MINDER RESEARCH INCORPORATED

The Minder Research, Inc.
3000 SE Waaler Street
Stuart, FL 34997
772 463-6522
info@MinderResearch.com

www.MinderResearch.com

TIRE MINDER®

Wireless Tire Pressure Monitoring System for cars, light trucks and SUVs

TireMinder®
55

The TireMinder® TM55™ TPMS Operating Manual

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Congratulations, you've done your homework and decided on the best TPMS on the market (Trailer Life and Motor Home Magazine's "Reader's Choice" Gold awards). If you have read any "User Comments" on various web sites, you will know that it's not just the product that got us the award. Minder has outstanding customer service.

If you have a question or problem, call or write. You'll quickly become a believer.
The Minder Team

Overview

The TireMinder® TM55™ Tire Pressure Monitoring System (TPMS) allows for constant monitoring of a vehicle's Tire Pressure & Temperature. The system can receive wireless information from up to 5 wheels. Various levels of warnings are issued for pressure changes (under & over), high temperatures and low battery status.

We realize people rarely read instructions.
The TM55™ is a highly sophisticated product which requires unique programming and understanding. Do everyone a favor – read on!

#1 Rule Antenna Up!

So Let's Get Started
Don't put the transmitters on the tires (yet).

1) Understanding your Monitor

The monitor should be partially charged so you can start programming right away. Press and release the **center button** to turn it on.

1.1) Charging

If the unit does not light up immediately, simply plug it into a live 12 volt power outlet using the cigarette lighter adapter or the USB cable to any USB port. You may work with the unit while is charging or after 15 to 20 minutes, it will have sufficient power to do a complete installation without being plugged in.

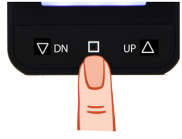
Monitor Battery Status

When only one bar is visible or if the icon flashes and beeps, it is time to recharge the monitor. An eight hour (or overnight) charge is recommended. This should be sufficient for more than two weeks of operation (this depends on how many hours per day the unit is active).

1.2) Units of Measure (PSI/kPa – °C/°F)

The monitor is set up to measure in PSI and °F.
To switch units, simply press the **DN or UP button** while in the monitoring mode.

1.3) Three Monitor Modes



a) Monitoring Mode - You will be in the "Monitoring Mode" 99% of the time. All wheel positions are shown displaying pressures and temperatures. Pressing and releasing the **center button** turns on the white backlight.
Pressing the **DN or UP buttons** changes the units of measure (psi/kPa/°C/°F).

b) Pressure Setting Mode – One of the 5 wheel positions is flashing. Pressing the **DN or UP button** raises or lowers the pressure next to that position. This is used when setting the baseline (cold) pressures you would normally run in your tires. To enter this mode, (from the "Monitoring Mode"), press and hold the **center button** for 5 seconds. The left front tire position will flash showing a pressure (36.2 psi if new). **See section 3.**

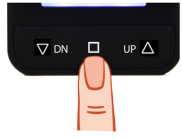
c) Learn Mode– This is only used for initial installation or when changing transmitters. In this mode, you "marry" the transmitters to individual wheel positions (there's just got to be a better word???)! To enter the "Learn mode," (from the "Monitoring Mode"), press and hold the **DN and UP buttons** for 5 seconds. The left front position will flash. If a transmitter has not been installed, you will see a solid RED light. If a transmitter has been installed, the light will be GREEN. **See section 6.**

2) Aluminum or Brass Valve Stems?

We hope you purchased the correct system for your vehicle. There are two basic TM55™ kits. One comes with brass transmitters (TM55-B) and the other with aluminum transmitters (TM55-A). The determining factor lies in the type of valve stems found on your car, SUV or truck. If the valve stems are rubber with brass threads, then you need model TM55-B. If your valve stems are metal with a dull silver color, then you need model TM55-A. These latter aluminum valve stems are only found on newer vehicles with factory installed Tire Pressure Monitoring Systems (TPMS). If you plan to order a 5th transmitter for your spare tire, be sure to order the correct one.

Do not put transmitters on the tires (YET).

3) Convert Monitor to "Pressure Setting Mode"
Setting the Baseline pressures (0 to 80psi)



3.1) From the "Monitoring Mode" (**1.3a**) press & hold the **center button** for approximately 5 seconds. Release the **center button** when you hear the beep.

