



TYRE WATCHER X2

VERSION 2 - MANUAL



Caravan Tyre Pressure Monitoring System

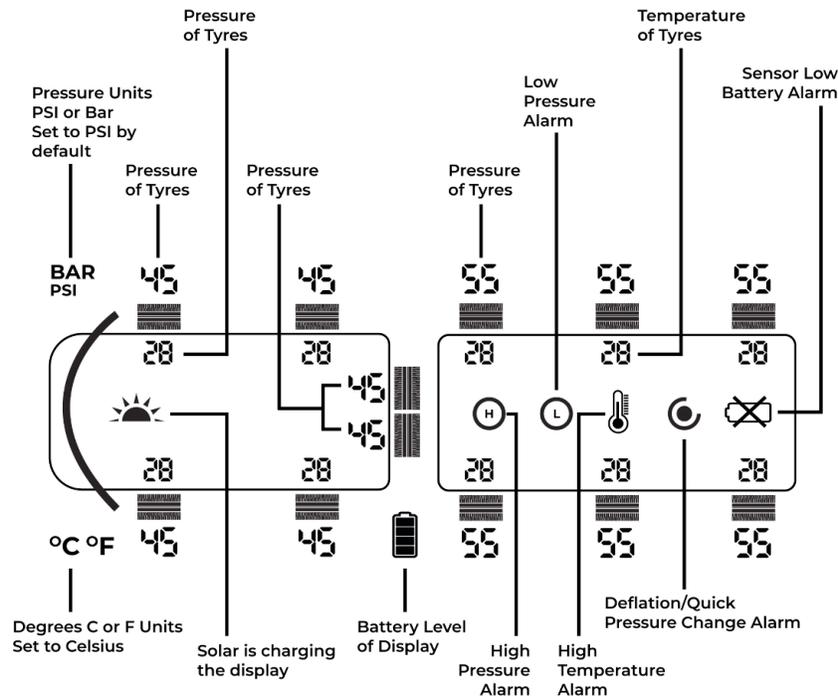
Thanks for purchasing our TyreWatcher X2 product we will try to keep this manual updated as much as possible. As we will be constantly improving this product and adding to the range of options it has using both hardware and software changes. So this is why it is stored online so you can download it and print it yourself. Plus we have a wide range of videos you can watch.

Where to find videos and firmware updates: On the product page down the bottom we will keep all information in one spot so it is easy to find.

What's in the Kit:

- Display Unit
- Sensors up to 12
- Cigarette Plug Charge Cable
- Dash Adhesive Pad
- Windscreen 3M Stick Pad
- Lock Nuts
- Spanner

What Display Icons Mean:



Firmware Version:

When the unit is turned on each time it says E X.X this is the version that firmware is on your display. You can check the product page to get the latest version and download it.

Quick Installation Guide:

Few steps to get the unit installed and working.

Notes:

Long Press = Press and hold button for 3 seconds

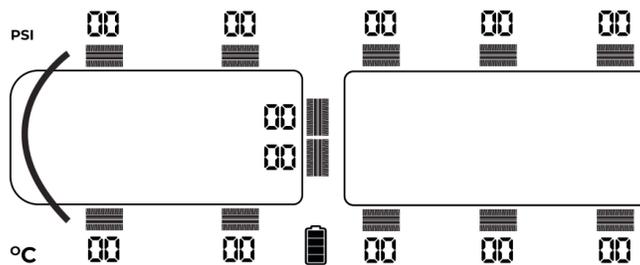
Press = Press button like a mouse click

We have a full setup video that can be viewed here that will give you visual steps:

[Setup 1st Time Video](#)

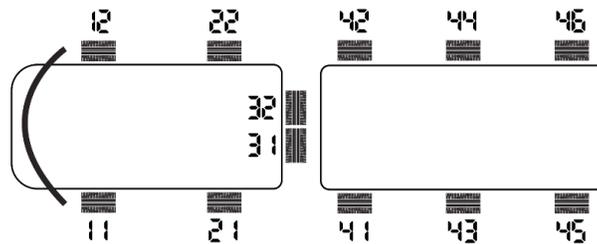
Step 1: When first using the unit please leave it plugged in with the cigarette charger for the first few uses until the battery is showing full.

