

## Integration Instructions

# PinPoint™ III ENVELOP on AGCO RG-C

**Note:** Before performing the integration procedure, verify that Task Controller, located in the ISOBUS Information menu in the Ag Control Monitor, is enabled. If so, proceed to the Menu Setup procedure starting on page 2. If it is disabled, perform the following steps, then cycle the machine key switch and proceed with the Menu Setup procedure.

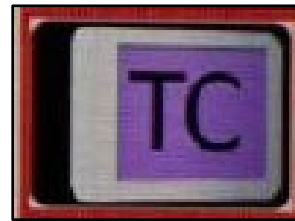
On the Ag Control Monitor, tap the **Settings** icon > **ISOBUS** icon > **Task Controller** icon.





**Settings**



**ISOBUS**



**Task Controller**

Tap the CapstanAG PinPoint™ III icon  from the program icons on the left side of the task controller screen. Tap the **Settings** icon  and select **Initial Setup > Configurations**.

9	Nozzle Spacing	20.00	in
10	Total Number of Nozzles	80	
11	Factory Reset		
12	Maximum TC Sections	80	
13	Selected VT	Raven, 128	
14	Selected TC	Raven, 130	
15	Aux Boom Configuration	No Config	
16	Software Restart		

**Configurations Page 2**

Scroll to the second page and verify that **Selected VT** and **Selected TC** are both set to **Raven**. Change if necessary.

**Note:** prior to performing any setup on the machine, perform the factory reset procedure.

Tap the **Settings** icon  and select **Initial Setup > Configuration > Factory Reset > Yes**.

Below is an example of the PinPoint™ III home screen.

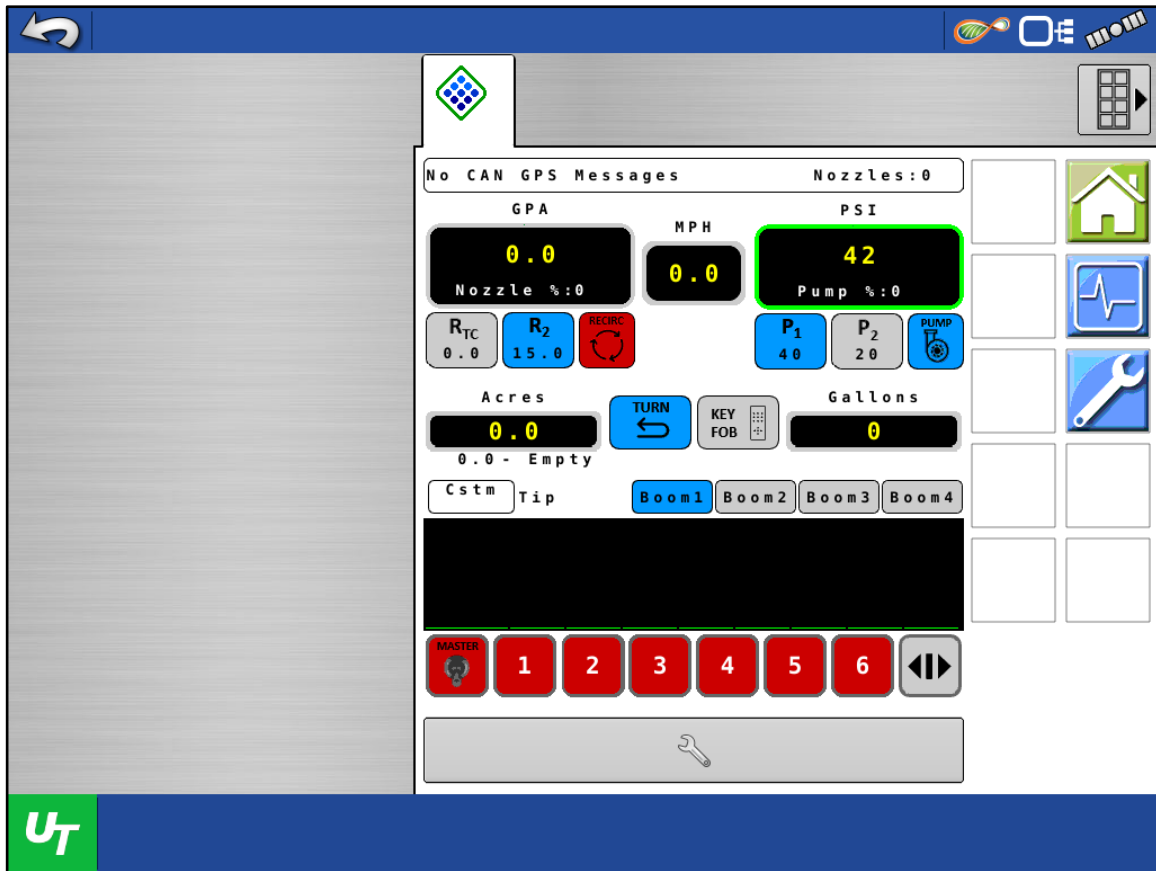



Figure 1 — Task Controller Home Screen

## Menu Setup

1. *Figure 1:* Select the CapstanAG PinPoint™ III icon  from the program icons on the left side of the task controller screen. This icon may be located in slightly different places depending on the task controller.

**Note:** ANYTIME you change settings, you MUST tap the **Settings** icon  to go into the **Settings** menu and select **Initial Setup > Configurations > Software Restart** to save settings. If the unit is turned off or loses battery power before this is done, the new settings will not be saved. Refer to *Figure 6* for the location of this function.

