



## Welcome

Welcome to  
**MoTeC News.**

**Our aim is to keep MoTeC users up to date on MoTeC systems, from hardware and software, to accessories, tech tips and any other information that could be of interest or use to you.**

**If you know of anyone you think might like to receive this, just email their details to the following address, and we will include them.**

[jeanette.ralston@motec.com.au](mailto:jeanette.ralston@motec.com.au)

## TECH TIP—TRACK MAPS

One of the more popular features of the **MoTeC** data logging and telemetry is the ability to relate the data to track position via the track map. This requires Interpreter to generate a track map from logged data at each new track. If the process doesn't work correctly immediately, then it must be addressed for the track map information to be useful. So how do we ensure the correct data is available?

### Requirements

In order to draw a Track Map you will require:

- A **MoTeC** data logging device
- A correctly calibrated wheel speed sensor (see previous tech tip)
- A correctly calibrated lateral G sensor
- A Beacon Receiver and Transmitter

Channels that must be logged

- Beacon
- Wheel Speed
- Lateral G

Log if Available

- Ground Speed
- Longitudinal G - useful if for Corrected Speed calculation
- Lap Distance - required for generating a Reference Lap
- Steering Angle - used for over/under steer calculation
- Lap Time

### Where Does The Map Come From?

Track maps are stored in the directory C:\Program Files\MoTeC\Track Maps. When you open a file in Interpreter it will look in this directory for a track with a name that matches the **venue** listed in the **details** page of Dash Manager.

If there is no existing Track Map matching the current name Interpreter will generate a new map with the current venue name. If Interpreter creates a new map where there should be an existing one, check the venue details (especially the spelling). If Interpreter states, "Map not available" then one of the required channels is probably not being logged.

### My Map Is Wrong!

If the map drawn bears no resemblance to the track there are a couple of things to check first. Open the logging and display the Lateral G, Longitudinal G (if fitted) and Wheel Speed. If either of these will not display then they are probably not being logged and the map will not be drawn, check your Dash Manager setup and your sensor wiring. If these channels are available, then check that the values are realistic.

- Are the absolute speed and G readings possible (your Formula Ford should not read 3G Lateral!!) If this is incorrect then check your calibration.
- Does the Lateral G have an offset? It should read zero on a straight. If not check the zero settings in the garage with the car on level ground and ideally with the driver in position





## TECH TIPS: (cont)

- Does the Longitudinal G have an offset? It should read approximately zero on a straight just before the braking point (no longer accelerating). If not then check the zero in the garage with the car on level ground and ideally with the driver in position.
- Is there excessive noise in the Lateral G trace? If so check the mounting is secure, check the wiring and connections for potential interference. A noisy trace can sometimes be improved by filtering the Lateral G channel using Interpreter Channel Maths.

Other items to check can be found under the preferences settings. Right click mouse and choose *Preferences*.

- Check that the correct type of course is selected i.e. *Cross Over, Circuit, Unjoined*.
- The curvature will alter how "sharp" the corners are, a negative number will make the turns tighter, a positive number will do the opposite. This number can be set between -30 and +30.
- The check boxes will change what is displayed on the main map.
- The start angle will change the orientation of the Track Map

You can also manually drag individual sections this is done by displaying the map, Right click mouse and choose *Edit*. This screen will allow you to bend the Track Map to more closely match reality.

### My Map Is Still Wrong!!

If there is no way you can repair your map but you have a suitable map either under another track name or from someone else's data it is possible to use this map with your data as long as your beacon location is the same. The Track Maps are stored in the following directory:

C:\Program Files\MoTeC\Track Maps

As stated above Interpreter will select the Track Map with the same name as the venue listed in the Dash Manager details editor. So either rename or insert the desired map in this folder which ever is appropriate. If the beacon was in a different place the data will be skewed or offset, typically the braking points will not match the corners and so on.

## WHATS NEW?

**MoTeC** are pleased to have released the E888 & E816 Expansion Units. The E888 and E816 units offer increased Inputs and Outputs to the ADL via a CAN connection. The E888 is ideal for drag racing V8 applications as it features 8 built in thermocouple amplifiers for use with K-type thermocouples. It also includes 8 analogue voltage inputs, 4 digital inputs and 2 temp compensation inputs.

The E816 offers 16 analogue voltage inputs, 4 digital inputs and 2 temp inputs. Both units include 8 auxiliary outputs. These outputs are individually controllable for frequency and duty cycle.

The E888 uses the two part 60 pin connector as used on the M800, while the E816 uses a 66 pin autosport connector. For ease of use, the inputs and outputs are configured through MoTeCs Dash Manager software in the same way as the ADLs own inputs and outputs.

For more details contact **MoTeC** on +61 3 9761 5050, or your local **MoTeC** Dealer. Dealer details can be found at <http://www.motec.com.au/dealers.htm>



## WELCOME!

**MoTeC** would like to welcome Jamie Augustine to our Operations department. Soon to be married Jamie (**MoTeC** Applications Engineer) joins us from FPR (Ford Performance Racing) where he was instrumental in setting up the electronics department. Jamie has experience in a wide variety of areas, specializing in Data Acquisition and Analysis.

Working alongside the existing team he brings a good practical knowledge of the **MoTeC** range and will prove a valuable addition to the support network. As a car racer and enthusiast he has already proved his prowess on the Karts and is the reigning **MoTeC** champion at his first attempt.