

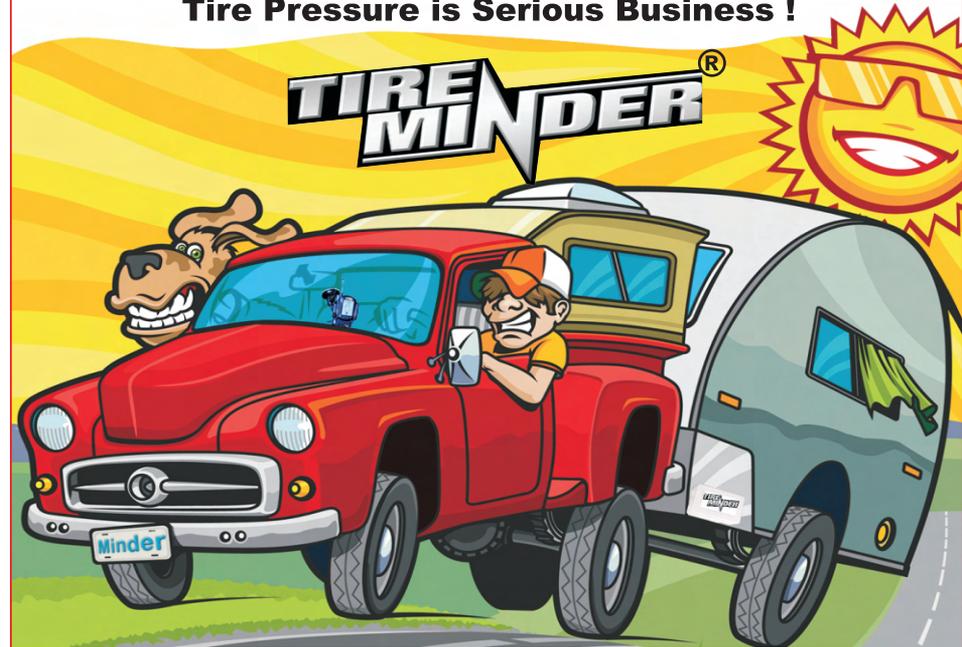
TIRE MINDER[®]



MINDER[®]

RESEARCH
INCORPORATED

Tire Pressure is Serious Business !



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**Tire Pressure Monitoring System
Operating Manual**

TMG300C and TMG400C-4

The TireMinder® TPMS

Table of Contents

	Page
Congratulations and Welcome.....	2
Illustrations for TMG400C & TMG300C.....	4
1. Transmitter Battery Replacement.....	3
2. Points to add to your Useful Knowledge.....	5
So Let's Get Started	6
3. Pressure Setting Mode.....	7
4. Monitor Learn Mode.....	8
5. Power Off.....	9
6. Power ON.....	9
7. Delete & Re-program.....	9
8. Delete/Clear and Reset programs.....	9
9. Customize Display.....	10
10. Checking Tire Pressures.....	11
10.1 NO "S" and Red Light Warning.....	12
A. Low Battery.....	
B. Electronic Interference.....	
C. Distance.....	
D. Missing Vehicle.....	
11. Low Battery Indicator (Receiver and Transmitter).....	13
12. Transmitter Ant-theft lock.....	13
13. Multiple Alerts.....	14
A. Rapid Air Loss (Blow Out).....	
B. Semi Rapid Air Loss.....	
C. Normal Pressure Loss.....	15
D. Adjust Start Point for Pressure Loss Warning.....	16
E. High Temperature warnings.....	16
F. High Pressure Alert.....	17
14. TireMinder® Boosters.....	17
15. Specifications.....	18
16. Product Assembly Chart.....	19
17. TireMinder® Warranty.....	19
18. Notes.....	20

"Be Safe on the Road," from the Minder TEAM!!!!



General Overview TireMinder® TPMS

Congratulations!!! You've done your homework and decided on the best TPMS on the market!!! "Be Safe on the Road"THE MINDER TEAM!

