

AFS PRO 700

Creating a 'Field Swath' – Headland Swath & AB Swath Lines with Boundaries in your Pro 700

Using & Setting Up AFS AccuTurn in your Pro 700

Prepared By Boekeman Machinery Precision Farming Team

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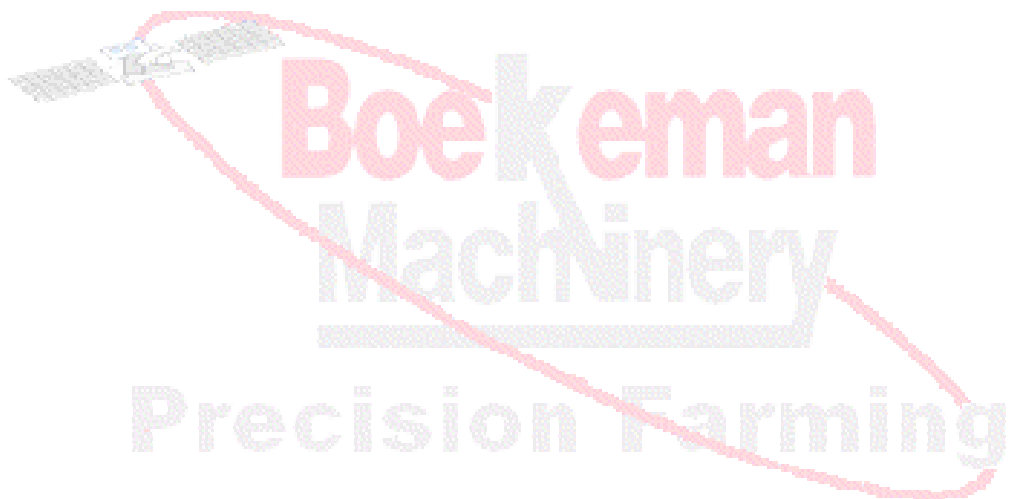
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Before You Start

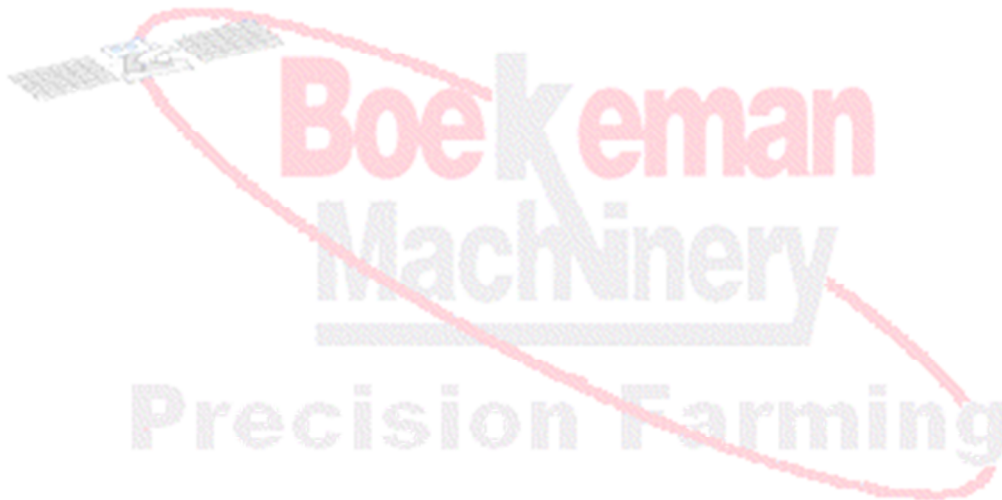
These instructions are for users who use an AccuGuide Ready FWA/4WD Tractor using Case IH Pro 700.

You must have the Trial or Full Unlock in order to use AccuTurn.

To use AccuTurn, Pro 700, AG372 and Nav may require an Upgrade – Pro 700 requires v30.17 or later, Nav 9.2.0004 or later and AG372 7.20.006 or later.

