

CONVERSION

INSTALLATION & OPERATION MANUAL



JOHN DEERE ROW CROP

09040110d



HEADSIGHT.COM | 574.546.5022

About Headsight

Headsight Contact Info

Headsight Harvesting Solutions
4845 3B Road
Bremen, IN 46506
Phone: 574-546-5022
Fax: 574-546-5760
Email: info@headsight.com
Web: www.headsight.com

Technical Assistance

Phone: 574-220-5511

About this Manual

How to use this manual

The instructions in this manual are in the order that they should be completed for new installations. Complete all applicable instructions in each section before proceeding. Note that some sections are labeled to indicate they only apply to certain machines or applications. An index is available in the front of the manual to help find technical information for previously installed systems.



This icon designates information of which you should take note.



This icon indicates a special tool needed for a given task.



This icon designates an important instruction.

Suggestions

If you have any suggestions to improve this manual please call 574-546-5022 or email info@headsight.com.

Disclaimers

HEADSIGHT, HORIZON, PINPOINT, FORESIGHT, FEATHERSIGHT, TRUESENSE, TERRAHAWK, INSIGHT, the Headsight logo, the Horizon logo, and Terrahawk logo are trademarks of Headsight Harvesting Solutions. All other trademarks are property of their respective owners.



Protected by one or more of the following patents and published applications:
US6883299; US7310931; US7647753; US9609806; US9609806; US10222410;
US10244680; EP2955993(DE,ES,FR,IT,UK); EP2956851 AU2004203614;
BR112015019262; BR112015019286; CA2900987; CA2900994; WO20180152266

Table of Contents

Installation	01
Height Sensor	02
Remove OEM Sensor (If Any)	02
Install Headsight Sensor	02
Return Spring(s)	04
Test Operation	04
Left Contour Sensor	05
Right Contour Sensor	06
Sensor Wiring	08
Height Sensor	08
Left Contour Sensor	08
Right Contour Sensor	08
Combine Adapter	09
Multipoint (HA3-JD53-16 & Similar)	09
Singlepoint (HA3-JD63-16 & Similar)	09
Insight® Box Mounting (If equipped)	10
Calibration	11
Sensor Adjustment	11
Settings	12
Combine Settings	12
Advanced Information	13
Theory of Operation	13
Basic Requirements	13
Reversing Sensor Swing	14
Reading Voltages	15
Before you Start	15
On the Insight® Box : Sensor Voltages	15
On the Insight® Box : Output Voltages	16
GS4/4600 - S700 Series Combines	17
GS3 or GS2 - S600 Series Combines	18
70 Series Combines	18
50 and 60 Series Combines	19
Diagnostics	20
Troubleshooting Overview	20
Troubleshooting—Sensors and Harnesses	21
Troubleshooting by Symptom	22
Sections	22
Parts	26
Conversion Components and Harnesses	26
Statement of Limited Warranty	27

Installation



Before working on combine or under header always:

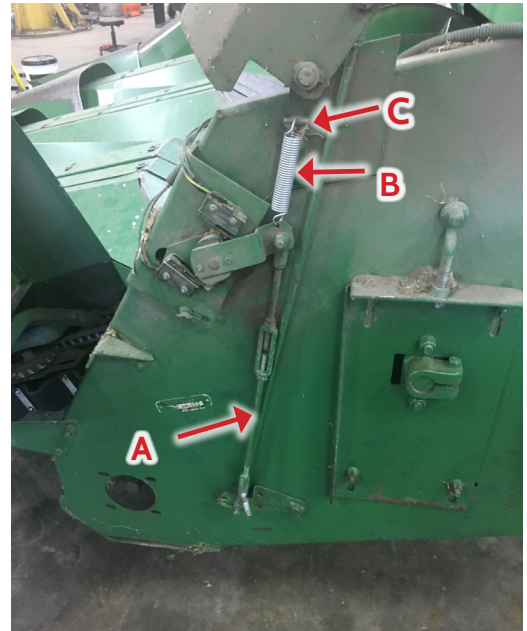
1. Perform all combine and header manufacturer safety precautions for servicing header.
2. Insert stop to prevent movement of header.
3. Set combine parking brake.
4. Turn off combine and remove key from ignition.
5. Disconnect all drive shafts from the header.



Height Sensor

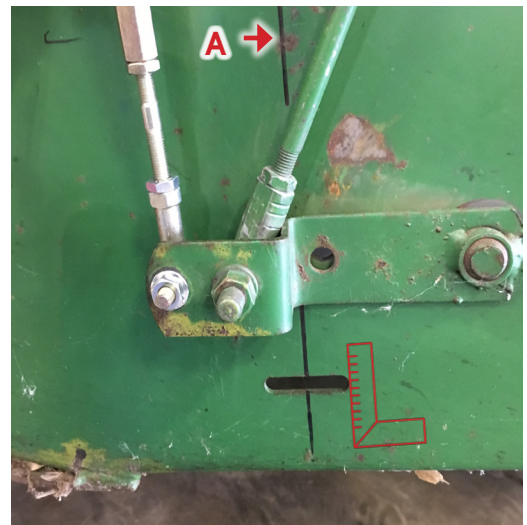
Remove OEM Sensor (If Any)

1. Raise header off ground far enough to allow all row units to hang fully down.
2. Remove the left side upper shield if desired.
 - Removing this shield makes working on the head much easier
3. Disconnect and remove entire linkage bar A.
 - Header equipped with AHC switches shown, DAM equipped heads similar
4. You may also wish to remove:
 - Entire switch assembly (shown)
 - DAM box and bracket (not shown)
 - Original AHHC wiring
5. If your head is equipped with the switch assm. (shown), remove and retain the spring B and spring hanger C.
 - Reinstall spring hanger bolts in indicator bracket
6. If your head is equipped with DAM, make sure the return springs on the right end of the header sensing shaft are not broken.
7. For all heads, make sure the sensing shaft pivots freely.



