

# Title: Bane-Welker Precision Farming Display

Jared L. Myers (ASM)

## Problem Statement and Review

Agricultural equipment continues to rely more heavily on technology. In order for dealerships to be able to provide top-notch service, they must invest in educating not only themselves but their customers. Many customers have had bad encounters with technology. As the Millennial generation enters the industry, there must be more resources and education provided on both ends to bridge the gap between generations.

This particular Precision Farming Display is intended to educate new employees and existing customers. It will cut down time for customers and speed diagnostic time for precision farming consultants. This Precision Farming Display stand will help Bane-Welker Equipment better serve its customers as well as stay on top with the industry's newest technology.

## Alternative Solutions

There are two potential solutions to this industry wide issue.

- Original equipment manufactures could hold large knowledge day events
- The dealership can build a mobile precision farming display stand.

Display stand is superior choice as it provides potential profit center.

## Common Errors

*Raven CAL = 1730*

$$1730 = \frac{1730 \text{ Pulses}}{10 \text{ Gallons}}$$

*Raven uses CAL number in  $\frac{\text{Pulses}}{10 \text{ Gallons}}$*

*PRO 700 uses CAL number in  $\frac{\text{Pulses}}{\text{Gallon}}$*

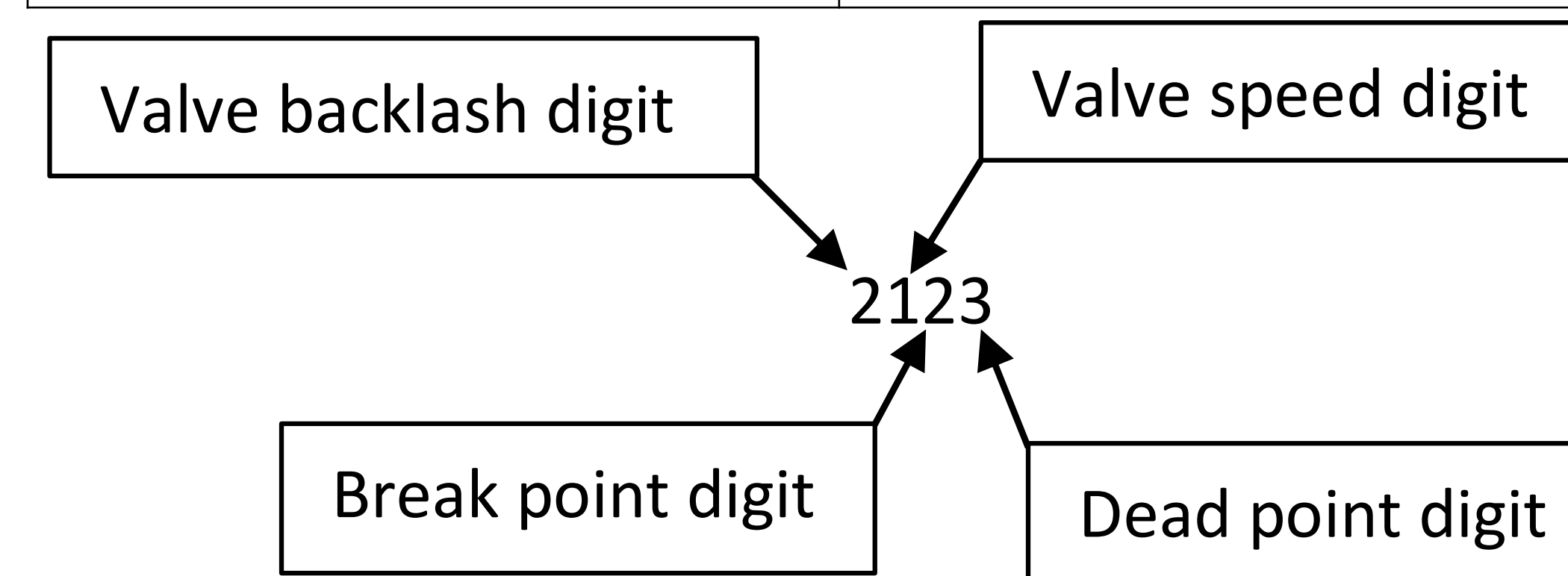
To get the Raven calibration number to work we need to divide by 10

$$\frac{\left(\frac{1730 \text{ Pulses}}{10 \text{ Gallons}}\right)}{10} = \frac{173}{\text{Gallon}}$$

So the Cal number we would use for the PRO 700 is 173

## Flow Meter Explanation

Valve Name	Calibration Number
Standard Valve	2123
Fast or Fast Close Valve	743
PWM or PWM Close Valve	43



## Pay off Scenario

- Customer runs multiple displays to run his liquid tool bar.
- Introduced to AccuControl®
- Then realizes there is an unlock that allows the planter to be run through the AFS Pro 700
- Unlocks combined- \$2,500
- Customer is interested in row clutches for his planter. 16 rows at 30 inches. He has 45° point rows.
- Overlap of 1,3400 sq. ft. on end rows
- 32,000 seeding population, 986 extra seeds are planted.
- \$237.87 more per acre in seed costs.
- \$11,285 for row clutches.
- Plants 2,500 acres of corn
- Costs \$4.51 more per acre for row clutches

## Display Components

- 2 AFS Pro 700's- Factory CNH displays in row crop equipment
- Raven Viper 4- Raven's newest display. Compatible with all Raven products and application systems
- Raven Viper Pro- Widely used in spraying and fertilizer applications
- XCN 2050-Trimble, tablet based display.
- Ag Leader InCommand 1200- Ag Leader's newest display with AgFinity

## Bane-Welker Precision Farming Display



## Cost Analysis

### Bane-Welker Precision Farming Display Stand

Component	Price
AFS Pro 700* 2	\$ 10,000.00
Ag Leader InCommand	\$ 7,000.00
XCN 2050	\$ 6,500.00
Raven Viper Pro	\$ 3,000.00
Raven Viper 4	\$ 10,000.00
AC-DC Converter	\$ 100.00
Display Stand	\$ 6,129.68
Miscellaneous	\$ 350.00
Unlocks	\$ 15,823.00
<b>Total Cost</b>	<b>\$ 58,902.68</b>

## Lesson Plans

- There are numerous pages and configurations to go through when setting up different application jobs in any display. The goal is getting the customer to feel comfortable enough to navigate through a display while on the phone with a precision farming consultant. My goal is to minimize down time of the customer and allow dealer employees to be able to service more customers faster.
- Demonstrate different possibilities to run product application through various displays such as the AFS Pro 700.
  - Raven ISO- Operates through the Virtual Terminal screen (VT)
  - Field IQ- Operates through CNH's AccuControl®
  - Step by step setup on configuration pages
- Basic navigation throughout displays
  - Setting up various run screens
  - Guidance Calibrations
  - Data Organization

## Impact and Sustainability

In order to stay ahead of the game, dealerships must find ways to better educate their customers and employees on the newest technology. With today's margin squeeze, precision farming technology has to be proven to pay. For a company to stay on top, education and progressiveness is a must.

Sponsor:  
Bane-Welker Equipment

Technical Advisor:  
Dr. Dennis Buckmaster

Instructors:  
Dr. Bernie Engel  
Dr. Robert Stwalley

Acknowledgements:  
Mike Davis  
Brian Verhey  
Chris Eppley  
Beau Ely  
Stacy Stewart