The TireMinder® TMG400C and TMG300C Tire Pressure Monitoring Systems (TPMS) allow for constant Monitoring of a vehicle's Tire Pressure & Temperature. The TMG400C system can receive wireless information from up to 22 wheels (4 wheels with the TMG300C.) After programming the ideal psi for each tire into the monitor, a transmitter is attached to each wheel's valve stem in sequence. That means **don't screw all the transmitters on now**. Various Levels of warnings are issued for pressure changes (under& over), high tire temperatures and low battery status.

We realize most people rarely read instructions. At the same time, this is a highly sophisticated product which requires unique programming. If you don't read at least the basic set up instructions, you will either return the product or have to call Minder. As we really don't want you to return the product to your supplier, PLEASE READ the instructions. If you still need help, check our web site, e-mail or call us. We have done our best to make these instructions easy to follow and occasionally entertaining. Life is too short to be serious all the time – right?

The monitor/receiver comes partially charged so you can start programming immediately. It is also set up to measure tire pressure in psi and temperature in Fahrenheit (°F). However if you live in Canada or Great Britain or Mexico, you are probably still trying to figure out which system you want to use. Whatever you decide, the TireMinder® TMG400C and TMG300C can be modified to your preferences. If you need to modify the measurement type, see section 9).



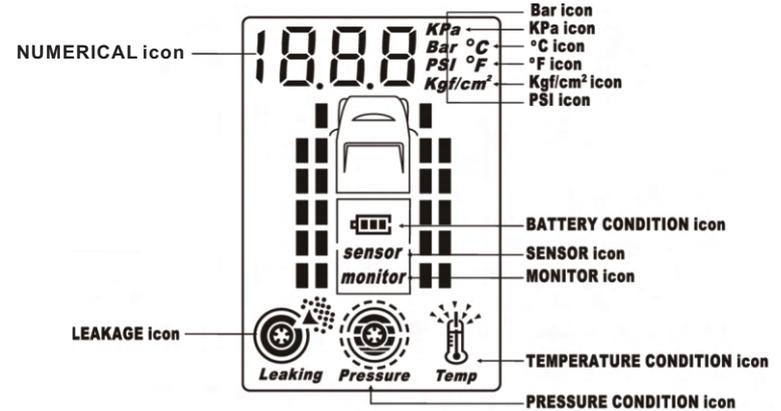
IMPORTANT NOTE: If your vehicle (Car, SUV, Mini Van, or Light truck) has a factory installed Tire Pressure Monitoring System, the valve stems are most likely made of aluminum. If you're not sure, check with your dealer. Upon confirmation that you have aluminum valve stems, you will need to mount special Aluminum TireMinder® transmitters. If you've already ordered standard TireMinder® transmitters (with brass inserts), Minder will gladly exchange, at N/C. Should you need further information, please check our website. The Item #'s are TMT300C-2AL or TMT400C-2AL.



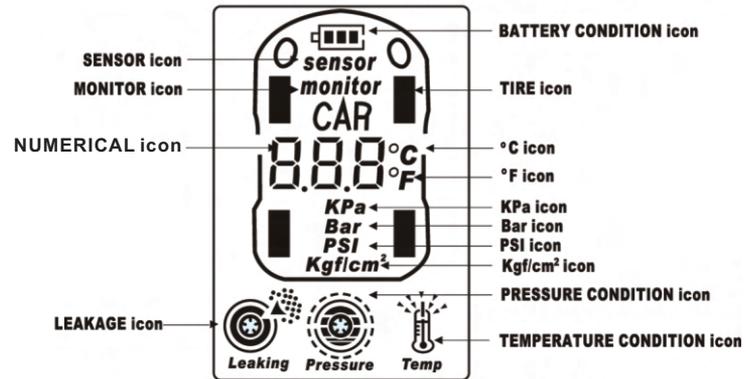
1) Transmitter Battery Replacement

Unscrew (counter clockwise) the transmitter cover, insert a new CR1632 battery. Be sure the + (plus) side is up, under the metal clip. Incorrect insertion will burn out the circuit. The cover should be "very" snug so as to remain waterproof. Please, DO NOT use pliers and a pipe wrench.