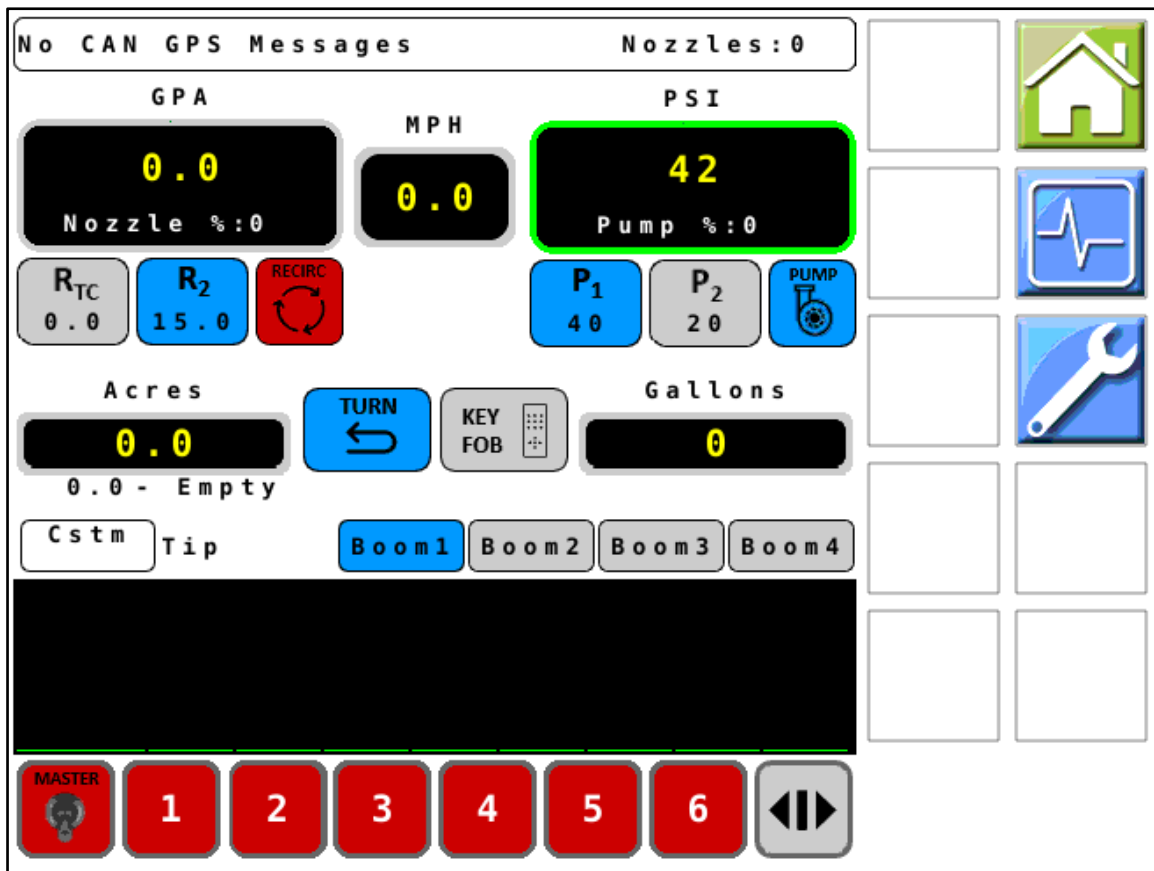

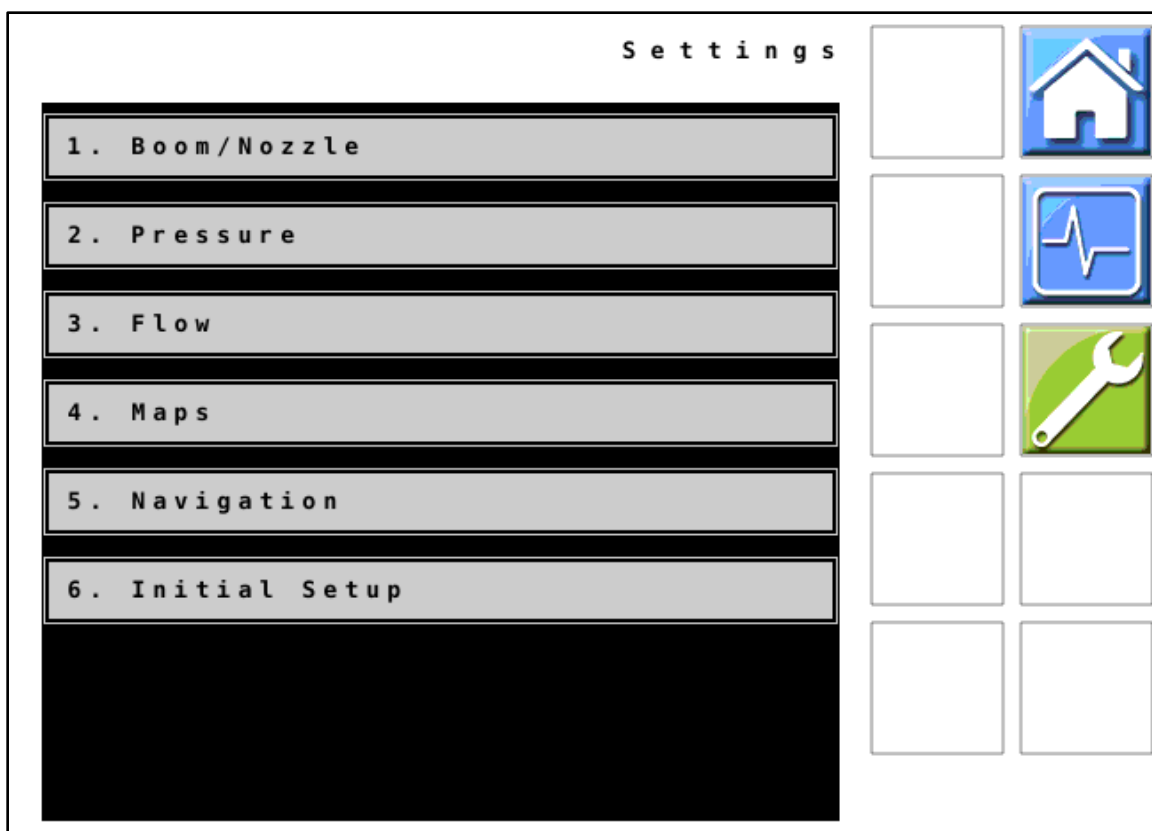


Figure 2 — PinPoint™ III Home Screen

2. *Figure 2:* Basic running settings and information are displayed on the PinPoint™ III home screen. The boom configuration can be selected from the saved configurations at the bottom of the screen. To edit these configurations and set up other features of the PinPoint™ III software, tap the **Settings** icon  at the right side of the screen.



**Figure 3 — Settings Menu**

3. *Figure 3:* Take note of the different menus which are reached from the settings menu. Some of these will require input of machine specific variables. Other settings only need to be verified correct from the factory.

4. Select **Initial Setup** > **VCM Setup** > **Geometry Setup**

**Note:** Complete this step BEFORE performing any other boom setup.

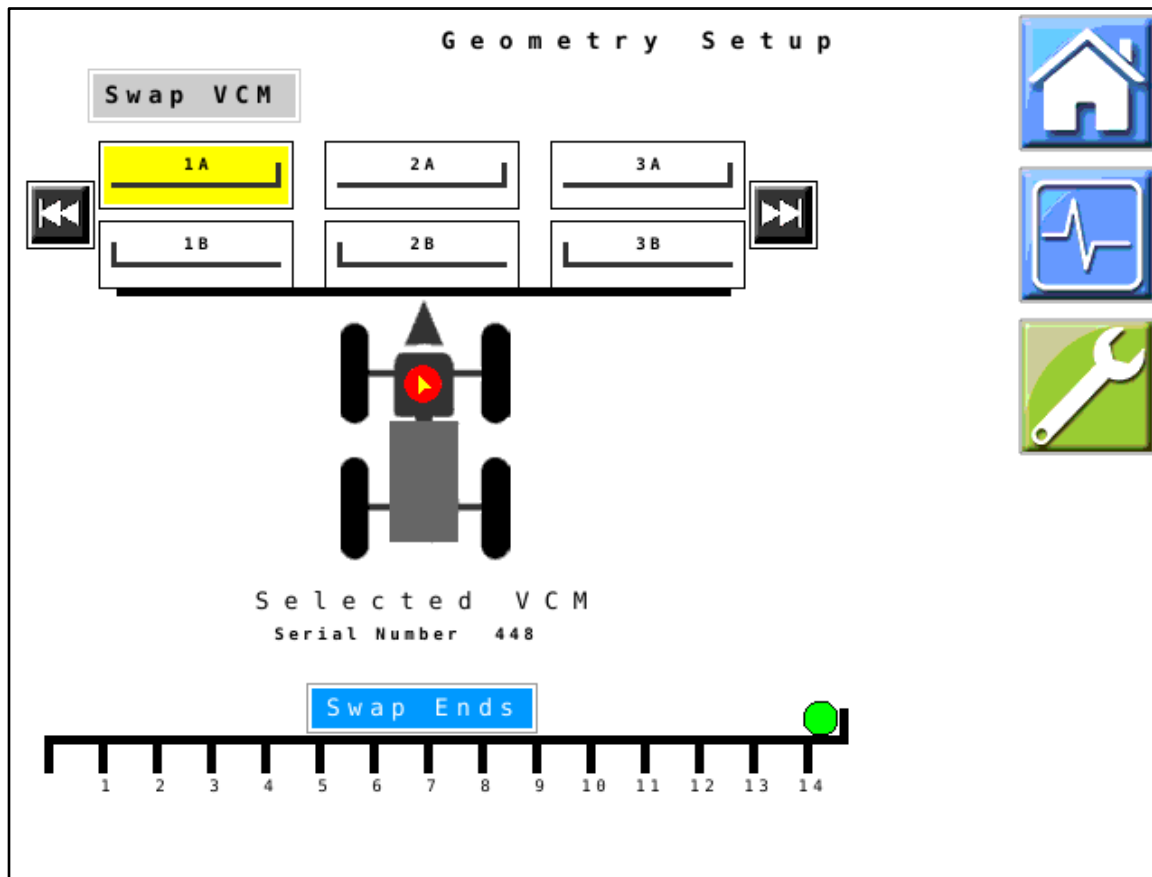




Figure 4 — Geometry Setup

**Note:** The green dot on the display indicates the position of the selected VCM (highlighted in yellow) in relation to the nozzles on its hub CAN channel.

5. *Figure 4:* VCMs must be in the correct order and orientation on the boom. If there is only one VCM connected to a hub CAN channel, use the **Swap Ends** icon **Swap Ends** with that VCM highlighted to orient the VCM correctly on the boom. VCMs can be mounted with the tube towards the center of the machine (green dot) and the pigtail running towards the outside tip, or vice versa.

If two VCMs are located on the same hub CAN channel, first use the **Swap VCM** icon **Swap VCM** with these VCMs highlighted to orient them correctly left to right, and then make sure the orientation (swap ends) is correct.

6. Use the **Left** and **Right Scroll** icons   to scroll through all the VCMs installed on the machine. Verify each of their locations and serial numbers. When the orientation and position of VCMs is correct, all the VCMs will show in order left to right on the screen exactly as they do across the boom on the machine.

7. Verify the order and orientation of the VCMs using the unit key fob or Capstan app.

**Note:** This MUST be done before continuing any further with setup. Failure to verify the VCM orientation will result in incorrect automatic nozzle shutoff.