Step 2: Take out your monitor and long press the M Button (Middle Button). This will turn the unit on. Pressing the M button is how you can turn the unit off and on. (Unit will auto turn off when in vehicle) Please make sure that the screen is showing numbers in all the tyre positions that it should have.



(This example above would be for a 12 sensor setup)

Step 3: Look at the Eze-Match Diagrams below to match up what sensors go on what tyres. If you have bought a 6,8,10 or 12 sensor kit from us the sensors will be matched as the below. So if you look at the first image it is for the 6 Sensor kit and you will put the sensor with “11” marked on it on the front left hand tyre (Passengers side front tyre)



(This is showing all 12 Tyre Sensor Positions)

These work by the first number being the axle so to speak and the second number is sensor so 11 is axle 1 sensor 1.

Step 4: Time to screw sensors onto your tyres. Take the display and sensors with you as you go around each tyre. Unscrew your tyre’s plastic dust cap and remove it. Screw the lock nut onto the valve thread. These are not required but are there to make the sensors harder to steal.

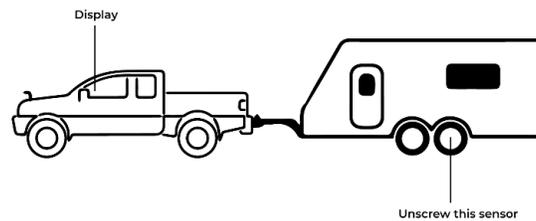
Then screw the sensor onto the valve thread and you should see a pressure value display in that position on the monitor. So if you screwed on sensor 11 when you look at the monitor the front left tyre on the vehicle should be showing a pressure.

Use the spanner provided in the kit and back lock nut onto the sensor if using the lock nuts. (Leave lock nut off furthest tyre from dash for step 6 as you will want to unscrew this sensor for a test)

Step 5: Go around and screw the sensors onto all of the tyres and confirm you have all pressures showing. So once all are done your tyres you will see the pressures and temps for each sensor.

Step 6: Do a range test this is just to make sure that when the display is in the location it is that

you will get the sensor signal. Place the monitor on the dash of the vehicle and go to the furthest tyre from display and screw sensor off so that it is just hanging onto the end of the thread. You should be able to hear the display alarming and it will be showing 00 as the pressure on that sensor and flashing. If you do not hear the unit alarm move the display around the dash and see if it picks up the sensor and alarms. If not you will need a repeater so see our repeater section and also this video here: [Repeater What is It](#)



Step 7: Set the high and low pressure alarms for each axle & Temperature Alarm. The wheels are divided so that there are 4 different high and low pressure alarm settings. This is the Front Vehicle Tyres, Rear Vehicle Tyres, Spares or Airbags, Caravan Tyres. So if pressure is ever above the high setting or below the low setting you will get an audible alarm and the unit will flash on screen. (There is also auto alarms that will alarm if anything is not as per normal but these are the user set alarms)

- Make sure display is on
- Press the + button and BAR PSI will show on screen.
- Press the + button until you see "P5" show on the screen.
- Press the M button to confirm.
- The front two wheels will start flashing.
- Press the M button again and you will see "En 1" this is just turning the user alarms on or off for these sensors so leave it as 1 for on.
- Press M button again and you will see HI - 48 this is the high pressure alarm setting. So this means it is set at 48PSI. Use + and - buttons to set the high pressure alarm you want to set.
- Press M button and you will see Lo - 32 this is the low pressure alarm setting. So this means it is set at 32PSI. Use the + and - buttons to set the low pressure alarm you want to set.
- Press M button and you will see the Rear Vehicle Tyres flashing. Repeat what you did above to set alarms for all tyres.
- Once you have done the last alarm which is caravan tyres and pressed the M button you will see "th" on the screen.
- Press the M button and you will see the high temperature alarm. Use the + and - buttons

- to set this as you want it or leave it as the default value.
- Press the M button and you will see "EP" on the screen.
- Long press the - button and you will go back to the main screen.
- User Alarms have been set.

