

# Sprayest

CONTROLS INC.



## Model ST8 Remote Boom Control

## Introduction

Congratulations on your purchase of the ST8 Remote Boom Control. It is a tool that is designed for checking and servicing your sprayer that saves you time and chemical, as well as providing safety for you.

### Getting Started

Please follow the steps below to help make your installation easier:

- Check the package contents.
- Install the ST8 control box.
- Install the included harnesses.
- Test the unit.

### Package Contents

Each ST8 Remote Boom Control should include the following components:

- ST8R control box
- Mounting plate
- 8T-8 button remote
- Adapter harness specific to the sprayer it was ordered for

### ST8 & General Harness Installation

1. Choose a location near the sprayer valves to mount the control box.
2. Mount the ST8R control box to the SS mounting plate. Make sure that the antenna is pointing up when the unit is mounted on the sprayer..
3. Find the connectors from the valves or sprayer harness. (**All sprayers** except those listed later in this guide.)
4. Starting with the valve that controls the boom section that is the furthest to the left, disconnect the connector and plug the adapter harness connector labeled "1" (black wire) in between.
5. Continue working left to right until all the valves have been connected to the harness.
6. Securely fasten all harnesses to the sprayer, allowing for movement of spray booms and ensuring that the wires will not be pinched. Make sure that the fuseholders on the harness between the connectors are installed in such a way that the cap is up to prevent moisture from entering into the fuseholder. Use a wire tie through the hole in the cap to hold it in position if necessary.

**Note:** There is a diode in the weather proof fuseholder near the end of the harness that attaches to the valve. This diode, if removed, must be replaced with the little arrow aimed at the harness coming from the valve. This diode prevents any electrical current from flowing back to the sprayers control panel. Failure to re-install this correctly could damage your sprayer control and prevent it from opening the sprayer valves.

### Solenoid Valve Harness

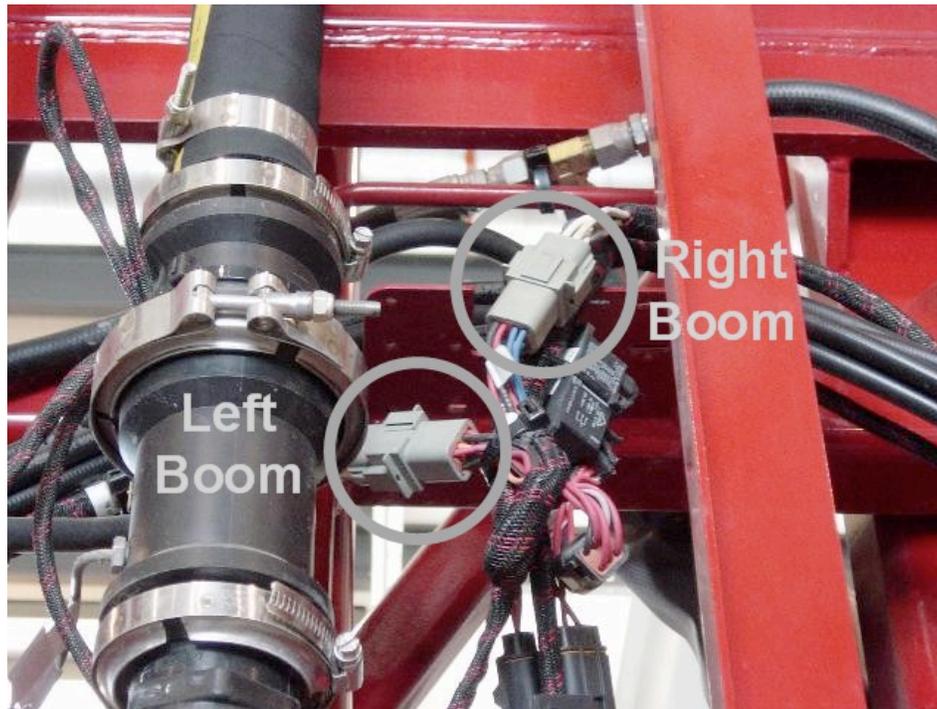
1. Install the ST8 control box as described in the previous section.
2. Unplug the switched wire from the solenoid and plug in the wire labeled "1" (black wire) on the adapter harness.
3. Plug the switched wire back into other connector on the adapter harness.
4. Continue working left to right until all the valves have been connected to the harness.

