



Words Simon Woolley  
Photos Jon Hill, Gerard Hughes

# BOX OF TRICKS

**Banish points forever by fitting electronic ignition and you might even gain a few bhp, too. Here's how.**

**Let's face it:** points are pretty annoying things. Fitted to the distributors of most '60s and '70s retro cars, they're fine in theory, but in practice the gap needs adjusting every few thousand miles for optimum power, they're liable to bounce, and have the annoying habit of burning out when you're miles from the nearest parts store. Add to this the condenser which often packs up and causes a mysterious misfire, and you've got an ignition system that's liable to send you stir crazy.

Fortunately, there is a much better system that means you can confine the points to the rubbish bin for good — electronic ignition. This relies on an electronic method of switching between the low and high tension circuit, and better still, it has no mechanical parts to wear. Even better, electronic ignition can handle a much better dwell time, so you get a fatter spark, plus it compensates for wear in the main shaft.

There are various kits on the market that allow you to retrofit electronic ignition to your retro car, but probably the best-regarded are the Lumenition kits — not surprising since the company invented it.

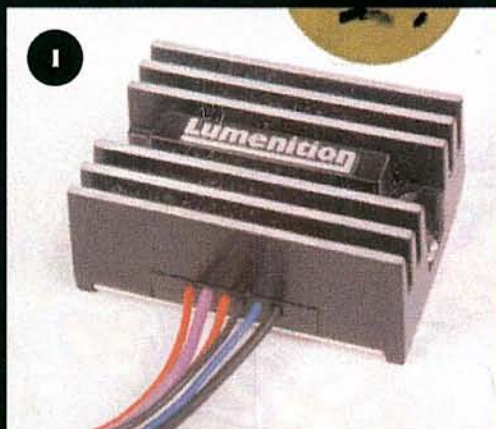
Lumenition make two basic types: the Magnetric which uses a system of passing magnets to collapse a field and send a signal; and the Optronic which is more modern and does the job of the points by using an LED beam interrupted by rotating blades called a chopper.

There are three main components of the Optronic system: the optical trigger which fits in place of the points; the chopper which sits over the points' cam; and the power module (located on the bulkhead or thereabouts) which boosts the signal. Simple, but very effective, and it's the Performance version of this (we are a tuning mag, after all) that we're fitting to a mid-'70s Mini Clubman.

This differs over the standard Optronic kit in that you get a high-energy coil matched to the power module, while the module itself has a great operating range and features a variable dwell angle to prevent the coil overheating a low engine rpm.

The Performance kit also differs in that included are lots of excellent extra bits and pieces to make the installation neat and tidy — including Spirap for protecting the loom, and rubber boots for shielding the LT connections on the coil.

The kit is dead easy to fit once you have identified which distributor is fitted to your particular retro car — you'll need to know this to get the correct fitting kit, and Lumenition produce them for almost all makes. The Mini we're using comes with the popular Lucas 25D unit, but fitting is similar whatever unit is in yours, so just follow all the steps to a fuss-free ignition system.



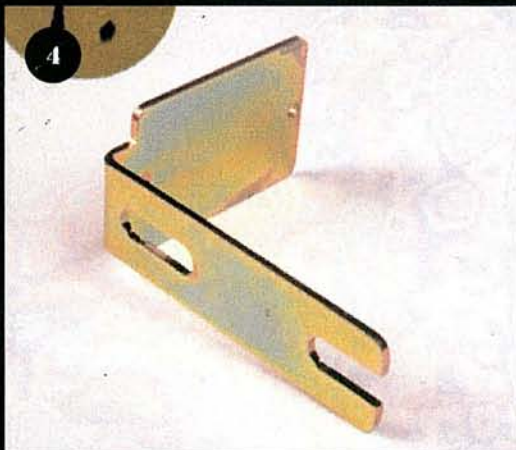
1 These are all of the main components for the Lumenition kit. You have got the power module that mounts on the inner wing or bulkhead, plus...



2 ...a chopper and optical switch that replace the points and condenser inside the distributor.