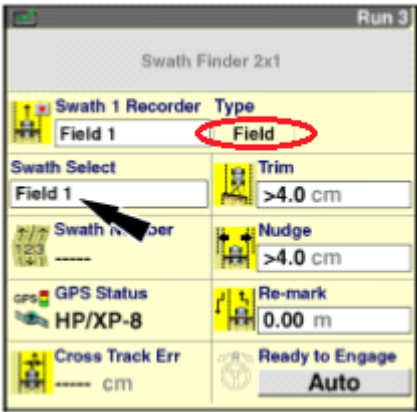
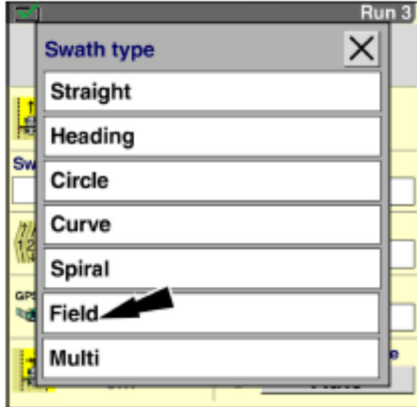
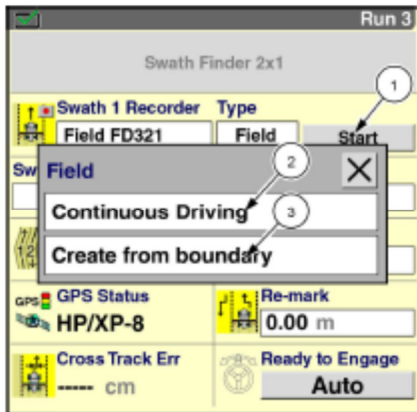
Boundaries must be mapped out using RTK.

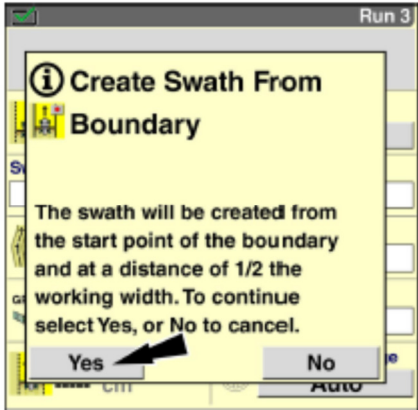
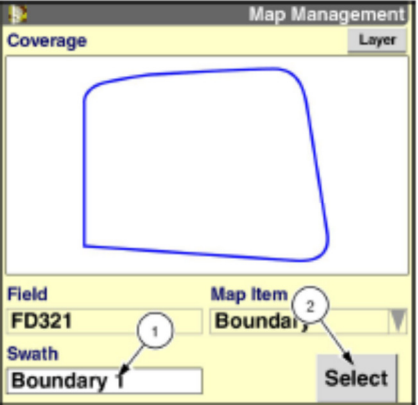


Please consult your Precision Farming Specialist for setup of the Machine for AccuTurn.


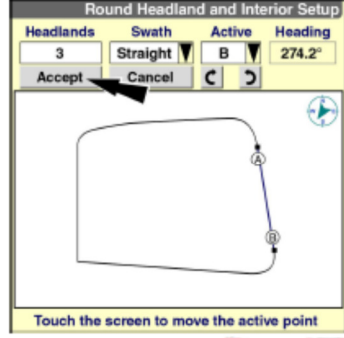
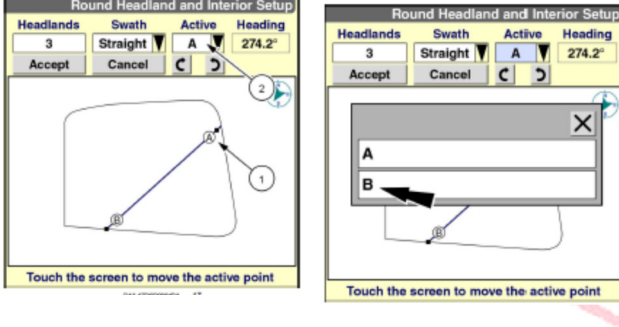
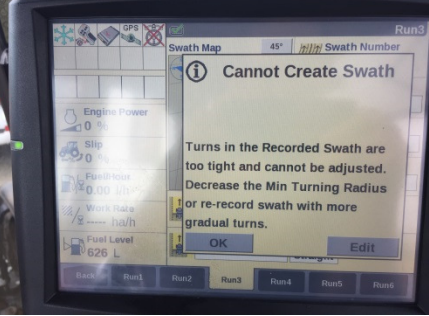



