



**BOURGAULT**

**X30**

Monitor/Controller

INGENUITY.

SIMPLICITY.

DURABILITY.

 **TOPCON**  
Precision Agriculture

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# Sequence Timing

**The following steps will help you get the initial on and off sequence timings.**

*Note: these calculated on and off times should be verified in the field with product being placed in the ground at normal operating speed!*



**Section Switching Setup - 7700 5TANK-MTRG(SCN)\_3710-60 10SPCG(GRAN SCN)**

VIRTUAL SECTION SWITCHBOX

Enabled

1



Sections



Timing



Section Switch



Select



New



ECU



Geometry



Section Control



Operator Inputs



Seeder



Speed



User



System



Vehicle



Implement



Product

The virtual Section Switchbox should be enabled, go to  
Implement/Section Control/Section Switch.



Section Switching Setup - 7700 5TANK-MTRG(SCN)\_3710-60 10SPCG(GRAN SCN) - GRAN

1 2 3 SWITCHES  
4 5 6

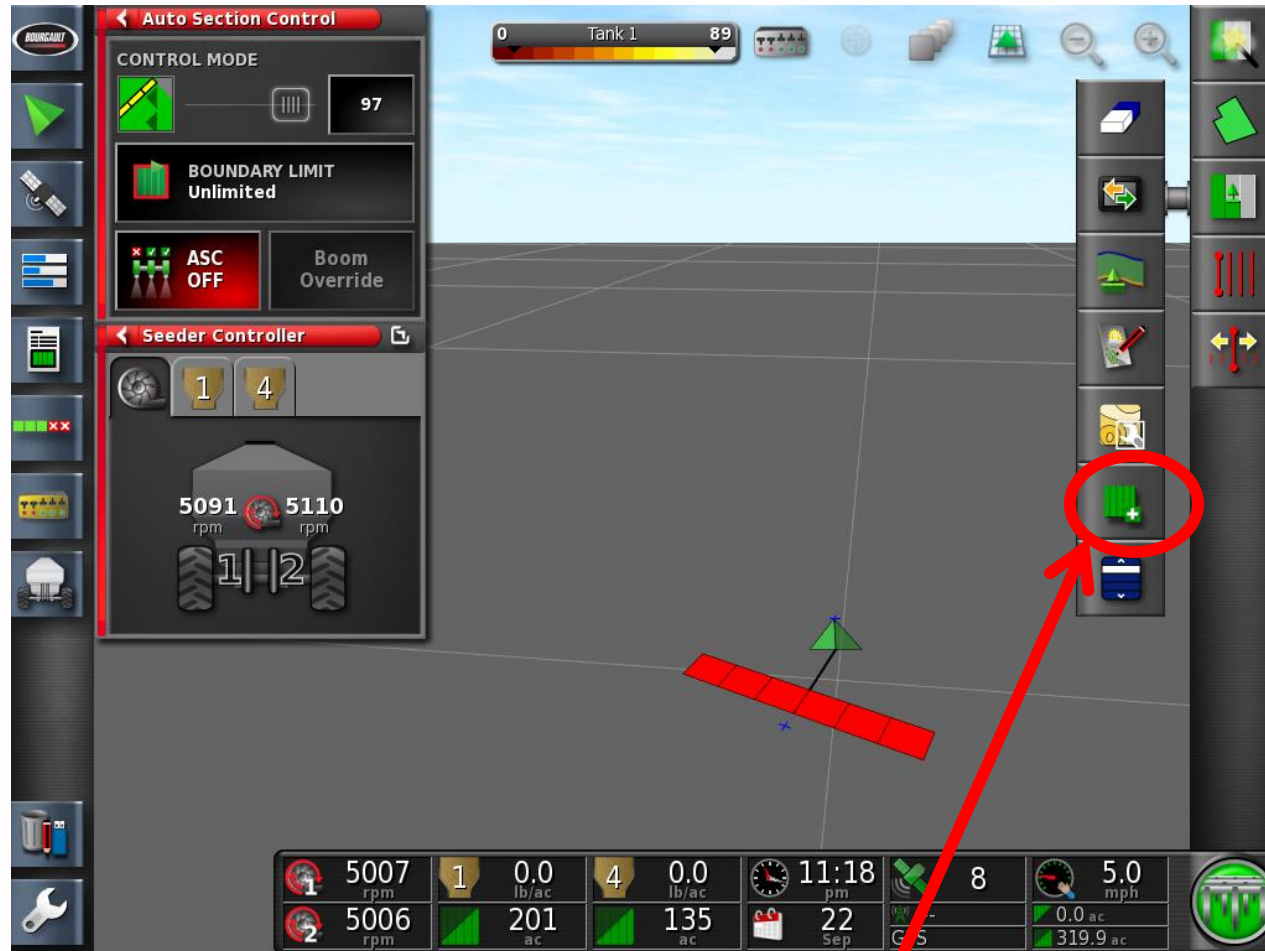
1

Section	Switch
1	1
2	2
3	3
4	4
5	5
6	6

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product

Verify that the X30 is set up with the correct number of sections to match the drill.



You must start a new Job.



The Job name is not important at this time, the default is okay.





To complete the timing test you must have product in a tank directed to the openers and one directed to the MRB's if equipped.



