Precision Liquid Fertilizer Solutions



## **QuickStart Setup Instructions for Case IH Pro 700 with AccuControl**

### IMPORTANT: SOFTWARE VERSION AND RATE & SECTION CONTROL MODULE UPDATES

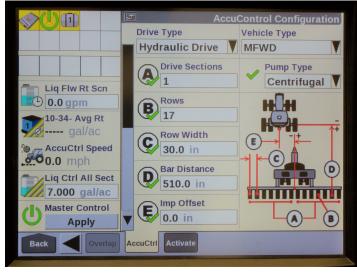
Keep your software up-to-date. Go to Diagnostics > Version to see the Software Version number for each piece of software (esp. AccuControl). Check with your CASE (NH) dealer to see what the latest versions are. Also, check and update the software/firmware for the Field-IQ module (Diagnostics > CAN > Scroll to find Rate & Section Control Module). Have dealer update all this once a year. March 2017--Display and AccuControl version 30.16. Rate & Section Ctrl Module should be 3.19. Version 2.14 will NOT work.

- Create an Operator (Toolbox > Operator) 1.
- 2. Check GPS Status (Toolbox > GPS)
- 3. Create Implement (Toolbox > Implement)
- 4. Set up Product (Toolbox > Product)
- 5. Set up Container (Optional) (Toolbox > Container)
- Basic Setup (Toolbox > AccuCtrl) 6.
  - Select AccuCtrl Operation (Liquid) A.
  - В. Select AccuCtrl Installed (Yes)
  - C. Select Implement Type (Liquid Toolbar)





- Press 'Setup'
- B. Select Drive Type (will be Hydraulic Drive)
- Select Vehicle Type
- D. Set Number of Drive Sections (A) Always = 1
- E. Pump Type will be set at Centrifugal
- Set Total Number of Rows (B)
- G. Enter Row Width (C)
- H. Enter Bar Distance in Inches (axle to knife) (D)
- Measure Implement Right/Left Offset
- Scroll down to Enter Rows per Drive Section (same as Total Number of Rows)
- K. Press 'Done'



8. Section Control Setup (If equipped with

Section Shut Off Valve) Toolbox > AccuControl > Section Control

- A. Select Section Control (Yes)
- B. Press 'Setup'
- C. Assign Module Serial Numbers
- D. Assign Rows per Output (number of rows per Section
- E. Select Control Polarity (Active On)
- F. Select 'Done'
- 9. Overlap/ Boundary Control (Toolbox > Overlap)
  - A. Turn Overlap Control and Boundary Control ON.
  - B. Adjust values as desired.

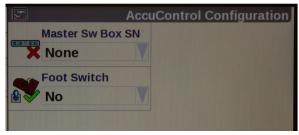




## **AccuControl Setup for Liquid**

- 10. Liquid Drive Setup *Toolbox > AccuControl > Liquid Drive* 
  - A. Select Liquid Drive (Yes)
  - B. Press 'Setup'
  - C. Assign Liquid Drive Serial Numbers
  - D. Select Drive Type (PWM)
  - E. Select Master Valve Type (NO)
  - F. Select Pump Disarm (No)
  - G. Select Sec Off Behavior (Turn Off)
  - H. Enter Drive Meter Cal Number
  - I. Press 'Done'

### Optional Ma ter Switch Box and Foot Switch



- 12. Implement Switch (if installed)
  - A. Select Implement Switch (Yes)
  - B. Press 'Setup'
  - C. Select Implement Switch Serial Number
  - Select Switch Polarity (Determine this by raising and lowering the implement and watch the Implement Status Arrow in Status/Warning Area for proper operation.)
  - E. Press 'Done'





Number of Pumps	Flow Calibration Number
1 Pump	84
2 Pumps	42
3 Pumps	28
4 Pumps	21

- 11. Master Switch Box (If equipped with External Switch Box)
  - A. Select Master Sw Box (Yes/No)
  - B. Press 'Setup'
  - C. Verify Serial Number
  - D. Select Foot Swiitch (if installed)
  - E. Press 'Done'





- 13. Section witch Box (If system is equipped with External Section witch Box or desire Manual Valve Section Co trol through Run Screens).
  - A. Select Section Switch Box (Yes)
  - B. Press 'Setup'
  - C. Select Configuration Mode (Auto)
  - D. Verify Switch Box Serial Number (if equipped)

If no external switchbox is installed, User Defined Windows can be assigned to a Run Screen (Toolbox>Layout).



