



System 110/150 Auto Section Control Setup Guide

Part Number AGA3715
Rev 1.5

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May, 2010**

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Service assistance can be provided by contacting your local TPA Authorised Dealer or by calling the Topcon Precision Agriculture Service Centre.

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Manual Conventions

This Manual uses the following conventions:

File>Exit - Click/tap/press the **File** menu, then click/tap/press **Exit**.

Enter - Click/tap/press the button or key labelled **Enter**.



Supplementary information that can help you configure, maintain, or set up a system.



Supplementary information that can have an effect on system operation, system performance, measurements & personal safety.



Notification that an action has the potential to adversely effect system operation, system performance, data integrity, or personal health.



Notification that an action *will* result in systems damage, loss of data, loss of warranty, or personal injury.



UNDER NO CIRCUMSTANCES SHOULD THIS ACTION BE PERFORMED.

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etting Started

This chapter will give you a brief explanation on what Auto Section Control is, and how to enable Auto Section Control on your System 110 or System 150 console.

What is Auto Section Control?

Auto Section Control allows you to automatically turn the sections on your boom on and off.

The system will turn on when it detects an area that hasn't been covered and it will turn off when it detects areas that have already been passed over.

The main purpose of this feature is to reduce wastage of product and to create even coverage over your field.

Auto Section Control can be enabled and disabled easily through your console and can control up to 10 sections at a time.

Even if your boom has 30 sections, the system can be configured to control 3 sections under one section width.

Enabling Auto Section Control



Figure 1-1. Main Guidance Screen

1. Select  (figure 1-1) to enter the *Select Feature screen*



Figure 1-2. Select Feature Screen

2. Select **Auto Section Control** (figure 1-2)
3. Select  to **Enable Auto Section Control** if Auto Section Control is disabled

Software Setup

This chapter will explain how to setup your Auto Section Control software for use.



Figure 2-1. Feature Selection Screen

1. Select  to enter the *Auto Section Control Setup* screen

Mode Setup

There are 3 options to configure under Mode Setup. These are:

- The Control Mode
- Minimum Gap Size
- Enable or Disable Boundary Limit

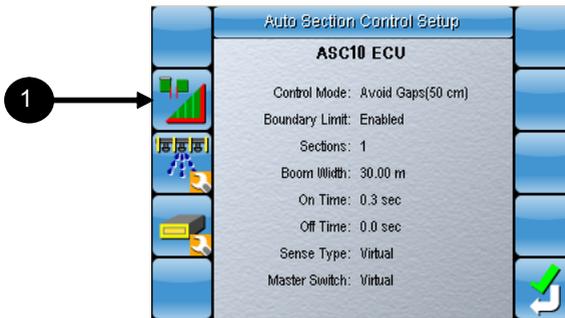


Figure 2-2. Auto Section Control Setup Screen

1. Select  to enter the *Mode Setup* screen

Control Mode

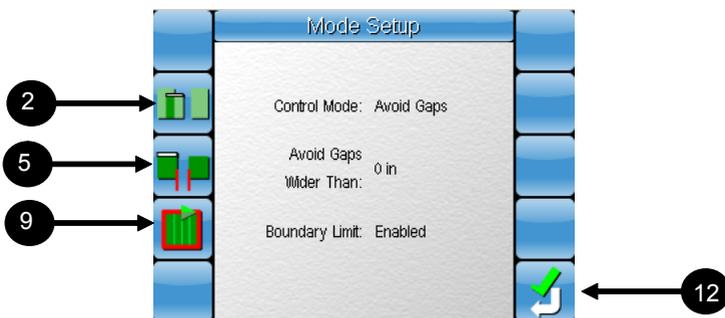


Figure 2-3. Mode Setup Screen

2. Select  to change the *Control Mode*

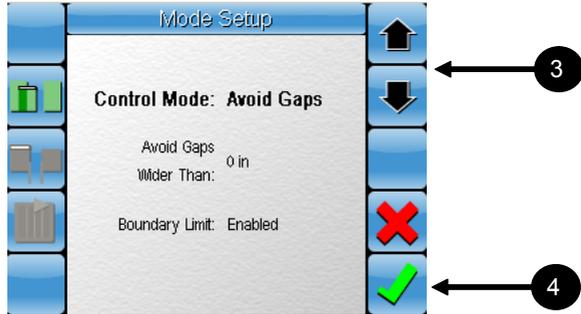


Figure 2-4. Control Mode Selection

3. Use the **up and down arrows** to select between **Avoid Gaps** and **Avoid Overlap**.

Selecting **Avoid Gaps** will prevent the sections on your boom from turning off if a gap equal to or smaller than the minimum gap size is detected. A gap could be the space between two areas of coverage which is small enough to be ignored. Avoiding small gaps prevents the sections on your boom from intermittently turning on and off if small uncovered areas are detected.