Install Headsight Sensor

1. Draw reference line A up the left header end sheet.
 - Use a square to make the line perpendicular to lower edge of side sheet
 - Line goes through center of the lower slot shown
 - Note this is also the bend point on the sensing arm when fully down



2. Measure up from the bottom of the side sheet along reference line.

3. Mark the reference line at:

- 13 1/2"
- 14 1/2" (used for Contour sensor)
- 15 3/4"

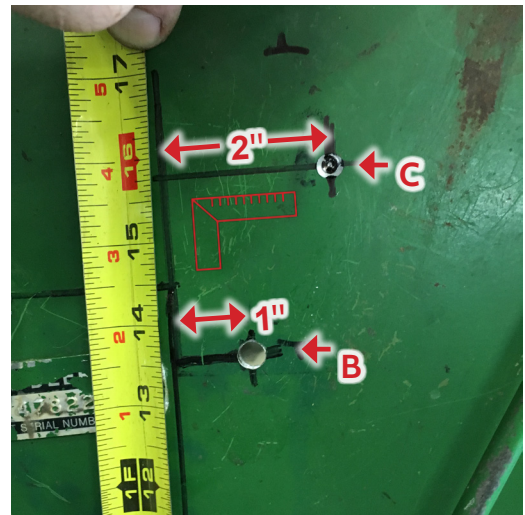


4. Use a square to mark lines back from reference line A as shown.

5. On line B, mark and drill a 5/16" hole 1" behind the reference line A.

6. On line C, mark and drill a 5/16" hole 2" behind the reference line A.

- Note: The spacing from hole B to C must fit the sensor assembly. Double check spacing before drilling hole C



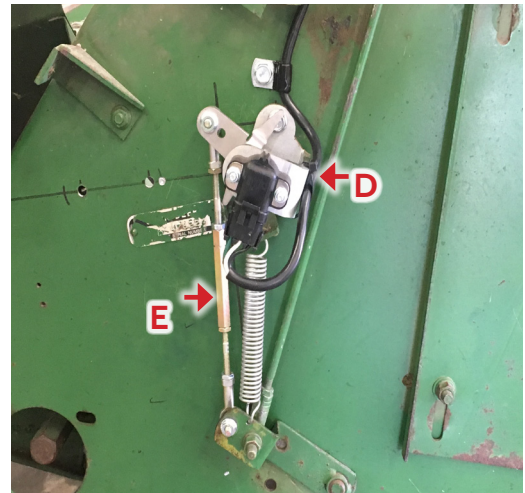
7. Mount sensor assembly D as shown:

- Sensor arm facing forward
- (2) M8 x 20 bolts and flange nuts

8. Adjust new linkage rod to ~9" C-C.

9. Install new linkage rod E as shown.

- Outer hole in sensor arm
- Use a 1/4" washer on lower linkage bolt inside of OEM sensing arm because of larger hole in arm
- If your head has a left end drive chain, you may wish to add several more washers inside the sensing arm to provide more clearance between the linkage rod and the chain



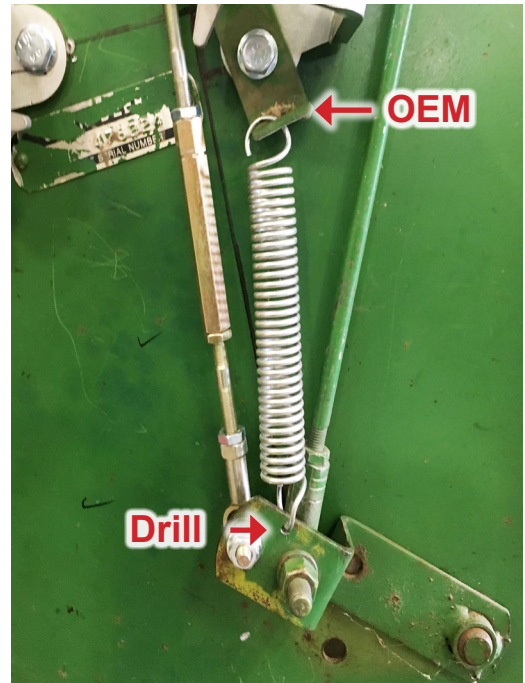
Return Spring(s)

If your head had the DAM control box, it should have the return spring(s) installed on the right end of the cross shaft, either inside the right chain shield and/or under the header. If so, make sure they are in good shape, and skip this section.

