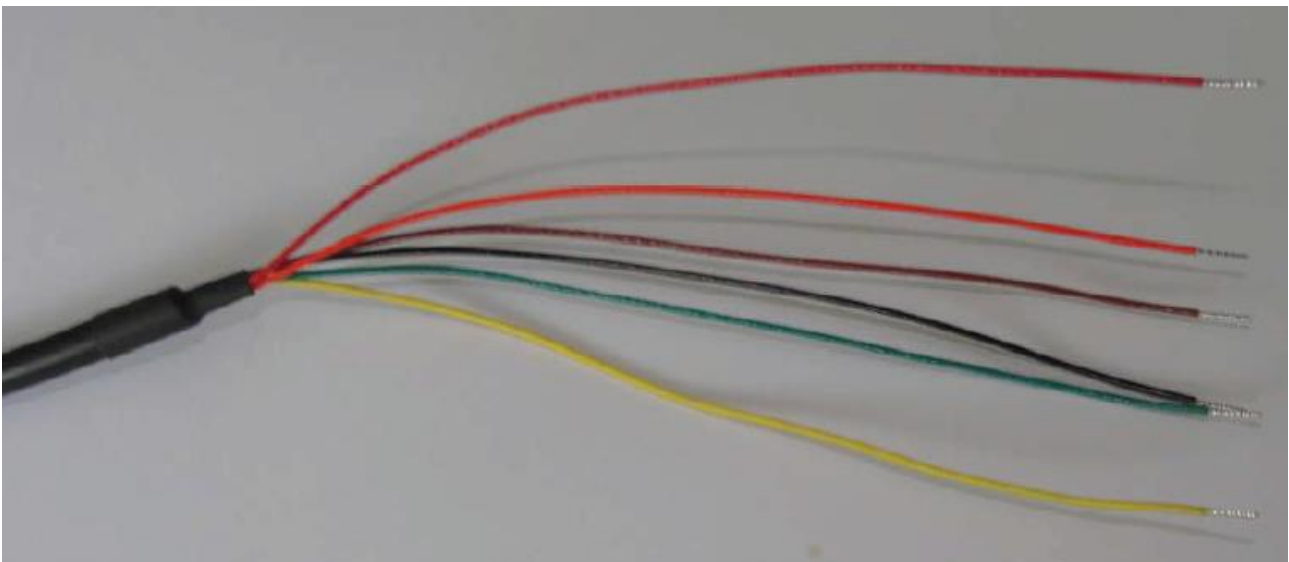




The Omnibox Hybrid is a dual mode GPS unit packaged in an IP65 waterproof enclosure. The Unit has a built in battery pack that includes charger and power supply with up to two 1800 mAmp rechargeable batteries that charge when power is available from the tractor. The system detects loss of external power and reports the event to establish trailer drop times and / or power on / power off. When powered the unit will send GPS data every 2 minutes (user configurable). When power is lost, the unit will switch to asset tracking mode and send GPS data 1-2 times a day when parked, and every 15-60 minutes when moving (user configurable).

How to connect 12VDC power

Note: before installing the Omnibox Hybrid in a vehicle, open the unit and connect the internal battery to the device. (Sim card needs also to be mounted). The Omnibox Hybrid is packaged with one 1800 mA rechargeable lithium battery, but has option for two.



- Connect the red and black wire to the asset power source. If the asset is installed on a trailer then the connection will be to the back light that is powered when the trailer is connected to the tractor.

Usually the power from the cabin connector to back light is passing via a fuse box or a junction box, you need to locate this junction box. In every trailer brand this junction box is located differently.

- Extend the red (+) and black (-) wires as needed to reach the vehicle's main battery.
- You must wire the Omnibox Hybrid straight to the power source without having any switches in between. You may wire the Omnibox Hybrid to a wire panel and / or fuse panel only if you have verified that the connection to the specific point at the control panel or fuse panel is straight from the battery without any switching on the way.
- If the vehicle has more than one battery, ensure that Omnibox Hybrid is wired to the main battery, not to the backup nor to the refrigeration battery.
- If you need to connect IO's or sensors such as temperature sensors or an output command relay, follow the attached diagram.
- The Omnibox Hybrid has its own fuse so it is not a must but optional to add an external 5 amp fuse to the red wire connected directly to the battery.

Omnibox Hybrid Test

Ensure to insert simcard and test the Omnibox at the lab before you ship for on location installation. The below is a pre install field test.

Notes:

- Unscrew the upper cover to see the LED's
- Start the test before the Omnibox is mounted permanently
- Connect the Omnibox to the power source.
- First the "Power LED" has to turn on.
- Within 2–5 minutes the Modem LED (second from left) has to turn green.
- Within 3 minutes the GPS LED will blink yellow and in 3-10 minutes the GPS LED has to blink green. If MODEM LED remains off, check communication parameters (APN, password, Sim, etc.)
If all parameters are OK, check SIM validity and if account has enough credit.
- When the first 3 lights on the left are green, the unit is communicating with the cellular network.
- The last Led, the DATA LED, will be turned off to conclude a successful test- If the DATA LED is red, and the MODEM LED is NOT green, then we will need to wait for cellular network registration. Wait until the MODEM LED turns green. At that point the DATA LED will turn off within a few minutes. If the MODEM LED is green but DATA LED remains red, the unit is registered to the network but can't send messages. Please Check your host settings and your host firewall, to see that nothing is blocking the messages . Also check that the sim has credit with operator.
- If the Modem and/or the GPS led do not blink green as specified above or if they are green but the DATA LED stays red, press the RESET on the Omnibox Hybrid front panel.
- Once the 3 lights on the left are green, press the ALARM button and hold it for 15-20 seconds until the DATA LED turns red. At that point check with the person at the host server to verify that the alarm and/or GPS reading was received.