*** Please dispose of any used lithium batteries properly. Take them to a hazardous waste recycler. Contact your local waste disposal company for drop off locations. You may also check our website for special battery exchange programs. ***



TMG400C



TMG300C

2) Points to add to your storehouse of USEFUL knowledge

- Whenever a transmitter has been mounted or a valve extender added, cover with soapy water to confirm no air loss.
- If after driving over rough terrain (or once a month) check to make sure all transmitters are still securely attached.
- If a Rapid Air loss or high temperature is indicated (13a, b, & e) be aware of your surroundings and cautiously drive the vehicle to a safe "off road" location as soon as possible.
- Double check pressure by testing each tire with an accurate mechanical or digital gauge every two or three months. TireMinder® brand gauges are recommended and should be available wherever you obtained this TPMS.
- FYI...."STANDBY MODE" means the Monitor is in NEUTRAL. On a new monitor, there are no readings or tire positions visible. If transmitters have been mounted, you will see those wheel positions, which are providing information. In other words, the monitor is not in the Programming Mode or Learn Mode. There are only 3 modes.



SO, LET'S GET STARTED!

You need to insert the CR1632 lithium batteries into the transmitters. See Item #1.

Tires should be cold and inflated to the vehicle manufacturer recommended pressures (not what's on the Tire!). Check that valve stem threads are not scratched, rusted or damaged. If marked, have them replaced before mounting the transmitters. If you are monitoring Dual Wheels, it is best to have clear access to both valve stems. Valve extenders may be used. We recommend using only high quality extenders and having them professionally installed. Once a transmitter is mounted on the valve stem, be sure it does not touch any solid portion of the wheel. As the TireMinder® transmitter only weighs 0.3 oz, it will not affect tire balance. As well, due to their light weight, they may be used on wheels equipped with rubber valve stems.

First, you need to program the TireMinder® Monitor to your vehicles' specific tire pressure. Have a look at the illustrations on page 4. Determine where on the display you would like your wheels to appear (see multiple wheel illustrations below). Those are the only positions you need to modify to your pressures (any positions not used may be ignored).

Final Display examples



Coach w/6 tires

Truck with 5th wheel 8 tires

Motor home with tag & tow 12 tires

Convert Monitor to “Pressure Setting Mode”

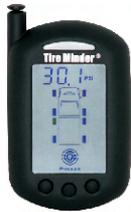
3. Pressure Setting Mode:

- A. **Press & hold center button for 5 seconds.** If system is new, you will see 72.4 psi (factory default setting).
- B. Press right or left button until desired pressure is displayed.
- C. Press center button to confirm and move to next tire position.
- D. Repeat “b” and “c” above for all tire positions to be monitored.
- E. **You MUST EXIT.** Press & hold center button for 5 seconds. Display will “beep” and revert to **standby mode** after another 5 seconds.

Final Display examples



Coach w/6 tires



Truck with 5th wheel 8 tires



Motor home with tag & tow 12 tires

Your monitor is now ready to receive information from each transmitter. Be sure to mount the transmitters at the same positions as previously programmed (above in item3).

Convert Monitor to “Learn Mode”

4. Learn Mode:

- A. **From standby mode, press & hold BOTH right and left buttons at same time (approx. 5 seconds).** All 22 positions will appear.
- B. **Front left tire position will flash w/RED LED illuminated**
- C. Mount any transmitter at the location indicated on the screen. LED will **turn GREEN** and exact psi will be displayed within 30 seconds. If synchronization is not achieved, remove the transmitter for 10 seconds and re-mount. It's also a good idea to have the receiver in your hand.
- D. Press right or left button to move to next tire position (LED will be RED).
- E. Repeat items “C” and “D” above until all transmitters are mounted.
- F. **You MUST EXIT after the last transmitter has been mounted.** **Press right AND left buttons simultaneously (that's like at the same time).** At this point you should only see the number of tire positions which have transmitters installed (4, 6, 8, etc). All other positions will have disappeared. The monitor will revert to the standby mode after 5 seconds. To see the system in action, you may now press the right or left button and scroll through all tire positions. The first press will show the pressure, the second press the temperature and the third will move to the next tire position.

For now, you are all set. Mount the monitor receiver where it's visible but does not obstruct your view of the road. We suggest you plug in the receiver for your first few drives. It takes 6 hours to fully charge, but after that, the unit will operate for 30 days without a charge.

