

AgPilotX Boom Shutoff Wiring & Setup for SwathPRO

- **General Guidelines:**

- The Right Boom Shutoff feature is compatible only with the following AgPilotX software versions:
 - Firmware 1.4.93i or newer on the lightbar and hub
 - App Build 491 or newer.

- **Important:**

- **DO NOT** connect any AgPilotX wires directly to SwathPRO wires.
 - **Important:** AgPilotX wires must **NOT** be connected to voltage.
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Wiring Instructions

Parts Needed (Not Supplied)

- **Relays:**

- 1 SPST 20A 24V relay
- 1 SPDT 20A 24V relay

- **Terminals:**

- 8 female ¼" spade terminals for relays.
- 1 #6 ring terminal for DPST toggle switch.
- 1 ring terminal for airframe grounding point.

- **Wires:**

- 18 AWG mil-spec black wire (length varies, approx. 6 feet).
 - 18 AWG mil-spec any colored wire (length varies).
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1. **Mount Relays:**

Securely mount both relays in an accessible location.

2. **Black Wires:**

- a. Cut three black wires to approximately 3" each.
- b. Cut one wire long enough to run from an airframe grounding point to the relays.
- c. Splice all three short wires into the long ground wire.
- d. Attach a female spade terminal to each 3" wire ends.
- e. Attach a ring terminal of the correct size to the grounding point end of the long wire.

3. Colored Wires:

- a. Cut a colored wire to go from the relay to the Right Boom switch (DPST) in the cockpit.
 - Attach a #6 ring terminal to the switch end.
 - Attach a female spade terminal to the opposite end of the wire.
- b. Cut a colored wire to go from the SPST relay to the SwathPRO Shutoff Kit Relay. (See SwathPRO shutoff kit schematic.)
 - Strip approximately ¼ of insulation from the shutoff kit relay end of the wire.
 - Attach a female spade terminal to the opposite end.
- c. Cut a colored wire to go from the SPDT relay to the SPST relay.
 - Attach a female spade terminal to both ends.

4. AgPilotX wire:

- Cut a wire to run from the AgPilotX hub to the relays.
 - Attach a female spade terminal to the relay end.
 - Strip approximately ¼ of insulation from the hub end.
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Relay Connections

• Parts Required:

- Two relays (one SPST, one SPDT).
- Eight spade terminals.

5. Relay 1 (SPDT) Connections:

- a. Terminal 86 → Right Boom Shutoff switch (DPST) wire (Step 3a).
- b. Terminal 87A → Ground wire from airframe ground lug (can be spliced with other grounds).
- c. Terminal 85 → Ground wire from airframe ground lug (can be spliced with other grounds).
- d. Terminal 30 → Relay 2 Terminal 30 wire (Step 3c)
- e. Terminal 87 not used.

6. Relay 2 (SPST) Connections:

- a. Terminal 30 → Relay 1 Terminal 30 wire (Step 3c).
- b. Terminal 85 → Ground wire from airframe ground lug (can be spliced with other grounds).
- c. Terminal 86 → Wire from shutoff kit relay (Step 3b).
- d. Terminal 87 → Port 10 from AgPilotX Hub wire (Step 4).

Note: Cut appropriate wire lengths, route appropriately, and secure with terminals at installer's discretion.

Misc Connections

7. Hub Connections:

- a. Locate **Switches and Devices Inputs rail (12-Pin, lower left)** on the AgPilotX Hub Enclosure.
- b. Connect the stripped end of the wire from Step 4 to **Input 10 (EXT Switch Spare 1)**.

8. Right Boom Switch Connection:

- a. Use the supplied **Double Pole Single Throw (DPST)** switch as the **Right Boom Shutoff switch**.
- b. Connect the wire from **Terminal 86 of Relay 1 (DPST)** to **Terminal 4 or 6** on the **Right Boom Shutoff switch**.
 - This terminal should switch from 0v to 28v when toggled.
 - This terminal will also be occupied by a SwathPRO wire.

9. Grounding Point connection:

- a. Connect the **ring terminal** from Step 2 to the **airframe ground**.

