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<b>Title</b>		Davis Weather Utility	
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1.3	11/17/2015	Tim Munn	Updated DST Information

## Introduction to the Davis Weather Utility

The Davis Weather Utility is a MoTeC i2 Pro math plugin that imports weather data from your Davis Weather Station into i2 Pro.

### Features

- View your weather data side by side you other logged data.
- Weather Channels:
  - Ambient Temperature
  - Humidity
  - Barometer
  - Average Wind Speed
  - High Wind Speed
  - Wind Direction
  - Rain Rate
- Automatic detection and syncing of data.

## Installation

1. Create a folder "C:\motec\Plugins\DavisWeatherUtility\"
2. Copy the "DavisWeatherUtility.dll" and "interop.i2.dll" to this folder
3. Open i2 and navigate to "Maths"
4. Click "Add Plugin"
5. Click "Install Plugin"
6. Navigate to "C:\motec\Plugins\DavisWeatherUtility\"
7. Select "DavisWeatherUtility.dll"

## Data Sync Settings

The plugin saves unique settings for each motec log file opened in i2. This is because each log file may require a different approach to accurately determine the timeframe of the recording. In order to accurate sync the data we need to know two factors: the date and time of the motec log, and if there is an offset between the recorded time of the weather data and the motec data.

### Date and Time

Using the date and time recorded from a GPS unit will guarantee that we know exactly when the motec log was created because it is logged in UTC. If no gps channels are available the user will have to specify a date and time including the time zone of downloading computer.

### Timezone

The davis weather station can be set to record data in local time or UTC. Putting your station into UTC mode will guarantee that we know when it was recorded. Otherwise the user

will have to specify the time zone their station is set to in order to apply the necessary corrections to sync the data with the mote log.

### Daylight Savings

If the data was recorded in a location that recognizes daylight savings time, have the "Enable Daylight Savings Time" checkbox checked. This will automatically adjust the sync time if the chosen date and time lie within daylight savings time.

### Note on Wind Direction

Davis Weather Stations log wind direction in cardinal notation (i.e. N, SSE). Since i2 does not have a compass component, wind direction is represented in degrees:

N:	0
NNE:	22.5
NE:	45
ENE:	67.5
E:	90
ESE:	112.5
SE:	135
SSE:	157.5
S:	180
SSW:	202.5
SW:	225
WSW:	247.5
W:	270
WNW:	292.5
NW:	315
NNW:	337.5

### Troubleshooting

If your weather channels do not show up an error occurred while trying to collect your weather data. Opening the plugin settings will give you information about why your weather data is not coming through automatically.

Requires i2 1.1 or later