The rest of this document contains important operating information. PLEASE DON'T LOSE IT – WE GUARANTEE YOU WILL NEED IT IN THE FUTURE!

5) Power Off

It is not necessary to Power Off the system as it will shut itself down after 15 (fifteen) minutes of no activity. "No activity" means the vehicle is not moving and there is nothing (or no one) moving about. It will re-start automatically when you re-enter the vehicle (it's like magic – eh?).

However, if you wish to turn it off manually, (from the standby mode), Press & Hold the center button for 8 (eight) seconds. Note the unit will enter the "Pressure Setting Mode" after 5 (five) seconds. Continue to hold down the button for an additional 3 (three) seconds to completely turn the system off (screen goes completely blank). If the Monitor does not go completely blank, the unit was not in a "Standby Mode" when you first press the center button. You will need to exit from either the "Pressure Setting Mode" or the "Learn Mode". See item # 3E or 4F.

6) Power On

Press & Release the Center button to turn on the receiver. The unit will now receive information from all transmitters.

7) DELETE & Re-program IF:

- A. The TPMS system is moved to another vehicle with different tire pressures.
- B. You want to clear everything and **start over**.
- C. A **transmitter** needs to be **replaced**.
- D. Additional **transmitters** are to be **added** (system expansion)

8) How to Delete/Clear and Reset programs:

- A. **From "Standby Mode"** press Both right and left buttons at the same time to enter "Learn" mode.
- B. Press right OR left button until **desired tire** position is **flashing**.
- C. **Press and hold center button** until only "---psi" is displayed at top of screen (LED turns RED).

- D. IF **REPLACING** a transmitter, **mount it now** to the selected position. The receiver will show the exact pressure (LED turns GREEN). If no reception within 30 seconds, remove transmitter for 5 seconds and re-mount. Have the receiver nearby for this initial synchronization.
- E. IF POSITION IS TO BE LEFT **UNMONITORED**, press and hold BOTH right and left buttons at the same time (5 seconds). The receiver will return to the standby mode. **The deleted tire position icon will no longer be displayed.**
- F. When ready to install the **replacement** transmitter, return to the "Learn" mode (see 4 A). Press the right OR left button until the desired location is flashing (LED is RED). Attach th transmitter securely. The receiver will then show that tires' exact pressure and the LED will become GREEN. **MUST** press BOTH right and left buttons to **exit** and return to standby mode.
- G. **Start Over – clear everything!!!**
Follow A, B and C above. Instead of deleting/clearing only one position, you simply clear all 22. Your goal is to have "---psi" and a red LED at all positions. After tire number 22 shows "---psi", press the right button and scroll through all 22 positions one more time (in case you missed one). When confirmed, exit this mode by pressing and holding the right and left buttons again. The monitor will return to the standby mode with no tire position howing. Congratulations, you've cleared everything and can start over.

9) Customize the Display:

Options: Kpa, BAR, PSI or kgf/cm2 plus °F or °C

From "Standby Mode" – press & hold centre button for 5 seconds to enter Basic Pressure Setting Mode. Then press & release the centre button to scroll through each tire. After tire #22 (or #4 on the TMG300C), the pressure unit will flash. Press right or left button to scroll through Kpa, BAR, etc. Press center button again to confirm your choice and bring up the temperature unit. Press right or left button to alternate between °C and °F.

Press center button to confirm your choice. Press and hold center button for 5 seconds to exit. After an additional 5 seconds, the unit will go to “Standby Mode”.

Note: You will not be able to scroll through all 22 positions if the unit has had transmitters previously installed. In this case, simply follow the above procedure at each installed position. The pressure unit will flash immediately after your last tire position. We know it sounds complicated, but once you get started, you will understand that it is relatively simple. If you still have trouble, please call us before becoming too frustrated.

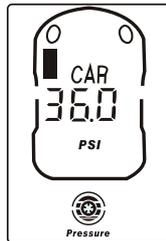
772-463-6522 M-F 9:00AM to 5:00PM EST.