3.2) All 5 tire positions will show 36.2 psi (if the monitor is new). The left front tire will be flashing.

3.3) Press **DN or UP button** until you see your desired "cold pressure". This should be what is recommended by the vehicle manufacturer and is usually found on the driver's side door jamb (NOT ON THE TIRE).

TIP: Holding the **DN or UP button** will make the numbers change rapidly.

3.4) Press and release the **center button** to move to the next tire position.
Repeat step 3.3. Do this for all 4 (or 5) positions.

3.5) To EXIT, press and hold **center button** for approximately five seconds. Display will "beep" and revert to the "Monitoring Mode."

4) Battery Installation

Your monitor is now ready to receive information from each transmitter. In order for this to happen, you will need to install the CR1632 lithium batteries.

Look at the illustration. Note that the battery slides UNDER the aluminum “bridge”, “clip” or “bracket”. Do NOT place it on top!! Be sure the plus (+) side is UP. Incorrect insertion may burn out the circuit or break the solder connection.
The cover should be finger tight (snug) so as to remain waterproof. Please, DO NOT use pliers and a pipe wrench! Over tightening will damage the O-ring.

Be sure to send in your warranty card to register for our FREE battery exchange program (details under **Section 14**).

5) Mounting the Transmitters (finally!!)

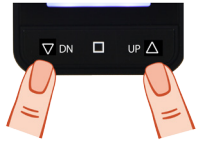
We are about to start mounting the transmitters on your vehicle. Keep the following in mind.

TIPS:

- First, air up your tires to the baseline pressures you set in **Section 3.**

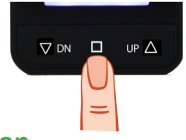
- Check that valve stem threads are not scratched, rusted or damaged.
- Once a transmitter is mounted on the valve stem, be sure it does not touch any solid portion of the wheel or hub cap.
- As TireMinder® transmitters weigh less than an ounce they should not affect tire balance.
- Even though we prefer metal valve stems, TireMinder® transmitters may be used on wheels equipped with rubber valve stems. Consider going to metal the next time you buy new tires.
- Remember that once transmitters are learned to a tire position, they are "married" to that tire position (there's that word again). Mark your transmitters before tire rotation so they can return to the learned position.
- The locking rings are there if you really really need them. They do not affect the operation of the system. They make good sinkers!

6) Convert Monitor to "Learn Mode"



6.1) From "Monitoring Mode" **(1.3a)** press and hold **DN and UP buttons** simultaneously (that's like at the same time – EH?) for approximately 5 seconds. Release the buttons when you hear a beep.

6.2) If the monitor is new, the left front position will flash with a solid RED LED illuminated. There will be no pressure or temperature readings "- - - PSI."



6.3) Mount any transmitter (FINALLY!!!) at the flashing location indicated on the screen. The LED will turn GREEN and the PSI/temperature will be displayed within 30 seconds. If the screen has gone dark (at any time), simply press and release the **center button** to see the numbers.

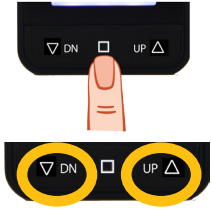
If synchronization is not achieved (light stays red), remove the transmitter for 10 seconds and re-mount. It's also a good idea to have the monitor close by with **ANTENNA FULLY EXTENDED.**

6.4) Press the **UP button** to move to the next position. Repeat steps 6.3 and 6.4 until all 4 (or 5) transmitters have been installed.

6.5) After having seen 4 or 5 green lights, Exit the "Learn Mode" by pressing and holding the **DN and UP buttons** for approximately 5 seconds until you hear a "beep."

The system is now in the “Monitoring Mode.” You will see all of your tires displayed with the current pressures and temperatures. There should be no GREEN or RED light at the top.

Press the **center button** to illuminate the screen.



The **UP or DN buttons** will only change the units of measure.

For now, you are ready to roll. Mount the monitor where it does not obstruct your view of the road. The TM55™ antenna is an integral part of the unit and should be fully extended at all times!

The rest of this document contains important operating information. We suggest you “scan” through it. Some sections will apply to your situation either now or in the future.

PLEASE DON’T LOSE these instructions. If you do, just visit www.MinderResearch.com for a copy.

Remember: Antenna UP!

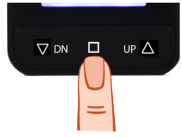
7) Replacing a single transmitter

If you need to replace a single transmitter, first enter the “Learn Mode.”