10. Shutoff Kit Relay Connection:

- a. Splice the **stripped wire** from Step 3b into the **wire connected to terminal 87A on the Shutoff Kit Relay**.
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11. Testing shutoff:

- a. See Following Steps

Testing Shutoff

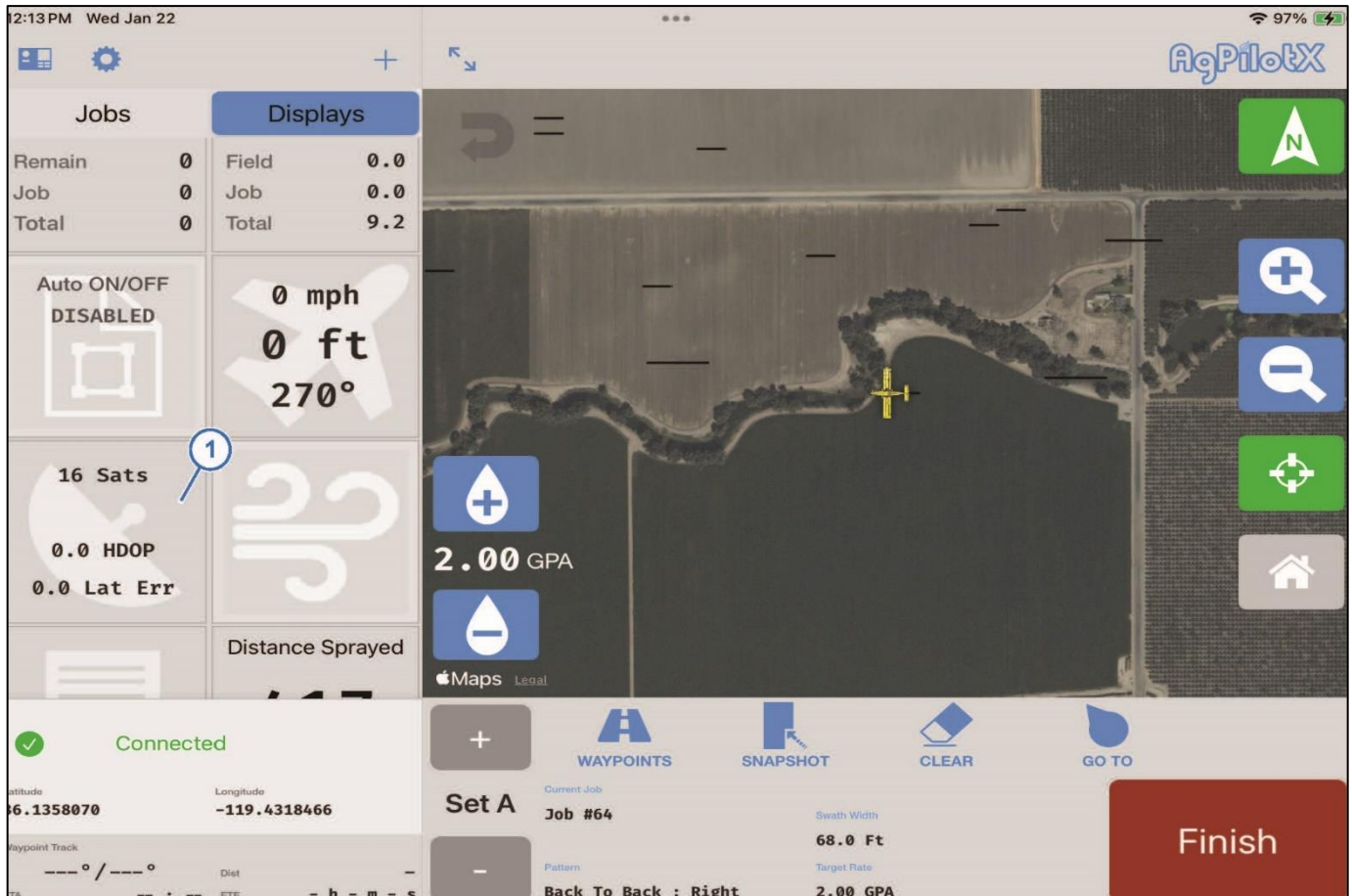


Figure 1: Satellite Icon

1. Select the **“Displays”** tab at the top left of the interface.
2. In the AgPilotX interface, scroll down on the left side until you see the Satellite icon (1).
3. Select the **Satellite** icon (Figure 1).