1. If your head has no left drive chain, install the original spring and bracket as shown.
 - Drill a $\frac{3}{16}$ " hole near top edge of sensing arm, centered between two linkages
 - Connect spring between OEM spring hanger and sensing arm
 - Install OEM hanger on lower bolt holding sensor
 - Rotate bracket as needed to keep spring clear of linkages
 - Tighten lower mounting bolt to hold bracket in place
2. If your head has a left end drive chain, connect the spring on the top of the sensor linkage, and drill new holes for OEM bracket in area shown.
 - Make sure to have adequate tension on the spring when sensor linkage is fully up

Test Operation

1. Lower head to ground. Make sure sensor rotates through stroke without binding or over-centering.
2. Reinstall upper side shield after entire installation is complete.



Left Contour Sensor

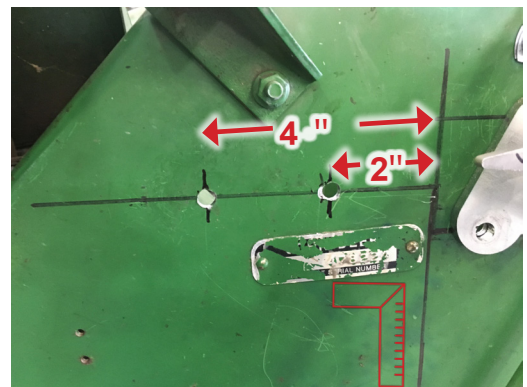
1. Lay a straight edge along the side sheet of head, forward to the arm holding the front snoot.
2. Mark the front snoot mounting arm 2" out from side sheet of header.
 - Row spacing will affect placement on arm



3. Weld or bolt provided L bracket to arm as shown.
 - Larger hole against snoot mounting arm
 - Arm for linkage even with 2" mark
 - Drill $\frac{1}{4}$ " hole and use $\frac{5}{16}$ " self tapping bolt, or weld
 - Row spacing will affect placement on arm



4. Beginning at 14 $\frac{1}{2}$ " mark on reference line A, use a square to draw a line forward on side sheet.
 - Mark should have been drawn from bottom edge of side sheet, see step 9 in Height Sensor Installation
5. Mark and drill $\frac{5}{16}$ " holes at 2" and 4" forward from reference line A.



6. Mount sensor assembly as shown.
 - Sensor arm facing upward
 - (2) M8 x 20 bolts and flange nuts
7. Adjust new linkage to ~9" C-C.
8. Install new linkage as shown:
 - INNER hole in sensor arm
 - Outside of sensing arm and front L bracket
9. Lower head to ground. Make sure sensor rotates through stroke without binding or over-centering.

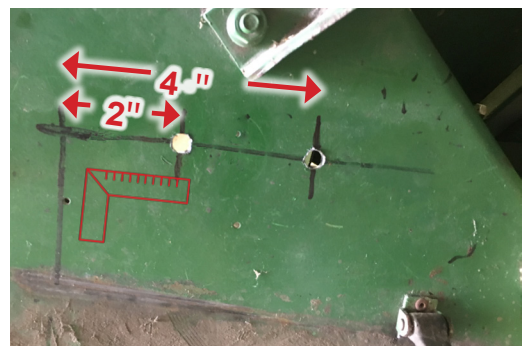


Right Contour Sensor

1. Remove chain cover shield.
2. Draw a reference line A up the right header end sheet.
 - Use a square to make the line perpendicular to lower edge of side sheet
 - Line goes through center of the lower forward slot shown



3. Measure up from the bottom of the side sheet and mark reference line A at 14 1/2".
4. Use a square to draw a 7 or 8 inch line forward from reference line A.
5. Mark and drill 5/16" holes at 2" and 4" forward from reference line A.



6. Lay a straight edge along the side sheet of head, forward to the arm holding the front snoot.

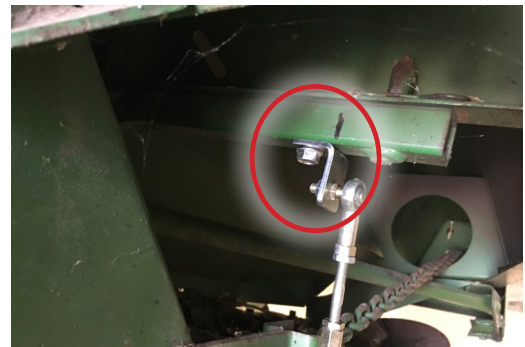
7. Mark the front snoot mounting arm 2" out from side sheet of header.

- Row spacing will affect placement on arm



8. Weld or bolt provided L bracket to arm as shown.

- Larger hole against snoot mounting arm
- Arm for linkage even with 2" mark
- Drill 1/4" hole and use 5/16" self tapping bolt, or weld
- Row spacing will affect placement on arm



9. Mount sensor assembly as shown.

- Sensor arm facing upward
- (2) M8 x 20 bolts and flange nuts

10. Adjust new linkage to ~9" C-C.

11. Install new linkage as shown:

- INNER hole in sensor arm
- Outside of sensing arm and front L bracket



12. Lower head to ground. Make sure sensor rotates through stroke without binding or over-centering.

13. Reinstall lower chain shield.

Sensor Wiring

Height Sensor

1. Connect 17' harness to sensor.
2. Ziptie harness to back of sensor frame.
3. Drill a $\frac{5}{16}$ " hole just above sensor as shown, and clamp sensor wire to clear linkages and arm.
4. Route harness up and along top of side sheet to rear corner, route through hole in upper rear corner and across head to Adapter harness near feeder.
5. Clamp or ziptie harness as needed.



