



## “Amethyst” Performance Mappable Ignition System

### Troubleshooting guide

*Before you start:* If you have a 2-cylinder or 8-cylinder car, check the firmware version of your Amethyst unit. The firmware version is displayed on the PC screen.

*Before version 1.80:* Suitable for 3, 4, 5 or 6 cylinders

*Version 1.80 or higher:* Also suitable for 8 cylinders

*Version 1.85 or higher:* Also suitable for 2 cylinders

Every Amethyst ever made can be upgraded to the latest firmware. Please contact us if your Amethyst needs to be upgraded. The differences between firmware versions are explained at [www.aldonamethyst.co.uk](http://www.aldonamethyst.co.uk).

#### Troubleshooting

<p>1. Engine doesn't start</p> <p><i>LED doesn't flash when engine is cranked over</i></p>	<p><i>This means that the Amethyst green wire is not receiving the signal from the distributor.</i></p> <ol style="list-style-type: none"> <li>1. Ensure that there a good 12v supply to the Amethyst red wire.</li> <li>2. Ensure that the unit is not immobilised. If you are using the immobiliser, it can be deactivated by touching the thin black wire to +12v.</li> <li>3. Check wiring to distributor sensor (points, Hall effect trigger, optical trigger or reluctor).</li> <li>4. If wiring appears OK, disconnect Amethyst green wire and touch it against earth a few times. LED should light when green wire is earthed, and extinguish when it is disconnected. If this test fails, the Amethyst unit is faulty.</li> <li>5. If Amethyst appears OK, check voltage on green wire when engine is being cranked over. Voltage should switch between approximately 12v and 0v.</li> </ol>
<p>2. Engine doesn't start</p> <p><i>LED flashes when engine is cranked over</i></p>	<p><i>This means that the Amethyst is not triggering the coil.</i></p> <p><i>Note: The coil should have a resistance of at least 1.5 ohms. Using a lower resistance coil may permanently damage the unit.</i></p> <ol style="list-style-type: none"> <li>1. Check connections from Amethyst yellow wire to coil LT- terminal.</li> <li>2. Ensure that there is a good 12v supply to the coil LT+ terminal.</li> <li>3. Check the HT components: coil, distributor and HT leads.</li> </ol> <p>If all connections and HT components are good, the Amethyst is probably faulty.</p>



3. Amethyst doesn't connect to PC	<ol style="list-style-type: none"><li>1. Ensure that the ignition is on, and that the Amethyst is receiving 12v on the red wire. The Amethyst will only connect to the PC if it is powered up.</li><li>2. The Amethyst PC software is based on Java. If your PC does not have Java installed, or if you suspect your version of Java is out of date, download the latest version from <a href="http://www.java.com">www.java.com</a></li><li>3. Although you can configure Amethyst with the engine running, turning the engine off will give a more reliable connection to the PC.</li></ol>
4. Too much / too little advance	<ol style="list-style-type: none"><li>1. Centrifugal advance mechanism loose. This will result in too much advance because the advance calculated by Amethyst will be added to the advance caused by the centrifugal mechanism not being locked securely.</li><li>2. Number of cylinders set incorrectly.</li></ol>
5. Incorrect RPM reading	Number of cylinders set incorrectly. Amethyst cannot calculate RPM unless it knows how many cylinders your engine has.
6. Misfires and interference	<ol style="list-style-type: none"><li>1. Ensure that the Amethyst unit has a good connection. The earth wire (thick black) should be kept as short as reasonably possible, and should be routed neatly near to the vehicle chassis.</li><li>2. Ensure that the HT components are in good condition.</li></ol>