Tramlining
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SAFETY NOTICES

Safety notices are one of the primary ways to call attention to potential hazards. An absence of specific alerts does not mean that there are no safety risks involved.

This Safety Alert Symbol identifies important safety messages in this manual. When you see this symbol, carefully read the message that follows. Be alert to the possibility of personal injury or death.

WARNING

Use of the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Use of the word CAUTION with the Safety Alert Symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION

Use of the word CAUTION without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in equipment damage.
TRAMLINING SETUP

The IntelliAg system can monitor and control tramlining functions providing accurate bout matching for spraying and fertilizer applications. Tramlining setup can only be accessed in User Level 2 or Level 3 mode.

PREDEFINED BOUTS

There are eight predefined bout selections in symmetric and assymmetric sequences:

Symmetric:
- 30 ft. (9 meter) drill 90 ft. (27 meter) sprayer

Assymmetric:
- 30 ft. (9 meter) drill
  - 60 ft. (18 meter) sprayer
  - 50 ft. (15 meter) sprayer
  - 80 ft. (24 meter) sprayer
- 40 ft. (12 meter) drill
  - 90 ft. (27 meter) sprayer
  - 60 ft. (18 meter) sprayer
  - 50 ft. (15 meter) sprayer
  - 80 ft. (24 meter) sprayer

5 custom bout selections allow setup for configuration not pre-defined.

PREDEFINED BOUT SETUP

Tramline must be enabled to monitor and control tramlining functions on the Main Work screen. When disabled, tramlining is not functional, however, the Tramline button still appears as a top level button for future enabling.

To Enable a Pre-Defined Bout:

1. At the Main Work screen, press the Next Page button.
2. Press the Tramline button to display the Tramline screen.
3. Press the Tramline input box and enter the Tramline selection as Enabled.
4. Press the Bout Selection input box and select a predefined bout selection.
5. Select the desired method to advance bouts.
6. Press the Left/Right Entry icon to select the entry point of the field and direction of the first turn. The icon will change based on the entry selected.
7. In the output/row table, assign the rows (outputs) to be closed on a specific bout. A maximum of 8 outputs can be entered.
BOUT ADVANCE MODE
A bout can be advanced to the next sequence by the following methods.

IMPLEMENT LIFT SWITCH
Bout advances automatically occur when the lift switch status changes to the up state. Master switch must be ON for the control channels to operate.

MASTER SWITCH
Bout advances automatically occur when the master switch is turned off.

ROW FAIL ADVANCE
Bout advances automatically when an All Rows Fail alarm occurs. Master switch must be used to turn on and off control channels.

MANUAL ADVANCE
Bouts are manually advanced from the Main Work screen by pressing the Next Bout button regardless of master switch or implement lift switch.

Predefined bouts do not require additional setup. Total bouts and row assignments are configured based on the drill/sprayer selected.

Bout configuration for the drill/sprayer selected can be viewed by pressing the Tram Setup button. Predefined bout configurations are only viewable and cannot be changed.
Figure 2
Predefined Bout Screen

<table>
<thead>
<tr>
<th>TOTAL BOUTS</th>
<th>OUTPUTS 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The diagram and table illustrate the predefined bout screen layout for the tramlining setup.
PREDEFINED BOUT SELECTION ILLUSTRATIONS

9 Meter Drill/27 Meter Sprayer (3 Bout Sequence)

2 diverters required located symmetrically around drill center. 2 seed rows are diverted to adjacent row during tramline bout only.

Figure 3

9 Meter Drill/27 Meter Sprayer (Right Turn)

9 Meter Drill/18 Meter Sprayer (1 Bout Sequence)

2 diverters required with 1 located on the far right and 1 on the far left of drill. With a first turn to the right, 1 seed row on the right side is diverted to an adjacent row during every bout. With a first turn to the left, 1 seed row on the left side is diverted to an adjacent row during every bout.