#### **Case IH SPX4260**

1. Install the ST8 control box as described in the previous section.
2. Locate the Weatherpack connectors at the back of the tractor unit, where the spray boom connects. There should be five or six 3-pin connectors depending on the sprayer.
3. Disconnect the connector for the boom section that is furthest to the left and plug the connector on the adapter harness labeled "1" (black wire) in between.
4. Continue working left to right until all the valves have been connected to the harness.

#### **Case IH SPX4420** (including SPX4410, SPX3185, SPX3310 and newer)

1. Find a suitable location to mount the control box at the back of the sprayer on the center section of the boom.
2. Mount the box securely using the holes in the bracket.
3. Locate the three grey plugs at the back of the sprayer for 7 section models or two grey plugs for 5-6 section models. They are circled in the picture below.



4. Disconnect the plugs from the left boom and plug the SprayTest “Left Boom” plugs into them.
5. Repeat Step 2 for the right boom and boom 7 if necessary.
6. Connect the SprayTest adapter harness to the ST8 control box.

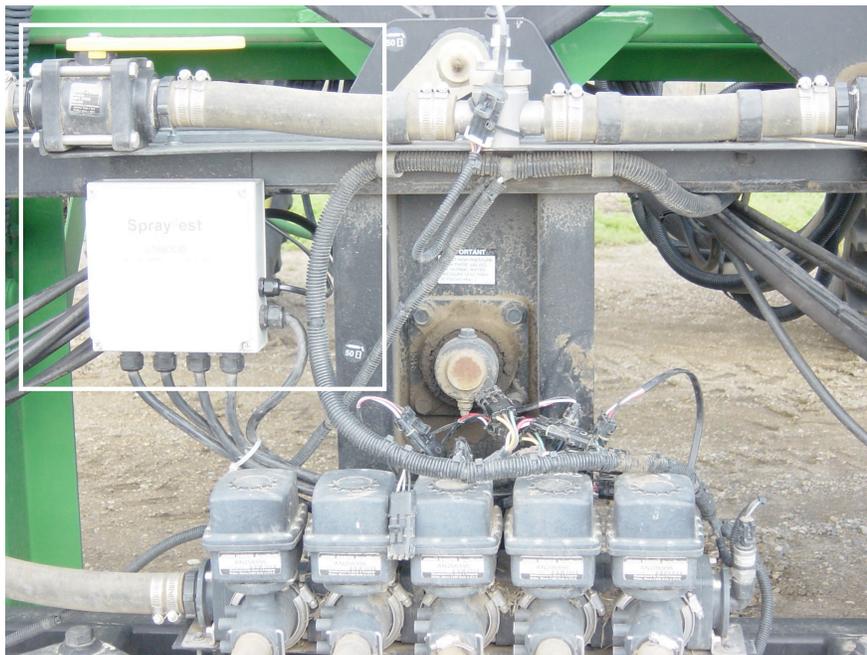
### **John Deere 4630**

1. Choose a location at the back on the center section of the sprayer to mount the control box.
2. Mount the control box so that the antenna is pointing upward. The control box can be mounted on the stainless steel mounting plate to make it the easiest to install on the sprayer.
3. Install the harness on the sprayer. There is a connector at each boom section solution valve. Split the connector and our harness tees into the wiring. The harness connectors are all numbered 1 through 5. These correspond to the boom valve on the sprayer, with #1 being the far left section. Continue to move to the right and connect boom valve for section 2,3,4 and 5.
4. The harness needs to be fastened to the spray boom securely and must allow for movement of the boom when folding or raising and lowering.

- Using the wire ties provided, secure end of the cable (with the gray connector) that connects to the control box to the sprayer. The reason for this is to eliminate unnecessary pulling on the cable that comes off the receiver. Then connect the control box cable to the gray connector on the harness.
- When installation is complete, go to the test section of this manual and try out your Spraytest.

## John Deere 4700/4710/4720 Sprayer

- Locate the ball valve as shown in the picture below.



2. Attach the 4700/4710/4720 box to the plate using the existing hole in the plate.
3. Starting with the left valve, disconnect the valve harness from the sprayer harness and plug the connector labeled "1" in between.
4. Repeat step 3 for remaining valves, moving left to right.
5. Connect the power cable from the 4700/4710/4720 box to the battery.
6. Secure all of the wires with wire ties to eliminate unnecessary wear on wires. Also, ensure that the wires are located in such a way that they will not be pinched or stretched when the boom is raised or lowered.
7. Mount the ST8R control box using the stainless steel bracket for ease of mounting.
8. Connect the 4700/4710/4720 box to the ST8R control box. The ST8R will get power from the 4700/4710/4720 box.

