

LHS Upgrade Guide

Landing Height System

(NORSEE Certified Edition)

Upgrading LHS-100-X to LHS-200-C

Connectors Replacement

The 200-C model comes with a 5-pin Quick-Disconnect connector. Existing installation of the 100-X units use a 4-pin connector. Three wires of the 100-X 4-pin connector are re-used. Two new wires (depending on the options required) need to be added.

Cut the 100-x 4-pin connector from the middle to expose the internal color coded wires. Connect the Red, Yellow & Blue wires from the old 100-x connector to the new 5-pin connector following this table.

LHS-100-X (4 Pin connector)	To New 5-pin LHS-200-C
RED	RED
YELLOW	BLACK
BLUE	BLUE

Note that the previous 100-X model uses **Yellow** as Aircraft Ground. The new 5-pin connector uses **BLACK** as Aircraft Ground. Connect the exposed Yellow from the existing LHS wiring to the new 5-pin Black wire.

New Wires

The 200-C 5-pin connector has an additional two wires. **Green & Yellow**

The Green wire is for GPS RS232 input. Please refer to the Installation Guide & Supplemental Wiring Guide.

The Yellow wire is for the Gear Detection input. Please refer to the Installation Guide & Supplemental Wiring Guide.

The new 200-C model is a single-ended Audio output on the same Blue wire and does not offer an Audio ground reference (Audio LO).

Installations that require an Audio LO ground reference, can connect the Audio Panel Audio LO to the LHS ground wire (Yellow).

Note on the previous 100-X units, the **GREEN** wire is Audio LO.

On some Audio Panels, the Audio LO signal is isolated, and the Audio Panel requires a ground reference; for this situation, connect the Audio Panel Audio LO to LHS ground wire. It's best to test the Audio Panel with the Audio HI only, as both the LHS and Audio Panel share the same ground reference.

Once the new unit is installed, check Audio level. If Audio seems to be lower than the previously installed 100-X model, this indicates the Audio Panel does require an Audio LO to be connected and the GREEN wire on the previous installation was being used. Connect that previously used Audio LO wire to LHS Ground wire (Yellow)

Both of these features are optional and are disabled by default within the LHS WiFi setup pages. In many installations, the GPS input may not be available or required. For fixed landing gear airplanes, the Gear Warning System wire is not required,

The 5-pin 200-C Connector Table

Color	Function
RED	Power. 12V/24V Systems. 150mA
BLACK	Unit Ground
BLUE	Audio Output (Single Ended)
GREEN	GPS RS232 Input
YELLOW	Gear Detection Input

Setup

The upgraded model uses a new board. The LHS unit needs to be set up again before first flight. See the following procedure to set up the LHS unit:

It's best to take the airplane to the ramp and do it outside hangar, so it is not set up with clean/shiny hangar flooring.

- 1) Measure the actual vertical height from the glass to the ground.
- 2) Power on the Master and go to WiFi. On the main page (before setting it up) see what the sensor is reading.

- 3) The bottom of the wing is not perpendicular to the ground, as there might be a slight difference between what the unit is seeing and the actual vertical measured height. Unit could be installed at an angle.
- 4) If the difference between the reading and measured vertical height is within 3" (inches + or -), input the number the LHS unit is showing on the first page. (The 2nd smaller number, that is in INCHES). Note that the big number is truncated to an internal value. Use the smaller number.
- 5) If the difference between the reading and measured is > 3 " (inches + or -), input the measured vertical height. The unit will triangulate and save that installed angle.