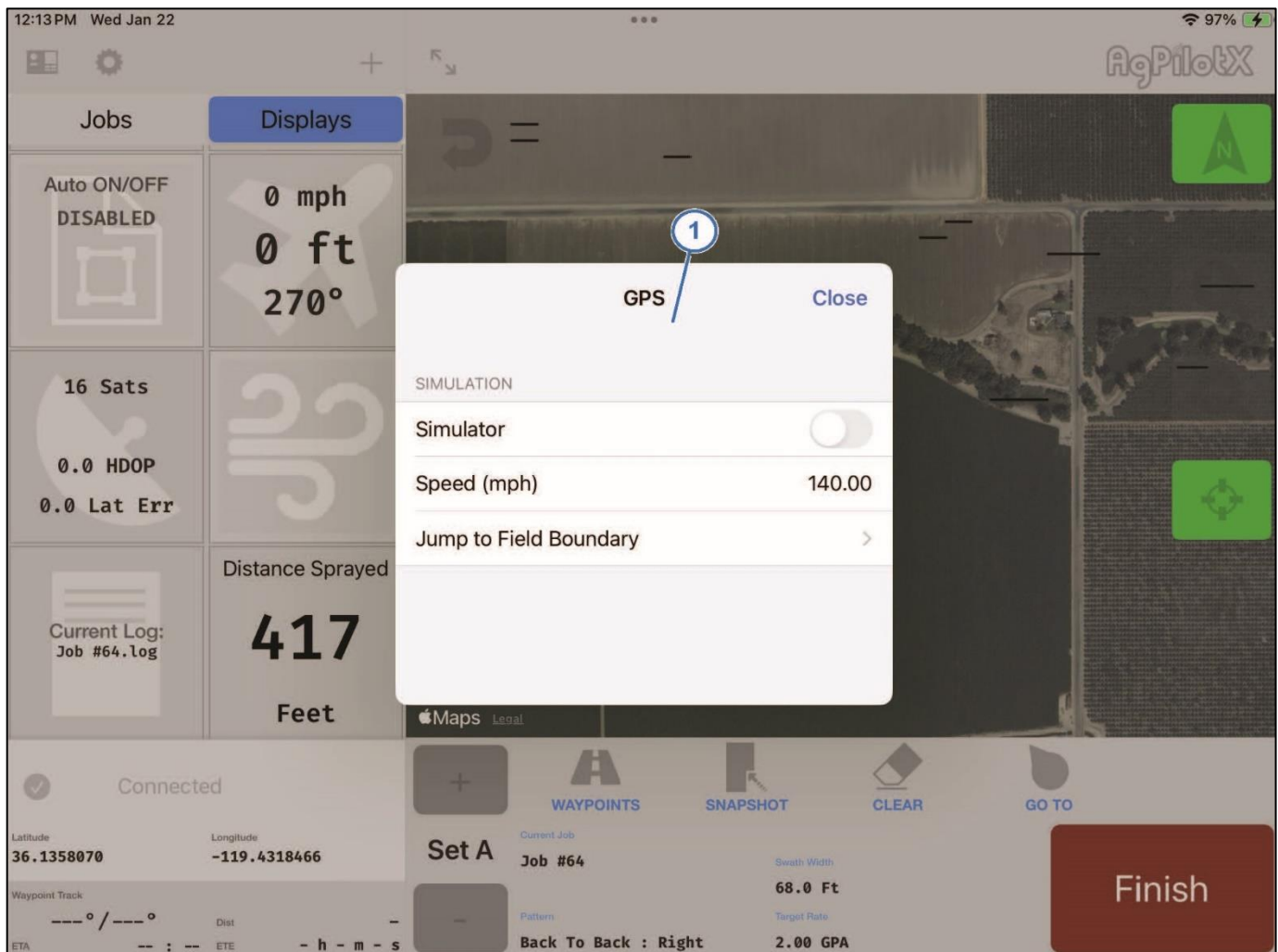


Figure 2: GPS Simulation Window

4. The GPS Simulation window should appear (1).

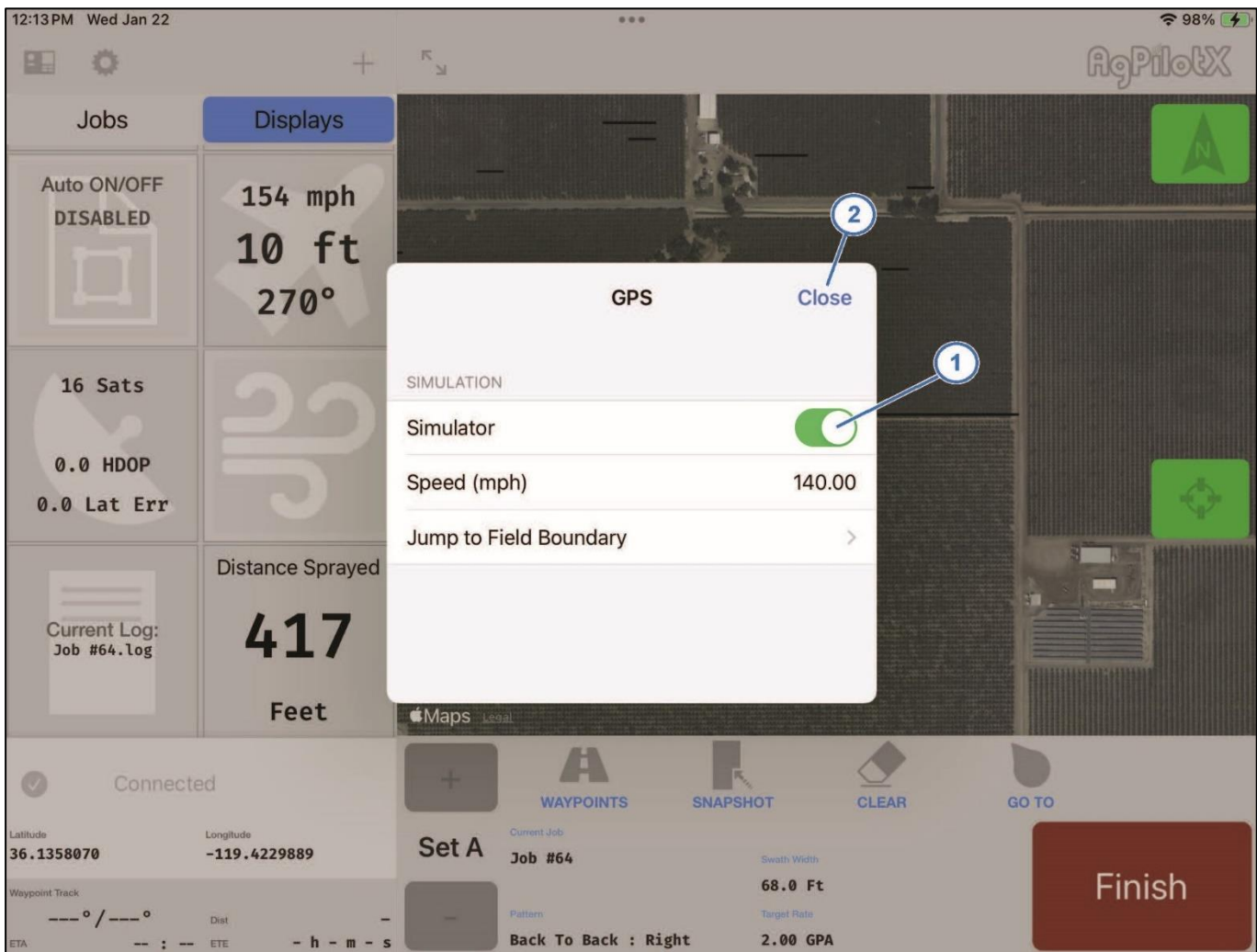


Figure 3: GPS Simulation Slider

5. Toggle the **Simulator slider** to the “On” position; it should turn green (1).
6. Close the window by selecting the **Close** text at the top-right of the window (2).
 - The plane should now appear to be moving on the screen.