From the “Monitoring Mode,” press and hold the **DN and UP buttons** until you hear a “beep.”

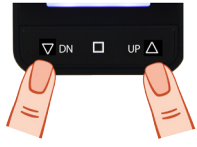
Press and release the **UP button** until you get to the tire position you wish to replace.

Press and hold the **center button** until the green LED light at the top of the monitor turns to red with a “- - - PSI.”



Attach the new transmitter (assumes you already removed the old transmitter). The LED should turn green within 10 to 15 seconds.

Exit the “Learn Mode” the same way you entered, press and hold both the **DN and UP buttons** until you hear a “beep.”



Voila, your new transmitter is installed!

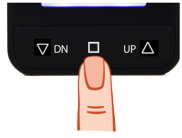
8) Auto “Sleep Mode” and Manual Power Off

It is not necessary to power off the system as it will shut itself down in “Sleep Mode” after 15 (fifteen) minutes of no activity. “No activity” means the vehicle is not moving and there is nothing (or no one) moving about.

The monitor is vibration sensitive and will re-start automatically when you re-enter the vehicle.

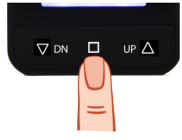
To manually turn off the system

From the “Monitoring Mode,” press & hold the **center button** until the screen goes completely blank. This will take about 10 seconds.

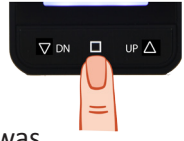


TIP: The unit will enter the “Pressure Setting Mode” after 5 seconds at which time you will see the baseline pressure for your left front tire. Continue to hold down the **center button** until the screen goes completely blank.

To turn the system back on, just simply press and release the **center button.**



9) Power On



Press and release the **center button** to turn on the monitor.

The unit will now start to search for updated information. The readings you see will be in the memory of the monitor from when it was last turned off (night before, the week before or whenever it was last active.) It will take approximately 20 minutes to update all pressures and temperatures.

TIP: If when you press the **center button** the unit does not light up, it simply needs to be re-charged.

10) Low Battery Indicator (Monitor and Transmitter)

10.1) Monitor Battery

The TM55™ monitor has a built-in Lithium-Ion rechargeable battery which under normal use will function for over 2 weeks before requiring a re-charge. The level of charge is displayed in the lower left of the monitor. You may recharge the unit at any time if you feel it may be necessary.

If the last bar disappears, the unit will beep several times and the battery icon will flash. If you don't plug it in soon, the monitor will shut down completely.

To re-charge, simply use the supplied 12/24V USB car charger.

A full charge takes approximately 8 hours using a cigarette type outlet. If using a USB power outlet, the time required may be more or less depending on the power of the outlet.

10.2) Transmitter Battery & "no S (5)"

Is your Antenna Up?

This alert indicates the transmitter has lost contact with the monitor. If you see an outline of a flashing battery icon below the temperature line next to the tire position with the problem then it is time to replace the CR1632 in the transmitter.

If you have a voltage meter available, you may check the voltage which should be 3.0 volts or higher. If it's under 3.0v and the system is older than 9 months, replace all the batteries on all your transmitters at the same time. If the voltage is above 3.0, then the loss of signal may be due to electronic interference.

Contact a TPMS specialist at Minder Research to discuss the problem.

11) Accuracy of Pressure Gauges and TPMS

No (reasonably priced) pressure gauge is going to be 100% accurate. Likewise, NO TPMS is going to be 100% accurate. What's important is that they are reasonably close and relatively consistent. You engineers and pilots probably have steam coming out of your ears after that last statement!!

Maybe this will help…

- The TireMinder® transmitters are accurate to ± 3% (that's +/- 1psi on 32 psi tires!)
- TireMinder® brand pressure gauges (mechanical or digital) are among the most accurate on the market at ± 2 psi.

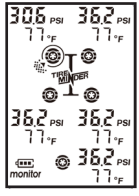
So if you are running 32 psi in your tires, you could have a gauge reading 2 psi high and a TPMS transmitter reading 1 psi low leaving a difference of 3 psi. This is not uncommon and is considered totally acceptable. Keep in mind, many gauges can be off by 4 or 5 psi!