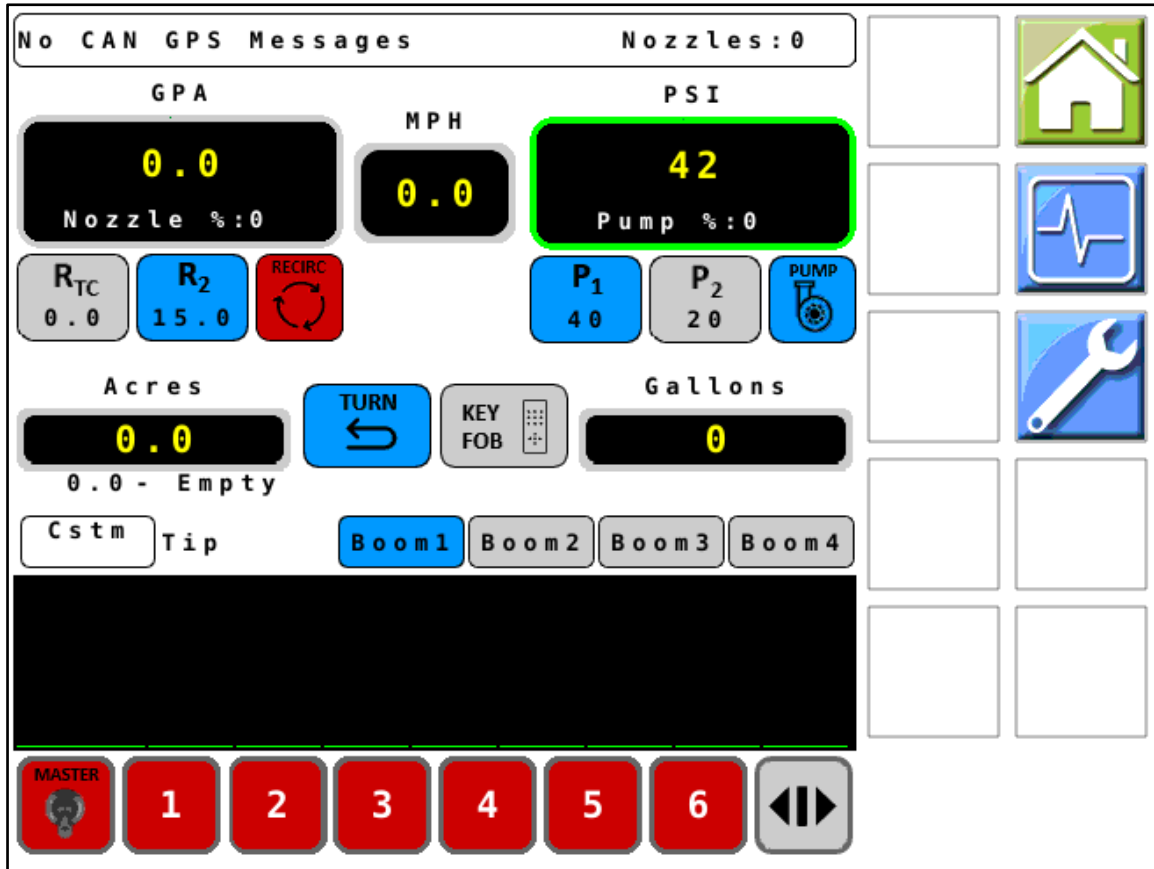





Figure 5 — Key Fob Verification


**Note:** The CapstanAG Mobile App can be used with the system in key fob mode for this test procedure.






8. *Figure 5:* Tap the **Home** icon  to return to the home screen.
9. Tap the **Key Fob** icon to set key fob mode to **ON**.
10. Locate the key fob remote control or use the Capstan app. Using the right arrow key on the key fob or the app, turn on each of the nozzles one at a time across the boom. If the VCM orientation and position is correct, the nozzles will turn on in order left to right across the boom. If the nozzles do not turn on in the correct order, navigate back to the **Geometry Setup** screen and correct any errors.

11. Tap the **Settings** icon  and select **Initial Setup > Configuration**.



C o n f i g u r a t i o n




<b>1</b>	Task Control Mode	ISO	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">  </div>	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">  </div>
<b>2</b>	Fluid Control Mode	Synchro		
<b>3</b>	Product Mode	Single		
<b>4</b>	Master Switch Source	None	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">  </div>	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">  </div>
<b>5</b>	Boom Switch Source	None		
<b>6</b>	Master Switch Input	12V		
<b>7</b>	VT Update Rate	100 ms	<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">  </div>	<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
<b>8</b>	Display Smoothing	Enable		

**Figure 6 — Configurations Page 1**

12. *Figure 6:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



13. *Figures 7 & 8:* Use the **Scroll Down** icon  to view the second and third pages and verify the values on your unit correctly match your machine's specifications. Change values if necessary.

9	Nozzle Spacing	20.00	in
10	Total Number of Nozzles	80	
11	Factory Reset		
12	Maximum TC Sections	80	
13	Selected VT	Raven, 128	
14	Selected TC	Raven, 130	
15	Aux Boom Configuration	No Config	
16	Software Restart		

Figure 7 — Configurations Page 2

**Note:** Line 16 is the **Software Restart** function used to save settings after editing. If the unit is turned off or loses battery power before this is done, the new settings will not be saved.

**Note:** The Maximum TC Sections field must be greater than or equal to the number of nozzles on the boom, with the exception of rate controllers which will not accept as many nozzles. For example, the Case Pro 700 only accepts 32 sections.

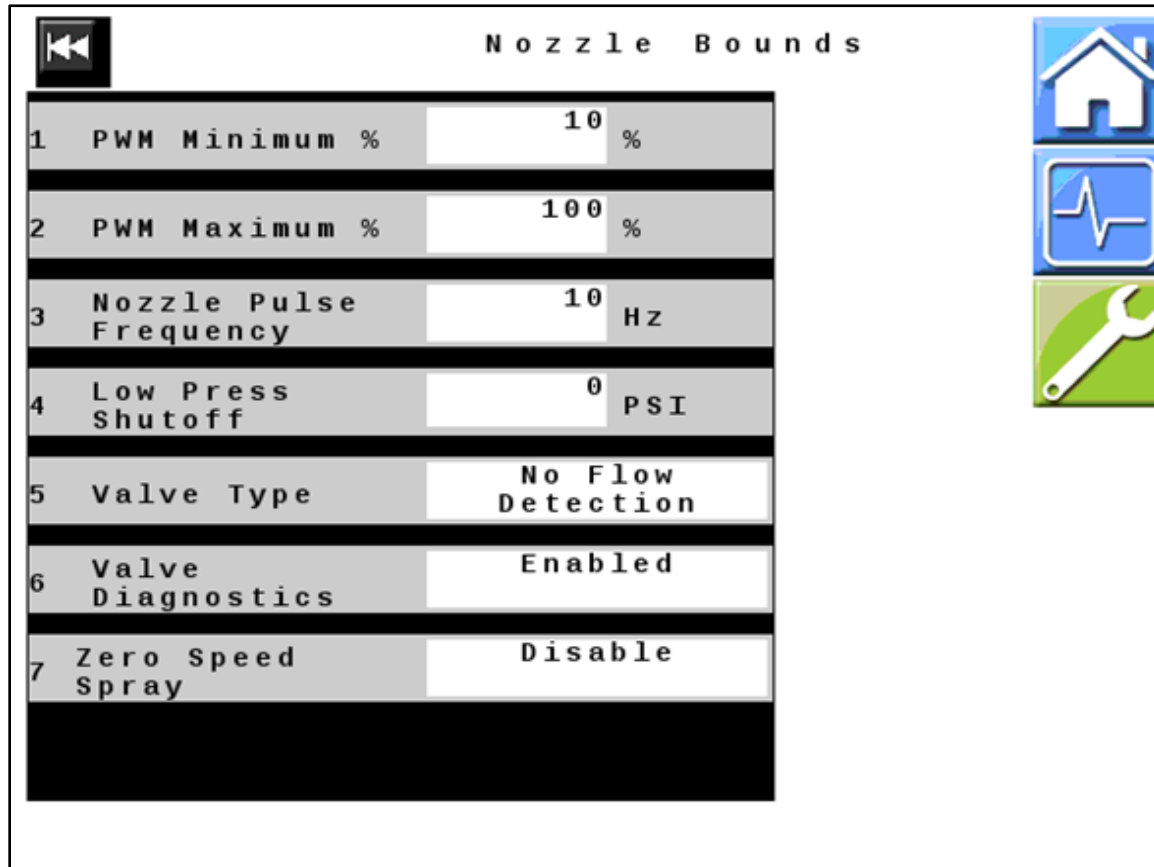
17	Machine Configuration	<New Config>
18	Fill Station	Disable
19	Language	English
20	Units (Pressure)	PSI

Figure 8 — Configurations Page 3





14. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Boom/Nozzle** > **Nozzle Bounds**.



Nozzle Bounds			
1	PWM Minimum %	10	%
2	PWM Maximum %	100	%
3	Nozzle Pulse Frequency	10	Hz
4	Low Press Shutoff	0	PSI
5	Valve Type	No Flow Detection	
6	Valve Diagnostics	Enabled	
7	Zero Speed Spray	Disable	

Figure 9 — Nozzle Bounds

15. *Figure 9*: The information in the fields on this screen is machine specific, verify that it is correct for your machine, and change any settings if necessary.



16. Tap the **Back** icon  to return to the **Boom/Nozzle** menu. Select **Nozzle Setup**.

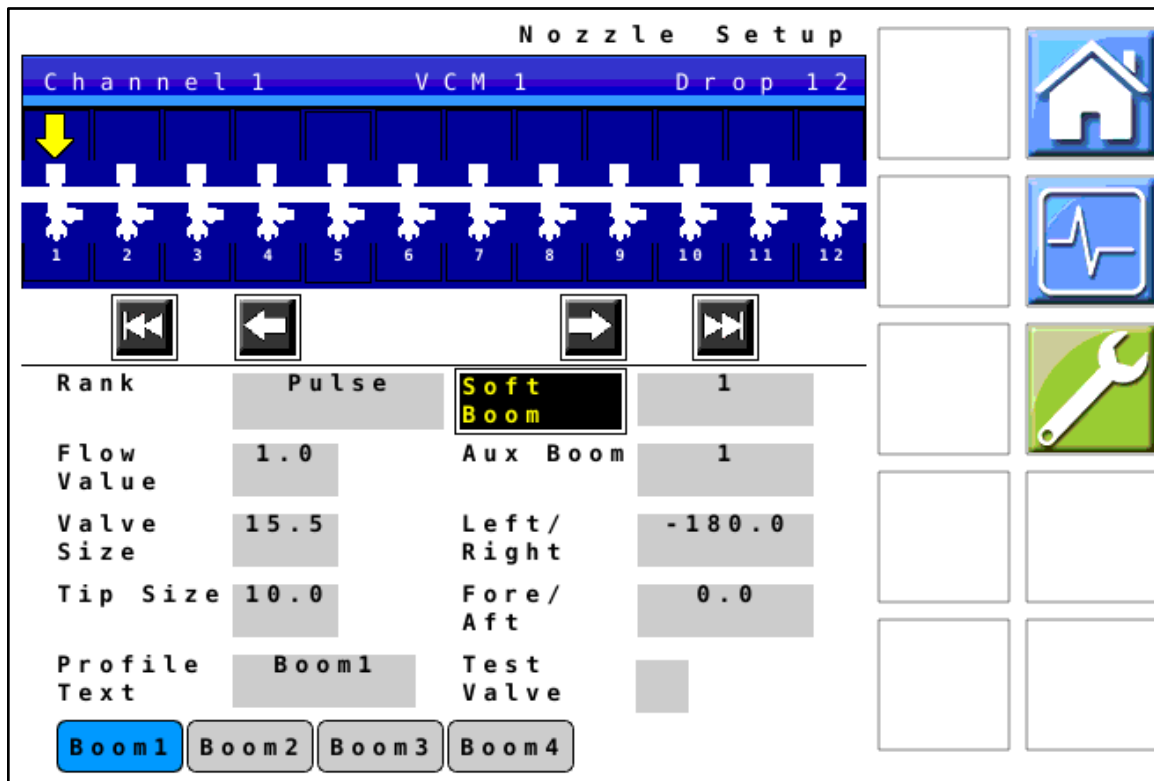




Figure 10 — Nozzle Setup

17. *Figure 10:* Use the Nozzle Setup screen to set up and name custom boom profiles.