Selecting **Avoid Overlap** will cause the sections on your boom to turn off if a previously covered area is detected.

4. Select  to confirm

Minimum Gap Size

5. Select  (figure 2-3) to enter a minimum gap size (refer Avoid Gaps above)

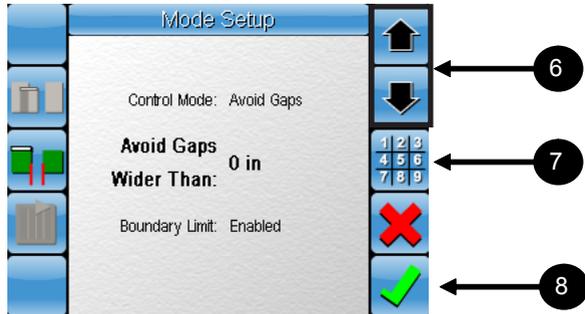


Figure 2-5. Mode Setup Screen

6. Use the **up and down arrows** to select a value between zero and 6.6ft
7. Alternatively, select

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |

 to type in a specific numeric value.

Refer to Appendix A, page A-8 of the System 110/150 Operator’s Manual (Part Number AGA3663) for information on using the Numeric keypad.

8. Select  to confirm

Boundary Limit

9. Select  (figure 2-3)

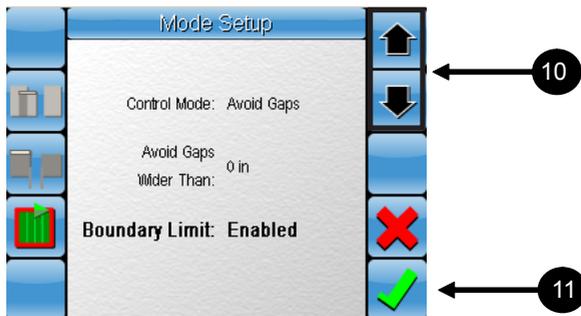


Figure 2-6. Boundary Limit

- Use the **up and down arrows** to enable or disable the Boundary Limit

When the Boundary Limit is enabled, the sections on the boom will automatically turn off when it detects the vehicle has left the field boundary (refer to the System 110/150 Operator's Manual, Chapter 8 for more information on creating a field boundary).

This helps prevent accidental application of product outside of the field boundary. When the Boundary Limit is disabled, the sections of the boom will continue to apply product even outside the field boundary.

- Select  (figure 2-6) to confirm
- Select  (figure 2-3) to return to the **Auto Section Control Setup screen**

Section Setup

There are 2 options to configure under Section Setup. These are:

- Number of sections
- Section width

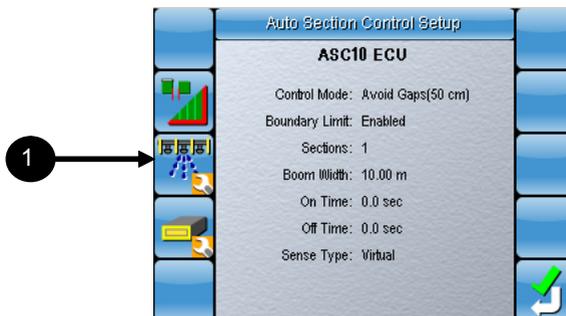


Figure 2-7. Auto Section Control Setup Screen

- Select  to enter the *Section Setup screen*

Number of Sections



Figure 2-8. Section Setup Screen

2. Select  (figure 2-8)



Figure 2-9. Select Number of Sections

3. Use the **up and down arrows** to select up to 10 sections
4. Select  to confirm

Section Width

5. Select  (figure 2-8)



Figure 2-10. Enter Section width

- Use the **up and down arrows** on the left to select a section.

You can either select an individual section to change its value or you can select all to set a specific value for all the sections.

- Use the **up and down arrows** on the right to change the section width value
- Alternatively, select  to type in a specific numeric value.

Refer to Appendix A, page A-8 of the System 110/150 Operator's Manual (Part Number AGA3663) for information on using the Numeric keypad.