10) Checking Tire Pressures:

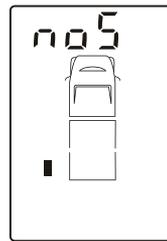
The TireMinder® TPMS will constantly monitor all tires which have been programmed. If you wish to check each tire pressure and temperature, press either a right or left button from “Stand By” mode. The Tire position will be displayed along with its exact pressure. Press again and that Tires' temperature appears. Press again to scroll to the next tire. If a tire position has been programmed but a transmitter is either missing or malfunctioning, the display will show “No...5” (actually should be the letter “S” meaning No Signal).



TMG400C



TMG300C



NO S

10.1) “NO....S” (5) and Red Light warning:

If this appears on the display, it means the monitor has lost the “S”ignal from one or more transmitters. At the same time, a battery icon with “sensor” will appear. There are multiple possible causes for this warning.

A. Low Battery

If your batteries have been installed for 9 months or longer and this is your first time seeing this warning, then it's time to replace one (or all) of the CR1632 power cells. You will find them at most battery specialty stores, Radio Shack® or very reasonably priced at www.MinderResearch.com. PLEASE SEE “PROPER BATTERY DISPOSAL” in Item 1.on page 3***

B. Electronic Interference

With the constant addition of new wireless products (most running at 433 MHz), it is possible that the TireMinder® signal is being interrupted by electronic interference. If the signal comes back or is lost intermittently, you can rest assured the loss is due to interference.

***Addition of a signal booster is recommended.

C. Distance

Even though the TireMinder® system will operate at 60 ft or more, there are times when the signal may be lost due to cold temperatures and/or deteriorating battery power thereby shortening the transmission distance.

***Addition of signal booster is recommended.

D. Missing Vehicle

The appearance of the “No....S” is inevitable when a towed vehicle is separated from the towing (power) unit. Do not confuse the battery/SENSOR icon with a low battery. As long as you are aware you left the vehicle behind, you may simply ignore the warnings (it will only beep once an hour). If you are not aware of the missing vehicle, we suggest you turn around and go find it!!!

Note: When the two systems are re-united, the monitor will pick up the missing tires automatically. This last part usually happens within the first 20 to 30 minutes (sometimes it takes longer). If you need them to re-connect sooner, simply loosen and tighten the transmitters on the previously missing wheels.

11) Low Battery Indicator (Receiver and Transmitter)

The TMG400C & TMG300C receivers (monitor) have built-in Lithium batteries which under normal use will function for 30 days before requiring a re-charge (based driving 4 hours per day). If the power is low, you will see an outline of a battery plus the word "Monitor" on the screen. A buzzer will also sound for 10 seconds. After 5 minutes, the unit will power off. To re-charge, simply use the supplied 12/24V car charger. A full charge takes 6 (six) hours.

*** NOTE....vehicle should be running. If not, make sure power outlet is live.***

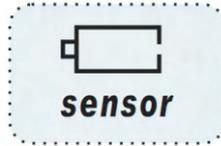
When a **Transmitter** battery is low, an outline of a battery plus the word "Sensor" will appear. At this time the exact tire position icon will flash and the buzzer will sound for 10 seconds. Please review 10.1 directions (above) for possible causes.

12) Transmitter Anti-theft lock

OK, this really should not take a lot of explanation. The black ring slips over the valve stem first. The two bars point outwards. Screw on the transmitter (finger tight). Raise the black ring until the bars fit into the slots. Tighten the three set screws with the supplied spanner wrench.

The important thing here is to not lose the small "spanner" wrench as you'll need it to remove the transmitter in the future.

Make note that the **Anti-theft locks should only be used if you are in extremely "high theft" areas. They are NOT necessary for securing the transmitters to the valve stems.**



13) Multiple Alerts

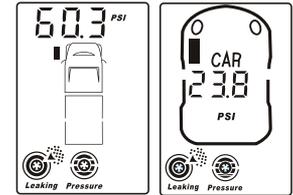
The TireMinder® TPMS monitors tire pressure & temperature in real time (that's like every 6 seconds). To save battery power, the REGULAR pressures and temperatures are updated on the monitor every 20 minutes. Should an abnormality occur, the monitor will react within the 6 seconds mentioned. There are multiple levels of alerts which vary in style & intensity depending on the severity of the abnormality. Alerts are activated whether moving or stationary.

A. Rapid Air Loss (Blow Out)

Condition: A tire loses 3 or more psi in less than 2 minutes.