**Note:** Valve size value may be either 15.5 (for 7-watt valves with black heat shrink tubing) or 24 (for 12-watt valves with blue heat shrink tubing). Verify which valves your unit is equipped with.

18. Select the **Soft Boom**  icon to configure the soft boom setup for each profile. Refer to the tables on pages 26 through 29 of these instructions for the correct soft boom configuration for your machine.

19. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Pressure > Pump Setup**.




Pump Setup

1	Servo Type	PWN 12V	
2	Servo Minimum %	23	%
3	Servo Maximum %	78	%
4	Servo Man Speed %	50	%
5	Pump Seal Shutdown	1	PSI
6	Pump Pulses/Rev	6	Pulse/Rev
7	Pump Max. Speed	0	RPM
8	Rx Method	Average	

Figure 11 — Pump Setup Page 1

20. *Figure 11:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

21. *Figure 12:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.



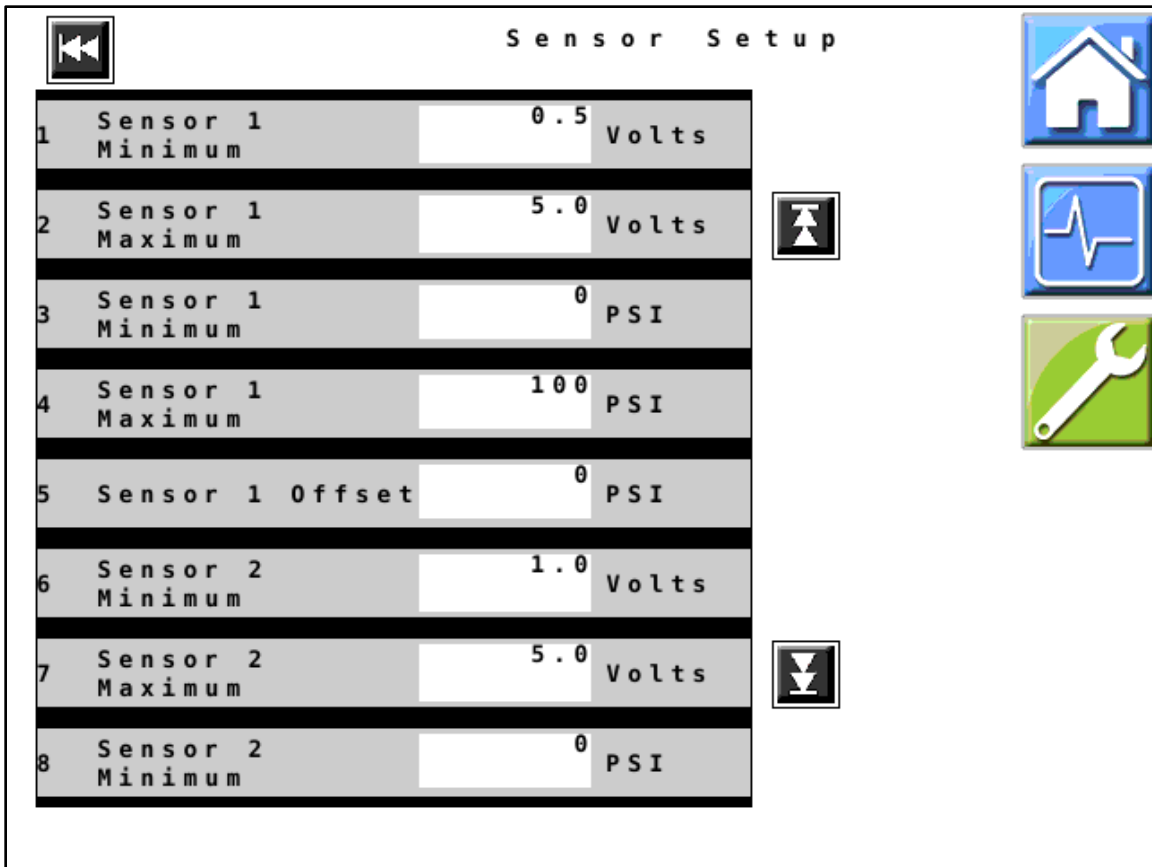
9	Min Pressure	0	PSI	
10	Max Pressure	100	PSI	
11	Max Flow	0	Gal / Min	
12	Pump Power Up Status	OFF		
13	Conventional Standby	40	PSI	
14	Fill Station PWM	50	%	
				

Figure 12 — Pump Setup Page 2



22. Tap the **Back** icon  to return to the **Pressures** menu. Select **Sensor Setup**.




The screenshot shows the 'Sensor Setup' screen. At the top left is a back icon. The title 'Sensor Setup' is centered at the top. On the right side, there are three icons: a home icon, a pulse icon, and a wrench icon. The main area contains a list of settings for two sensors. Sensor 1 settings are numbered 1 through 5, and Sensor 2 settings are numbered 6 through 8. Each setting has a label, a value field, and a unit. To the right of the list are two scroll icons: an up/down arrow and a down arrow.

Item	Label	Value	Unit
1	Sensor 1 Minimum	0.5	Volts
2	Sensor 1 Maximum	5.0	Volts
3	Sensor 1 Minimum	0	PSI
4	Sensor 1 Maximum	100	PSI
5	Sensor 1 Offset	0	PSI
6	Sensor 2 Minimum	1.0	Volts
7	Sensor 2 Maximum	5.0	Volts
8	Sensor 2 Minimum	0	PSI

Figure 13 — Sensor Setup Page 1

23. *Figure 13:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

24. *Figure 14:* Use the **Scroll Down** icon  to view the second page and verify the values there as well.



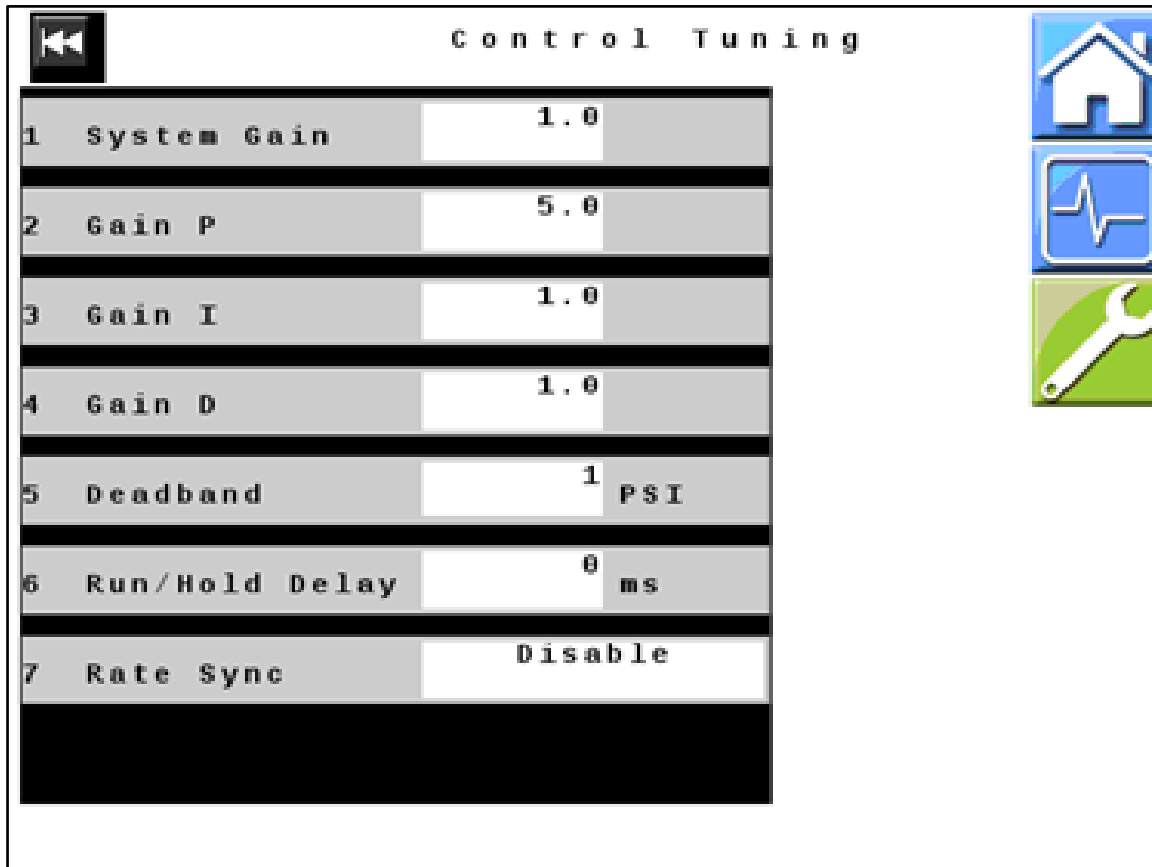
The screenshot shows the second page of the 'Sensor Setup' screen. It contains two settings for Sensor 2, numbered 9 and 10. Each setting has a label, a value field, and a unit. To the right of the list is a scroll icon: an up/down arrow.