3 Because this is the Performance kit, you also get a coil tailored to suit the kit.



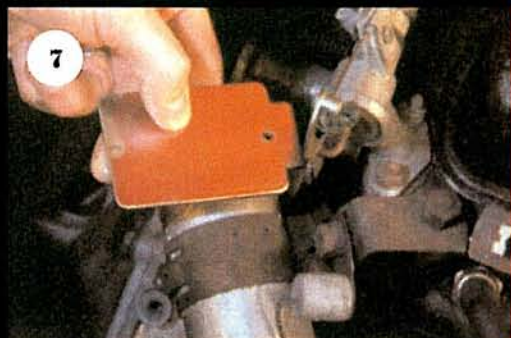
4 If you don't want to drill any holes in the bodywork, Lumenition also supply this neat bracket that mounts the module next to the coil using the coil's original mounting holes.



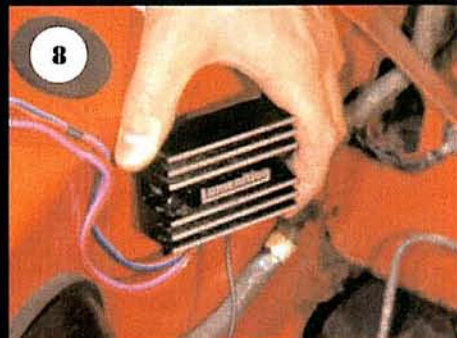
Before you start, make sure you disconnect the battery.



As the kit is going on a Mini, we removed the grille making access to the distributor much easier.



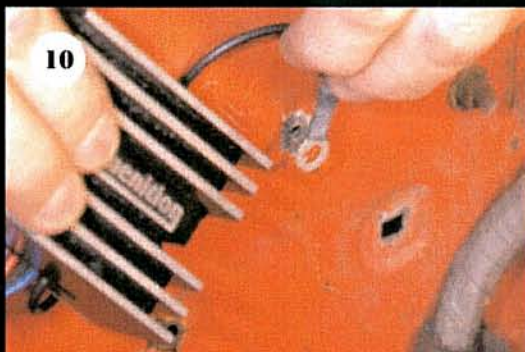
Firstly, you need to mount the module. We could've used the supplied coil bracket, but because the coil mounts to the engine on the Mini and the module ideally needs to be away from heat and vibration...



...we chose to play it safe and mounted it to the inner wing instead.



Mark where you want it to go, then drill two locating holes — making sure that there are no pipes or cables on the other side.



Locate the black Earth lead on the module and then slot it under the module base. For a good contact, scrape some paint away from the edge of the hole you drilled.



Screw the module into place using the supplied self-tappers.



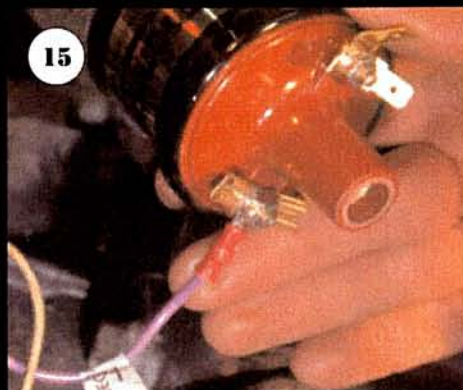
Locate the red power feed wire and find a suitable live ignition feed to connect it to — we used a spare one in the fuse box (or you can use one on the ignition switch). If there isn't a spare blade available, use the piggyback connector supplied.



Next replace the coil with the new one. Simply loosen the bracket, remove the old coil and...

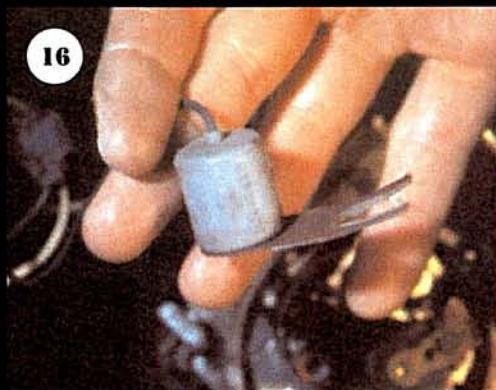


...slip the new one into place.



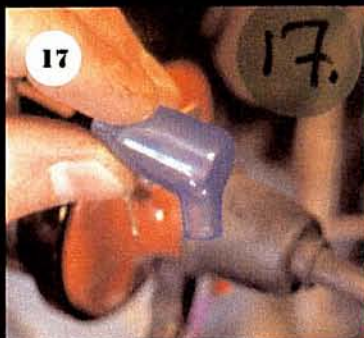
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Connect the purple lead from the module to the negative connector on the coil, and reattach the original leads, apart from...