- Once the data light turns off it is an indication that the unit is communicating successfully to the server. If the data line remains red even if the MODEM LED and the GPS LED are green, there is a communication problem to the host. The problem remains as long as the DATA LED is red.
- If the 3 LEDs on the left are green and the data light is off, it is a strong indication that the installation and communication are successful. In order to confirm this 100% you must have a confirmation from the person at the host the particular unit has communicated with.
- Once the communication is confirmed, turn on the engine and see that the Omnibox Hybrid is still on during and after the engine start up.
- Now you can place the Omnibox Hybrid in its final pre prepared location and close the 4 screws.
- Test again the the first 3 lights are green before leaving the vehicle.







Troubleshooting

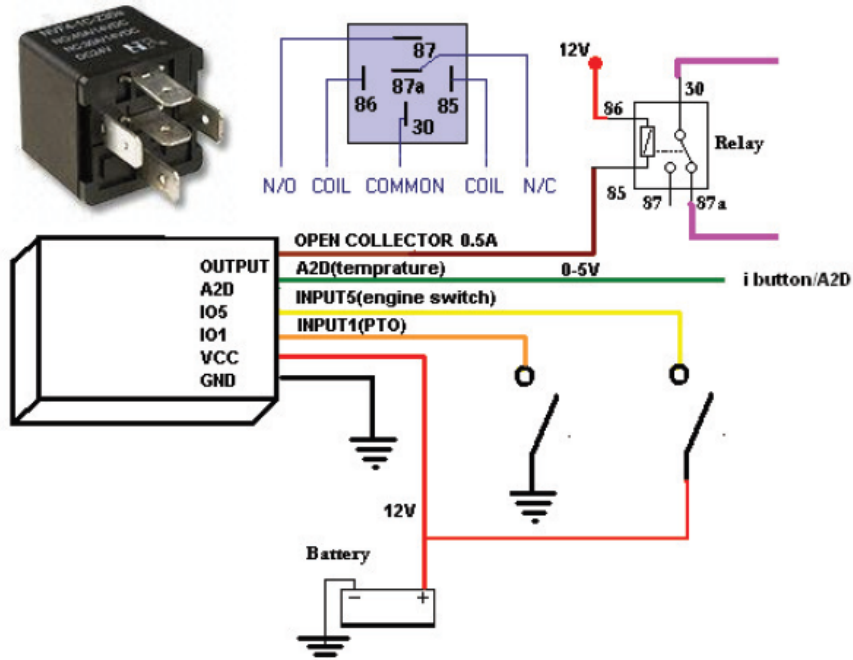
- If the POWER LED of the Omnibox Hybrid does not turn green when you connect to the power source:
 - Disconnect the connector and check with your Volt Meter that 12VDC power is reaching the Omnibox Hybrid.
 - If the GPS LED does not blink green check that the device is installed properly and in view of the sky if you checked all of the above and the GPS light still does not turn green, press the RESET button.
 - If the modem light does not turn green in a few minutes press the RESET button. If it is still not green check with the cellular operator if there is coverage at your location.

Omnibox Hybrid Wiring

In addition to the dual mode trailer tracking functionality the Omnibox Hybrid also has:

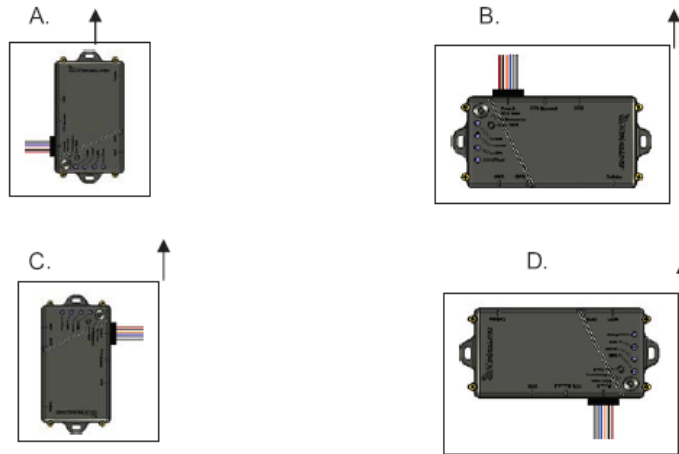
- 2 digital inputs one negative ground and one positive input
- 1 digital out
- 1 analog in or digital temperature

Color of wire on mating connector	Pin Description	
Red	External power input Positive pin (+) 6 -32 Volts	
Black	GROUND	
Orange	Input1 negative input	
Green	A2D or digital temperature sensor	
Yellow	Input5 positive input	
Brown	500maOpen Collector output1	



Optional Accelerometer mounting instructions

In order to install the unit for optimal performance it needs to be straight leveled and pointed in the driving direction with the LED's pointing to the sky. Driving direction can be one of the following 4 positions. It is recommended that all units for a given fleet will be installed in the same orientation.



The configuration (see “service configuration” section in the Omnibox Hybrid user guide) should be according to the driving direction shown by the arrow above. Choose the direction from the pull down menu in the software as follows:

- A → Power cable left, sticker down
- B → Power cable forward, sticker down
- C → Power cable right, sticker down
- D → Power cable backward, sticker down