ASC  
OFF

Use a  
Manual  
Speed

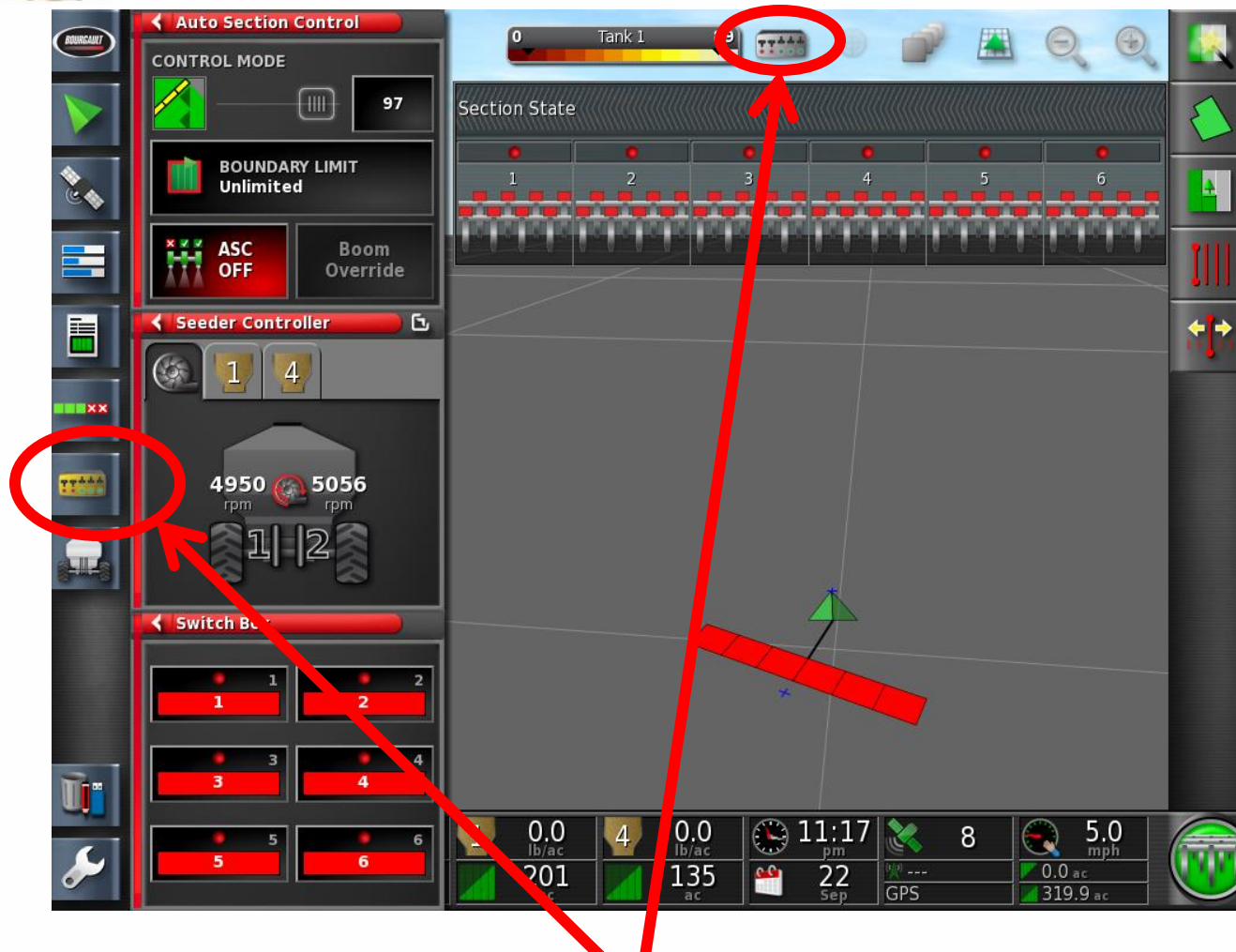
Virtual  
Section  
Switches  
Off

Tank  
Clutches  
Must be  
On