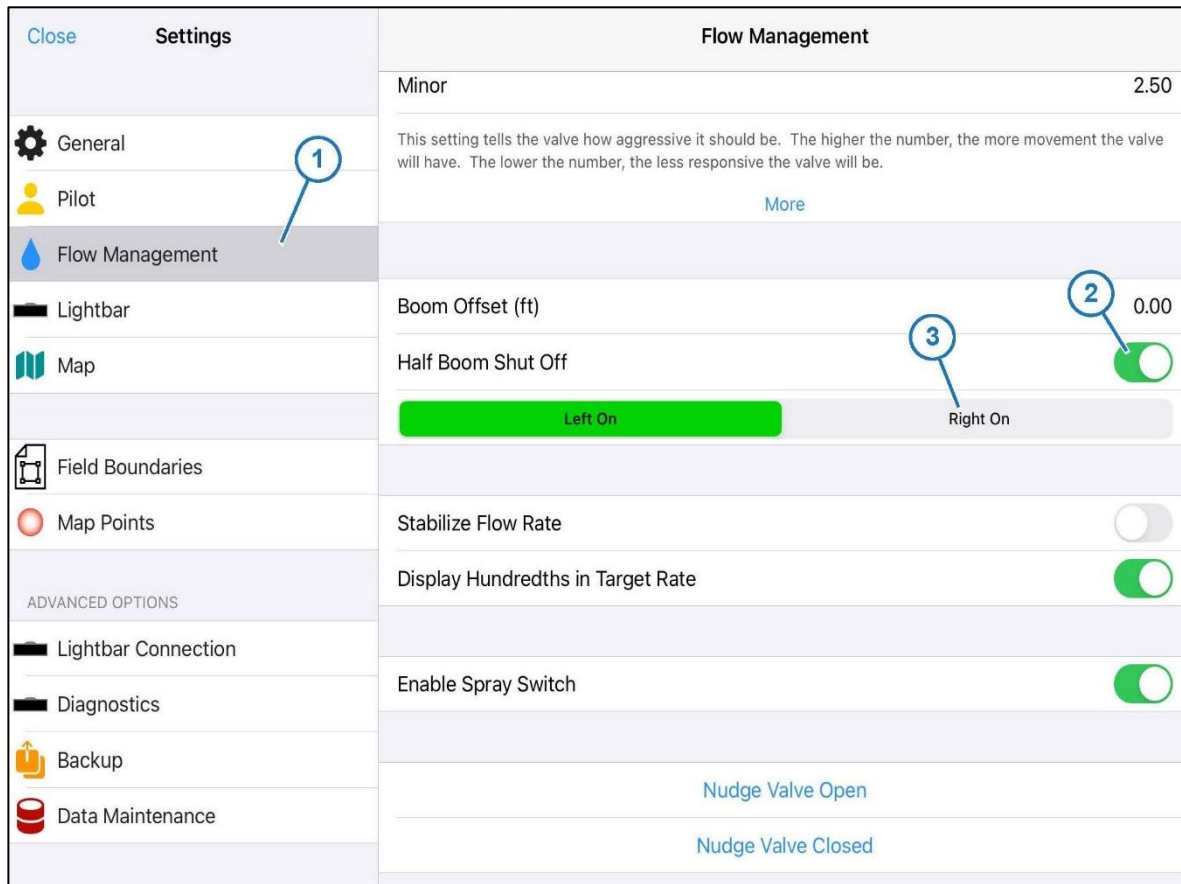


Figure 5: Half Boom Shutoff

7. Select the gear icon at the top left corner on the main page.
8. Select the **Flow Management** Icon (1).
9. If not already On, toggle the **Half Boom Shut Off** slide to the “On” position (2). The toggle should turn green.
10. Confirm that **Right On** (3) is displayed in grey, and the **Left On** is green.
11. Close the window by selecting “**Close**” at the top left of the interface.