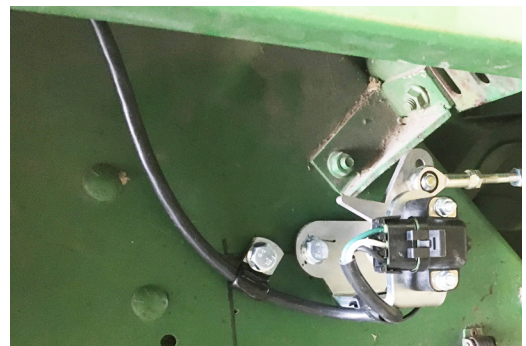
Left Contour Sensor

1. Reverse A & C in 17' harness.
 - See: Advanced Info, Reversed Sensor Swing
2. Connect reversed 17' harness to Left Contour sensor.
3. Ziptie harness to back of sensor frame.
4. Drill a $\frac{5}{16}$ " hole just above sensor as shown, and clamp sensor wire to clear linkages and height sensor arm.
5. Route harness up and along top of side sheet to rear corner, route through hole in upper rear corner and across head to Adapter harness near feeder.
6. Clamp or ziptie harness as needed.



Right Contour Sensor

1. Connect 23' or 33' harness to sensor (length depends on head size.)
2. Ziptie harness to back of sensor frame.
3. Drill a $\frac{5}{16}$ " hole just behind sensor as shown, and clamp sensor wire to clear chain shield.
4. Route harness to rear of head, and across head to Adapter harness near feeder.
 - Optional routing: under head in front of feeder
 - Optional routing: over feeder opening in frame tube
5. Clamp or ziptie harness as needed.



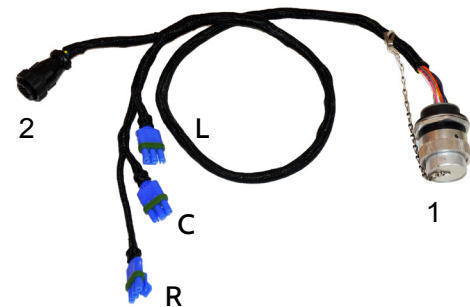
Combine Adapter

Multipoint (HA3-JD53-16 & Similar)

For Combines:

- Connections: Multipoint header connection
- Models: John Deere 50 series
- CNH combines similar

1. Mount connection (1) to header with HT2250 brackets and B2250 hardware within reach of combine electrical harness (near factory 31pin connector.)
2. Connect (2) to factory 16 pin header connector (if equipped.)
3. Connect the 17' Height sensor harness to the input marked C.
4. Connect the 17' Left Contour sensor harness to the input marked L.
5. Connect the 23' or 33' Right Contour sensor harness to the input marked R.
6. Fasten harness with zip ties to keep it out of moving parts and away from any wear points.



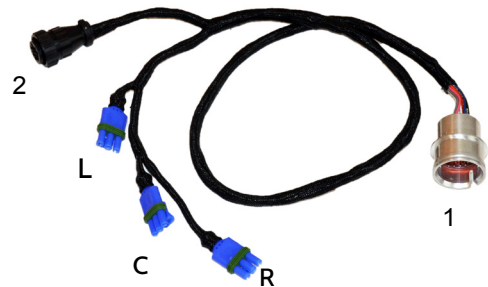
Singlepoint (HA3-JD63-16 & Similar)



For Combines:

- Connections: Singlepoint header connection
- Models: John Deere 50,60,70, or S-series
- AGCO late model similar

1. Mount connection (1) into single point connector with snap ring.
2. Connect (2) to factory 16 pin header connector (if equipped.)
3. Connect the 17' Height sensor harness to the input marked C.
4. Connect the 17' Left Contour sensor harness to the input marked L.
5. Connect the 23' or 33' Right Contour sensor harness to the input marked R.
6. Fasten harness with zip ties to keep it out of moving parts and away from any wear points.





Make sure the cable routing is done so no wiring can bind or pinch. Tie up all loose cabling. Properly installed wiring is the most critical aspect of a trouble-free installation.

Insight[®] Box Mounting (If equipped)

1. Position box at rear of header so Headsight Adapter harness can reach feeder house electrical connection of combine and header
2. Mark mounting hole locations.
3. Drill mounting holes using 1/4" drill bit.
4. Secure box to header using hardware provided.
5. See provided combine specific manual for correct adapter harness and installation.



Sensor Adjustment

1. Use the Insight box (if equipped), the combine diagnostics, or a voltmeter (measure Pin B to frame ground) to read the sensor voltages.
 - For JD50/60/70/S Series, refer to Advanced Info>>Reading Voltages.
 - For systems using an Insight, refer to Advanced Info>>Reading Voltages.
 - For most others, Refer to appropriate combine manual, or Advanced Info>>Reading Voltages
 - For combines with no internal diagnostics, use a voltmeter.
2. Lower header fully on flat surface. Adjust linkages so all sensors read 1.0-1.5V.
3. Raise head clear of ground. All sensors should read 3.0-4.2V. Adjust linkage if necessary.
4. If any sensor has reversed voltage swing, see Advanced Info, Reversed Sensor Swing.



Sensor output voltage must always be between .5 and 4.5 volts.