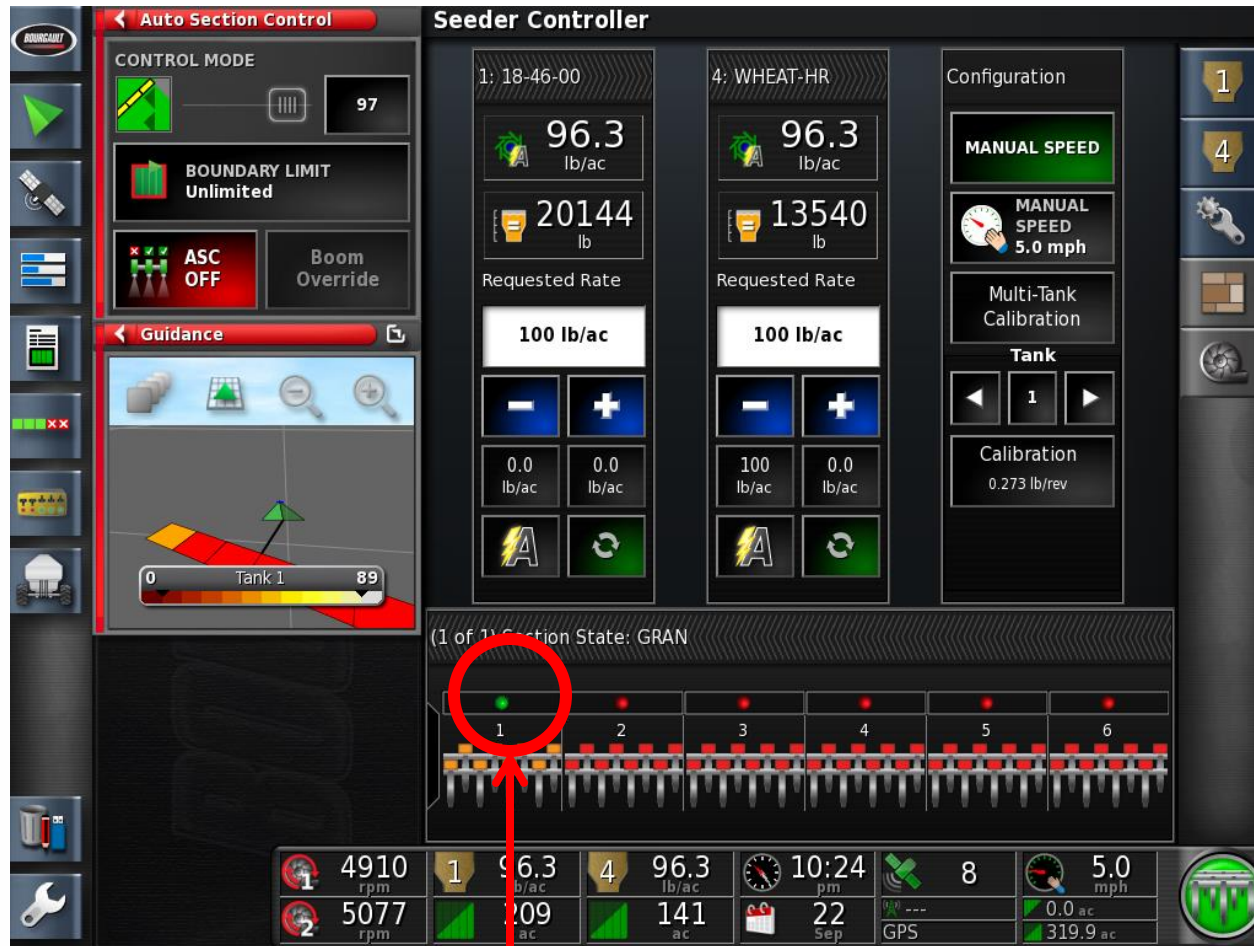
Turn  
Master  
On







If preferred there are two alternate Section Virtual Switches that may be used for the timing test.

