

396-3630Y1

SureFire Catalyst system and JDRC 2000

Your setup may vary. See the full setup instructions on instruction with main Adapter harness (396-3562Y1, -3563Y1, -3564Y1 or -3566Y1). See also 396-3616Y1 manual for JDRC 2000 and Tower systems.

Setup Control Valve

Product 2 Liquid

Control Valve Type: **PWM Close**

Valve Response Rate (1-100): **80**

Control Deadband (%): **2**

Start with the Valve Response Rate at 80. You will also make some changes in the Advanced Tuning (described later). If system is too slow to adjust to speed changes, increase Valve Response by 10 at a time.

If the system overshoots and oscillates decrease by 10 at a time.

Setup PWM

Product 2 Liquid

Coil Frequency (Hz): **125**

High Limit (%): **80.0**

Low Limit (%): **10**

PWM Startup (%): **10**

IMPORTANT: Adjust PWM Startup for best performance in the field.

Start with the Low Limit and PWM Startup as shown above. Monitor the PWM DC % on the Run page. If the pump needs to go below 10% DC, change the Low Limit above. Adjust the PWM Startup % so the pump starts at the speed you want.

Most SureFire Catalyst systems with the 0.08 to 1.6 GPM flowmeter have a flow cal of 22710 pulses per gallon. The JDRC will not accept a 5-digit flow cal so we set 177 pls/fl oz. ($22710 / 128 = 177$ pulses per fl.oz.)

Check the Serial Number sticker on the side of the flowmeter to confirm pulses/gal.

Setup Rate Sensor

Product 2 Liquid

Flowmeter Calibration: **177**

Flowmeter Pulse/Units: **fl oz**

Setup Alarms

Product 2 Liquid

Off Rate Alarm (% off target rate): **20**

Alarm?

Enter minimum flow rate required to maintain spray pattern.

Minimum Flow Rate (gal/min): **0.0**

For a rate of 32 oz/acre ($32 / 128 = 0.25$ gal/acre), check the Decimal Shift box, and enter the rate as 0.25 gal/acre.

Setup Rates

Product 2 Liquid

Preset Rate Values (gal/ae): Rate 1* **0.25**, Rate 2 **0.00**, Rate 3 **0.00**

Rate Bump (gal/ae): **0.10**

Rate Selection: **Predefined**

Rate Smoothing **15** %

Decimal Shift

Example shown is 32 oz/acre or 0.25 gal/ac. Check **Decimal Shift** box. ($32 / 128 = 0.25$)

Setup Tank

Product 2 Liquid

Tank Capacity (gal): **0**

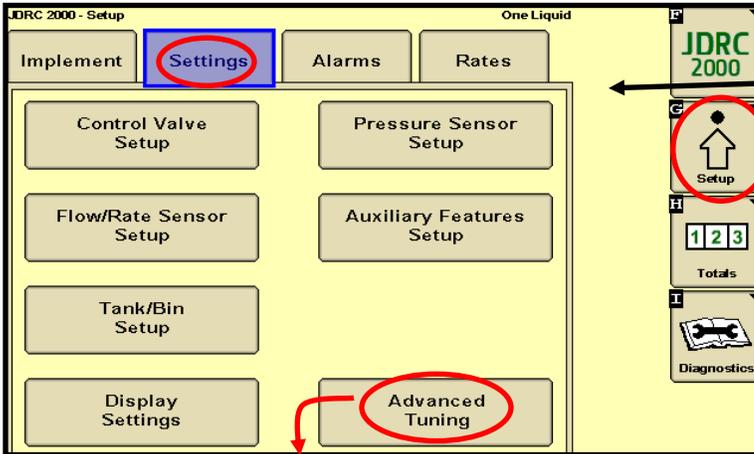
Current Level (gal): **0**

Low Tank Level (gal): **0**

Alarm?

Use this if you want to keep track of product in the tank.

MUST do this Setup step:

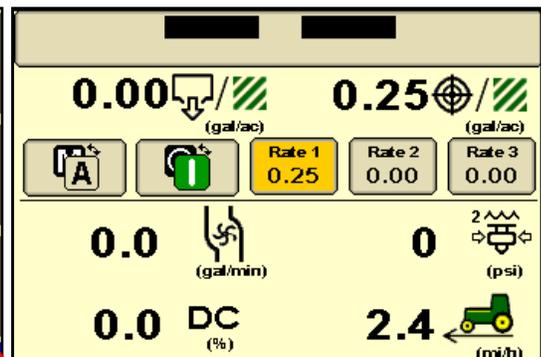
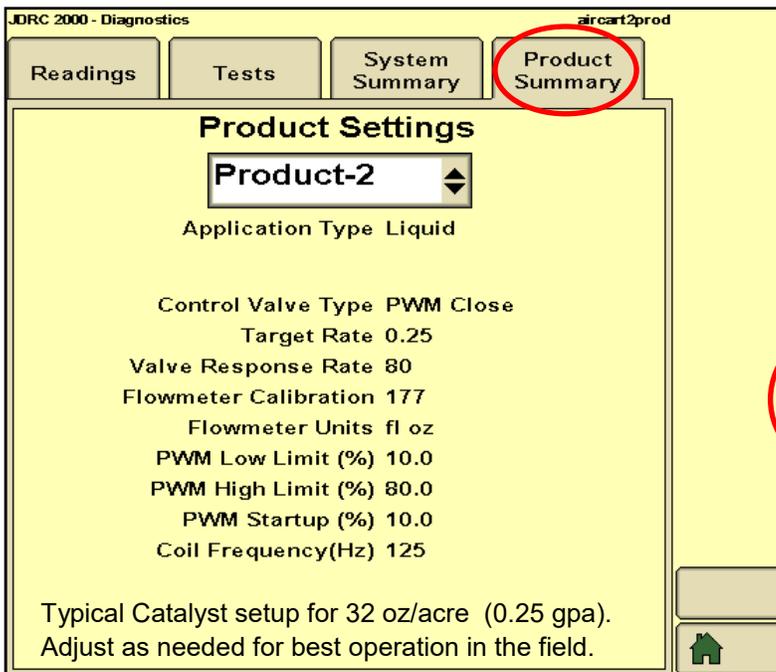
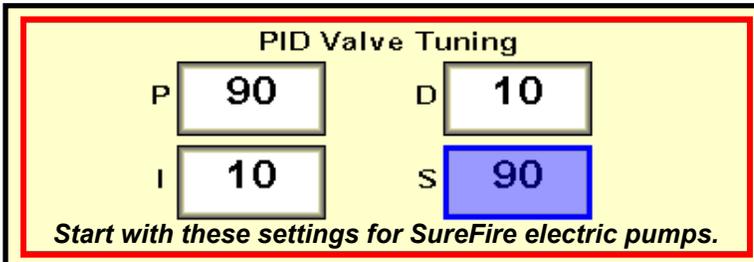


Advanced Tuning

On SureFire **electric pump systems** (Tower 110, Tower 200, Catalyst, and Spartan), it will be necessary to use the **Advanced Tuning** feature in addition to the regular Control Valve Calibration. To activate **Advanced Tuning**, press and hold the **Settings tab** for about 8 seconds.

On **electric pump systems**, set the PID Valve Tuning parameters as shown (below left). Press the “?” for an explanation of what each of these values does.

Fine-tuning of the system may require some adjustment of these numbers along with the Valve Response Rate on the Control Valve Setup.



The screenshot above shows the Run page with 4 items that be set in **Display Settings**. These items give valuable information about the performance of your system.

- Flow (gal/min)
- Pressure (PSI)
- PWM Duty Cycle (DC %)
- Speed (mph)