Figure 4

9 Meter Drill/18 Meter Sprayer

RIGHT

LEFT
9 Meter Drill/15 Meter Sprayer (10 Bout Sequence)

6 diverters required with 2 located on the far left, 2 located on the far right, and 2 located in drill center.

First turn to the right:
- 2 right seed rows are diverted on bouts 1 and 10
- 2 left seed rows are diverted on bouts 5 and 6
- 2 center seed rows are diverted on bouts 3 and 8

First turn to the left:
- 2 left seed rows are diverted on bouts 1 and 10
- 2 right seed rows are diverted on bouts 5 and 6
- 2 center seed rows are diverted on bouts 3 and 8

Figure 5

9 Meter Drill/15 Meter Sprayer (Right Turn)

9 Meter Drill/24 Meter Sprayer (8 Bout Sequence)

6 diverters required with 1 located on the far left, 1 located on the far right, 2 located on the left, and 2 located on the right of the drill.

First turn to the right:
- 2 right seed rows are diverted on bouts 2 and 7
- 1 far left seed row is diverted on bouts 4 and 5

First turn to the left:
- 2 left seed rows are diverted on bouts 2 and 7
- 1 far right seed row is diverted on bouts 4 and 5
8 diverters required with 2 located on the far left, 2 located on the far right, 2 located on the left, and 2 located on the right.

First turn to the right:
- 2 far right seed rows are diverted back on bouts 2 and 17
- 2 right seed rows are diverted back on bouts 4 and 15
- 2 left seed rows are diverted back on bouts 6 and 13
- 2 far left seed rows are diverted back on bouts 8 and 11

First turn to the left:
- 2 far left seed rows are diverted back on bouts 2 and 17
- 2 left seed rows are diverted back on bouts 4 and 15
- 2 right seed rows are diverted back on bouts 6 and 13
- 2 far right seed rows are diverted back on bouts 8 and 11
**12 Meter Drill/18 Meter Sprayer (6 Bout Sequence)**

4 diverters required with 2 located on the left and 2 located on the right.

**First turn to the right:**
- 2 right seed rows are diverted back on bouts 1 and 6
- 2 left seed rows are diverted back on bouts 3 and 4

**First turn to the left:**
- 2 left seed rows are diverted back on bouts 1 and 6
- 2 right seed rows are diverted back on bouts 3 and 4

**Figure 8**

12 Meter Drill/18 Meter Sprayer (Right Turn)

---

**12 Meter Drill/15 Meter Sprayer (10 Bout Sequence)**

8 diverters required with 2 located on the far left, 2 located on the far right, 2 located on the left and 2 located on the right.

**First turn to the right:**
- 2 far right seed rows are diverted back on bouts 4 and 7
- 2 far left seed rows are diverted back on bouts 2 and 9
- 2 right seed rows are diverted back on bouts 1 and 10
- 2 left seed rows are diverted back on bouts 5 and 6

**First turn to the left:**
- 2 far left seed rows are diverted back on bouts 4 and 7
- 2 far right seed rows are diverted back on bouts 2 and 9
- 2 left seed rows are diverted back on bouts 1 and 10
- 2 right seed rows are diverted back on bouts 5 and 6
Figure 9

12 Meter Drill/15 Meter Sprayer (Right Turn)

First Turn to the right
- 1 seed row on right side is diverted back during every bout

First Turn to the left
- 1 seed row on left side is diverted back during every bout

Figure 10

12 Meter Drill/24 Meter Sprayer (1 Bout Sequence)
2 diverters required with 1 located on the far right and far left.

First Turn to the right
- 1 seed row on right side is diverted back during every bout

First Turn to the left
- 1 seed row on left side is diverted back during every bout
CUSTOM BOUT SETUP

To Configure Bouts not Predefined:

1. At the Main Work screen and in Setup/Configuration mode, press the Next Page button.
2. Press the Tramline button to display the Tramline screen.
3. Press the Tramline input box and enter the tramline selection as Enabled.
4. Press the Bout Selection input box and select a Custom bout selection (Custom 1 - Custom 5).
5. Select the desired method to advance bouts. Refer to Bout Advance Modes for methods available.
6. Press the Left/Right Entry icon to select the entry point of the field and direction of the first turn. The icon will change based on the entry selected.
7. Assign the rows (outputs) to be closed on a specific bout in the table. A maximum of 8 outputs can be entered.
8. Press the Tram Setup button to identify row assignments for each bout.

