



## **ST8191 Brake Bias IDU Systems – ST542030 Manual Addendum**

### **Purpose of this addendum**

In conjunction with the ST8100 Display User Guide, this addendum will help you install and use the Stack ST8191 Brake Bias Display Option. It explains how to set up and configure the system for your vehicle.

### **Introduction:**

System Requirements:

ST8103, 4, 5 or 6 and ST8175 Twin Brake Pressure Sensor Option Pack.

### **Description:**

Users will find a new layer 4 inserted before the Performance Meter layer on the dash showing brake pressure information. The front and rear pressure values are shown under the headings 'Front' and 'Rear'. The percentage value in the middle shows the Brake Pressure Balance and is always shown with respect to the front pressure. US and UK systems display brake pressure in PSI, EC systems display pressure in Bar.

### **Operation:**

The Brake Balance Alarm will operate if the Balance Value goes outside the upper and lower limits. These limits can be set by the user, and are set to a default value of 50% low and 100% high. The alarm is designed to give some warning to the driver that the brake balance of the vehicle may not be as expected. If the balance goes outside the pre-set limits, then the system will give an alarm each time the brakes are applied, thus giving the driver time to react before racing speeds are achieved. The alarm shown will be: !! Brake Bias 40% !! and the alarm light will also illuminate. The alarm can be cancelled in the normal way, Switch 3.

A Balance value will only be shown if both brake pressures exceed the value set in the set-up menus. This is set to a default value of 150PSI or 10 Bar, but can be adjusted by the user to prevent alarms caused by any residual pressure in the brake system. Once both pressures exceed this value a Balance percentage value will be calculated and displayed.

### **Setting the Brake Balance Alarm:**

Enter the Set-up Menu in the normal way (Switches 1 and then 2)

Scroll through the settings using Switch 3 until the 'Edit Test Low Brake Bias 50%' menu is reached.

Using Switches 1 and 2 the Low Brake Bias threshold can be adjusted.

*This is the Minimum Front Brake Pressure that is acceptable, i.e. Rear Brakes locking. If the balance percentage value falls below this value the alarm will activate.*

Pressing Switch 3 then allows the High Brake Bias threshold to be adjusted, using Switches 1 and 2 as before.

*This is the Maximum Front Brake Pressure that is acceptable, i.e. Front Brakes locking. If the balance percentage value goes above this value then the alarm will activate.*

Pressing Switch 3 again then allows the Mask value to be set. This is the value below which no alarms are shown. This is used to mask any effects caused by low residual pressure in the brake system.

*Note: This cannot be adjusted below 10 Bar (EC) or 150PSI (UK & USA)*