Step 8: Mount the monitor on your dash or windscreen where you can see the screen easily and the solar panel will get some sunlight.

You just need to clean the surface and apply the stick pad to the surface and one side to the monitor mount. You can cut down the stick pad if needed to suit size.

The monitor has been designed so it does not need full direct sun on solar so the sun getting to it at an angle is fine.

Step 9: Go for a 20 min drive and ensure that all pressures are showing and staying stable.

Step 10: Well done, that is the basic setup all done.

Quick Disconnect for Caravan Drop Off

Allows you to disconnect the caravan tyre sensors from the monitor for when you are not towing the caravan.

- Long Press the + button for 4 seconds disconnect you will see the caravan disappear off the screen and to reconnect long press the + button for 4 seconds.

On Road and Off Road Alarm Mode

This allows you to have two sets of user set alarms and be able to change them at a press of a button when you go off the tarmac onto other types of roads and have let your tyres down.

So you would have already set your on road user alarms as per Step 7 on the quick setup guide above. To set the off road alarms the steps are the same but to get into it you just need to.

- Make sure display is on
- Press the + button and BAR PSI will show on screen.
- Press the + button until you see "P5" show on the screen.
- Long Press the M button and you will see it will say "OFF" at the bottom of the display and the front tyres will be flashing. From here follow the same instructions as above.

Switching Between mode on and off road modes: Now once you are back on the home screen you just need to press the "M" button four times and you will hear a long beep which means off road mode and if your press the "M" button four times again you will hear a short beep which means on road mode. We suggest changing mode before letting tyres down as if you do it the other way you may get alarms until the sensors send next data. Either way these alarms will clear in 5-10mins of driving.

Home Screen - "M" Button four times - Long Beep = OFF Road Mode

Short Beep = On Road Mode

Display Night Brightness

Our Display uses the clear sensor on the front of the unit to turn the backlight of the display on. There is a setting that allows you to adjust how bright this is if you need to turn it down.

- Home Screen
- Press the - button until you see "LL"
- Press the M button and the number will flash.
- Use the + and - buttons to adjust the number.
- 1 = Low Light, 2 = Middle Light, 3 = High Light
- Press the M button to select and number will stop flashing
- Long press - button to go back to home screen

Upgrading Software on Monitor

This is best to watch on video see the two videos here:

Android Install Video:

1. Turn on the unit. You'll see it's set at "2.4" (that's because of the current firmware version installed).
2. To check the firmware version, go to www.obd2australia.com.au.
 - a. In the product search bar, type in "tyrewatcher x2"
 - b. Scroll down to the bottom and you'll see the latest firmware update notice there.
 - c. Click on download. No need to worry about opening anything.
3. Next, go to Google Playstore and look for the app "NRF Connect for Mobile" (it should have a "chain link" logo).
4. Click "Install" or "Open" (if already installed).
5. Now, time to put the device on upgrade mode. While the app is open, go to your Tyrewatcher X2 device and push the Menu button on the left.
6. Press it again until you see "UP" on the screen.
7. Press the middle button. You'll see that the "UP" starts to flash.
8. On the app, scroll down until you see "BT22". Click "Connect".
9. Open the "Secure DFU Service" option.
10. Click the Up and Down button so that it is crossed.
11. Push on the Up arrow button.
12. A pop-up message appears. Click "Send".
13. Go back to the Scanner menu. Look for "DfuTarg" and click "Connect".
14. On the top right of the screen, click on the "DFU" button.
15. Make sure the option on the pop-up message is set to "Distribution packet (ZIP)" then click "OK".
16. Find the file "HB-E2.4.zip". Click on it.
17. Once the update is complete, the unit will automatically reboot.
18. You'll now see the new version shown on your Tyrewatcher X2 device.

iPhone Install Video:

1. Turn on the unit. You'll see it's set at "2.4" (that's because of the current firmware version installed).
2. To download the latest firmware version, on your iPhone, go to the website (www.obd2australia.com.au).
3. Search for the product "Tyrewatcher X2".
4. Near the bottom of the product page, you will see the link to the firmware update. Click on that.
5. A pop-up message appear. Click "Download".

