



iCone Connected Tech Installation Manual

Arrow Boards

In order to connect the iCone Connected Tech (iCT) box to a 15 or 25 lamp arrow board the following steps need to be followed in order to have a successful installation.

I – Parts verification

- 1) Verify that all of the parts in the installation kit are available.

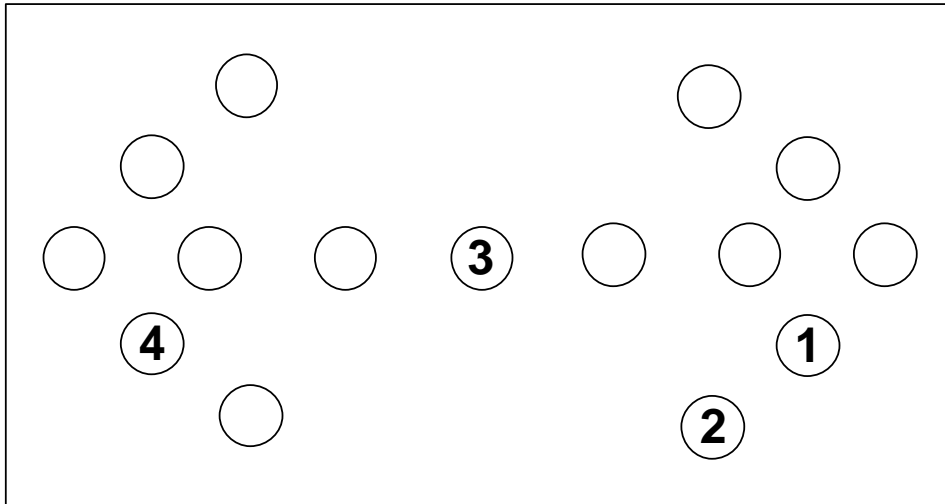
Part	Quantity
iCone Connected Tech Arrow Panel Box with mounting brackets	1
iCone Connected Tech Power Cable	1
iCone Connected Tech Light Sensor Cable	1
Cable Gland (may be on light sensor cable)	1
U-Bolts	2
3/8 Hex Nuts	4
3/8 Flat Washers (may be part of U-Bolt kit)	4
3/8 Lock Washers (may be part of U-Bolt kit)	4
Zip Ties	20

- 2) Untangle and straighten the all cables.

II – Determine light locations

- 1) Use the following diagrams to determine the light locations on your panel board.

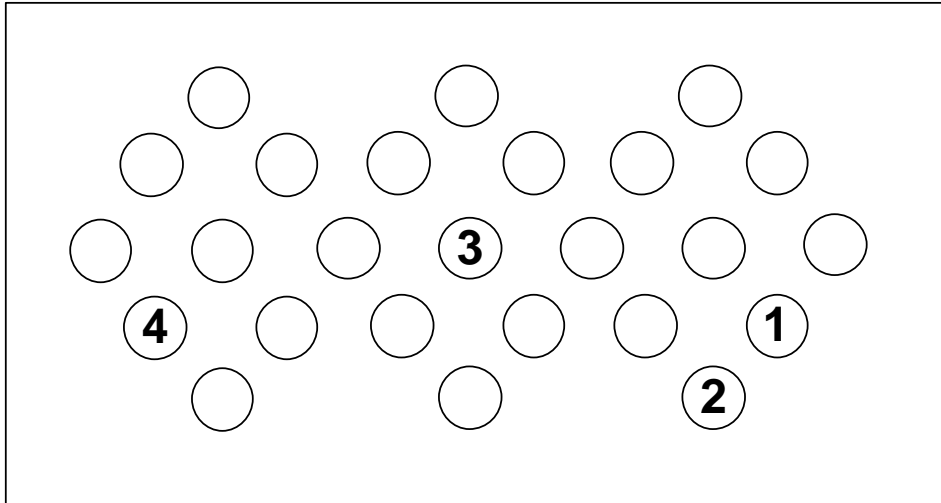
15 lamp arrow board (front view)



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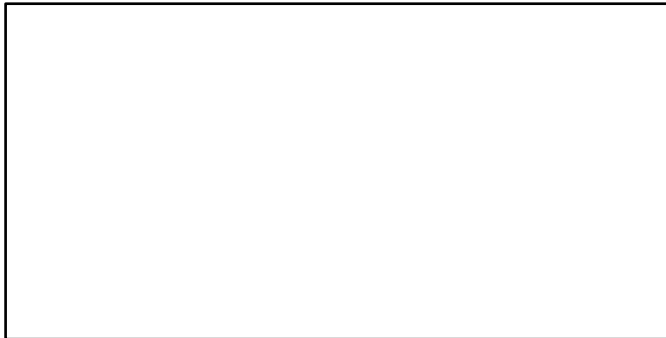
25 lamp arrow board (front view)