Pro-Tip



Headsight has a "Sensor Testor" tool which can be used directly to measure any 3 wire sensor of this type. This tool can be useful during adjustment, especially for multiple installations. Contact Headsight for more information.

- For this application, the tool must be connected at the "combine adapter" end of the sensor extension harnesses, as some sensors use reverse polarity.

Settings

Combine Settings



Properly setting the combine is essential to having responsive header control. Automatic, drop rate, accumulator and tilt speed must all be properly adjusted for good header performance.



Always perform the combine calibration before adjusting settings. Set each sensitivity setting by increasing until header hunting occurs then decreasing until header becomes stable.

Please see the appropriate Combine manual for settings and operation.
Operate the head just like any other head equipped with AHHC.

- Enable AHHC and lateral tilt (if equipped)
- Perform header ground calibration
- Adjust height position as needed
- Set raise and lower rates
- Set Height and Tilt sensitivities

Advanced Information

Theory of Operation

A review of the following points will help the service technician to understand the complete system, which will help diagnose specific problems.

1. Each sensor returns a variable voltage depending on header height.
 - High header height = high voltage (approximately 4 volts)
 - Low header height = low voltage (approximately 1 volt)
2. Each sensor has 3 wires:
 - black or lt blue= ground
 - white = signal returned to combine (varies 1-4 volts)
 - green or pink = 5 volt power
3. The Insight box adjusts signals as needed then sends them to combine using the same combine wiring as OEM system would use.
 - All sensors are scaled to an appropriate range for combine
 - Insight will reverse the direction of swing if needed
 - Insight box reads all sensors and sends signals to combine that will cause appropriate height and or tilt response
 - If Foresight is enabled - the Insight box magnifies the voltage change below the point where the snout tips touch the ground
4. The voltages the combine sees are exactly like what it would see with an OEM system.
All existing combine controls and settings may be used.

Basic Requirements



Each sensor must meet basic requirements for the combine to accept the calibration. If any sensor does not meet the requirements below, you must correct it and then recalibrate the Insight box.

- See the header manual for sensor adjustment instructions.
- Sensor output voltage must always be between .5 and 4.5 volts.
- Sensor output voltage must change more than 1.0 volts from raised to lowered position for each sensor.

Reversing Sensor Swing



When routing the wiring, there may be times when you would like to route the wiring through a small hole. This procedure can also be used to accomplish that. This step is NOT always required; but is shown to aid installation as needed.

Use yellow WeatherPack pin tool to swap wires A&C if any sensor swings in the wrong direction.

1. Record the pin location of each wire color in the connector.

- Example:
 - A = Black or Lt Blue
 - B = White
 - C = Green or Pink



2. Release the back cover of the connector and open hinge.

1. Release wire retaining clip on each connector. Insert removal tool and pull each wire out of connector.

2. Route wiring as needed.

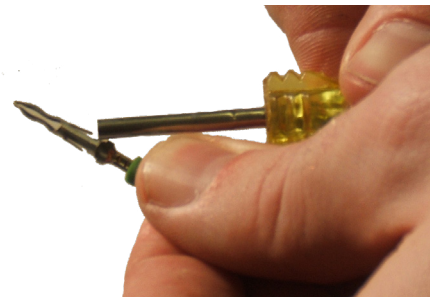
3. Flare connector terminal tabs slightly using removal tool.

4. Reinstall wires in connector body:

- If Reversing sensor:
 - A - previously C
 - White into B
 - C - previously A
- If not reversing sensor, reinstall into original locations.

5. Latch wire retaining clip.

6. Connect wiring harness to sensor.

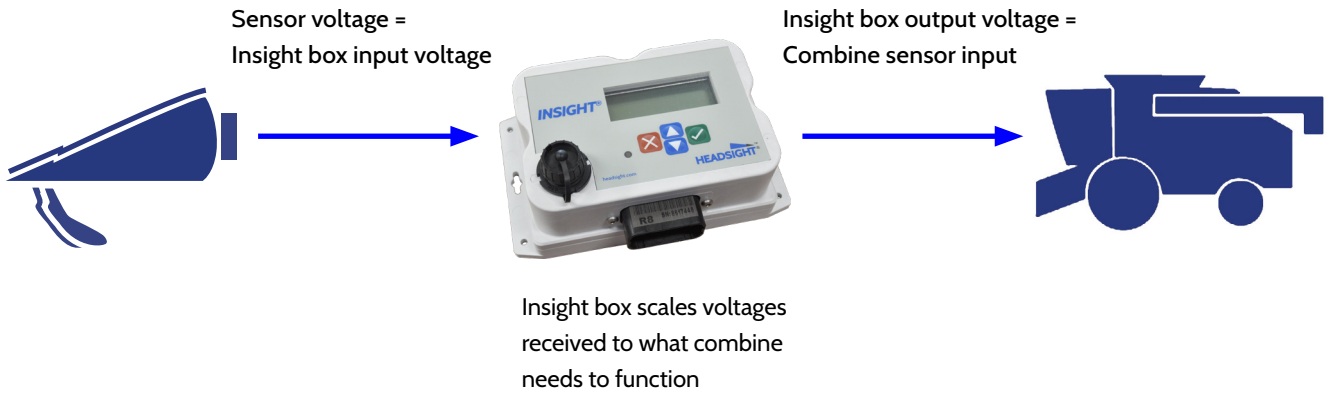


Reading Voltages

Before you Start



Sensor voltages can be read on the combine for direct wired systems, or on a Insight box (if equipped). See appropriate section. The Insight box can display both the input voltages it receives from each sensor and the output voltages it is sending to the combine.



