

# ManTooth™ Wireless Digital Pressure/Temperature Gauge

## Frequently Asked Questions

- **Q:** Why is the elevation being reported by my ManTooth app incorrect?
  - **A:** The elevation is taken from the phone's GPS location. The ManTooth app simply uses the phone's GPS to find its reported elevation and applies the pressure correction. If the phone's GPS is not as accurate, the elevation could be reported as any elevation point within the location accuracy area. However, if the user wants to input a more accurate elevation reading, they can simply tap on the elevation number in the "session settings" screen and manually input their own number. Also, it should also be noted that 1000 feet of elevation corresponds to 0.5 psi difference.
- **Q:** With what devices does the ManTooth work?
  - **A:** Here is a list of compatible products:
    - **Apple users** - the ManTooth app is currently available and functions properly with any Apple iPhone or iPad running iOS 7.0 or later.
    - **Android users** - the ManTooth app is currently available for any Smart Phone running Android 4.0.3 (ice cream sandwich) or later.
    - **\*\*NOTE\*\***All ManTooth devices will continue to work with any updates made to the ManTooth app. There is no need to worry about having to update the ManTooth module itself.
- **Q:** How does my ManTooth connect to my phone?
  - **A:** The ManTooth uses Bluetooth to connect to any number of different devices. Bluetooth is a type of radio connection between two compatible devices.
- **Q:** Why do I have to pair my ManTooth to my phone?
  - **A:** Pairing the ManTooth to a device basically allows the two devices to know what radio signal to look for. Think of pairing like setting the radio stations on your car so when you want to listen to a station you don't have to search through all the available stations. Once the device and the ManTooth are paired, you should not have to complete the pairing process again unless you intentionally unpair the devices.
- **Q:** How far can I be from my ManTooth and still be getting system data?
  - **A:** The ManTooth needs to stay within the transmission range of the smartphone/tablet at all times. The ManTooth has been tested and successfully used at distances of over 400 feet with a number of different phones - both Apple and Android. Ultimately, the distance by which the phone and the ManTooth can be separated depends upon a number of different factors. If there are no objects in the way to interrupt the signal, the connection between the device and the ManTooth should be maintained at 400 feet. However, when objects that interfere with the Bluetooth radio signal (walls, roofs, floors, etc.) begin to appear between the device and the ManTooth, the ultimate range may decrease. The more obstructions that are added between the device and the ManTooth, the weaker the signal (passing

through or around the obstacles leads to a shorter range). To ensure the best possible range, the Bluetooth radio transmitter in the ManTooth utilizes the highest signal strength available. However, each situation will be slightly different depending on the environment surroundings each job.

- **Additional info:** Due to the fact that the majority of devices have a Bluetooth radio that is not as powerful as the ManTooth, there are some instances when the device is sending commands to the ManTooth indicating that it needs to be within 100 feet line of site (less if there are obstructions). The phone or tablet will be sending commands during these operations:
  - When the “Power Down Connected Devices” or “Restore Factory Defaults” buttons on the “General Settings” screen are used.
  - When the “Calibrate Device Readings” feature is used.
  - If the Auto Off timer warning message comes up, move within the device’s transmit range before clicking to extend the timer.
  - When starting a new session, until the “Assign Devices and Zero” screen has been seen. Once you have moved past this screen, the ManTooth device is programmed to automatically send its readings at one second intervals. The phone or tablet can be moved farther away and will still get readings as long as it is within 400 feet line of site (less if there are obstructions).
- **Q:** What is the difference between the three different ManTooth products? (67001, 67002, & 67003)?
  - **A:** The current ManTooth models are as follows:
    - 67001: This ManTooth model contains one ManTooth module with one pressure transducer and is sold with one temperature clamp. An additional temperature clamp may be purchased so the unit will report one pressure and two temperatures.
    - 67002: This ManTooth model has a main unit that contains the Bluetooth radio, battery, microprocessor, one pressure transducer, and two temperature probe ports. The second unit (called the tether unit) is attached to the main unit via a three foot cable and contains only a pressure transducer bundled into a convenient carrying case. This setup is designed so that you can measure two pressures and two temperatures of a system but at a lower cost.
    - 67003: This ManTooth model is the same as the 67001 model. However, it comes as a kit with two 67001 units and two temperature clamps bundled into a convenient carrying case. This setup is ideal for technicians who want to measure multiple pressures and not be limited to pressure ports within three feet of each other.
- **Q:** I have two ManTooth units. How do I connect them both to the same session?
  - **A:** To connect two ManTooth units to the same session, first make sure that both ManTooth units are paired with your device. Then when you are in the “Assign Detected Devices” screen, simply select both devices before hitting “save.” After you save, all pressure values will be displayed on the “Assign Devices and Zero” screen.
- **Q:** Why does my ManTooth keep turning off after five minutes?

