

December 2008

## Welcome

This special new technology edition newsletter is being released to announce new technologies relevant to F1 and LMP racing. Both of the products described will be available in 2009.

The infra red tyre system is likely to be critical for F1 applications. It accurately measures tyre carcass temperature and pressure. For our existing customers this feature is compatible with current DigiTyre ECU's.

Our new composite wheel allows for integrated rubber custom grips bespoke to the driver. This aids comfort in longer endurance events. The wheel be raced in 2009.

We would like to wish all our customers Happy Christmas and we look forward to working together in 2009.

Regards,  
John Bailey

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## New Technology Issue

Infra Red Tyre Pressure and Temperature Monitoring  
Moulded Rubber/Composite Steering Wheel

## Accurate tyre carcass temperature measurement

BERU f1systems announces the debut of its infra red (IR) Tyre Pressure and Temperature Measurement System (TPTMS). A development of our DigiTyre TPMS, it offers a rim mounted sensor to measure the tyre's pressure and inner surface temperature accurately (0.5°C), and with high resolution (0.25°C).

"In F1 when using a standard wheel electronic, heat soak from the rim prevents an accurate tyre carcass temperature from being recorded," says Principal Engineer, Gavin Skipper. "Being able to accurately monitor the tyre's temperature is critical, so the data from the IR sensor is invaluable". Existing BERU f1systems TPMS customers will be able to purchase a software upgrade for their ECU and then continue using this with the new IR TPTMS sensor and antenna. The system is capable of measuring tyre temperatures from -40 to 215°C.

The sensor also includes a Low Frequency (LF) receiver, allowing engineers to interrogate the wheel sensor using hand-held tools, and monitor the tyre's temperature and pressure when the wheels are not fitted to the vehicle.

"We have already commenced testing with F1 teams and the results are impressive," adds Skipper. For further information, please contact [gavin.skipper@bf1systems.com](mailto:gavin.skipper@bf1systems.com) or call +44 1379 646200

## New composite wheel with bespoke hand grips

BERU f1systems has created a one piece rubber overmoulded composite steering wheel. Cost effective and lighter, it requires no additional rubber tooling and offers improved bonding to the composites. Through laser scanning of the driver's grip profile, it will be possible to create a customised grip matching the driver's hand profile. This will offer increased comfort and control for drivers during longer race stints.



BERU f1systems is able to offer a complete design and manufacture of composite steering wheels including integrated electronics and displays. Our close working relationship with Souriau offers access to special connectors developed specifically for this application. Our recently installed high pressure/high temperature autoclave allows us to produce particularly intricate components. For further information about composite applications, please contact [john.bailey@bf1systems.com](mailto:john.bailey@bf1systems.com)