊕ and ⊖ Simultaneously will reset the application rate to the default value. Attention: the first time the ⊕ or ⊖ keys are repressed, the target rate is displayed. Only after the 2nd press, the boost mode comes into effect.
Ha / Liters counters		Covered area and sprayed volume are alternately displayed in the lower right corner. Holding the ⊕ and ⊖ depressed during 3 secs will reset the counters to 0. **Note: the master must be off and the speed must be 0 !**
Simulated ground speed		Simulated ground speed allows spraying without moving the sprayer. **Note : See system setup programming for more details.**

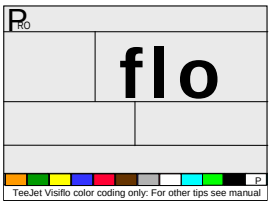
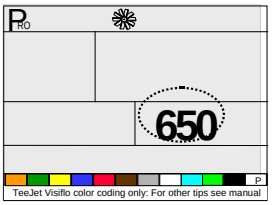
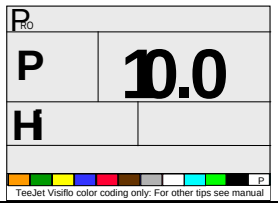
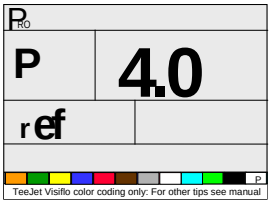
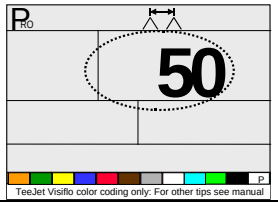
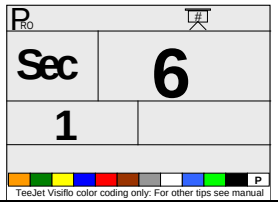
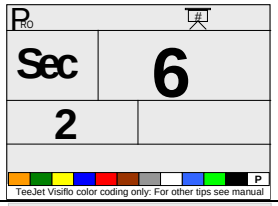
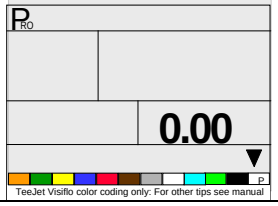
Operating and programming modes: access overview

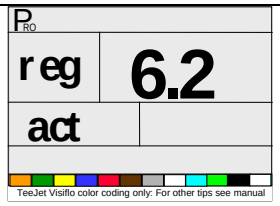
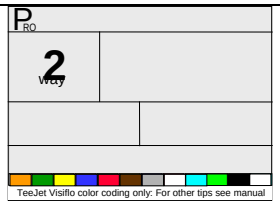
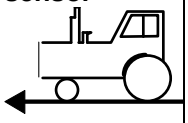
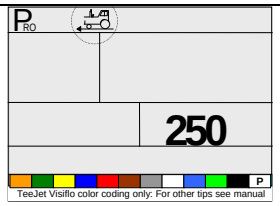
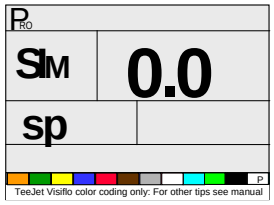
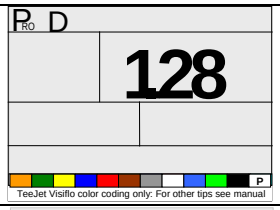
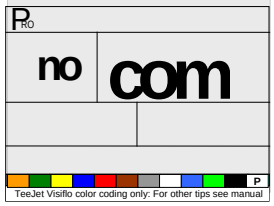
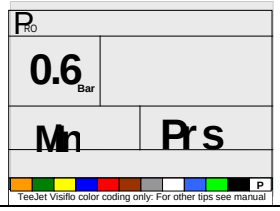
Mode:	Action(s):	Temporary screen:	Final screen:
Power-up of console Master Off	Press PRO *  Software version * Serial nr. *		
Power Off Master Off	**Start from working mode display** Action 1 Keep depressed Action 2 Press PRO * 		
System program Master Off	**Working mode display** Action 1 Keep + and - depressed Action 2 Press PRO 2 times * 		
User program Master Off	**Working mode display** Press PRO 2 times * 		