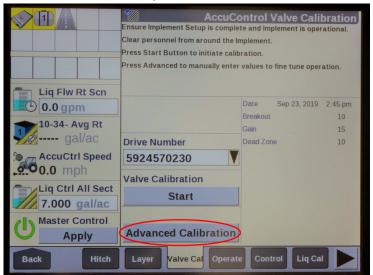
## **Create A Layout**

Go to Toolbox>Layout
Select Current Layout and then select New
Name the Layout. Under Run Screen select a screen.
In the white boxes add the following items to Run Screen

- AccuControl Speed
- Master Control
- Liquid Op Mode
- Liquid Control
- Liq App Rate Scan
- Container
- Lig Flow Rt Scan
- Section Control
- Overlap Control
- Clutch Control (may want this if the system has electric section valves)



The Run Screen Layout is largely a mirror of operator preference. Some of these items may be added to the Left Hand area is space is available or more than one Run Screen can be set up.



Proportional Gain: 0 Differential Gain: 0 Dead Zone: 10%

Integrator Lower Limit: 0 Hz Flow Filter Time Constant: 0% Lead Filter Constant: 0.01 Hz

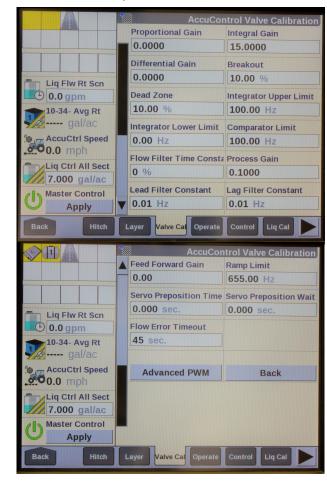
Lag Filter Constant: 0.01 Hz Feed Forward Gain: 0 Ramp Limit: 655 Hz

Servo Preposition Time: 0 Seconds Servo Preposition Wait: 0 Seconds

Intergral Gain: 15 Breakout: 10%

Integrator Upper Limit: 0 Hz Compactor Limit: 100 Hz Process Gain: 0.1000

Flow Error Timeout: 45 Seconds





## Pro 700 & AccuControl Operation or Liquid Applicatio

To start applying product:

Go to Toolbox>AccuCtrl>Default Speed - Enter a default speed. The applicator will default to this speed if all ground speed sources are lost. The Master Apply button may need to be cycled twice to start the application.

### 1.Preparatio

A.Insert a data card in the display.

B.Create or Select a Grower/Farm/Field/Task & Crop Type

### (Performance > Profile

### 2. Product Setup: Toolbox > Product

- A. Name the product (Example: 28-0-0)
- B. Select the form for the product (Liquid)
- C. Select Usage (Fertilizer)
- D. Enter Default Application Rate
- E. Enter Minimum and Maximum Application Rate.

#### 10-34-0 Liquid Usage Fertilizer Lia Flw Rt Scn Default App Rate Delta App Rate ① 0.0 gpm 7.000 gal/ac Units 1.000 gal/ac -- gal/ac Min App Rate Max App Rate AccuCtrl Speed 0.000 gal/ac 60.000 gal/ac 00.0 mph Package Size RX Scale Factor Liq Ctrl All Sect Units 1: 1.0000 0.000 gal 7.000 gal/ac **Product Density** Master Control 0.00 lb/gal P ATurn Manual Product Contr

# 3. Product Layer Assignment: Work Condition > Layer to assign a product to a control section of the applicator

- A. Select or Create a Work Condition.
- B. Select Layer 1 Control Type (AccuControl Liquid)
- C. Select Product for Layer 1 Control
- D. Select Container if using the Container
- E. Assign additional layers if needed.