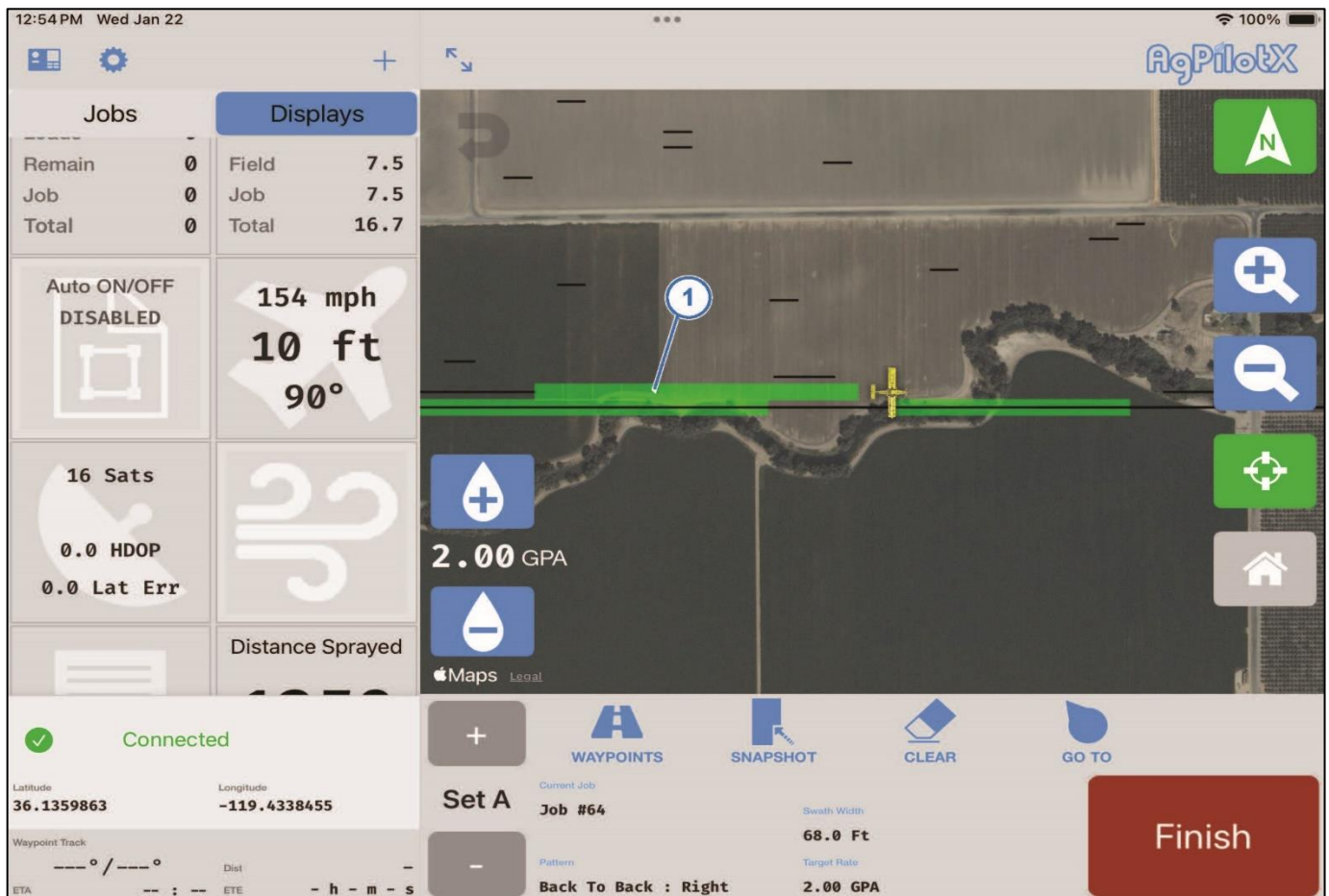


Figure 6: Full Boom Spray

12. **Engage the valves** to activate pulsing.

- A green spray pattern should appear behind the plane (1).