Creating a 'Field Swath' - Headland & AB Swath Lines with Boundaries in your Pro 700

This will step you through how to create a 'Field Swath' in your Pro 700 based on your RTK Mapped Boundaries.

	<p>To start, ensure you are in the correct Grower, Farm and Field.</p> <p>Go to your Run Screens, and move to your GPS page.</p> <p>Press the Button below 'Type', to create a type of swath.</p>
	<p>Press 'Field' in the pop-up options window.</p>
	<p>Press on 'Start' (1) and press 'Create from Boundary' (3)</p> <p>NOTE: If this does not appear it means you have NO Boundary created in this Grower, Farm, Field.</p> <p><i>Meaning:</i></p> <ul style="list-style-type: none"> - Not in correct Grower, Farm, Field - Need to create a Boundary at RTK with Bookeman's Boundary Cable in Ute

	<p>The Field Swath' will be created based on your Implement width. Ensure your Implement width is correct (Edit in Toolbox-Implement). Otherwise the Swaths will be incorrect.</p> <p>If this is correct then Press 'Yes'</p>
	<p>Select the Boundary (1) and (2) you would like to create Swaths from.</p> <p>NOTE: If there are 2 or more boundaries in the one Grower, Farm, Field, then you can select different boundaries to create the Field Swath from.</p>
	<p>These Swaths will automatically be created based on your Implement.</p> <p>It is time to however make critical adjustments to these swaths.</p> <p>Press on your new Field Swath called 'Field 1'</p>
	<p>Press 'Swath Manage'</p>

	<p>Press 'Edit Field Swath'</p>
	<p>Select whether you would like 1, 2, 3 or other Laps (Headlands OR Victory Laps around the Boundary).</p> <p>It is recommended you create a 'Straight' Swath, so leave this as it shows.</p>
	<p>Following this, choose you're 'A' and 'B' Active Points to create your straight AB swath.</p> <p>This is where we choose where your interior swath or AB swath will be created from. Using your finger, press where you would like point 'A' and point 'B' to be. Then once complete, press 'Accept'</p>
	<p>Finally, Before Engaging on the Square or Headland Swath, you may encounter the following error.</p> <p>'Cannot Create Swath' As Turns are Too Tight.</p>
	<p>To adjust this, Go into Toolbox - NAV-S</p> <p>Here you will have to adjust the 'Min Turning Radius' – This defaults to 50m – Adjust from 5-25m depending on the implement and turning circle – Change and Test it to confirm.</p>

FINISHED CREATING FIELD SWATH

Using the 'Field Swath' - using Interior Mode (AB Swath) and Square Mode (Headland)

This will step you through how to use the 'field swath' in the Pro 700.



To start, ensure you are in the correct Grower, Farm and Field.

Go to your Run Screens, and move to your GPS page.

Press the Button below 'Swath Select, and ensure the Swath Type selected is called 'Field 1' (or the name of the field you created).

If it is not, simply press on the Swath Select to select the correct swath.

NOTE: If it does not exist, refer to above instructions regarding creating this swath.



As we now know, the Field Swath has 2 different types of swaths:




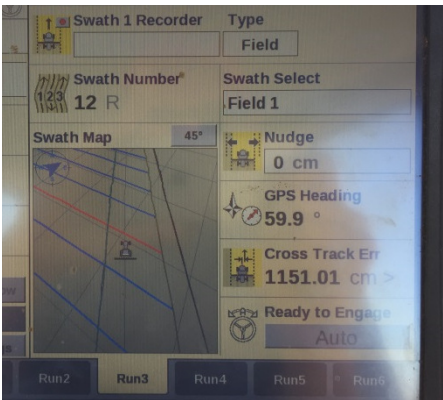
1. The Straight 'Interior Mode' (AB Swath) and
2. 'Square Mode' (Headland/Field Swath).