On the Insight® Box : Sensor Voltages

- From main menu, go to >> Diagnostics>>Display Voltages
 - This shows real-time voltage coming from each sensor.

```

L  LC  CTR  RC  R
0.0 0.0  0.0  0.0  0.0
Sensors^ L  C  R
Outputs> 0.0 0.0 0.0
    
```

- For more information about sensor history and status see >>Diagnostics>>Detailed Diagnostics>>(parameter of interest)

- Sensor = signal from sensor in volts
- Max = the maximum voltage sent to Insight box from sensor since last calibrated
- Min = the minimum voltage sent to Insight box from sensor since last calibrated
- Enabled = is this sensor enabled to control height? Yes or No
- SetH = the “header raised” voltage set-point recorded during calibration
- SetL = the “header lowered” voltage set-point recorded during calibration
- Reversed = is the polarity of this sensor reversed? Yes or No

```

Left Sens  =0.00U
Max=0.00U  SetH=5.00U
Min=0.00U  SetL=0.00U
Enabled=N  Reversed=N
    
```

On the Insight[®] Box : Output Voltages

1. From main menu, go to >> Diagnostics>>Display Voltages

- This shows real-time voltage sent to the combine
- 1.0V with head fully lowered
- 4.0V with head raised

```

L   LC   CTR  RC   R
0.0 0.0  0.0  0.0  0.0
Sensors^ L   C   R
Outputs> 0.0 0.0  0.0
  
```

2. Alternately: From main menu, go to >> Diagnostics>>Detailed Diagnostics>> (parameter of Interest).

- Shows actual voltage being sent to the combine.
- Available selections depend on combine model

```

Pressure/aux Sensor
->Left Height Out
Right Height Out
Sensor Status
  
```

3. Left Height Output = X.XVolts

- 1.0V with head fully lowered
- 4.0V with head raised

```

Left Height OUTPUT
      =1.00V
Range = (1.0v-4.0V)
  
```

4. Center Height Output = X.XVolts

- 1.0V with head fully lowered
- 4.0V with head raised

```

Center Height OUTPUT
      =1.00V
Range = (1.0v-4.0V)
  
```

5. Right Height Output = X.XVolts

- 1.0V with head fully lowered
- 4.0V with head raised







```

Right Height OUTPUT
      =1.00V
Range = (1.0v-4.0V)
  
```








Read the sensor inputs to the combine on the combine monitor (as equipped). See your combine owners manual or below for more information. These voltages should be close to the voltages on the Insight "Height Outputs" above.

GS4/4600 - S700 Series Combines




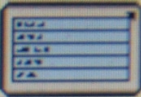



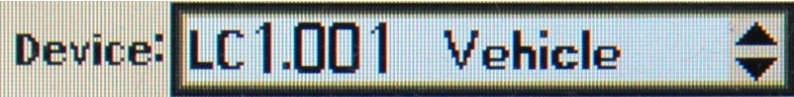

1. Press  Menu.
2. Press  System.
3. Press  Diagnostics System.
4. Press  System Diagnostics.
5. Select  AHC - Sensing AHC-Sensing.
6. Select  Sensor.
7. Read values displayed on the resulting screen.



LC1 Sensor Supply Voltage	5.00 V
Feeder House Position Sensor	2.12 V
Feeder House Position	39.4 %
Left Header Height Sensor	0.00 V
Center Header Height Sensor	0.00 V
Right Header Height Sensor	0.00 V

GS3 or GS2 - S600 Series Combines





1. Press  menu.
2. Press  message center
3. Press  addresses.
4. Select LC1 in  devices box.
5. Press  arrow down till you see address 21-Left, 22-center, 24-right
6. For each address, the right 3 digits are the height sensor voltage X.XX.

70 Series Combines

1. Press  menu.
2. Scroll to  when highlighted press 
3. Scroll to  when highlighted press 
4. Scroll to  when highlighted press 
5. Scroll to  when highlighted and press 

6. Scroll to  when highlighted and press  until desire address is displayed.
7. Address 28 - left, 29 - center, and 30 - right;
8. Read sensor voltage as X.XX volts.

50 and 60 Series Combines

1. Press  Diagnostics button on cornerpost.
2. Press  Up until the screen reads "E01".
3. Press  Enter.
4. Press  Up until you see address 22-Left, 24-center, 26-right
5. Read sensor voltage as X.XX volts.

Diagnostics



Before working on combine or under header always:

1. Perform all combine and header manufacturer safety precautions for servicing header.
2. Insert stop to prevent movement of header.
3. Set combine parking brake.
4. Turn off combine and remove key from ignition.
5. Disconnect all drive shafts from the header.



Troubleshooting Overview

Several Troubleshooting Sections are available, depending on the type of problem or symptoms.

1. Troubleshooting -Sensors & Harnesses
 - Use this section to troubleshoot a specific sensor that is not working or out of adjustment.
 - Typical symptom:
 - Sensor fault code displayed - example: "Err XX, Left sensor > 0.3V"
2. Troubleshooting by Symptom
 - Use this section to diagnose poor operation symptoms
 - Not usually accompanied by an Error message or Fault Code
 - Typical Symptoms
 - Header won't tilt
 - Header 'hunts'
3. Troubleshooting by Error Code
 - Use this section to help determine the problem when a fault code has been displayed.