#### **Testing**

See testing section of manual.

### **John Deere 4730 + 4830 Sprayers**

The control box is a complete weatherproof unit with the receiver and other components enclosed. The power is picked up from the wiring at the center valve to power the receiver. No other wiring is required besides installing the harness provided to fit the 4730 +4830 sprayer.

1. Find a suitable location to mount the control box at the back of the sprayer near the valves. The antenna needs to point upward when installed.
2. Using the stainless steel bracket provided mount the control box on the stainless steel bracket and mount ST8 control box on the sprayer.
3. The Spraytest harness needs to connect to the ST8 control box .

**Do Not let the Spraytest harness hang from the ST8 control box.** Use wire ties to secure the harness to the sprayer in a location that the cable from the ST8 control box will easily reach.

4. At center valve, disconnect the metripack connector and plug the SprayTest wiring harness marked "4" into the corresponding connectors. This connection controls section #4 as well as providing the power and ground for the SprayTest control box.
5. There is a wire with a connector marked "2+3" for boom solution valves 2+3 as well as a connector marked "5+6" for boom solution valves 5+6. Split the connectors on the sprayer and plug our harness in line for each corresponding set of valves.

6. String the wire marked “1” out to the left boom valve and proceed to connect the SprayTest harness into corresponding harness.
7. Repeat the process for installation on the right hand boom with cable marked “7”.
8. Make sure that the fuseholders (diode holders) on the harness between the connectors are installed in such a way that the cap is up to prevent moisture from entering into the fuseholder (diode holder). Use a wire tie through the hole in the cap to hold it in position if necessary.
9. Make sure there is adequate cable to allow for movement of booms and install all harnesses to avoid pinching or damaging cable when booms are folded or unfolded. Secure all wiring harnesses to ensure long cable life and trouble free wiring.
10. To try out the remote boom control see the test section in the ST8 manual.

## **John Deere 4920/4930 Sprayers**

1. The ST8 control box mounts on the center section when standing behind the sprayer. Make sure the center cable will reach the center valve. The control box should be mounted with the antenna pointing up.
2. Mount the control box on the stainless steel bracket provided. Then mount the unit on the sprayer.
3. Plug the harness provided into the connector on the box.

**Do Not let the Spraytest harness hang from the ST8 control box.** Use wire ties to secure the harness to the sprayer in a location that the cable from the ST8 control box will easily reach.

4. At center valve, disconnect the weatherpack connector and plug the SprayTest wiring harness into the corresponding connectors.
5. String the wire out to the left boom valves and proceed to connect the SprayTest harness into corresponding harnesses. Harnesses are marked 1 for left boom, 2 for second section from the left, 3 for third section from the left.
6. Repeat the process for installation on the right hand boom with harness marked 5 is for section 5, and so on.
7. Make sure there is adequate cable to allow for movement of booms and install all harnesses to avoid pinching or damaging cable when booms are folded or unfolded. Secure all wiring harnesses to ensure long cable life and trouble free wiring.
8. To test your Spraytest see test section of this manual..

## **Hardi Sprayers**

1. Find a suitable location to mount the control box at the back of the tractor. The box needs to be in a hanging position.
2. Mount the box securely using the holes in the bracket.
3. The Hardi adapter box goes in the cab. There is a power cord that needs to be connected to 12v power and a good ground.
4. Unplug the connector that connects to the sectional switch box in the tractor, plug that cable into the mating connector on our Hardi box. Then plug the other connector from our box to the switch box.
5. The cable with a 12 pin connector on it will plug into the ST8 control box.

## **Rogator 664**

1. Locate the box at the back of the sprayer that contains the air valves.
2. Remove the cover from the box.
3. Disconnect the 4-pin weatherpack connector.
4. Connect the SprayTest harness in between the two disconnected weatherpack connectors.
5. Cut a slot in the side of the box deep enough and wide enough to allow for the SprayTest harness to exit the box while the cover is on.
6. Find a suitable location for the control box to be installed.
7. Plug the SprayTest harness into the control box.
8. Connect the power harness. The fused wire needs to be connected to 12V+ (battery or keyed power) and the other black wire needs to be connected to a good ground.