Refer to your Swath Map as to which swath it currently displays – For example in this photo to the left –

The swath map displays the 'Square Mode' (Headland/Field Swath).

IF THIS IS CORRECT THEN YOU ARE READY TO ENGAGE ONTO THE SWATH LINE

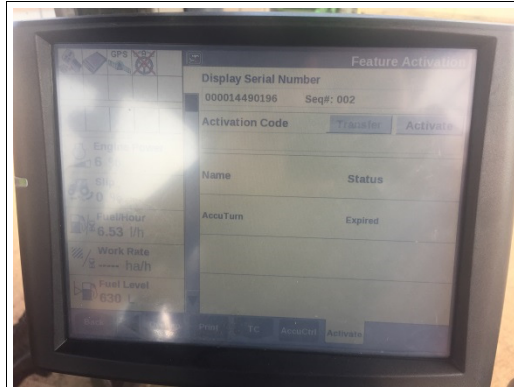
IF THIS IS THE INCORRECT LINE, PLEASE REFER TO THE BELOW TO CHANGE THE MODE TO THE 'INTERIOR MODE' OR 'SQUARE MODE'

	<p>Press on 'Field 1' or the name of the field swath you have created.</p>
	<p>Press 'Swath Manage'</p>
	<p>Press 'Change to Interior Mode' for Internal Straight AB Swaths</p> <p>Press 'Change to Square Mode' for External Headland/Field Swaths</p>
	<p>The following shows an example of what the Interior Mode 'Straight AB Swath' will look like.</p>

FINISHED USING FIELD SWATHS

AFS Accuturn - Setting up AFS AccuTurn in your Pro 700

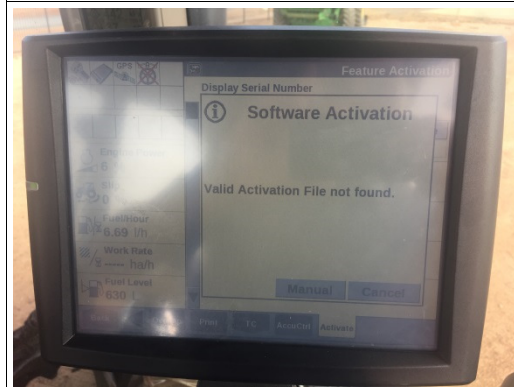
This will step you through the setup process of AccuTurn in your Pro 700.



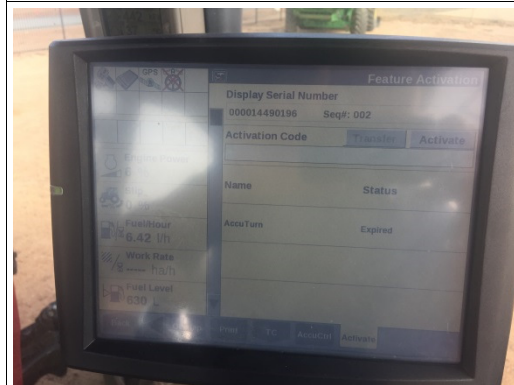
Firstly we need to Unlock AccuTurn in the Pro 700.

In 'Toolbox' – Go to the last tab on the bottom right, and Press on 'Activate'

Press on 'Activate' on the top right corner.



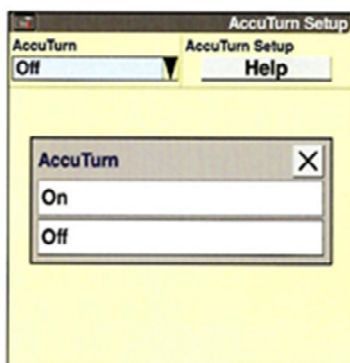
Press on 'Manual'



Press in the White Box, Under the Activation Code.