While in any of the programming modes, the following general rules apply:

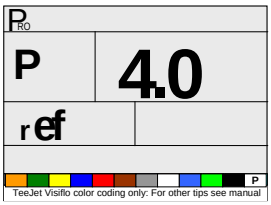
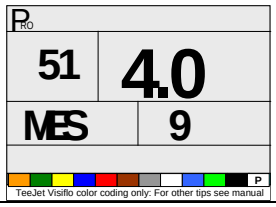
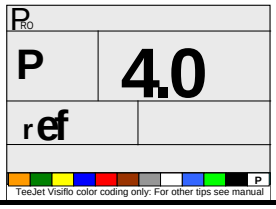
- **To scroll through or skip programming steps:** * PRO
- **To modify parameters:** * + or −.
- **To set value back to 0:** * + and − simultaneously.
- **To exit any of the programming steps, <u>at any step</u>:** hold PRO depressed for min. 3 sec.

System setup.

Step nr. - Parameter	Display:	Description	Your value:
1. Regulation type option		Select with ⊕ or ⊖ the desired regulation type: FLO for flow-based regulation , PRS for pressure based regulation **Default value: FLO**	
2. Flow meter pulses/liter 		Enter here the number of pulses/liter for the flow meter. **Default value: 650** **Unit : pulses/liter** **Note: this step is only shown when FLO is selected in step 1**	
3. Maximum value of pressure transmitter		Maximum pressure (at 20 mA) of the pressure transmitter **Default value: 10.0** **Unit : bar**	
4. Pressure transmitter: 0 bar reference current		Enter in mA, the current produced by the sensor for a 0 bar pressure. Press ⊕ and ⊖ simultaneously to start the auto-calibration – **see further in this document**. **Default value: 4.0** **Unit : 4.0 mA**	
5. Nozzle spacing		Enter here the nozzle spacing. **Default value: 50** **Unit : cm**	
5_1. Nr. Of nozzles for section 1		Enter here the number of nozzles for section 1 **Default value: 6**	
5_2. – 5.x Nr. Of nozzles for section 2 … 9		As above, but for sections 2 until the max. value programmed for the machine. **Default value: 6**	
6. Flow rate for program-mable nozzle		Enter here the flow rate of the programmable nozzle at 2 bar reference pressure. **Valeur défaut: 0.00** **Unit: liter/min**	

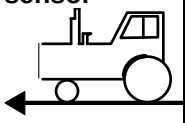
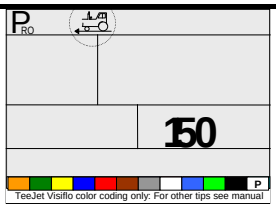
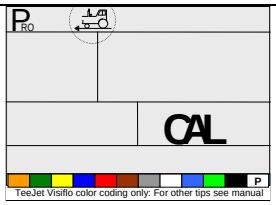
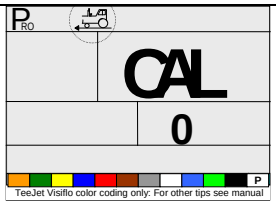
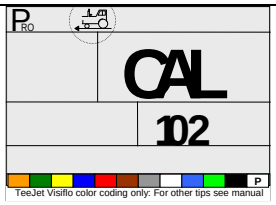
7. Regulating valve actuating factor		**a.** The first digit acts at the coarse regulation action, **b.** The second digit acs at the fine regulation action. **Note : 0 is slow, 9 is a fast action** **Default value: 6.2**	
8. Section valve type		Choose between following options: : - 2 way : no return flow when section is off. - 3 way : calibrated return flow when section is off (flow must be equal to flow of active section) **Default value: 2**	
9. Wheel speed sensor 		**a.** Enter the number of pulses per 100 m; use ⇔ to select the radar mode (iin that case: pulse per 10 m) **Default value: 250** **b.** Press + and − simultaneously for auto-calibration – **see note on auto-calibration.**	
10. Speed simulation		Enter here the value for the simulated speed. When not in use, program in 0.0 **Default value: 0.0** **Note : The value reverts back to 0.0 from the moment the first wheel pulse is detected.**	
11. Density		Enter here the density of the liquid used. (liquid fertiliser) Choice between density and no density is made in the user setup. **Note : water density = 1.00** **Default value: 1.28**	
12. Commun-ication		Select here the use of the serial port : - NO COM : no communication - Prt : ticket printer - GPS : connection with a GPS compatible system **Default value: no com**	
13. Mimnimum pressure hold		Enter here the minimum pressure that is allowed in the system. The regulation valve will not allow a pressure below that value in the system. **Default value: 0.6 Bar**	