Troubleshooting—Sensors and Harnesses



To properly test the wiring and sensors on the header, follow the steps below in order. Use a Volt Meter as needed.

The sensor connector pattern is as follows:

- Pin A is Ground (Black or Lt Blue)
- Pin B is Signal (White)
- Pin C is 5V (Green or Pink)



A very common problem during install is to reverse the wires at the connector after removing the plug to route the cables. Make sure that the wires/voltages are as shown. If A & C are reversed, the sensor output voltage will be 4.7V and not change.

The following requirements must be met before testing:

- Key on, combine engine running
- Header connected

Symptom	Problem	Solution
Bad Harness Wiring Disconnect Sensor Plug (Measure voltage on harness plug at sensor)	Measure C to Frame Ground Voltage should be 5V	If not, check harness for continuity or short on 5V wire Check Combine 5V source
	Measure C to A Voltage should be 5V	If not check harness for continuity on ground wire Check combine sensor ground source
	Jump C to B in harness plug Voltage should be 5V (For Insight systems, see “Diagnostics/ Display Sensor Voltages”. For all others, use Combine Diagnostics*)	If not check signal wire for broken harness or bad connection
	All of the above are correct	Harness & combine connections pass test.
If you have a Headsight Sensor tester, use it to test the sensor. For all other:	Verify sensor is connected to extension harness Sensor voltage should be 0.5- 4.5V (For Insight systems, see “Diagnostics/ Display Sensor Voltages”. For all others, use Combine Specific Diagnostics)	If sensor cannot be adjusted to achieve a voltage within the range, replace sensor.

Troubleshooting by Symptom



Nearly every problem with the header control system may be resolved by one of the following simple steps:

- Make sure each sensor meets basic requirements discussed in Advanced Info section
- Properly calibrate Insight box
- Properly calibrate combine AHHC (“Header Cal”)
- Enable appropriate AHHC functions on combine
- Properly set combine electronics and/or hydraulics
-

Sections

- AHHC Diagnostics
- Lateral Tilt Diagnostics

Symptom	Problem	Solution
AHHC Diagnostics		
No automatic operation height or tilt (If the Insight box does not have a green status light, go to “Insight Status Light Diagnostics”)	Wiring is not connected properly	Check wiring from sensor to combine
	Header control is not enabled with cab controls	See Operation section of this manual
	Wrong HHC mode selected	Turn on AHHC, see Operation section of this manual
	Sensors are out of range (Direct Wire Systems only)	Correct sensor voltages to between 0.5V < xx < 4.0V, low on ground.
	Power supply from combine less than 10V to Insight.	Check 12V power source (Pin 4 in combine plug)
	Insight box/wiring failure	>>Diagnostics>>Detailed Diagnostics>>Left/Right Height Output 0.8-1.2V head fully lowered 3.8-4.2V sensors off ground
Header is too jumpy	Combine is improperly set	See - Setting section of this manual Reduce Auto Drop Rate Decrease sensitivity
	Insight or combine needs to be recalibrated	See Calibration section of this manual
Header responds to slowly	Insight or combine needs to be recalibrated	See Calibration section of this manual
	Combine is improperly set	See - Setting section of this manual Increase Auto Drop rate Increase sensitivity

Symptom	Problem	Solution
AHHC Diagnostics		
Combine Header Cal Fails	Header not properly connected	Verify that Insight harness is attached and Insight box has power.
	Insight Has Errors	Repair error, clear error codes Cycle key Recalibrate Insight
	Combine does not recognize header	Verify the JD>>50/60/70/S is chosen on the Insight box, and that the correct header type has been selected.
	Header Raise Speed Cal Required (S series only)	Perform Header Raise Speed Cal first
	Insight Outputs are not correct	Recalibrate Insight on flat surface.
	>>Diagnostics>>Detailed Diagnostics>>Left/Right Height Output	Reset Insight: See Insight Overview for details
	0.8-1.2V head fully lowered 3.8-4.2V sensors off ground	Insight defective
	Combine Problem	Call your combine service dept.
Cannot operate head high enough	Calibration not properly completed	Perform Insight and Combine calibration on flat level surface
	Sensors too short	Install extensions on corn sensors.
Cannot operate head low enough	Calibration not properly completed	Perform Insight and Combine calibration on flat level surface
	Special software needed	Contact Headsight regarding optional products Foresight and/or Feathersight
Header dives to ground and recovers entering crop	Lower Rate set too High	See Combine Specific Settings
Head Jumps and Jerks whole combine	Drop rate too fast	See Combine Settings section of this manual)
	Unopened accumulator	Open accumulator valve 1-2 turn
	Discharged accumulator	Test accumulator as described in combine owner's manual, replace or recharge as necessary