III – Light Sensor cable installation

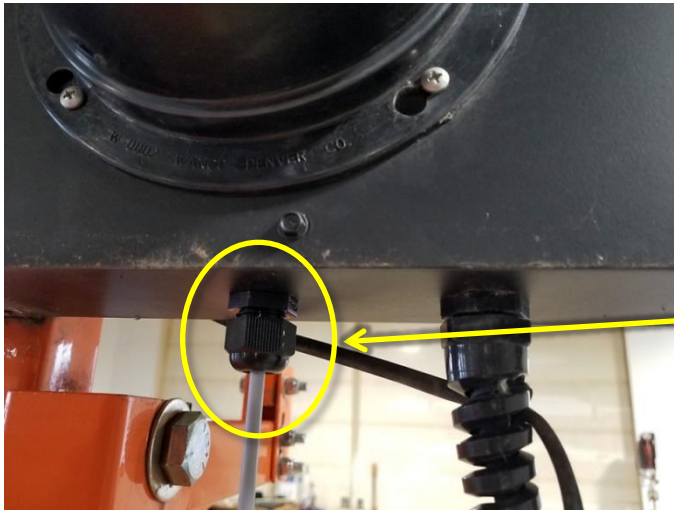
- 1) Put the arrow board in the down position.
- 2) Remove visor and light #2.
- 3) Examine the inside of the board and determine a good location for the hole to be drilled near light #2.
- 4) After a safe location has been identified drill the hole.

❖ NOTE: The hole size will depend on the size of the provided cable gland.



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Light sensor cable installed at the bottom of the arrow board frame.

5) Install the cable gland.



Cable gland

- 6) Remove visor and lights #1, 3, and 4.
- 7) Run the sensor cable thru the cable gland, one wire at a time.
- 8) Pull the wire in order to reach the desired light positions.
 - ❖ NOTE: Additional lights may need to be removed to ease the installation
- 9) Light and sensor wire color code table:

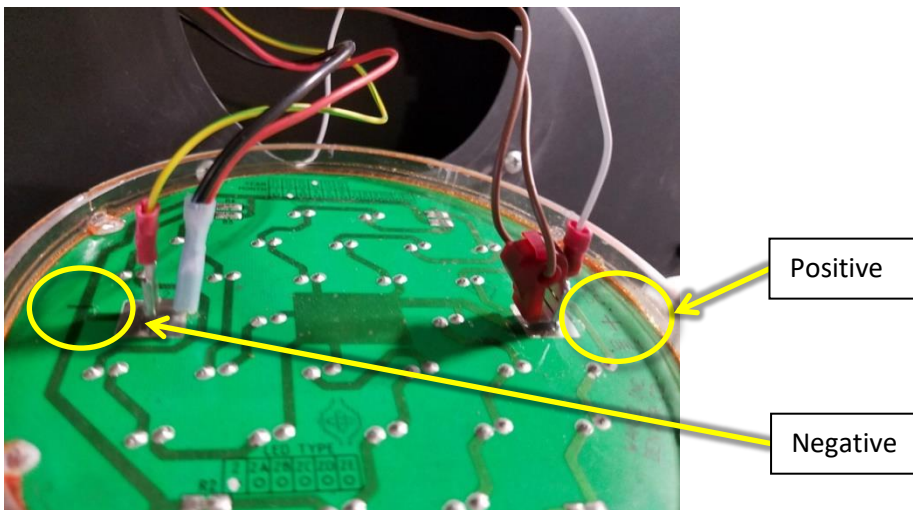
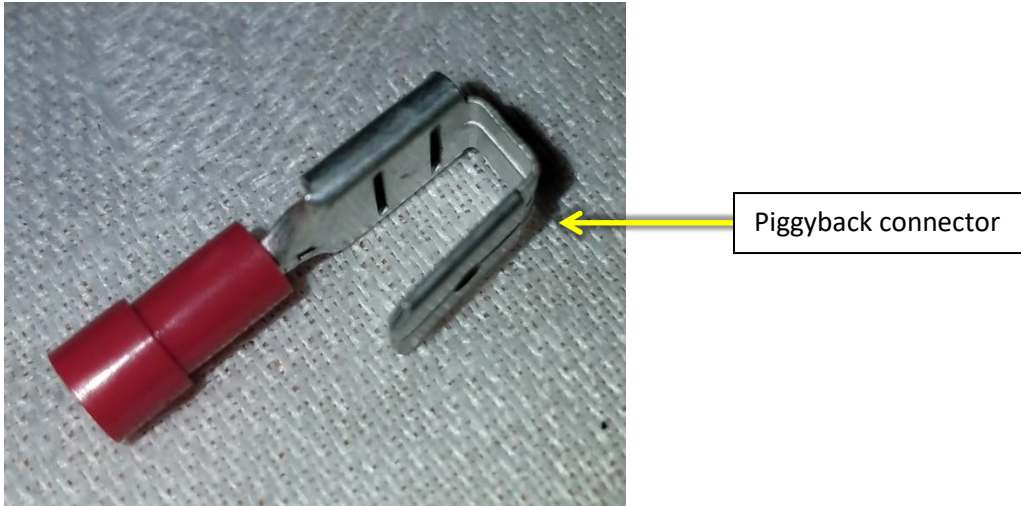
Light Position	Light Sensor Wire Color
1	Brown
2	White
3	Blue
4	Black
Negative	Green-Yellow or Grey