- Select  to confirm
- Select  (figure 2-8) to return to the **Auto Section Control Setup screen**

Control Setup

There are 3 options to configure under Control Setup. These are:

- On Time
- Off Time
- Sense Type

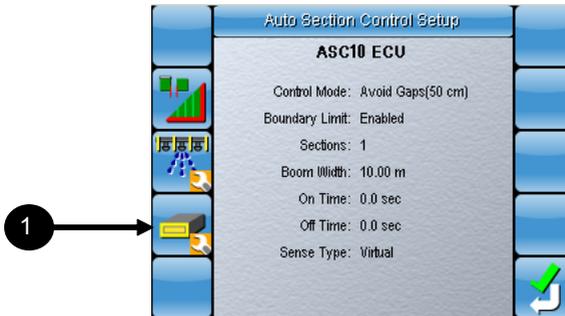


Figure 2-11. Auto Section Control Setup Screen

1. Select  to enter the *Control Setup screen*

On Time



Figure 2-12. Control Setup Screen

2. Select  to set the **On Time**



Figure 2-13. Set the On Time

3. Use the **up and down arrows** to set the On Time to a value between 0 and 5 seconds.

The On Time is the physical time delay between when the sections are turned on and when the product actually comes out of the application nozzle.

4. Select  to confirm your selection

Off Time

5. Select **Off Time** (figure 2-12)

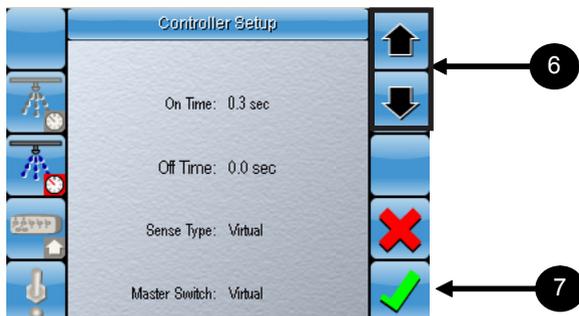


Figure 2-14. Set the Off Time

6. Use the **up and down arrows** to set the Off Time to a value between 0 and 5 seconds.

The Off Time is the physical time delay between when the sections are turned off and when the product actually stops coming out of the application nozzle.

7. Select  (figure 2-14) to confirm your selection

Sense Type

8. Select  to set the **Sense Type** (figure 2-12)

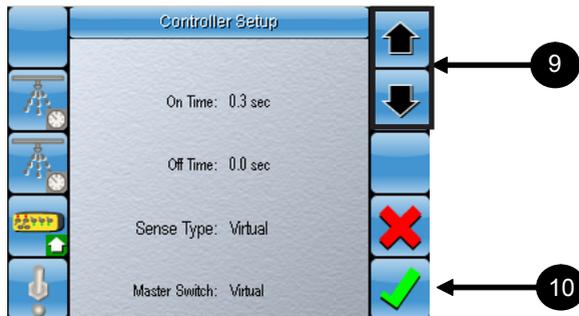


Figure 2-15. Set the Sense Type

9. Use the **up and down arrows** to select between Virtual, Switchbox and ECU Inputs.

Virtual is selected if you are turning the sections on and off through the console's virtual switchbox.

Switchbox is selected if you are using a normal key switchbox that is physically connected to your system.

ECU Inputs is selected if you are using a switchbox that connects directly to the ECU Inputs

10. Select  (figure 2-15) to confirm your selection
11. Select  (figure 2-12) to return to the *Auto Section Control Setup screen*

Master Switch

12. Select  to set the **Master Switch** (figure 2-12)

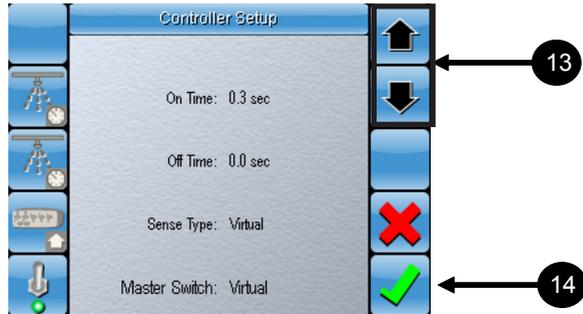


Figure 2-16. Set the Master Switch

13. Use the **up and down arrows** to select between Virtual and ECU Inputs.

Virtual is selected if you are controlling the Master Switch through the console's virtual switchbox.

ECU Inputs is selected if you controlling the Master Switch via a switchbox that connects directly to the ECU Inputs

14. Select  (figure 2-16) to confirm your selection
15. Select  (figure 2-12) to return to the *Auto Section Control Setup screen*

Operations

This section will explain how to use Auto Section Control as applied to your field.