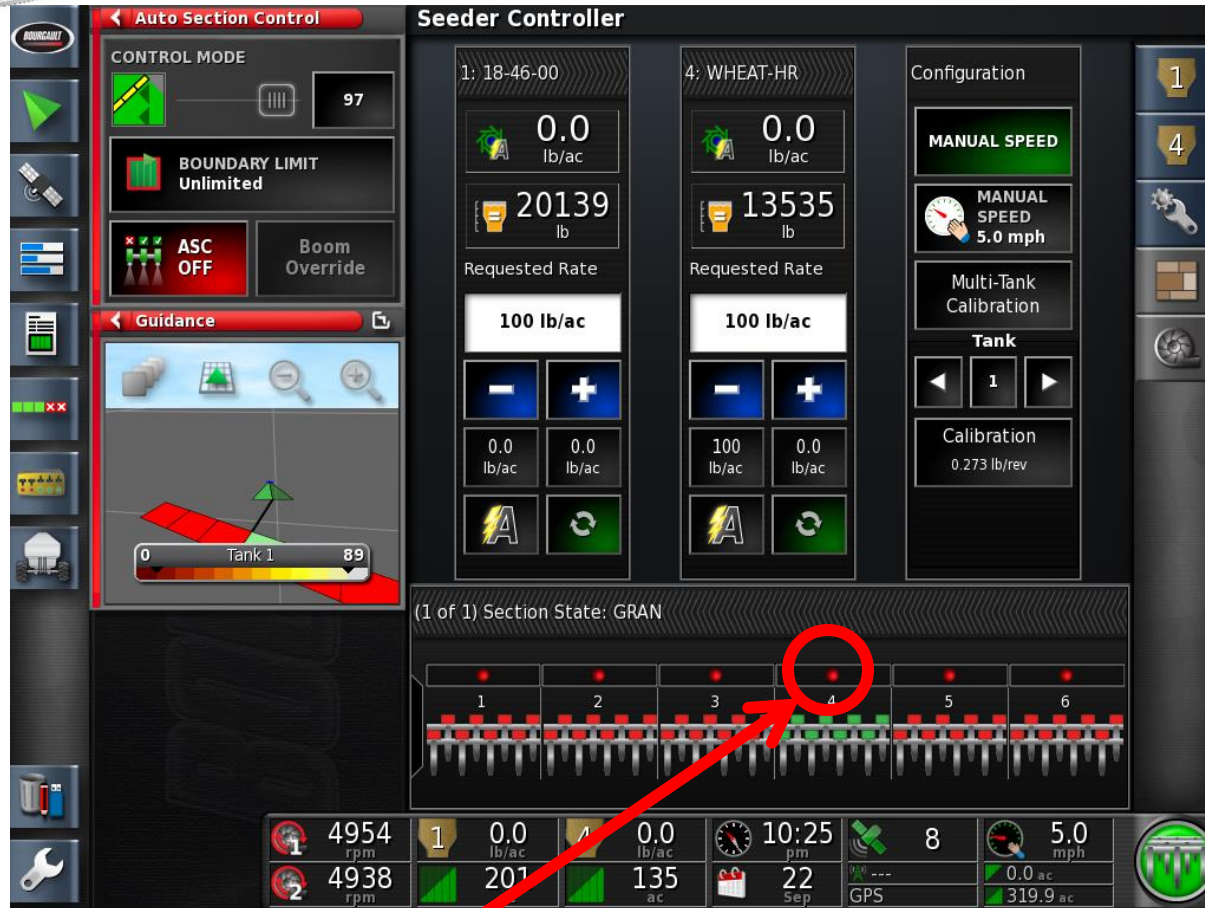


Select the each section switch one at a time and start timing once the dot turns green. Repeat this a few times to get and average ON time then record this number for entry.



You may notice the section indicator changes from yellow to green after a few seconds, this reflects the current Sequence ON time setting.





When the section is on press the section icon to turn it off then start timing once the dot turns red for each section and record the OFF time. Off times should be timed a few times and may be harder to verify because the product may take a second or two to clear out.



Controller Setup - 7700 5TANK-MTRG(SCN)\_3710-60 10SPCG(GRAN SCN) - GRAN

2

Section	On Time	Off Time	Select
All	6/6	6/6	✓
1	4.0 s	3.0 s	✓
2	3.5 s	2.5 s	✓
3	3.0 s	2.0 s	✓
4	3.0 s	2.0 s	✓
5	3.5 s	2.5 s	✓
6	4.0 s	3.0 s	✓

Navigation icons: Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, Speed, User, System, Vehicle, Implement, Product

Section Control menu items: Sections, Timing, Section Switch

Enter the calculated ON and OFF times in Implement/Section Control/Timing



Once you have completed all of the preceding steps you will be at a basic starting point for your Sequence Timings. A considerable amount of time should be spent in the field to verify and adjust the Sequence Times.

***Note;***

***The following page is a step-by-step procedure to verify sequence on and off times in the field, failure to do this may cause misses and/or excessive overlap!***





## How to Adjust Sequence Times (X30 equipped 7000 series).

(The initial sequence times should be calculated with a stop-watch, see ASC setup instructions)

1. You must first find an open area of a level field large enough to make perpendicular passes.
2. With the ASC (auto section control) enabled you will need to start a new JOB.
3. With all the Tank switches on, the openers in the ground and the Master switch on make 2 passes in the center of the field.