10) Disconnect the positive (+) wire from the lamp.

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- 11) Connect the appropriate sensor wire to the light positive and connect the board positive wire (removed in previous step) to the piggyback connector.

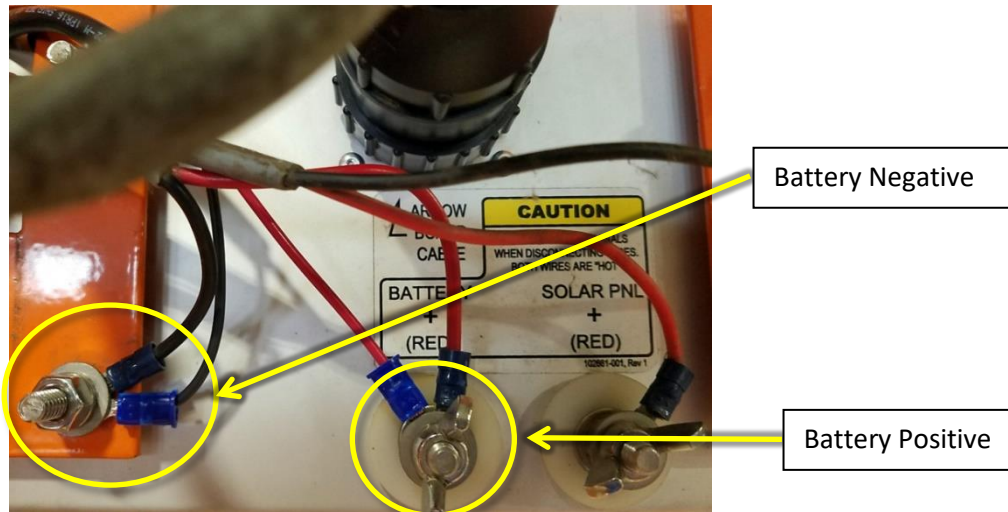


- 12) Do the same for the negative in light #2 using the green-yellow wire.
❖ NOTE: This could be done on any of the lights.
- 13) Tighten the cable gland, leaving enough cable available to connect to the iCT box (approx. 3ft).
- 14) Zip tie the extra wire to the board chassis.
- 15) Attach visors and lights back to panel.

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IV – Electrical wiring

- 1) Connect the power cable to the arrow board power panel to the side identified as “BATTERY”.
 - ❖ NOTE: **Do not** connect on the side identified as “SOLAR PNL”
- 2) Red wire goes to the bolt with winged nut terminal.
- 3) Black wire goes to the bolt with regular nut on the left side of the battery positive.



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V – iCT box installation

- 1) The iCT box comes with the mounting brackets already attached.
- 2) Mount the U-Bolts on the boards center support beam.
- 3) Attach the iCT box to the U-Bolts, install washers and tighten the nuts.