Enter Code, Of Which it will then Advise the AccuTurn has been Unlocked.

NOTE: In order to Unlock AccuTurn, provide the Display Serial Number to Boekemans Precision Farming Specialists which is displayed on the top middle part of the Pro 700



In 'Toolbox', Press on 'ATurn' and Press 'On'



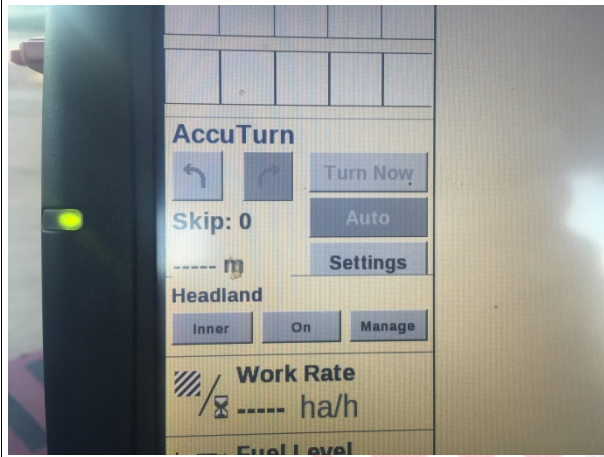
Next, In the 'Toolbox', press on 'Layout' on the bottom left hand tab.

In one of the Run Screens, add the following Icons:

- 'AccuTurn 2x1'
- 'Headland'

These must be added to a Run Screen to be able to use AccuTurn.

NOTE: Create new Layout – Press on 'Current Layout' to create new.



Press into your main 'Run Screen' The AccuTurn and Headland Icons will be added.

SETTING UP TURN TRIGGER POINT:

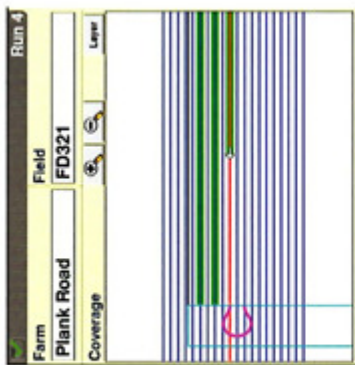
INSTRUCTIONS FOR SETUP (continued)

"Triggers" window

Use the "Triggers" window to select an event that will trigger end-of-row turns when "Auto" mode is enabled.

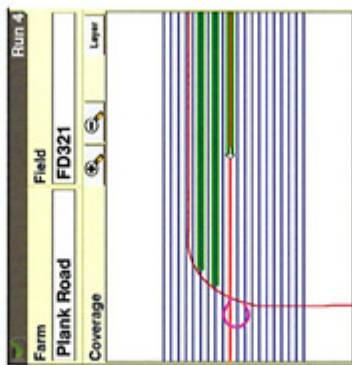
"Headland" (Recommended)

The automatic turn starts when the implement crosses the headland boundary. It optimizes the turn keep the implement in between the headland boundary and the outer boundary.



"Outer Boundary"

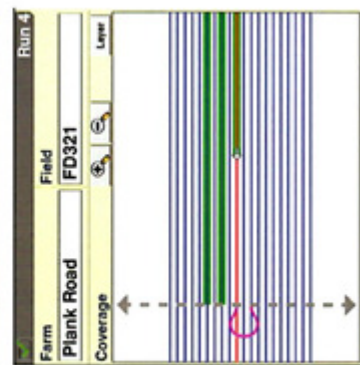
The automatic turn starts when the implement crosses the outer boundary of the field.