Figure 11
Tramlining Setup

9. At the Tram Setup screen, press the Total Bouts box to enter Total Bouts (maximum of 26 can be entered).
10. Press the Outputs box to enter number of outputs.
11. In the Bout table, identify each row(s) to turn off for each bout. A maximum of 6 rows can be turned off for each bout.
12. Use the Next Bout button to display additional Bout Setup screens to enter more than 6 bouts.
Figure 12

Custom Screen

Enter rows to turn off Additional Bout Setup Screens
OPERATION

1. Press the **Start Tram** button to start tramlining and the **Pause Tram** button to stop tramlining.
2. Press the **Next Bout** button to manually advance to the next bout sequence.
3. Displays the current bout number (2) and total number of bouts (3).
4. Left/right icon indicator displays the turn direction of the bout. Press the icon on the Work screen to change direction.
5. Highlighted rows indicate what rows are off (rows 5, 6 and 13, 14) during the current bout sequence.

*Figure 13*  
Tramlining During Work Mode

![Diagram showing tramlining during work mode with labels indicating various parameters and settings.](image-url)
VIEW TRAMLINE FUNCTIONS ON WORK SCREEN

To view tramlining functionality on the Main Work screen, the tramlining data item must be selected on the Work Screen Configuration.

**To View Tramlining on Main Work screen:**

1. At the Main Work screen, press the **Next Page** button and select the **Screen Config** button.
2. Press a highlighted box and scroll through Data Items until Tramline appears.
3. Press the **Checkmark** button to select.
4. Press the **Work Screen** button to return to the Main Work screen.

**Figure 14**
**Work Screen Configuration**
TROUBLESHOOTING

Alarms will display on the Virtual Terminal with an audible alarm. The alarm can be silenced by pressing the Alarm Cancel or ESC button. Detailed descriptions of the alarm can be viewed by pressing the Alarm Detail button. Some alarm conditions may display instructions to correct the situation. Each alarm type has an associated alarm number for reference.

SEEDING DETECTED ON A TRAMLINED ROW

Alarm 231
Seeding is detected on a tramlined row that should be turned off.

Corrective Action
- Verify that the correct tramline output is assigned to a correct row unit.
- Inspect harness for damage
- Check diverter for proper operation
- Inspect module and module harness for damage

Figure 15
Tramlining Row Alarm
Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from their customer for any DICKEY-john product.

DICKEY-john® WARRANTY

DICKEY-john warrants to the original purchaser for use that, if any part of the product proves to be defective in material or workmanship within one year from date of original installation, and is returned to DICKEY-john within 30 days after such defect is discovered, DICKEY-john will (at our option) either replace or repair said part. This warranty does not apply to damage resulting from misuse, neglect, accident, or improper installation or maintenance; any expenses or liability for repairs made by outside parties without DICKEY-john's written consent; damage to any associated equipment; or lost profits or special damages. Said part will not be considered defective if it substantially fulfills the performance expectations. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE, AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. DICKEY-john neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part and will not be liable for consequential damages. Purchaser accepts these terms and warranty limitations unless the product is returned within fifteen days for full refund of purchase price.

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Headquarters:
5200 Dickey-john Road, Auburn, IL USA 62615

Europe:
DICKEY-john Europe S.A.S, 165, boulevard de Valmy, 92706 – Colombes – France
TEL: 33 (0) 1 41 19 21 80, FAX: 33 (0) 1 47 86 00 07 WEB: www.dickey-john.eu

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