6. Go to the App Store. Search for the app “NRF Connect for Mobile” (it should have a “chain link” logo). Click “Get” to install.
7. If you already have the app, open it.
8. Go back to the unit. Press the left button to take you to the menu screen.
9. Press it until you see “UP” (which means update) on the screen
10. Now, press the middle button. You will see the “UP” flash or blink and this means the device is in update mode.
11. Go back to the app on your phone. Click “Scan” on the upper right part of the screen.
12. Once done, scroll down until you see the “BT22” option appear. Press “Connect”.
13. On the top of the screen, click “Client”.
14. Look for, in the Attribute Table, the option “Buttonless DFU Without Bonds”.
15. The Up/Down arrow should be blue. If not, just click on it.
16. Click on the Up arrow. Go to “Bool” on the pop-up menu.
17. Slide the button from “False” to True” and click “Write”.
18. Once you get a disconnection notification, click “Close” to return to the main menu.
19. Scroll down and look for “DfuTarg”. Connect to this.
20. On the top of the screen, select “DFU”. Click on “Open Document Picker”.
21. Look for the file “HB-E2.4.zip” on the folder. Click on that.
22. Click on “Start”. The progress bar should appear on the button. Your unit should also start rebooting.
23. Once the update is successful on your phone, the Tyrewatcher X2 will show the new version.

This system is software updateable which means as we improve the unit and add features you will be able to update your unit from your phone. When the unit powers up you can use the M button to turn it off and on. You will see E 2.X what this is telling you is the version of software your display has. So you can check what it is then go to the product page and scroll to the bottom and you will see what version we are up to.

To upgrade:

Step 1: Download the App “NRF Connect” from the app store or google play store onto your phone.



Step 2: Press + button to show BAR PSI. Press the + button until you see “UP” press M button and the UP will flash.

Step 3: Open “NRF Connect” App on phone and in “Scanner Tab” connect to BT22.

Step 4: Under “Secure DFU Service” press the Up/Down Together Arrow icon and it will be crossed out.

Step 5: Under “Secure DFU Service” Press the Up Arrow icon and you will see a pop up saying “Reset the device to bootloader” press the send button.

Step 6: This will disconnect BT22 and you will need to go back to the scanner tab and choose “DfuTarg” and press connect.

Step 7: At top of screen press the DFU icon and choose the (ZIP) icon and press ok.

Step 8: Choose the zip file from your phone.

Step 9: You will see a graph and once complete the monitor will restart and you will be on the main screen.

Step 10: Close app on phone this is all done.

Battery In & Out Method for Sensor Pairing

This method allows you to place ANY sensor on any tyre position that you choose. Ignore the number on the top of the sensor and place it at any tyre position while using this method. This is handy if you want to change a sensor to a different tyre or add a new sensor to the system.

- Adding a new sensor
- Pairing sensors again
- Recalibration by pairing sensors again

Step 1: Unscrew the sensor cap using the provided spanner and push the battery out using the end of the spanner. If doing multiple sensors then do this for all sensors that you are adding.

Step 2: From main screen Long Press - button (3 Seconds) unit will beep and screen will show id 11, Bond and front tyre will be flashing with the 11.

Step 2: Use + and - buttons to choose the tyre you want to pair the sensor to.

Step 3: Push battery back into the sensor you want to pair and a ID number will show up in the two squares for example "2A F3" when this id shows up press the middle button to confirm and it will go to the next tyre.