## **Rogator 854 (1996 and earlier)**

1. Locate the box with the air valves at the back of the sprayer.
2. Take the cover off of the top of the box.
3. Disconnect the 6-pin weatherpack connector.
4. Connect the SprayTest harness in between the two disconnected weatherpack connectors.
5. Cut a slot in the side of the box deep enough and wide enough to allow for the SprayTest harness to exit the box while the cover is on.
6. Find a suitable location for the control box to be installed.

7. Plug the SprayTest harness into the control box.
8. Connect the power harness. The fused wire needs to be connected to 12V+ (battery or keyed power) and the other black wire needs to be connected to a good ground.

**Rogator 854** (1997 and later including 1054, 1254)

1. Find a suitable location to mount the control box at the back of the sprayer.
2. Mount the box securely using the holes in the bracket.
3. Identify connector shown in the picture below. This is located under the air valves on the right side of the foam marker.



4. Disconnect the wiring harness from the bottom of the valve box and plug the harness into the plug on the valve.
5. Reconnect the original harness to the adaptor harness.
6. Connect power harness to a 12 volt source (preferably a keyed source) and a good ground.

7. Connect the SprayTest adapter harness to the ST8 control box.  
**Rogator 1064** (including 864, 1264 and newer, 1074, RG series)  
or **Willmar 8650**

1. Find a suitable location to mount the control box at the back of the sprayer.
2. Mount the box securely using the holes in the bracket.
3. Identify the connector as shown in the picture below. It is located at the back of the sprayer near the mast.



4. Disconnect the wiring harness and plug the SprayTest adapter harness in between.
5. Connect the SprayTest adapter harness to the ST8 control box.

### Testing

1. Testing can be done without water in the tank and without starting the engine.
2. Turn on the ignition and then turn on the sprayer pump switch.

3. Leave the master switch off. The individual boom switches can be in either on or off position.
4. Put the rate controller into manual mode and turn off any auto sectional control on the sprayer.
5. Push the power button to turn the remote on.
6. Push and hold button #1 and the left boom valve will open/spray.
7. Push and hold button #2 and the second boom valve from the left will open/spray.
8. Continue to test #3 through #7.
9. When testing is complete, press the power button to turn the remote off. The remote will turn off after 15 minutes if the operator forgets to turn it off.

## **Troubleshooting**

1. Check the remote to make sure that the battery is good. Turn the remote on without the sprayer being on. If the red light starts blinking once every second, then the remote needs charging. Charge the battery using a micro USB cell phone charger and test it again (most cell phone chargers are micro USB). When the battery is charged and the remote is connected to the ST8 control box the green light will flash rapidly. If the green light isn't flashing rapidly after the battery has been checked or has been charged, the remote may be faulty.
2. Check the ST8 to make sure that there is power to it. Turn the key to ignition and power on the remote. Press any button on the remote and listen for the sprayer valves opening and closing. If the valves aren't opening and closing check to make sure that the ST8 is connected to a good 12V power source and ground. If the valves still aren't opening after making sure there is a good connection to a power source and ground, check the fuse in the by the connector on the sprayer. If the fuse is good, the ST8 is faulty.
3. Check to make sure that the SprayTest connectors are plugged into the right connectors from the valves on the sprayer. The SprayTest harness is numbered 1-7 (depending on the sprayer) with 1 being the left boom.
4. Check to see if the valves open and close with the remote. You should be able to hear the valves as they open and close. If you don't hear the valves opening and closing, go back to the cab of the sprayer and turn the sprayer switches on to make sure the valves are opening and closing with the switches. If the valves don't work with the SprayTest harness connected, check the diodes in the harness. They're located in the weatherproof fuseholders on the adapter harness. Remove the weatherproof cap on the fuseholder for each valve and make sure that the little arrow on the top of the diode is pointed toward the valve. Test the valves with the switches again.

**Warranty is limited to one year parts and labour. Any attempt to repair or alter the unit will void warranty.**



# SprayTest

C O N T R O L S I N C .

411 Railway Ave  
P.O. Box 269  
Beechy, SK S0L 0C0  
Canada

Phone: 306-859-1200  
Toll Free: 1-855-859-1200  
Email: [spraytest@sasktel.net](mailto:spraytest@sasktel.net)  
Website: [www.spraytest.com](http://www.spraytest.com)

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