Auto-calibration of the pressure sensor

1. Adjusting the 0 bar reference current		Enter here the current in mA, produced by the pressure transmitter when no pressure is measured.. Check that the pump is off and that no pressure remains in the line before doing the calibration Press [+] and [−] to start the auto-calibration **Default value: 4.0** **Unit : mA**	
2. Measure-ment (auto-calibration)		The current is now measured by the controller 51 = digital value (internal use) 4.0 = value in mA MES 0 … 9 = 10 measurement in progress	
3. Final display:		Current, delivered by the pressure transmitter after the auto-calibration This is the mean value of the 10 measurements. The value must be close to 4.0 Return to system setup.	

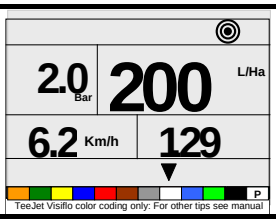
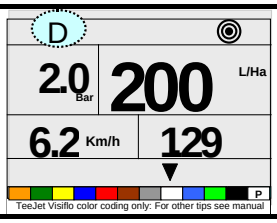
Auto-calibration of the speed input.

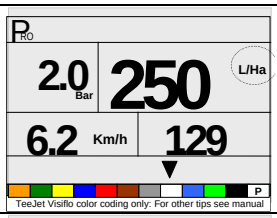
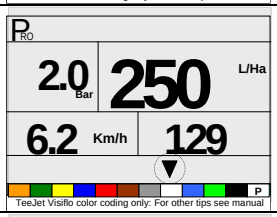
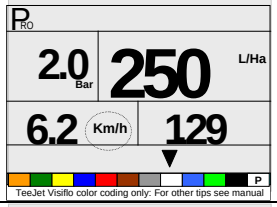
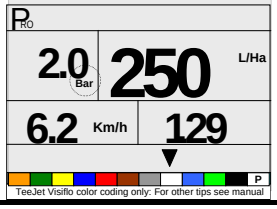
Speed input calibration is based upon the number of impulses received over a distance of 100 meter.
Place 2 signs, 100 meter apart from each other.
Auto-calibration has to be done in the field with the tank half-filled with water.

1. **Speed sensor** 		**To select the auto-calibration,** press [+] and [−] simultaneously.	
2. **Initial screen**		Drive slowly until you approach the first mark, indicating the 100 m run	
3. **Start of the automatic calibration.**		Press [+] when passing the first mark, to start the automatic calibration..	
4. **Automatic measure-ment.**		Drive until the second mark, and press [+] when passing that mark. The number of impulses received during the 100 m drive will be shown on the display. The automatic calibration will detect if a wheel sensor or a radar is installed. In the latter case, RAD will be shown on the display, together with the number of pulses per 10m Press [PRO] to go back to system programming mode.	

Note: Speed pulse calibration must be done each time tires or tire pressures are changed.

User setup

Press ⇔ in any of the user setup screens, to select or deselect the Density feature (use of liquid fertiliser)			

Parameter	Display:	Description:	Your value:
1. **Target rate selection**		Change the value by pressing ⊞ or ⊟ to obtain the desired figure.	
2. **Select a nozzle** ▼		Select the proper nozzle with ⊞ and ⊟.	
3. **What if … ?** **Calculation step based on speed.**		KMH symbol is flashing: Select your working speed with ⊞ and ⊟. The corresponding pressure for that speed and nozzle selected will be shown as an indication only.	
4. **What if … ?** **Calculation step based on pressure.**		Bar symbol is flashing: Select your working pressure with ⊞ and ⊟. The corresponding speed for that pressure and nozzle selected will be shown as an indication only. .	