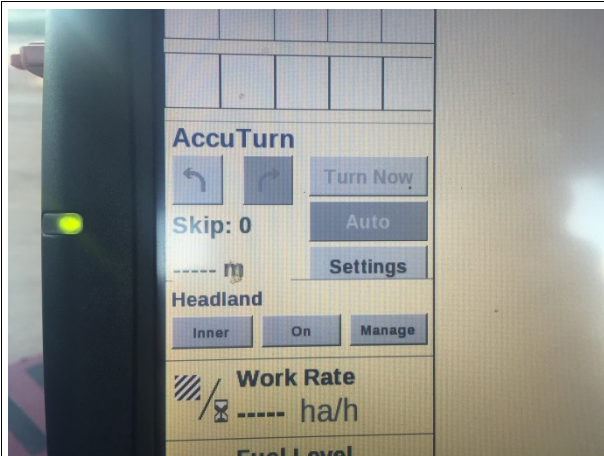


Caution: Make sure you have enough space beyond the field boundary to complete the turn.

"End of Swath"

The "End of Swath" is created when the "Turn Now" button is used at each end of the field. The software then triggers future automatic turns at the "End of Swath". The "End of Swath" can be updated by using the "Turn Now" button at any time during the operation.

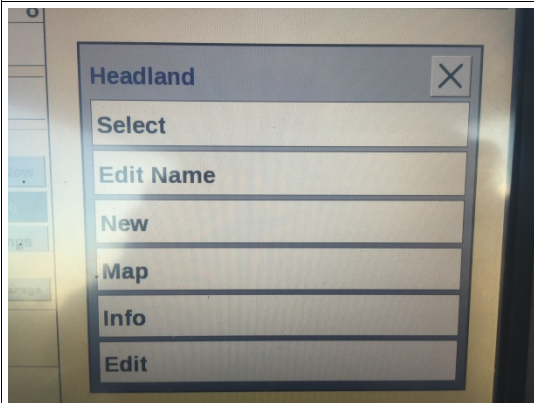




It is recommended, the Trigger point for Auto Turn is at the 'Inner Boundary'.

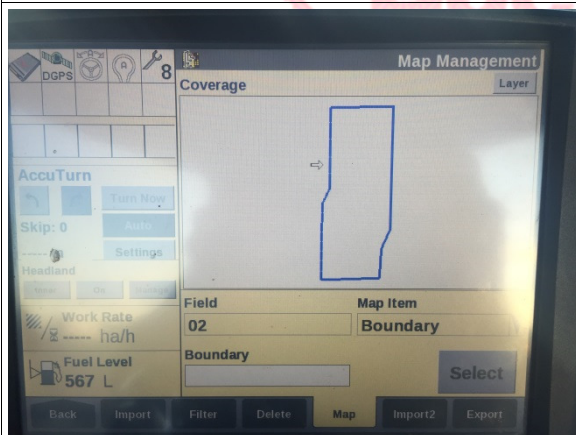
This is setup in the 'Headland' Settings.

Under the 'Headland' Icon, Press on 'Manage'.



Press 'New'

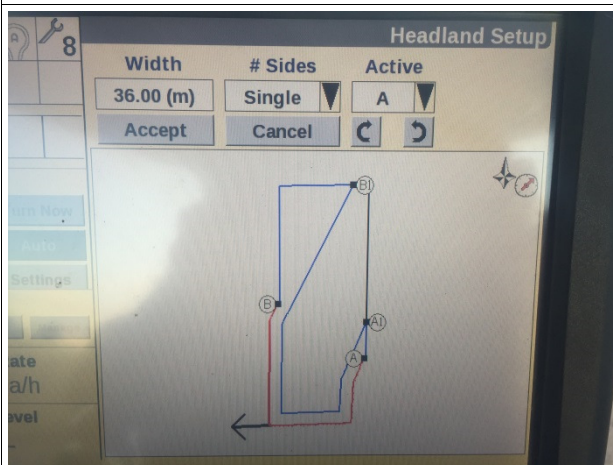
NOTE: You MUST have Boundaries setup in your Pro 700 screen and a USB also in the screen to have this functional.



It will now show the Boundary that has been setup, there has to be a boundary in order to setup Headland Management.

Press on 'Select'

NOTE: You may have to scroll across with an arrow button if there are multiple boundaries.