Alert Description:

- Constant Audible "Beep Beep"
- White LCD screen Flashes
- Red LED flashes
- Tire position ICON Flashes
- "Blow Out" Icon appears in lower left corner
- Digital Tire Pressure Flashes



TMG400C

TMG300C

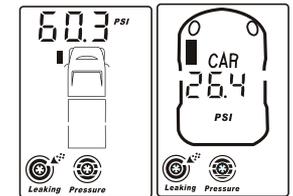
Cautiously bring the vehicle to a stop and check the offending tire. If the tire registers close to normal pressure (with a regular gauge), it is possible the TireMinder® has loosened due to rough terrain. Re-attaching the transmitter should cancel the warning.

B. Semi Rapid Air Loss

Condition: A tire loses 6 or more psi in 2 to 10 minutes.

Alert Description:

- Intermittent "Beep Beep"
- Red LED Flashes



TMG400C

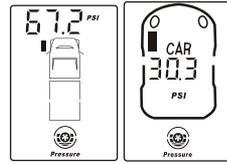
TMG300C

- Tire Position Icon Flashes
- "Leaking" Icon appears in lower left corner
- Digital Tire Pressure Flashes

This warning would most often occur should you pick up a nail or sharp object puncturing the tire causing a semi-Rapid air loss. As in 13-a, cautiously bring the vehicle to a stop and check the offending tire.

C. Normal Pressure Loss (condition 1,2,&3)

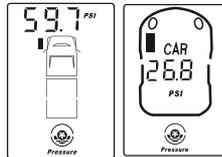
- 1) **Condition:** Over a long period of time, pressure in a specific tire has dropped 15% to 25% below the "basic" pressure previously set up for this tire. Example: You originally set up the system for this tire to contain 80 psi. If pressure drops to 68 psi (15% loss), the system will issue an alert.



1) TMG400C TMG300C

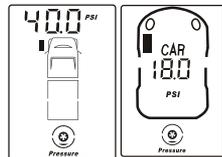
Alert Description:

- Intermittent "Beep" every 15 (fifteen) seconds for 5 (five) minutes
- Tire position Icon will flash & show 75% full
- Digital pressure displays exact lower psi
- To turn off the Alert, press right or left button. If the abnormality is not corrected, the Alert will re-activate after 1 (one) hour.



2) TMG400C TMG300C

- 2) **Condition:** If a tire drops 25% to 50% below the set basic pressure, the alert will be the same as in condition 1 except the Icon will show 50% full.



3) TMG400C TMG300C

- 3) **Condition:** If a tire drops below 50%, the Pressure Icon shows empty.

D. How to Adjust Start Point for Pressure Loss Warning

As previously stated, the TPMS is programmed to first warn if pressure drops 15% or more. If you would prefer this warning to come sooner (example at 10%), you may make this change by raising the Basic Starting Pressure by 5%.

As an example, if the manufacturer's recommended pressure for your vehicle is 80 psi, this is what you need to put in your tires. When setting up the Tire Minder Receiver (Monitor) in the "Basic Pressure Setting Mode," simply input the tire's pressure at 84 psi (80 + 5%). Now the Alert level will be at 71.5 psi (10% below the actual 80 psi in the tire.)

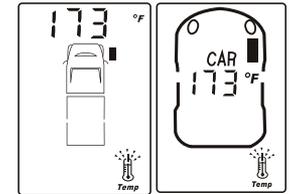
Please check the Minder Research web site www.MinderResearch.com for updates. You might find a chart to help you with the above explanation.

E. High temperature warnings 1 & 2

- 1) Condition: Internal Temperature of tire exceeds 167°F (75°C):

Alert Description:

- Intermittent "Beep"
 - Red LED & "Temp" Icon will flash
 - Exact Digital Temperature is Displayed
 - Tire position Icon will flash
- Note: To de-activate alarm - press right or left button



TMG400C TMG300C

- 2) Condition: Temperature exceeds 185 °F (85°C)

Alert Description:

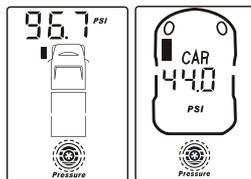
- Constant "Beep Beep"
- Others same as condition 1

Obviously under either condition you need to cautiously "get off the road" & determine the cause of the over heating. On RV type vehicles, this is usually due to a sticking caliper.