Item	Label	Value	Unit
9	Sensor 2	250	PSI
10	Sensor 2 Offset	0	PSI

Figure 14 — Sensor Setup Page 2



25. Tap the **Back** icon  to return to the **Pressures** menu. Select **Control Tuning**.




Number	Label	Value	Unit
1	System Gain	1.0	
2	Gain P	5.0	
3	Gain I	1.0	
4	Gain D	1.0	
5	Deadband	1	PSI
6	Run/Hold Delay	0	ms
7	Rate Sync	Disable	

Figure 15 — Control Tuning

26. *Figure 15:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



27. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Flow > Flowmeter**.

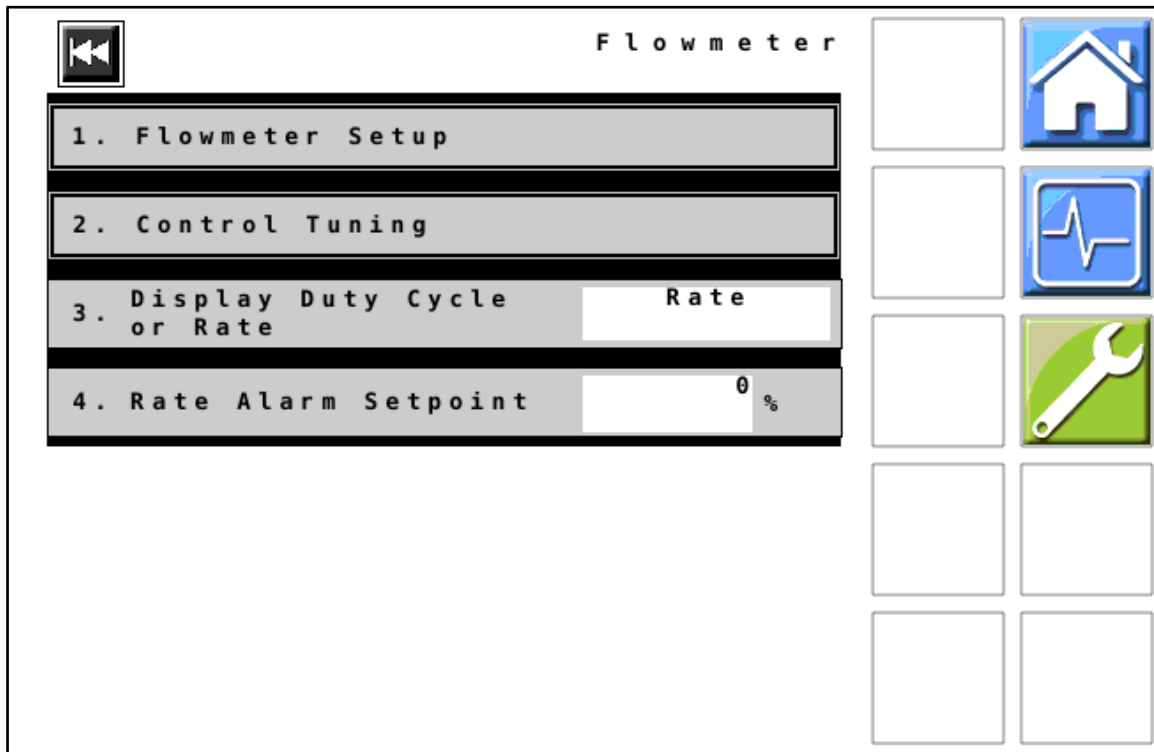
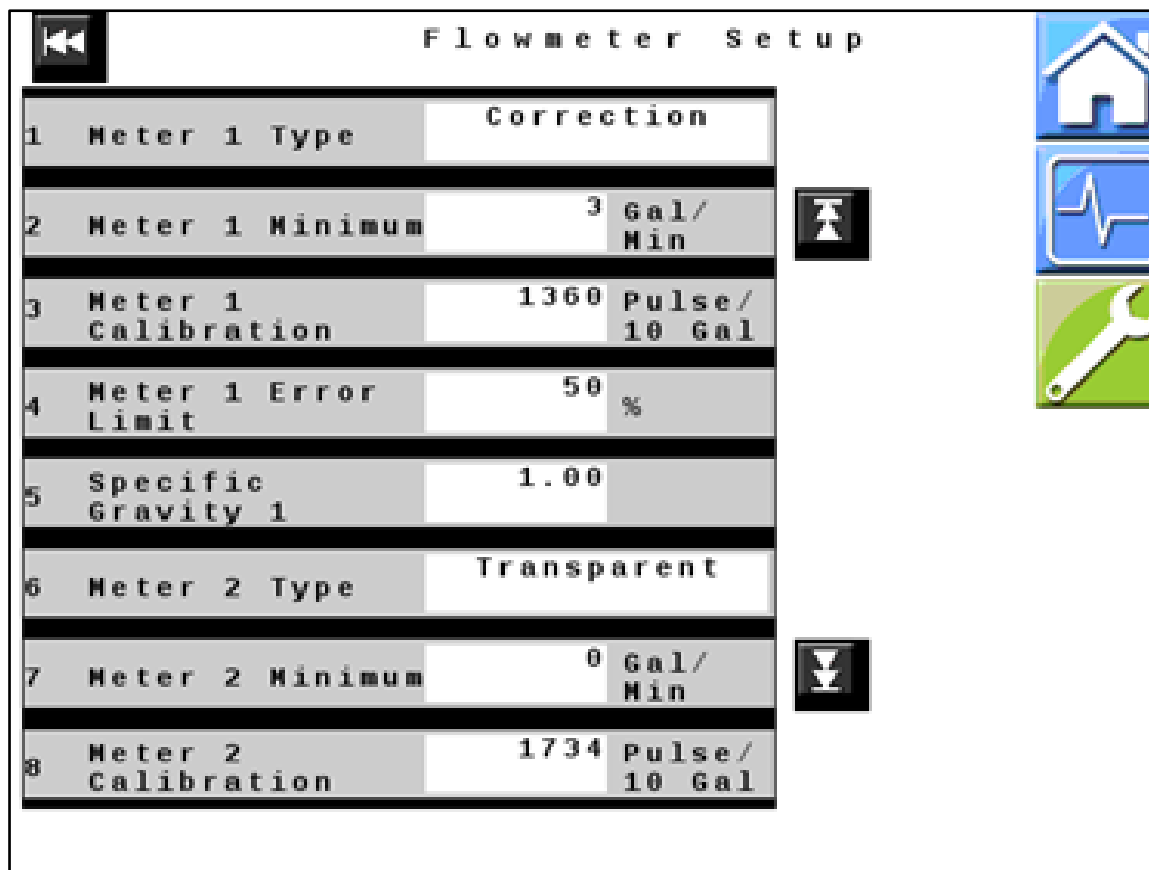


Figure 16 — Flowmeter

28. *Figure 16:* Verify that all values displayed on your unit match those shown here. Change values if necessary.

**Note:** tapping the **Display Duty Cycle or Rate** icon changes which value is displayed on the home screen.

29. Select **Flowmeter Setup**.




Flowmeter Setup		
1	Meter 1 Type	Correction
2	Meter 1 Minimum	3 Gal/Min
3	Meter 1 Calibration	1360 Pulse/10 Gal
4	Meter 1 Error Limit	50 %
5	Specific Gravity 1	1.00
6	Meter 2 Type	Transparent
7	Meter 2 Minimum	0 Gal/Min
8	Meter 2 Calibration	1734 Pulse/10 Gal

Figure 17 — Flowmeter Setup Page 1

30. *Figure 17:* The information in the fields on this screen is machine specific, verify that it is correct for your machine, and change any settings if necessary.

**Note:** Obtain the Meter 1 Calibration value from flowmeter tag. If machine is equipped with a fill-station flowmeter, obtain Meter 2 Calibration value also.



Figure 18: Use the **Scroll Down** icon  to view the second page and verify the values there as well.