What is important to understand is that the TireMinder® TM55™ (and any other brand for that matter) is designed to warn you of changes. For example, on a 32psi baseline tire, the TPMS really does not care whether it starts at 35 psi or 29 psi. It is the change and deviations from the baseline you need to know about.

12) 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 4 minutes if a change has occurred. Should an abnormality occur, the monitor will react within 6 seconds. 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.

Above all else folks, **DO NOT PANIC! Also, the DRIVER SHOULD NEVER try to figure out what the problem is. Let your husband (or wife), co-pilot, navigator, partner, etc., look at the monitor or simply wait for a convenient time to carefully pull off the road. At that time, check the monitor to see which tire position is causing the alert and why. Nine out of 10 times it will be due to a pressure change (15% below or 20% above the baseline you set in Section 3).**



12.1) Rapid Air Loss (Blow Out)

If you have never seen this icon, simply loosen a transmitter. The below description will happen. Make a mental note of what it looks like. If convenient, why not do that right now ?

This is the most important alert to watch for and requires correction ASAP.

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

Alert Description:

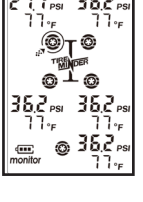
- Audible “Beep” 15 times
- White LCD screen lights up and stays lit for 5 minutes
- RED LED flashes as does the offending tire position
- “Blow Out” icon appears next to the offending tire position
- Digital tire pressure flashes – you will see the psi number go down as the tire continues to lose pressure.

Action Required:

If you encounter this alert while driving, cautiously bring your vehicle to a safe, off-road location to check the offending tire.

12.2) 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 as does the offending tire position
- Tire position icon flashes
- Modified “blow out” icon flashes
- Digital tire pressure flashes and shows remaining psi

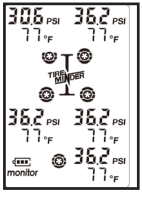
This warning would most often occur should you pick up a nail or sharp object puncturing the tire causing a semi-rapid air loss. This alert may also be activated due to a rapid drop in temperature causing a corresponding drop in pressure.

Action Required:

Cautiously bring the vehicle to a safe off road location and check the offending tire.

12.3) Normal Pressure Loss

Condition: Over a long period of time, pressure in a specific tire has dropped 15% below the "baseline" pressure you set up for this position. Example: You originally set up the system for this tire to contain 35 psi. If pressure drops to 29.7 psi (15% loss), the system will issue an alert.



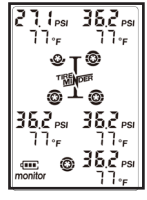
Alert Description:

- Intermittent "Beep" for 5 (five) minutes.
- Tire position icon will flash and display lower than normal pressure
- Pressure icon (circle beside offending tire) will flash and show 75% full
- To turn off the alert, press **CENTER button**. If the abnormality is not corrected, the alert will re-activate after 1 (one) hour.

Action Required:

Monitor the pressure and bring it up to normal soon.

Condition: If a tire drops 25% to 50% below the set baseline pressure, the alert will be the same as in condition 1 except the icon will show 50% full.



Action Required:

You should not drive very far (your 35psi tire could have 20psi!!). Correct the problem ASAP.

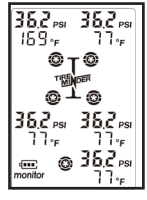
Condition: If a tire drops below 50%, the pressure icon will show empty:

Action Required:

Stop at the next safe location and check the offending tire with a gauge. If the reading is correct, you should change the tire before driving further.

12.4 High Temperature Warning:

Condition: Internal Temperature of tire exceeds 167 F° or 75 C°



- Intermittent “Beep”
- Red LED & “Temp” Icon will flash beside the offending tire.
- Exact digital temperature is displayed
- Tire position icon will flash

Note: to de-activate alarm – press **CENTER button**

Action Required:

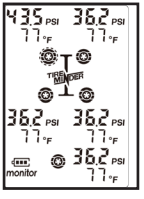
Obviously, under this condition you need to cautiously “get off the road” and

determine the cause of the overheating. In most cases, this will be due to a brake caliper that is sticking or a bearing which has overheated.

12.5 High Pressure Alert

Condition: A tire's pressure rises 20% above the baseline pressure you had set for that position. Example, if the baseline in the position is 35 psi, the alert would sound if the pressure reached 42 psi (20% up). We see this most often if a tire starts out cold at 2 or 3 psi above the base line (say 38 psi cold). After a time at high speed, the temperature and pressure will rise. It is not unusual for the pressure to rise 4 or 5 psi which would then give you the over pressure warning.