### 4. Controller Setup—Liquid: Work Condition > Control

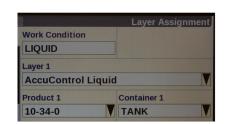
- A. Verify Implement
- B. Verify Work Condition
- C. Select Controller—Liquid
- D. Product Delay-Default is 1.0 sec.
- E. Enter the Minimum Speed (if the speed drops below this, the applicator will keep applying at this speed)
- F. Enter a value for Off-target Alarm Limit (probably 15-20%)

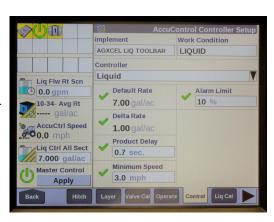
### 5. Enable Application: Run Screens

- A. Liquid Op Mode—Select Liquid
- B. Read the safety message and press Accept.
- Master Control—Press Apply on display or switch on Master Switch on switchbox (if equipped)

### 6. Liquid Rate Control

- A. Liquid Control defaulted to ON
- B. Increase or decrease rate if needed
- C. Automatic rate control (prescription) is assigned in







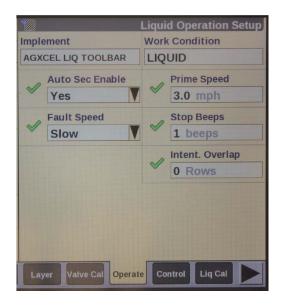
These are only example screen shots. Your system may vary and not require these particular settings, or it may require settings not shown in this document.

Please check your Case IH Pro 700 display manual and your AFS AccuControl manual for more information about our setup.

# Container Setup (Example) Toolbox - Container



# Work Condition (Example) Toolbox - Operate



# Implement Setup (Example) Toolbox - Implement



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Liq Flw Rt Scn

0.0 gpm

10-34- Avg Rt

gal/ac

60.0 mph

Back

AccuCtrl Speed

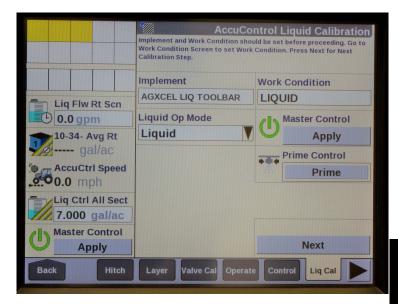
Liq Ctrl All Sect

**Apply** 

Hitch

7.000 gal/ac

Master Control



To run a system flow test, Go to **Work Condition** > **Liquid Cal**. From here, ensure that you set the **Liquid Op Mode** to **Liquid** before proceeding to the next page.

Insert the Meter Cal # from the Tag on Meter or Er Target Rate. Proceed to Next Page.

AccuControl Liquid Calibration

Meter Cal Value

22.0 Pulses/Gal

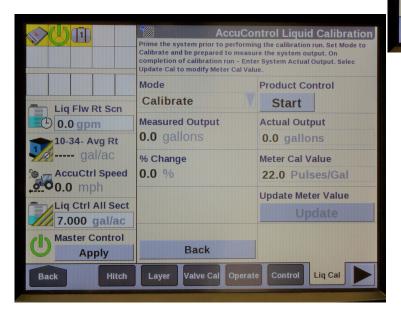
**Target Rate** 

7.00 gal/ac

Next

Liq Cal

Enter a Speed and a Rate that you would like to simulate for this test...



Once your desired rate has been entered, you can start the system by pressing the Start button. Ensure that your master switch is enabled.

**Simulated Speed** 

7.0 mph

Back

Serial Number

5924570230

### **AGXCEL CASE IH** AGXCEL CASE IM PRO 700 LIQUID ECU INTEGRATION HARNESS **SECTIONS** 12-PIN DELPHI TO TWIN 16-PIN ROUND CONNECTION VALVE GROUND 02 SECTION 02 SECTION 03 04 SECTION 04 05 06 07 09 Agxcel #55209 10 317-050 11 12-PIN CONNECTOR 12 14 VALVE POWER SECTION 01 15 VALVE POWER Wire Size: 18G Length: 2ft +12V SENSOR FLOW SIGNAL В FLOW GROUND С +12V P OWER D **PUMP** PWM + Е F G -12V G ROUND Н SECTION 01 GROUND 01 SECTION 02 Κ SECTION 03 03 PWM+ SECTION 04 М 04 PWM -05 SECTION 01 06 08 09 10 11 FLOW GROUND +12V SENSOR 13 FLOW SIGNAL 14 Version 1.0 Created 08-21-19 15 POW ER 16

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