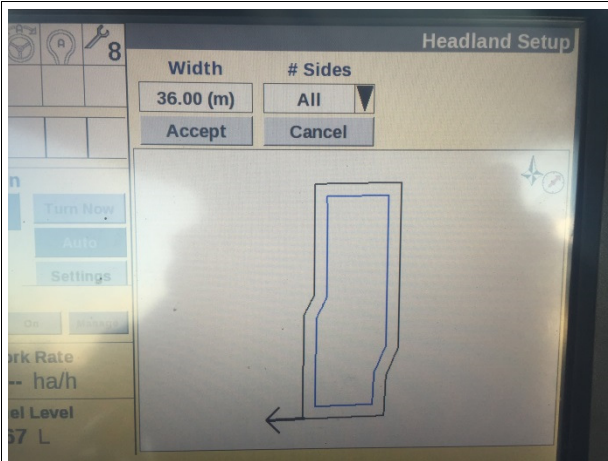


The next step is to apply the headland width – being where the trigger point lies.

This depends on the number of Laps you do around the boundary.

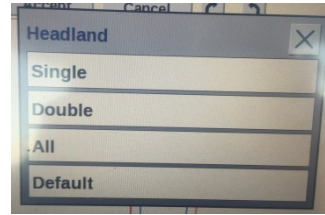
Under 'Width' Press on the white box. Here you can customise your Headland Width, of which this will create your inner boundary.

Eg) If you do 2 laps around your paddock and the Width of the implement is 12m, then you will select 24m as the Headland Width.



Next, Under '# Sides' Press on the white box.

Press 'All' Sides as a general rule.



Now Select 'Accept'



Next, In the AccuTurn Settings – 'Toolbox' – 'ATurn' Press Under the 'Auto Turn Trigger'.

Press 'Headland' as the Trigger.

SETTING UP ALL OTHER SETTINGS:

INSTRUCTIONS FOR SETUP (continued)

"Turn Early or Late" window

Use the "Turn Early or Late" window to adjust where the automatic turn starts relative to the trigger point.

- A positive value results in a late turn
- A negative value results in an early turn

Note: Before you adjust the "Turn Early or Late" value ensure that the "Bar Distance" value on the **Toolbox > Implement Setup** screen is correct.

"Implement Compensation" window

Use the "Implement Compensation" window to adjust the way the vehicle comes out of the automatic turn which adjusts the vehicles path for the next swath.

Note: This adjustment is intended primarily for towed implements with a long hitch.

"Auto Speed" window

Use the "Auto Speed" window to enable or disable automatic speed calculations.

• When automatic speed calculations are enabled, the software uses the implement width, the minimum turn radius, and the steering characteristics of the vehicle to plan the ideal turn based on the current vehicle speed.

• When automatic speed calculations are disabled, the software plans automatic turns based on a constant vehicle speed provided by the operator in the "Manual Speed" window. When entering a turn, you must maintain a vehicle speed that is less than or equal to the speed defined in the "Manual Speed" window.

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INSTRUCTIONS FOR SETUP (continued) "AccuTurn Minimum Radius" window

Use the "AccuTurn Minimum Radius" window to set the smallest turning radius that the software will use to plan automatic turns.

Note: When setting this, you must take into account the steering capability of the tractor as well as keeping the implement drawbar from contacting the tractor. If high cross track error is seen during automatic turns or the drawbar is too close to the tractor, increase this value.

Additional Setup windows

These are the most critical parameters to set to ensure proper AccuTurn operation. For additional parameters, please consult the operators manual.

INSTRUCTIONS FOR ACCUTURN OPERATION

For both the "Boundary" and the "Headland" trigger to function properly a boundary must be recorded. This is done by finding the "Boundary Record" window on a Run screen.

For the "Headland" trigger to function properly, a "Headland" must be created. To do this, place the "Headland" window on a run screen (Toolbox > Layout) and follow the prompts.

Use the "AccuTurn 1x2" window to monitor and control automatic turns.

