

bf1 systems Garage Monitoring System

bf1systems' new Garage Monitoring System allows teams to monitor the status of up to 240 tyres in and around the garage area at once.

Using the permit list and position files already with teams, the PC software monitors the pressure, temperature and remaining battery life of sensors in the immediate vicinity of the pits and displays sensor data in an easy to read format on the screen, and alerts engineers if a tyre breaches a pre-determined warning limit.

The system works using antennae mounted in the garage to receive datagrams transmitted by the wheel sensors when they are stationary, or when the wheel sensor is interrogated by a Mini Trigger or Mini Analyser, which are then processed by the ECU and the data is transferred to the PC software. The system has the benefit that if a team member is already using one of bf1systems' handheld tools, such as the Mini Analyser to interrogate a wheel sensor, the Garage Monitoring System will also receive these datagrams and update itself accordingly.

Separate warning limits for minimum pressure, maximum pressure, minimum temperature, maximum temperature and remaining battery life can be set for each wheel. If a sensor falls outside of the specified limits it is immediately highlighted on the screen, thereby allowing teams to ensure all their tyres are in the optimum condition at all times.

Users have the option of sorting the data on the screen either by sensor serial number, by wheel set number or having tyres which have warnings present, automatically displayed at the top of the screen. Regardless of the sorting option chosen, the system displays for each corner of the car, a summary at the top informing the user of how many wheel sensors on that position have been receiver, and how many have warnings present.

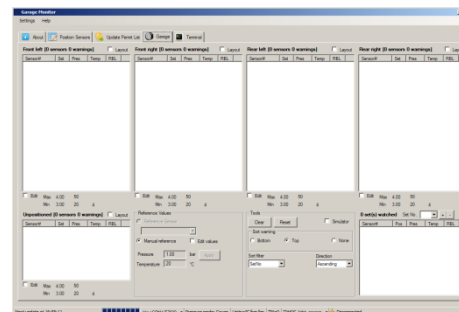
The user also has the option of clicking on a single wheel from a complete set to allow them to view just the data for that wheel set in a sub window. This is very useful if an engineer wishes to monitor in close detail the condition of one particular tyre set.

To ensure that the tyre pressures displayed are corrected for ambient pressure changes arising either from weather conditions, or from elevation changes, the user has the option of either manually entering the atmospheric pressure into the software, or choosing to use one of their wheel sensors which is not mounted in a wheel, as an ambient pressure sensor. This ensures that all times the pressures displayed are correct.

The Garage Monitor System software is designed to be run on a PC all day, and can be interrogated whenever required to check the status of the wheels.

The Garage Monitoring Software bundle consists of the following items:

- 1 x Garage Monitoring PC Software
- 1 x Garage Monitoring ECU
- 4 x Garage Monitor Antennae
- 1 x Connector Kit Consisting Of 4 x Antenna Loom Connectors and 1 x ECU Loom Connector



Specification

Electrical

- Operating Voltage Range – 9V – 18V
- Current Consumption – <200mA

Environmental

- Operating Temperature Range – 0°C - +85°C
- IP Rating – IP50 – IP65 (ECU dependant)
- Antenna Receive Range – 10m in free space

Configurable Warnings

- Minimum Tyre Pressure (independent warnings for each wheel position)
- Maximum Tyre Pressure (independent warnings for each wheel position)
- Minimum Tyre Temperature (independent warnings for each wheel position)
- Maximum Tyre Temperature (independent warnings for each wheel position)
- Minimum Remaining Battery Life (independent warnings for each wheel position)