Front of mounted iCT box



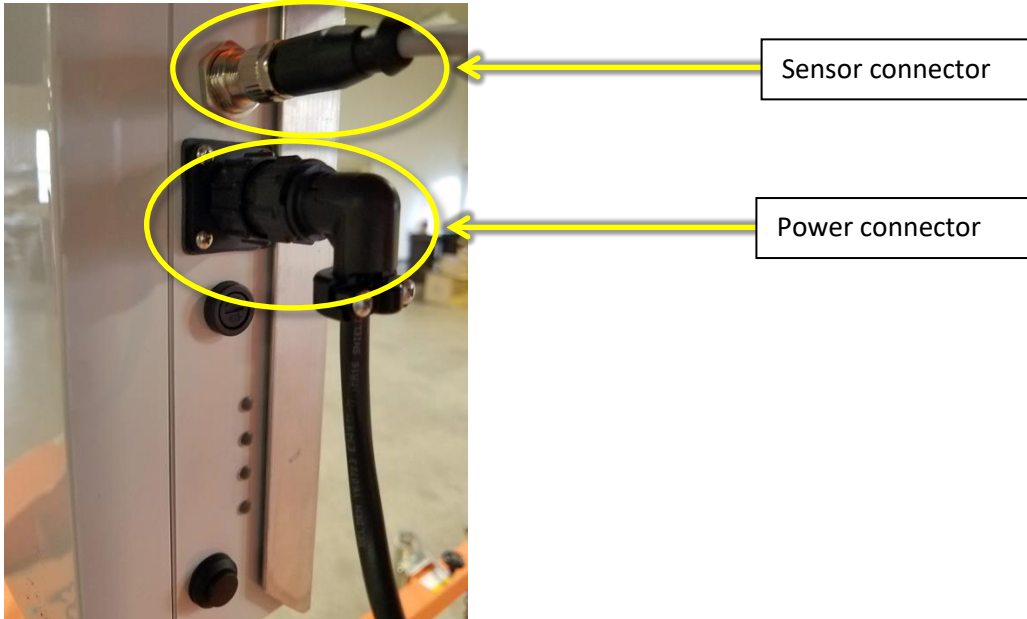
Back of mounted iCT box



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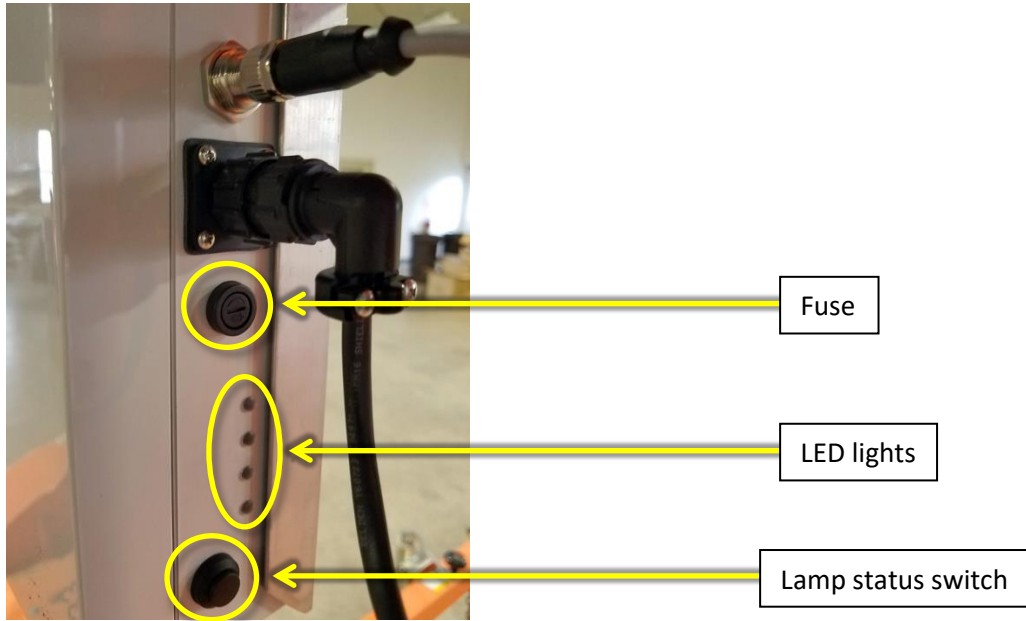
Arrow Boards

4) Connect the sensor and power cables to the box.



VI – Verification

- 1) To verify that the iCT box is functional press the button at the bottom of the box, just below the LED lights.



- 2) By pressing the button the LED lights will flash indicating the lamp sequence of the arrow board.

Arrow Pattern (15 lamp)	iCT Box LED Indicators
Flashing Caution (four corners)	Blue
Flashing Caution (solid line)	Blue
Right arrow	Red + Blue
Sequential right arrow	Red + Blue
Left arrow	Yellow + Blue
Sequential left arrow	Yellow + Blue
Double arrow	Red +Yellow + Blue

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Arrow Pattern (25 lamp)	iCT Box LED Indicators
Flashing Caution (four corners)	Blue
Flashing Caution (solid line)	Blue
Flashing Caution (alternating diamond)	Blue
Right arrow	Red + Blue
Sequential right arrow	Red + Blue
Sequential right chevrons	Red + Blue
Right moving arrow	Red + Blue
Left arrow	Yellow + Blue
Sequential left arrow	Yellow + Blue
Sequential left chevrons	Yellow + Blue
Left moving arrow	Yellow + Blue
Double arrow	Red + Yellow + Blue

- 3) To verify that the iCT box is communicating properly press the button at the bottom of the box, just below the LED lights and check the status of the green light.

Communication Status	Green Light Indicator
Communication in process	Quick flashing light
Successful previous communication	Slow flashing light
Unsuccessful previous communication	No light

- 4) After all cables have been installed and verified use zip ties to tie light sensor and power cables to existing wiring, allow for drip loop if possible.