Symptom	Problem	Solution
Lateral Tilt Diagnostics		
Height works but not Tilt	Increase Tilt Sensitivity.	>>Setup>>Tilt Sensitivity Increase Tilt sensitivity
	Rare combine problem	Call Headsight to increase Max Combine Tilt.
Head rocks back and forth	Tilt Sensitivity too high	Adjust sensitivity in combine >>Setup>>Tilt Sensitivity Decrease Tilt sensitivity Press Check
	Insight/Combine not calibrated properly (do Cal on flat surface)	See Calibration Section
Header tips wrong way (Once head is moved off level, it continues all the way in either direction)	Left and Right sensor harnesses reversed	Connect sensor harnesses to correct plugs on adapter harness.
Head tips all the way one direction	Improperly adjusted sensors	Adjust the sensors to both be equal when sitting flat on the ground (platform) or when hanging against stops (corn/grain)
	Sensor harness improperly wired	See Diagnostics: Sensor and Harness Spec: Note about reversed wires in connectors.
	Poor connection	Check harness and connectors for cut/ torn wire or loose terminals Make sure terminals are properly latched, not "pushed back", in connector body
	Sensor or harness fault	See Diagnostics: Sensor & Harness
	Insight box failure	>>Diagnostics>>Detailed Diagnostics>>Left & Right Height Outputs 1.0V head fully lowered 4.0V sensors off ground
	Combine problem	Test combine on a different header

Symptom	Problem	Solution
Lateral Tilt Diagnostics		
Header runs slightly out of level	Insight or combine not calibrated correctly	Recalibrate Insight and combine on flat surface
	Sensor physically misadjusted	Make sure both end sensors mount the same and hang at the same angle
	Header not adjusted correctly	Make sure the frame to snoot angle adjustment is the same across the width of the head Lower and tilt head until snoot tips just touch on a flat surface. Make sure frame is level to ground within 1" from left to right. Readjust snoots if necessary.
	All the above fails to correct problem:	>>Settings>>Tilt Balance Adjust balance to level Head (Must be reset to 100 before calibrating combine)

Parts

Conversion Components and Harnesses



<u>ITEM</u>	<u>QTY.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	AR	HT3380	Height and contour sensor(s)
2	AR	B3380	Linkage and bolt kit
3A	AR	HA3-JD63-16	Adapter harness (shown)
3B	AR	HA3-JD53-16	Adapter harness
4	AR	PFB-xx (17,23,33)	Sensor extension harness
5	AR	HT2250	Bracket for Header Connector (not shown)

Statement of Limited Warranty

For Headsight® Products

Precision Planting DBA Headsight Harvesting Solutions (Headsight) warrants its new products to be free from defects in material and workmanship for a period of twelve (12) consecutive months following the date of purchase by the retail purchaser.

Headsight warrants its new corn sensors assemblies for a period of thirty-six (36) months.

Headsight warrants genuine Headsight replacement parts and components to be free from defects in material and workmanship for a period of six (6) consecutive months following the date of purchase or the remainder of the original equipment warranty period, whichever is longer.

Headsight's obligation under these warranties shall be limited to repairing or replacing, free of charge to the original purchaser, any part that, in Headsight's judgment, shows evidence of such defect.

Limitations to Warranty

This warranty does not cover:

- Warranty claims directly resulting from improper installation of the product.
- Any product damaged by accident, abuse, misuse, or negligence after shipment from Headsight.
- Any unauthorized product alteration or modification.
- Any unauthorized repairs made with parts other than genuine Headsight parts.
- Any repairs performed by anyone other than Headsight or an authorized Headsight dealer unless specifically authorized by Headsight.

Warranty Procedure

- Troubleshooting should be done between farmer/dealer and Headsight through our technical assistance @ **574.220.5511**.
- Labor reimbursement will occur only pre-arranged through Headsight technical assistance and be scheduled to a flat rate basis or reasonable time allowance in Headsight's judgment.
- There is no mileage reimbursement.
- Diagnostic time will not be reimbursed except in pre-arranged circumstances.
- Warranty claims should be on typical dealer service work order with a number and name to be attached for any future correspondence.
- All warranty work must be performed, and claims submitted, within thirty (30) days of the occurrence of the claim and within the warranty period.
- All parts removed during warranty repair must be returned to Headsight with Headsight's Return Form within thirty (30) days of the occurrence of the claim and within the warranty period.
- Headsight reserves the right to either inspect the product at the original retail purchaser's location or require it to be returned to Headsight for inspection.

Limitation of Liability

Headsight makes no express warranties other than those, which are specifically described herein. Any description of the goods sold hereunder, including any reference to buyer's specifications and any descriptions in circulars and other written material published by Headsight is for the sole purpose of identifying such goods and shall not create an express warranty that the goods shall conform to such description.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. There are no implied warranties of merchantability or fitness of a particular purpose. This warranty states Headsight's entire and exclusive liability and buyer's exclusive remedy or any claim for damages in connection with the sale of furnishing of Headsight products, their design, suitability for use, installation or operation, or for any claimed defects herein. HEADSIGHT WILL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, NOR FOR ANY SUM IN EXCESS OF THE PRICE RECEIVED FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.

No representative of Headsight nor any dealer associated with Headsight has the authority to change the items of this warranty in any manner whatsoever, and no assistance to purchaser by Headsight in the repair or operation of any Headsight product shall constitute a waiver of the conditions of this warranty, nor shall such assistance extend or revive it.

Headsight reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold. Warranty: **1/2022**



P 574.546.5022 • **F** 574.546.5760

4845 3B Rd • Bremen, IN 46506

info@headsight.com

www.headsight.com