4. Your third pass should be a perpendicular pass to the first two passes with the Tank switches and Master switch on, stopping when the back row of the drill is approximately 10 feet in to the first passes.
5. Find a back row for each section and check for misses and/or overlap for each section.
6. To calculate the seconds that you need to adjust the sequence time you must calculate how many feet per second you are travelling. (5280 multiplied by the ground speed then divided by 3600 will give you the feet per second) **for example [(5280ft/mile X 5mph) divided by 3600 = 7.3 ft/sec].**
7. If the **product ends before the first pass** you must take the distance that it is short and divide it by the predetermined ft/sec to get the number of seconds to add to the off time. **(Most customers would be more comfortable with some overlap).**
8. If the **product overlaps the first pass** too much you must divide the overlap by the ft/sec and subtract this number from the sequence off time. **(Most customers would be more comfortable with some overlap).**
9. Continue seeding and stop approximately 10 feet past the perpendicular rows.
10. If the **product does not turn on quick enough** to the leading opener (front row) of each section, measure the miss then divide it by the ft/sec to get the number that you must subtract from the sequence on time. **(Most customers would be more comfortable with some overlap).**
11. If the **product overlaps too much**, measure the overlap then divide it by the ft/sec to get the number that you must add to the sequence on time. **(Most customers would be more comfortable with some overlap).**

***Note; after the initial sequence time settings it is important to make angle passes to make sure the overlap or miss is acceptable.***

***TIP; (if product is difficult to locate in the ground it would be beneficial to remove a seed hose from the front and back row of each section then secure it to broadcast product making it easier to find)***