- 1. Turn direction buttons:** The highlighted button is the direction of next turn
- 2. Number of swaths that the turn will skip**
- 3. Distance to the next end-of-row turn** when "Auto" is enabled
- 4. "Turn Now"** button: With guidance engaged press the "Turn Now" button to start an end of row turn on demand
- 5. "Auto"** button: With guidance engaged press the "Auto" button to enable automatic end of row turns based on a defined trigger
- 6. "Settings"** button: Quickly access the "AccuTurn" setup screen

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INSTRUCTIONS FOR SETUP (continued)

The "Approaching Automatic Turn" popup will appear when operating in "Auto" mode and the trigger for automatic turn is within 10 seconds:

- 1. Turn direction buttons:** The highlighted button is the direction of next turn
- 2. "Turn Now"** button: With guidance engaged press the "Turn Now" button to start an end of row turn on demand
- 3. Number of swaths** that the turn will skip
- The approximate time until the automatic turn starts
- Maximum recommended vehicle speed for the turn
Note: If you exceed this value the turn may disengage (check your settings)
Note: If the planned turn crosses the outer boundary of the field, "Turn will cross boundary" will display as well
- "Cancel" button: Use to cancel the planned turn
- "OK" button: Use to acknowledge that the planned turn is correct and closes the window - the vehicle will follow the planned turn path

When the planned turn is complete, the planned path will turn from **Pink** to **Red**.

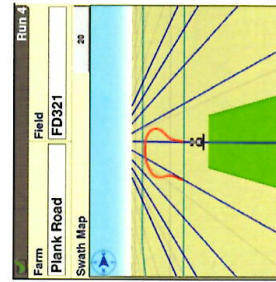
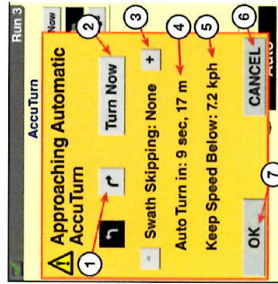
- During automatic turns, the text in the "Guidance Engage" window updates to read "Auto Turning"
- All the buttons in the "AccuTurn" window except "Settings" become inactive for the duration of the turn

Note: At any point in the turn operator can turn the wheel to disengage Autoguidance and stop the automatic turn.

For additional setup and operation directions please contact your local Case IH dealer or reference

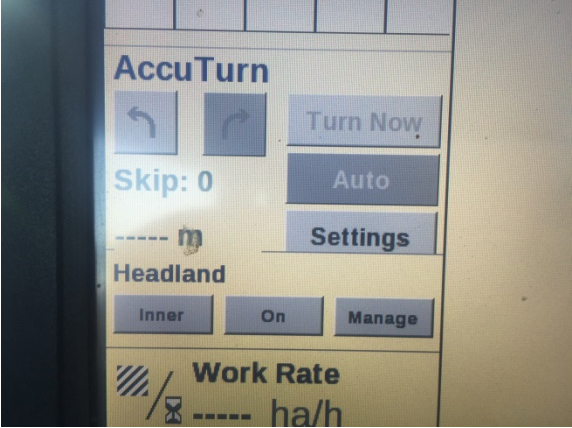

Autoguidance 30.21 Operators Manual publication 48112357.

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AFS Accuturn - Using AFS AccuTurn in your Pro 700

Now all AFS AccuTurn settings are complete, it is time to use AccuTurn.

	<p>Before using, ensure Headland is setup</p> <ul style="list-style-type: none">- Refer to Above Instructions THEN- If Headland displays 'Off' Press Button and Press 'On' or 'Manual'- Ensure 'Inner' is displayed – Per Photo to left – If it Displays 'Outer', Press on Outer, which will swap it to 'Inner' – This Activates the Inner Headland as the AccuTurn Trigger Point.
	<p>Let's get AccuTurning!</p> <p>Firstly, engage Auto Steer on a AB Line Swath. When engaged we can now use the AccuTurn.</p> <p>Press on 'Auto' as per the photo in the AccuTurn Icon. This will setup Automatic turning at the Inner Hedland/Boundary.</p> <p>Control which way to turn by pressing the left or right arrow, and control whether to skip a row or not in settings.</p>

FINISHED USING ACCUTURN