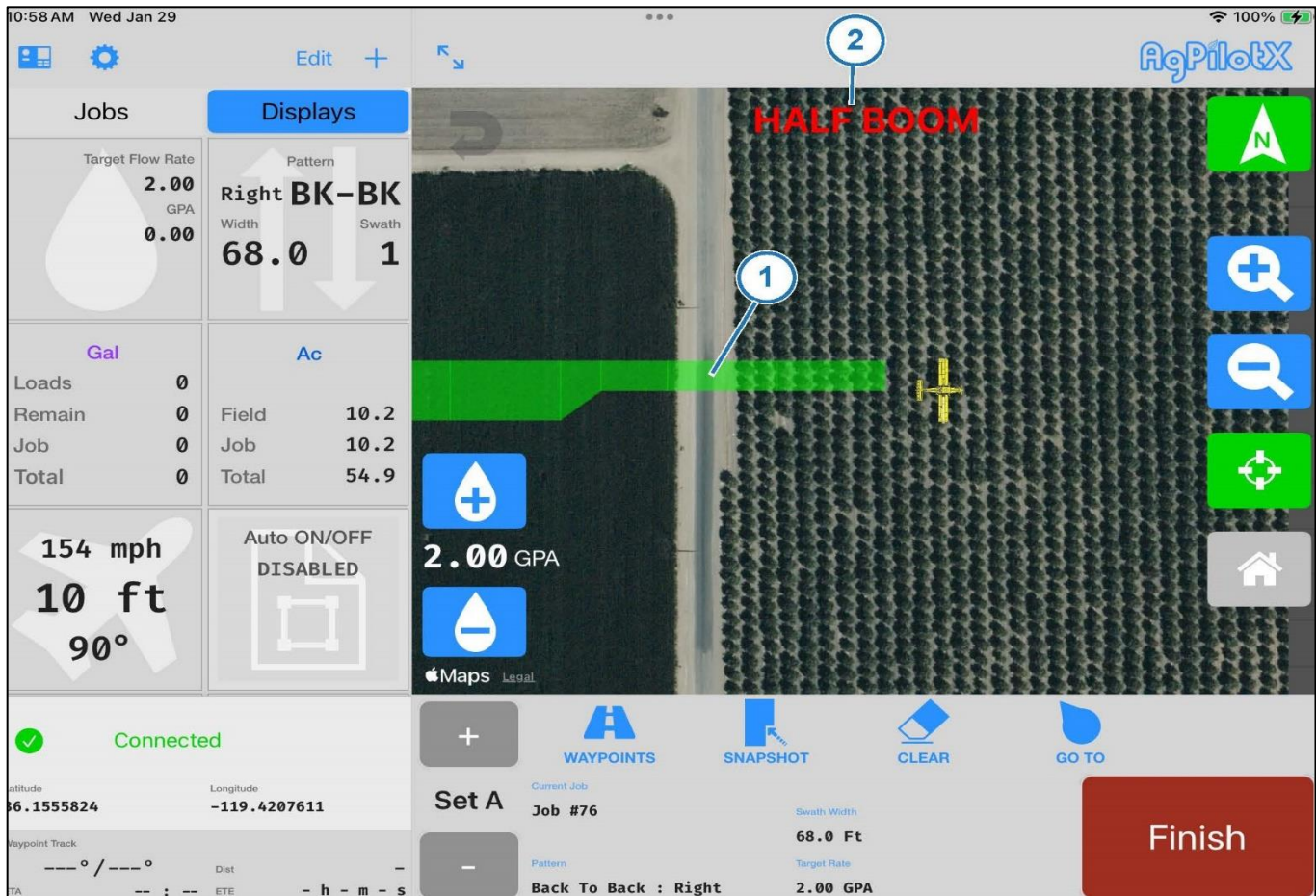


Figure 7: Half Boom Spray

13. Toggle the **Right Boom Shutoff** switch to **ON**.
 - The spray pattern should reduce to half-width (1).
 - **HALF BOOM** should display at the top of the screen (2).
14. Toggle the **Right Boom Shutoff** switch to **OFF**.
 - The spray pattern should return to full width (Figure 6, Item 1).
 - The **HALF BOOM** text should be removed from the screen.
15. If the system operates as expected, disengage the valves to disable pulsing, disable Simulation mode by repeating step 2-5. Ensure the **Simulator slider** returns to grey.

Wiring Schematic