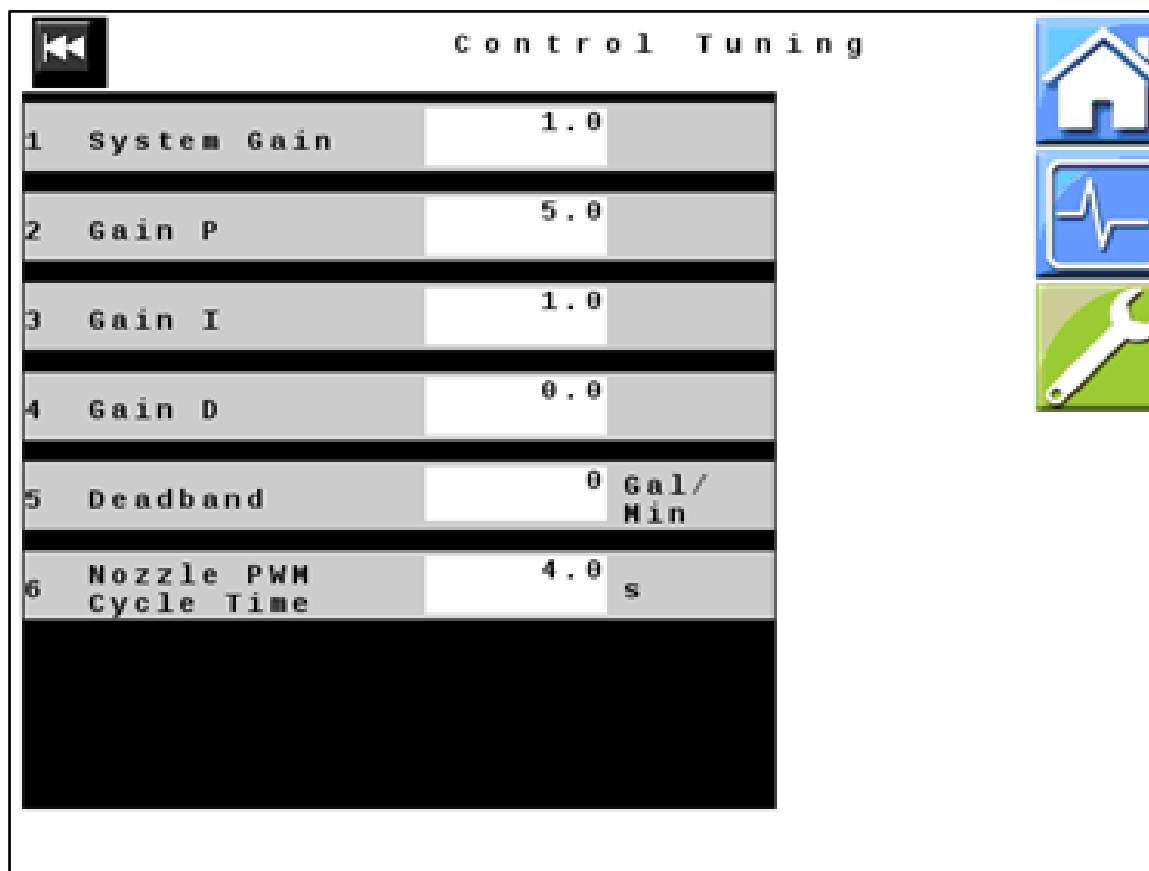
9	Meter 2 Error Limit	0 %	
10	Specific Gravity 2	1.00	
11	JD-R Low Flow Mode	0 Gal/Min	
12	Preset Rate Average	Average	
13	Flowmeter Sense Resistor	Pull-Up	
14	Tank Sensor Calibration	Not Started	

Figure 18 — Flowmeter Setup Page 2

31. Tap the **Back** icon  to return to the **Flow** menu. Select **Control Tuning**.

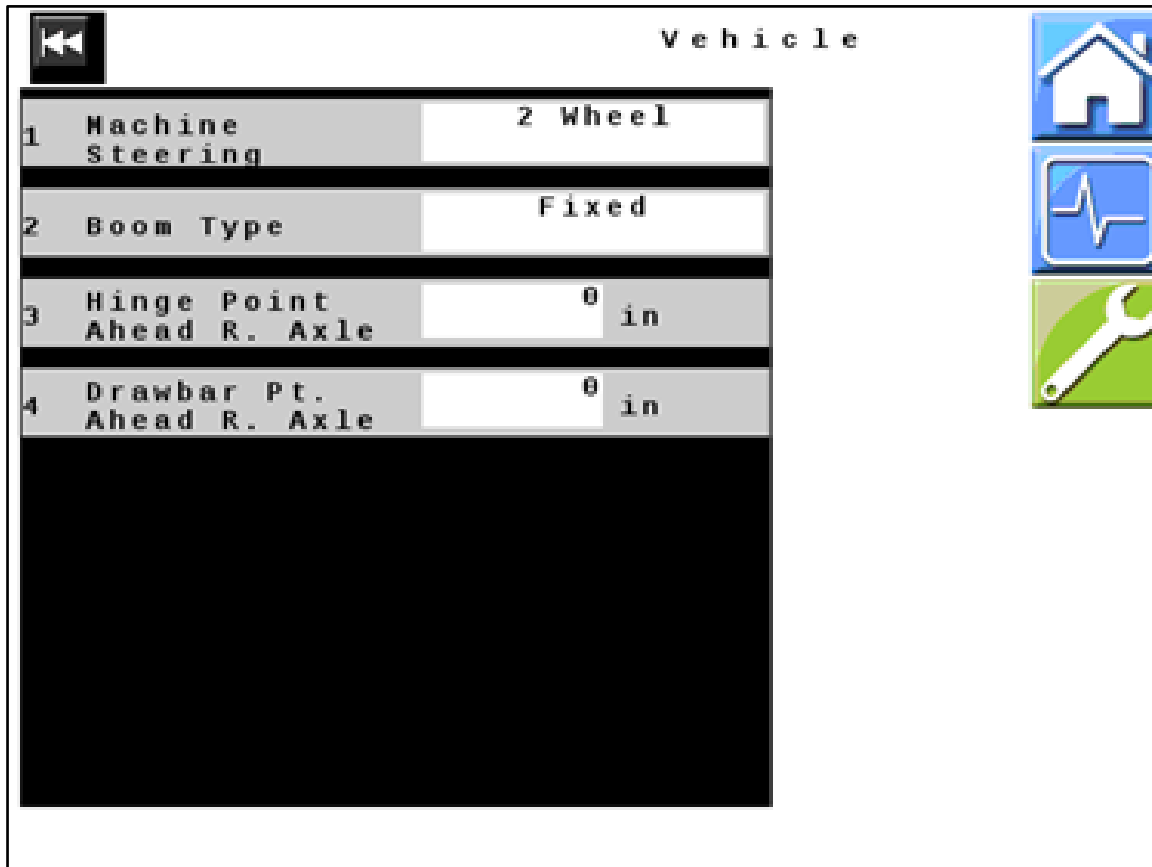


**Figure 19 — Control Tuning**

32. *Figure 19:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



33. Tap the **Back** icon  twice to return to the **Settings** menu. Select **Navigation > Vehicle**.




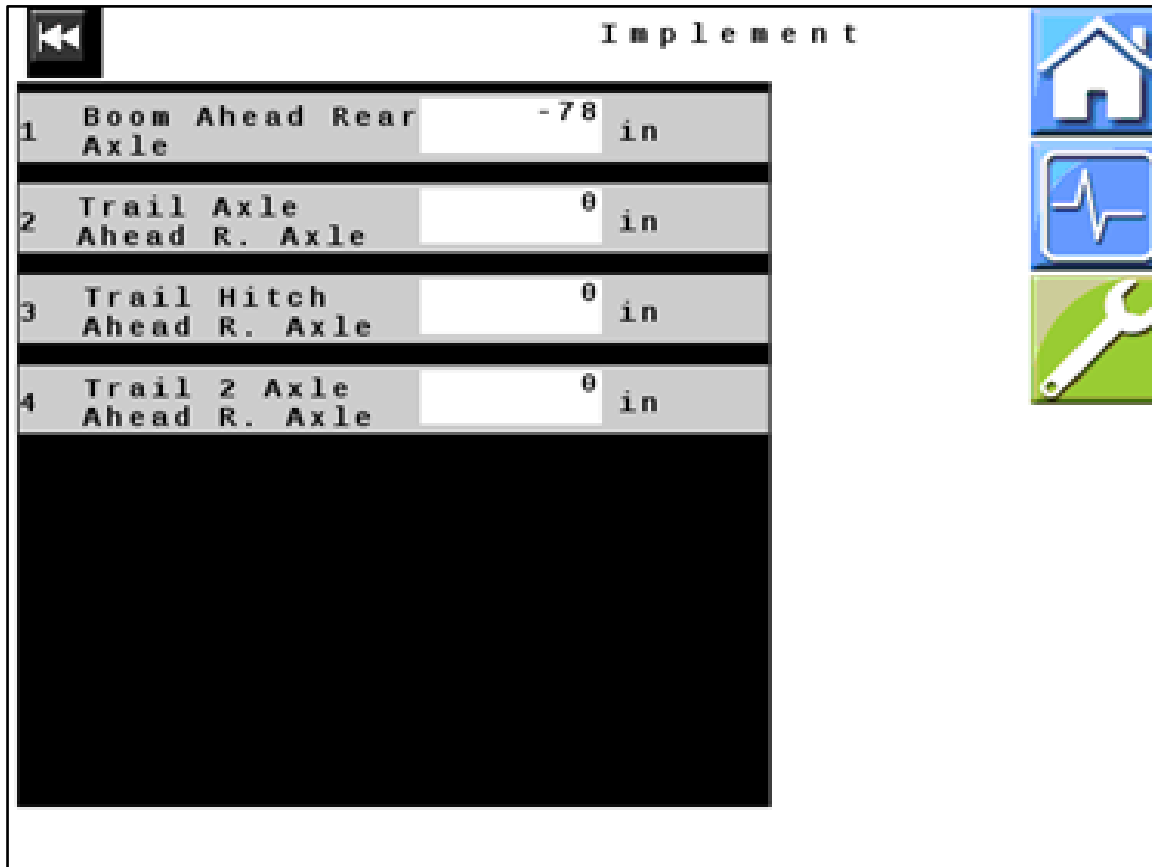
Vehicle	
1 Machine Steering	2 Wheel
2 Boom Type	Fixed
3 Hinge Point Ahead R. Axle	0 in
4 Drawbar Pt. Ahead R. Axle	0 in