F. High Pressure Alert

Condition: A tire's pressure rises 20% above the Basic set pressure
Alert Description:

- Intermittent "Beep Beep"
- Tire position Icon flashes
- Exact Digital pressure flashes
- Tire Pressure Icon Flashes
- To silence alarm press right or left button
- Alert will re-activate after 1 (one) hour unless condition is corrected



TMG400C TMG300C

14) Optional Transmission Boosters TireMinder® TMB100-W and TMB100-B

The TireMinder® transmission boosters function with all three TireMinder® brand TPMS (TMG300C, TMG400C and TMG500-HD). Even though the basic systems have been tested and work well up to 60 ft., there are occasions where a vehicle will emit electronic interference causing the loss of signal from the transmitters. The chance of lost signals also increases with distance (from rear tires to receiver), extreme cold and battery deterioration.

Once installed on the 5th Wheel or a large Motor coach, no further programming or action is necessary.* The TireMinder® Booster will automatically pick up the signals from all transmitters and resend the information to the receiver/monitor.

The TMB100-W needs to be wired into a 12v or 24v DC power source.

* The TMB100-B is operated by 4 "AA" batteries and is ideal for Motor coaches which have limited access to power lines. These batteries should be replaced every 3 or 4 months.

15) Technical Specifications TMG400C & TMG300C

Sensor/Transmitter

Working Temperature	(-20°C--85°C) -4°F to 185°F
Working Humidity	0 - 95%
Dimensions	(23 x 21 x 21 mm) .8" x .8" x .9"
Weight	(9g) 0.3 oz
Battery Voltage	3V DC (CR1632)
Battery Life	9-12 months
Standby Current	500nA
Working Current	6mA
Pressure Range TMG400C	(0 Bar - 10 Bar) 0 - 145 psi
Pressure Range TMG300C	(0 Bar - 4.5 Bar) 0-65 psi
Pressure Precision TMG400C	(±0.3 Bar) ± 4 psi
Pressure Precision TMG300C	(±0.1 Bar) ± 1.5 psi
Temperature Range	(-20°C -- 85°C) -4°F to 185°F
Temperature Precision	(± 3°C) ± 5°F
Signal Transmitting Frequency	433.92 MHz
Operating Distance	up to 20M (65 ft) Booster recommended If towing or over 25 ft (Receiver to rear Tire)

Monitor/Receiver

Working Voltage	3V DC
Working Temperature	(-20°C -- 60°C) -4°F to 140°F
Working Humidity	0 - 90%
Standby Current	0.1mA
Working Current	15mA
Dimensions	90 x 55 x 24 mm 3.5"x2.2"x0.9"
Signal Receiving Frequency	433.92 MHz
Color of Backlight	White

16) Product Assembly Chart TMG400C & TMG300

Name	Quantity
Sensor/ Transmitter	4 sets
Monitor/ Receiver	1 set
Bracket	1 set
12/24 V DC Cigarette Lighter Adapter	1 set
Anti-theft Security Device	4 sets
M3 Screw	20 pieces
Driver	1 piece
User Manual	1 book

17) TireMinder® Limited Warranty

This TireMinder® TPMS is guaranteed against manufacturing defects for a period of **one year** from date of purchase. Should the unit not function as designed, The Minder Research Inc. will repair or replace the item at no charge to the owner.

Excluded are products that have been damaged through impact, water or unauthorized service.

This warranty is limited to the replacement of the product only and does not extend to any incremental cost incurred. In no case shall Minder's liability exceed the purchase price. This warranty gives you specific legal rights which may vary from state to state or province to province.

If you have a question or a problem, please contact the TPMS specialist at The Minder Research Inc. (772.463.6522) before returning the product. Many issues can be resolved over the phone.

If service is required return w/copy of bill of sale to:

The Minder Research Inc
P.O. Box 47
Port Salerno, FL 34992
www.MinderResearch.com
info@MinderResearch.com

COPYWRITE - The Minder Research Incorporated 2010



Notes:

Need help? Call the TPMS specialist at Minder Research
772-463-6522!