Step 4: Repeat if needed or long press the - button to exit.

You will notice as you have pulled the cap off that you could in fact screw any cap with any number onto different sensors so this is an easy way to swap them around or if you get a new sensor that is blank as a replacement you can just use the old sensor cap with the number on it.

Tyre Exchange - Swap Sensor Position

This feature allows you to swap the tyre position of a tyre sensor. For example if you want to swap the sensor that is on the front left tyre position to the front right tyre position.

Step 1: Press the + button from the main screen. BAR PSI will show.

Step 2: Press + button and click until you see "EP"

Step 3: Press the M button to enter this menu.

Step 4: Press the - button to choose one tyre position and use the + button to choose another tyre position. You will end up with two flashing tyres and these two will swap.

Step 5: Press the M button and they will be swapped and you will "LL" on screen. Long Press the right button to go back to the main screen.

Deleting A Sensor From The Monitor

This feature will remove sensors from the system. This is handy if you have a 12 sensor kit but

only want to use 10 sensors. Or if you want to delete a current sensor from the system and add a new sensor.

Step 1: Short press the - button.

Step 2: Press + or - buttons to choose the tyre sensor you want to delete.

Step 3: Press the middle button and “dEone” will show. Long Press the middle button and this sensor will be deleted.

To delete all sensors long press the left button and “dEAll” will show long press middle button to confirm and this will delete all sensors.

Setting Up Repeater & Repeater Mode

Do you need a repeater?

Some notes to consider:

- If you want to know if you need a repeater or not, you can do a **range test**.
To do so, you can place your unit on where you plan to put it on your vehicle. Then, unscrew the sensors on your tyres up to the edge of the thread. The device should ring an alarm if it senses pressure coming off the tyre. If not, you might need a repeater to reach those tyres.
- You might also take cue if your display often shows “88” on a tyre pressure reading, especially if your driving. An “88” means that no signal was received from that particular sensor.
- Another important consideration before mounting the repeater is finding a spot on your vehicle where it could have unobstructed “line of (signal) sight” with the Tyrewatcher X2 screen. It could on the top of your rear window, on top of the van, or on the van’s A-frame.
- Still, we recommend to test the repeater on different ranges and spots before installing it. You may also go for a drive to test the unit while in motion. Remember, every vehicle has a different set-up, and signal reception could be affected greatly by this.

Putting the Unit on Repeater mode

1. Press the left button to go to the menu. Press on it again until you see “Pt”.
2. Then, press the middle button and the “PU t” should appear on the screen.
3. Plug the repeater into a power source.
(Currently, it has a cigarette plug but other options could be added in the future to make it easier to set up a power source for the repeater.)
4. The LED on the repeater should flash once.
5. Click on the middle button again and “PU t” should start to flash.
6. Once the display resets, you will now see the repeater reading.

7. You may do a range test again to assess the repeater.

Connecting Sensors to the app

Doing a cold to warm pressure increase test

TroubleShooting

1. Turned unit on and there are now 00s or any numbers showing?

Ok this might mean that the IDs from the sensors have somehow been deleted. This can happen at times when multiple buttons are pushed. What we need to do is follow the Battery In & Out Method for Sensor Pairing. This will pair each sensor to the display again and then you can carry on the quick setup guide at the start.

2. Unit will not power up?

Please leave it plugged in with the cigarette charger for at least 2 hours if possible.

3. I get 88 showing as a pressure when driving?

Ok we use this to tell us that there has been no signal received from this sensor. If it just happens randomly once this is ok as it may have been interference or other issues. However, if it happens all the time then we need to sort this. First thing to try is to test the sensor when the car and van are stationary so just unscrew the sensor that is showing 88 and see if the display alarms. If it does then it may be a cause that you need to use a repeater in your setup. So you will need to purchase a repeater.

1. One of my sensors does not display on the screen?
2. The unit is not auto turning off?
3. The unit is not charging or is going flat?
- 4.
- 5.

FAQs