Figure 20 — Vehicle

34. *Figure 20:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



35. Tap the **Back** icon  to return to the **Navigation** menu. Select **Implement**.

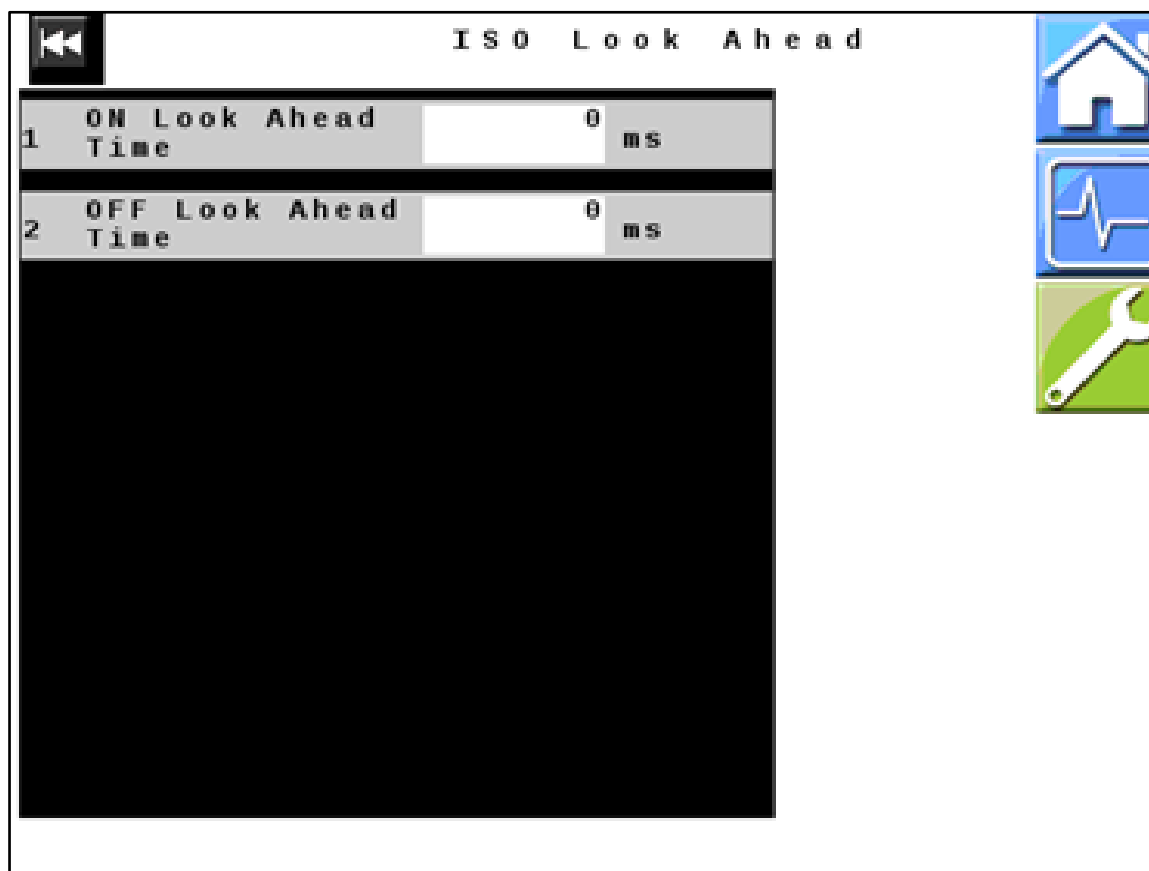


1	Boom Ahead Rear Axle	- 78	in
2	Trail Axle Ahead R. Axle	0	in
3	Trail Hitch Ahead R. Axle	0	in
4	Trail 2 Axle Ahead R. Axle	0	in

Figure 21 — Implement

36. *Figure 21:* Verify that all values displayed on your unit match those shown here. Change values if necessary.


37. Tap the **Back** icon  to return to the **Navigation** menu. Select **ISO Look Ahead**.



**Figure 22 — ISO Look Ahead**

38. *Figure 22:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



39. Tap the **Back** icon  to return to the **Navigation** menu. Select **GPS**.

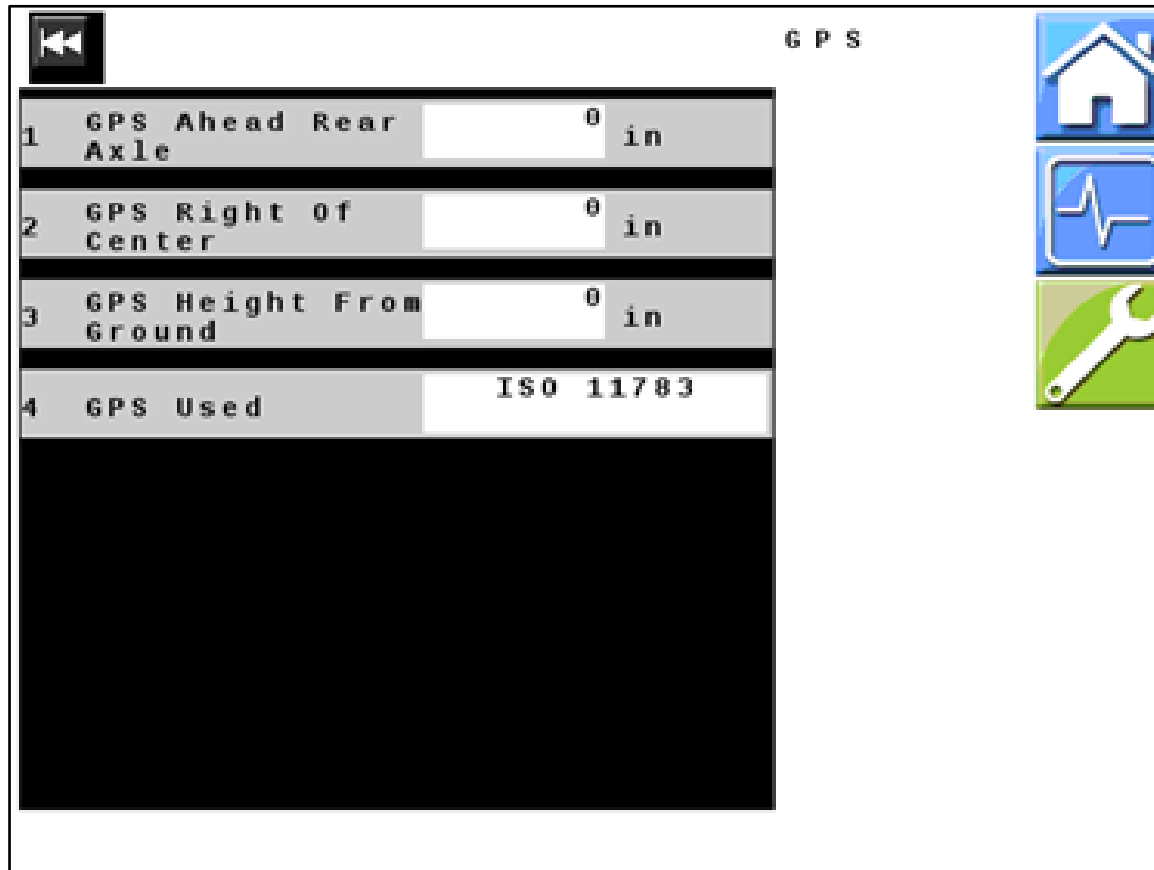



Figure 23 — GPS

40. *Figure 23*: Select the type of GPS from the list of available options. Not all of the options listed here may show on your system. Only the types available for your system will show on your list.

- If your machine has serial GPS, select NMEA0183
- If your machine has CAN GPS, available types include—in preference order:
  - a. J1939
  - b. ISO 11783
  - c. NMEA2000

Verify that all other values displayed on your unit match those shown here. Change values if necessary.