Alert Description:



- Intermittent "Beep Beep"
- Tire Position icon flashes
- Exact digital pressure flashes
- Tire Pressure icon flashes showing an extra outside ring

To silence alarm press **CENTER button**

Note: alert will re-activate after 1 (one) hour unless condition is corrected.

Action Required:

When reasonably convenient, confirm the pressure with a regular gauge. If the pressure is too high, simply reduce it to normal.

13) TM55 Transmitter Update Cycle

The TM55 Transmitter updates every 4 minutes, as long as the vehicle is in motion!
To save energy, the TireMinder TM55 transmitters will not transmit unless the vehicle is in motion. As soon as the transmitter senses motion, it will send out an initial pressure and temperature reading. Keep in mind, the transmitters continually check every 6 seconds for any tire pressure or temperature issue. If it finds any fluctuations, it will immediately alert you.

What if I lose pressure when the tire isn't moving?
As soon as your vehicle starts to move, you will be immediately notified of an issue.

14) Using the Locking Rings

To install the locking rings, thread the anti-theft screw onto your valve stem. Then, add your transmitter to the same valve stem. Use the wrench to tighten and "lock" the transmitter and anti-theft screw in place.

Please note: If you are in an area that has high salinity (road salt, sea salt, etc.) you will need to occasionally remove the transmitters and locking rings to prevent corrosion.

15) Technical Specifications TM55™ Sensor/Transmitter

Working Temperature	(-20°C to +85°C) -4° F to 185° F
Working Humidity	0 – 100%
Dimensions	(23 x 21 x 21 mm) .8” x .8” x .9”
Weight	(14,1 g) 0.5 oz.
Battery Voltage	3V DC (CR1632)
Battery Life	1 year
Standby Current	500mA
Working Current	6mA
Pressure Range TM55™	0 – 80 psi
Pressure Precision	± 2.7 %
Temperature Precision	(± 3°C) ± 6° F Does not replace the Weather Channel!
Signal Transmitting Frequency	433.92 MHz
Operating Distance	Sorry, no hard number – varies with temperature, battery condition and amount of electronic interference.

Antenna UP is MANDATORY!!

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

Charger

Input Voltage	12/24 VDC
Output Amperage	1.0 Amp
Internal Fuse	3.0 amps

16) TireMinder® Limited Warranty

In order for Minder to extend its' award winning customer service, it is extremely important that you complete and mail the enclosed warranty card along with a copy of your bill of sale. In addition to the warranty, this will register you for the FREE battery exchange program (CR1632 transmitter batteries only) valid through the end of 2018.

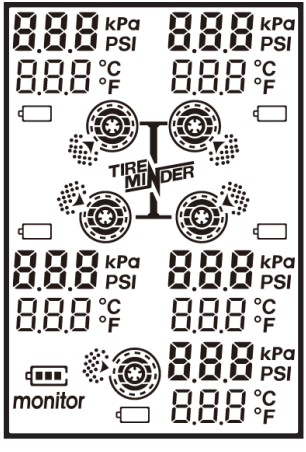
This TireMinder® TPMS is guaranteed against manufacturing defects for a period of one year from date of purchase. Should the unit not function as designed, The Minder Research Inc. will repair or replace the part at no charge to the original owner.

Excluded are products that have been damaged through impact, water, fire, misuse 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 a TPMS specialist at The Minder Research Inc. (772.463.6522) before returning the product. Many issues can be resolved over the phone.

17) Contact Info and Kit Contents

If service is required return w/copy of bill of sale to:
The Minder Research Inc
3000 SE Waaler Street
Stuart, FL 34997

TM55™
LCD LAYOUT



TM55-A Kit Includes:

1 Monitor and 1 USB Car Charger
4 Aluminum Transmitters & 8 CR1632 Batteries
1 Adjustable Mounting Bracket
4 Anti Theft Locking Rings, 1 Wrench
Warranty Registration / Battery Exchange Card

TM55-B Kit Includes:

1 Monitor and 1 USB Car Charger
4 Brass Transmitters & 8 CR1632 Batteries
1 Adjustable Mounting Bracket
4 Anti Theft Locking Rings, 1 Wrench
Warranty Registration / Battery Exchange Card