- **A:** The ManTooth has an “Auto Off” function to preserve the battery of the ManTooth and your phone. The default setting for the “Auto Off” is set for five minutes. If you wish to increase or decrease this set point, go into the app settings and change it to anywhere from one to 99 minutes. You may also disable the “Auto Off” by moving the slider all the way to the left and the time will appear as “never.” When the auto off timer is nearing its specified time, a warning will appear on the your device’s screen alerting you that the unit will be turning itself off along with an option so you can reset the “Auto Off” timer if you wish.
- **Q:** Can my ManTooth read pressures below atmospheric pressure?
  - **A:** Yes. The ManTooth can read pressures below atmospheric pressure (14.7 psia) However, the accuracy of the pressure transducer in the ManTooth is 0.5% of full scale at 77°F. This accuracy level is not precise enough for the ManTooth to be used in place of a micron gauge.
- **Q:** Why am I unable to zero the pressure on my ManTooth?
  - **A:** The default pressure units on the ManTooth app is PSIA (iPhone app only\*; Android app defaults to PSIG), meaning that at an elevation setting of 0, a zeroed gauge will read 14.7 PSI. If you would like to change the pressure units, go to the app settings from the ManTooth app home screen to select between units of PSIA, PSIG, bar, kPa, MPa, and kg/cm<sup>2</sup>. \*iPhone app default is scheduled to be fixed in upcoming app update).
- **Q:** Can my ManTooth be used to read just temperature?
  - **A:** Yes. To use your ManTooth to read only temperature, simply start a session as you normally would when reading both temperatures and pressures and the temperature readings will be displayed.
- **Q:** When I plug my ManTooth in to charge the battery, the green light immediately turns on even though my ManTooth’s battery is dead. Why?
  - **A:** When you plug your ManTooth in to charge the battery, the green light means that the ManTooth is currently charging its onboard battery. Once the green light shuts off, the battery is fully charged.
- **Q:** Why can’t I find the ManTooth app in the iStore while using my iPad?
  - **A:** When you are searching for apps on the iPad, the default search is for apps that are iPad only. Currently the ManTooth app is not available as a specific “iPad only” app. However, iPads will run the iPhone app. You just have to tell the Apple App store that you want to include iPhone apps in your search. So there are three ways that you can locate the app on an iPad. First is direct search in the app store but when you are searching you have to click where it says “iPad only” and change the selection to include iPhone apps. The second way is to just follow the link on our website. If you are on the iPad just go into your web browser and on the ManTooth page, click the link for the Apple App store and the correct page will open up for you. The third way is if you have a QR code reader on your iPad you can read the QR code on the package and that, too, will bring you right to the app store page.
- **Q:** What is the maximum pipe size the ManTooth temperature clamp will accommodate?
  - **A:** 1-3/8” piping.

- **Q:** How do I connect my ManTooth to an R-410A system with 5/16" flare fittings?
  - **A:** The ManTooth was designed with the most widely used fitting - a 1/4" flare fitting - so that the technician can connect to as wide a variety of systems as possible. We offer a full line of Quick Couplers for just this purpose. If you would prefer a short length of hose, we do offer the 9" Flexflow hoses, and the YELLOW JACKET 90° Quick Coupler is also an option.