41. Tap the **Back** icon  to return to the **Navigation** menu. Select **Compass**.

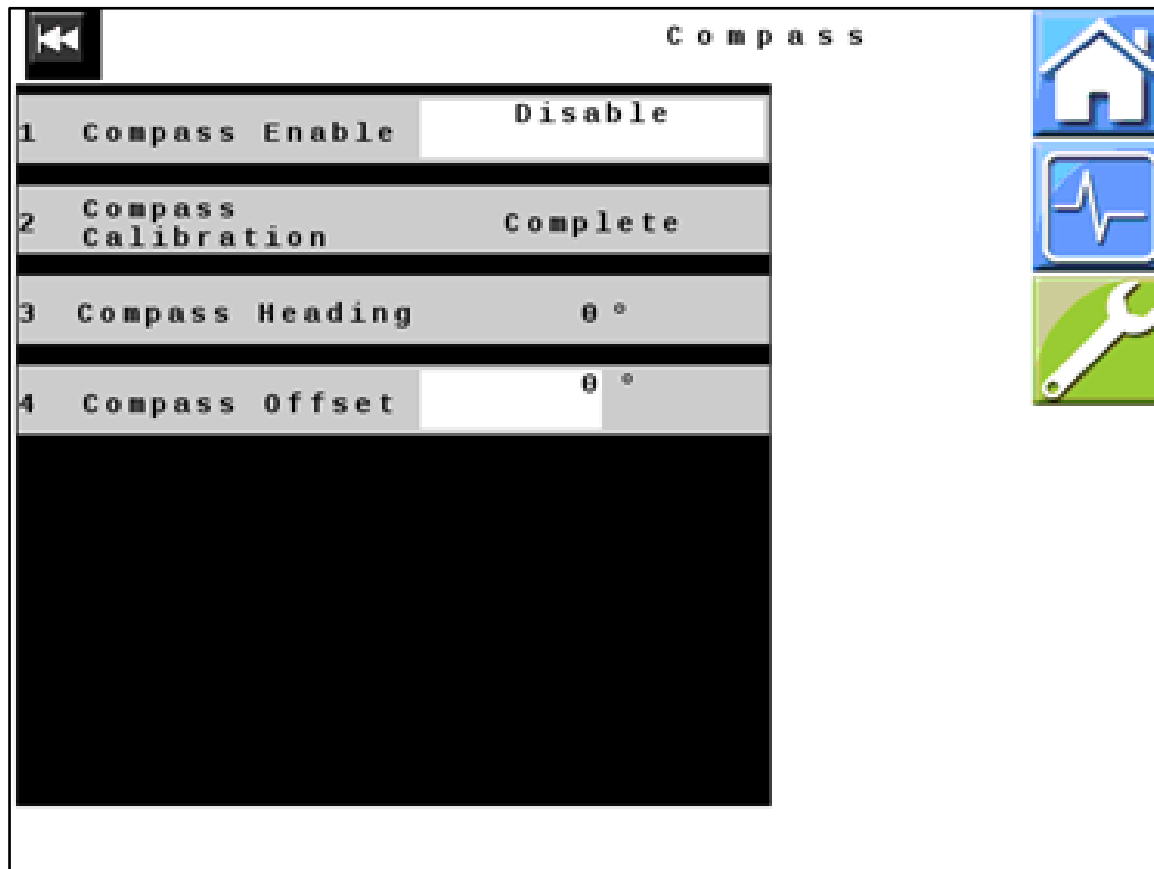



Figure 24 — Compass

42. *Figure 24:* Verify that all values displayed on your unit match those shown here. Change values if necessary.



43. Tap the **Back** icon  to return to the **Navigation** menu. Select **Gyro**.

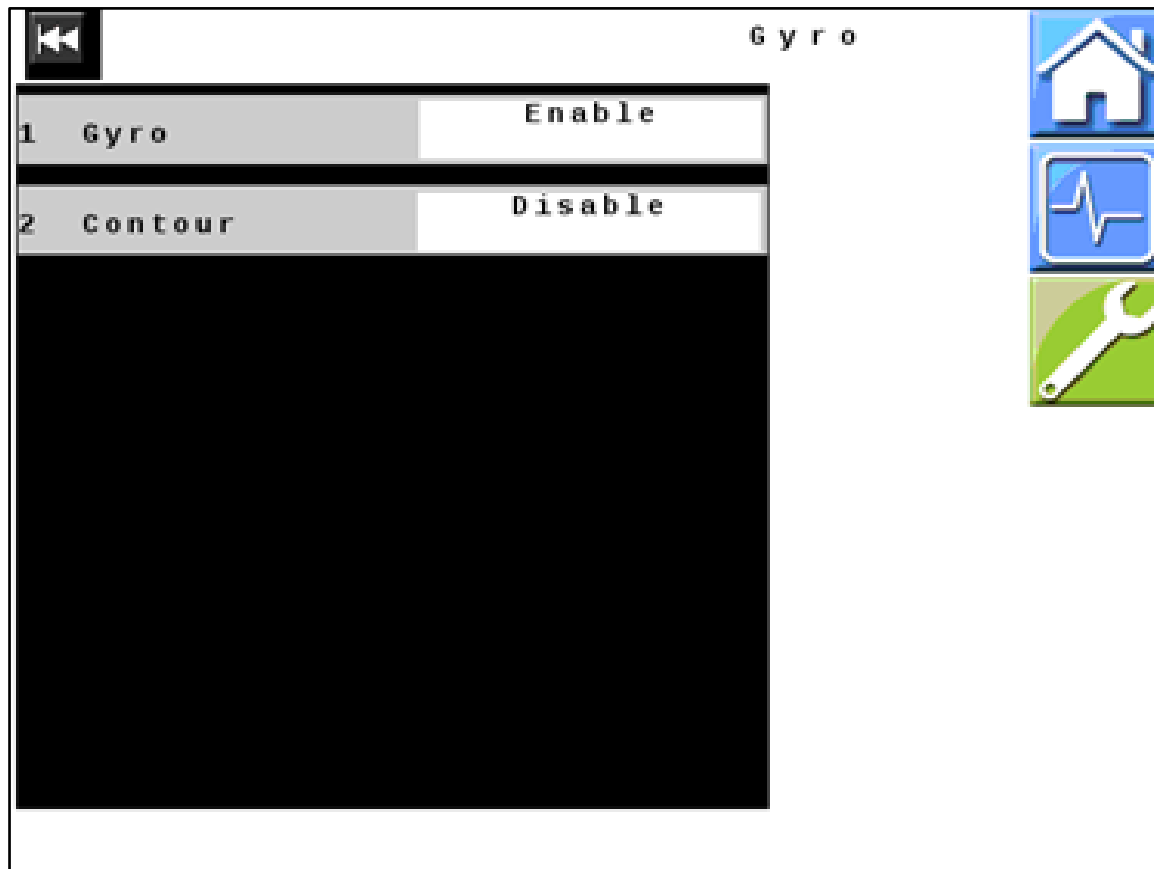


Figure 25 — Gyro

44. *Figure 25:* Verify that all values displayed on your unit match those shown here. Change values if necessary.





## Soft Boom Configurations

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	17	11	0	0	✗
2	18	48	12	0	0	
3	49	59	13	0	0	⬆
4	60	90	14	0	0	
5	91	107	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

90' x 10"

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	11	11	0	0	✗
2	12	32	12	0	0	
3	33	39	13	0	0	⬆
4	40	60	14	0	0	
5	61	71	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

90' x 15"

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	9	11	0	0	✗
2	10	24	12	0	0	
3	25	30	13	0	0	⬆
4	31	45	14	0	0	
5	46	54	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

90' x 20"

Soft Boom	Start	End	Soft Boom	Start	End	
1	1	23	11	0	0	✗
2	24	54	12	0	0	
3	55	65	13	0	0	⬆
4	66	96	14	0	0	
5	97	119	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

100' x 10"



Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	15	11	0	0	✓
2	16	36	12	0	0	✗
3	37	43	13	0	0	⬆
4	44	64	14	0	0	
5	65	79	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

100' x 15"

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	12	11	0	0	✓
2	13	29	12	0	0	✗
3	30	34	13	0	0	⬆
4	35	51	14	0	0	
5	52	63	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

100' x 19"

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	12	11	0	0	✓
2	13	27	12	0	0	✗
3	28	33	13	0	0	⬆
4	34	48	14	0	0	
5	49	60	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

100' x 20"

Soft Boom	Start	Soft Boom End	Boom Soft Boom	Setup Start	End	
1	1	33	11	0	0	✓
2	34	66	12	0	0	✗
3	67	77	13	0	0	⬆
4	78	110	14	0	0	
5	111	143	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

120' x 10"



Soft Boom	Start	Soft Boom End	Boom Setup	Soft Boom Start	End	
1	1	22	11	0	0	✓
2	23	44	12	0	0	✗
3	45	51	13	0	0	⬆
4	52	73	14	0	0	
5	74	95	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

120' x 15''

Soft Boom	Start	Soft Boom End	Boom Setup	Soft Boom Start	End	
1	1	17	11	0	0	✓
2	18	35	12	0	0	✗
3	36	40	13	0	0	⬆
4	41	58	14	0	0	
5	59	75	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

120' x 19''

Soft Boom	Start	Soft Boom End	Boom Setup	Soft Boom Start	End	
1	1	16	11	0	0	✓
2	17	33	12	0	0	✗
3	34	39	13	0	0	⬆
4	40	56	14	0	0	
5	57	72	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

120' x 20'' Aluminum Boom

Soft Boom	Start	Soft Boom End	Boom Setup	Soft Boom Start	End	
1	1	17	11	0	0	✓
2	18	33	12	0	0	✗
3	34	39	13	0	0	⬆
4	40	55	14	0	0	
5	56	72	15	0	0	
6	0	0	16	0	0	
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

120' x 20'' Steel Boom



Soft Boom Setup						✓
Soft Boom	Start	End	Soft Boom	Start	End	
1	1	21	11	0	0	✗
2	22	40	12	0	0	⬆
3	41	45	13	0	0	
4	46	64	14	0	0	⬇
5	65	85	15	0	0	
6	0	0	16	0	0	⬇
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

132' x 19''

Soft Boom Setup						✓
Soft Boom	Start	End	Soft Boom	Start	End	
1	1	20	11	0	0	✗
2	21	37	12	0	0	⬆
3	38	43	13	0	0	
4	44	60	14	0	0	⬇
5	61	80	15	0	0	
6	0	0	16	0	0	⬇
7	0	0	17	0	0	
8	0	0	18	0	0	⬇
9	0	0	19	0	0	
10	0	0	20	0	0	

132' x 20''