Once it has been setup properly and is active, Auto Section Control will automatically turn the sections on your boom On and Off as you are performing coverage mapping of your field.

How it works

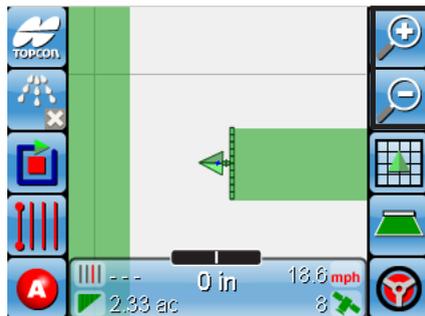


Figure 3-1. Vehicle approaches previously covered area

In figure 3-1 a sprayer with a 30 meter boom is approaching a previously covered area. Areas which have been covered are green.

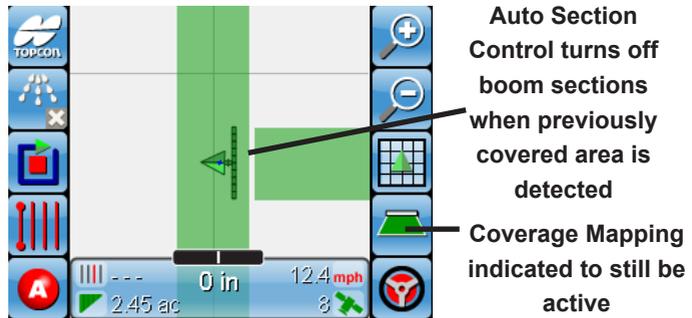


Figure 3-2. Vehicle enters previously covered area

In figure 3-2, the sprayer has entered the previously covered area. Coverage mapping is indicated to still be active however the sections on the boom have automatically turned off.

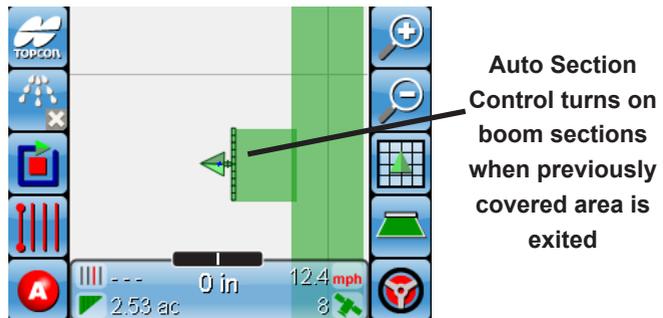


Figure 3-3. Vehicle exits previously covered area

In figure 3-3, the sprayer has exited the previously covered area and the sections on the boom have automatically turned back on.

This is just a simple example of how Auto Section Control is meant to perform once it is active.

Individual Section Control

As mentioned, Auto Section Control turns the sections on your boom Off when a previously covered area is detected. This means that the boom will only turn Off the sections that are currently passing over a previously covered area.

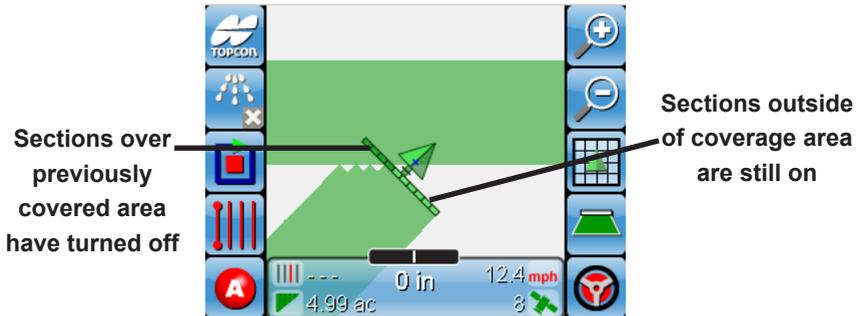


Figure 3-4. Individual sections are controlled on entry

The same applies when exiting a previously covered area. The sections will turn On gradually as they begin to exit the coverage area.



Figure 3-5. Individual sections are controlled on exit

Appendix A - Software Registration

The first time you attempt to enable Auto Section Control, you will be prompted to register your software.

To register, you will require three registration numbers that are available from your authorized TPA dealer.

1. Enter the 3 registration numbers
2. Select the **Green Tick** to confirm
3. If the entered Registration Key is incorrect, select  to return to the **Enter Registration Key screen** to try again or contact your authorized TPA dealer for assistance

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