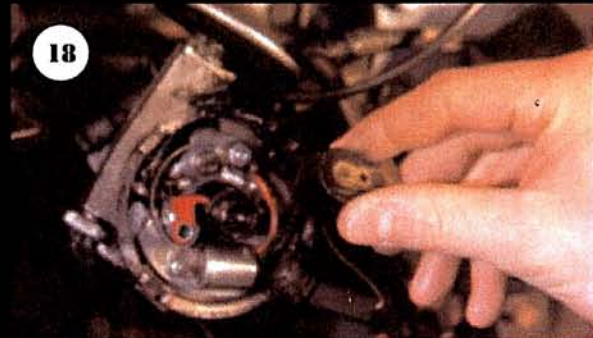
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...the ballast resistor if one is fitted. Simply cut the wire and remove as it's not needed any longer.



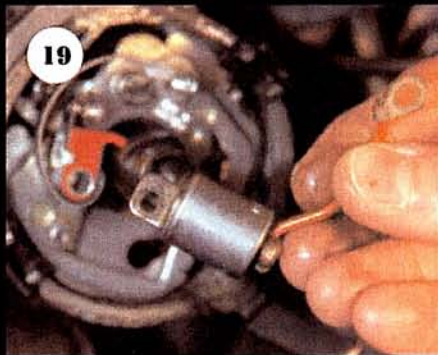
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Lumenition also supply waterproof connectors. Definitely worth fitting.



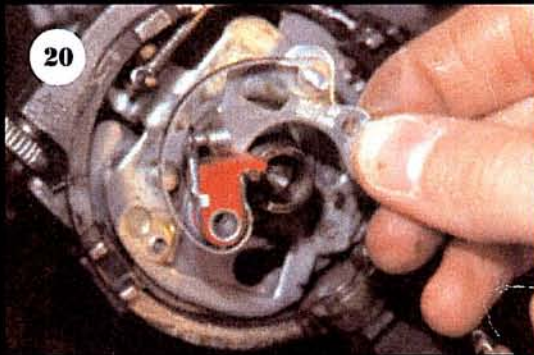
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Now move onto the distributor. Take off the cap and secure it out of the way, then remove the rotor arm, and put to one side.



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Unscrew and then remove the condenser, and low-tension lead that it attaches to.



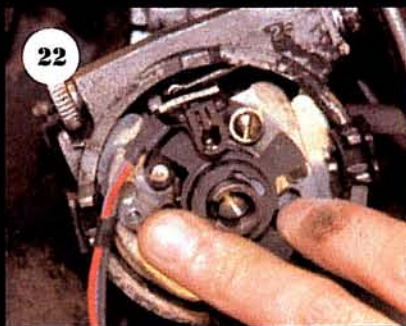
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Followed by the points. All of these are no longer needed.



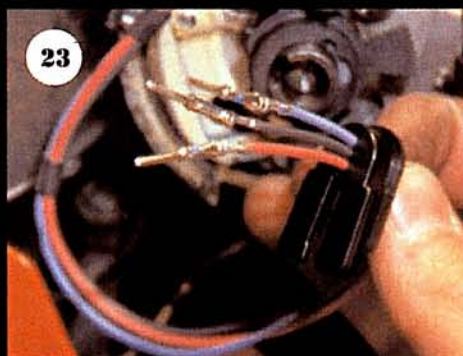
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Grab the optical switch and locate it on the original points' mounting peg, then secure in place with the supplied screw which replaces the points adjustment screw.



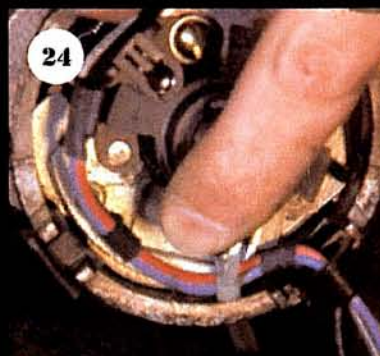
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Slip the chopper onto the shaft (you'll probably get two in the kit — four-blade for four-cylinder, six for six-cyl.). It only goes on one way and it's a deliberately tight fit so take care when pushing it home to avoid damaging the blades. If needed, a socket or the rotor arm can be used to help push it home.



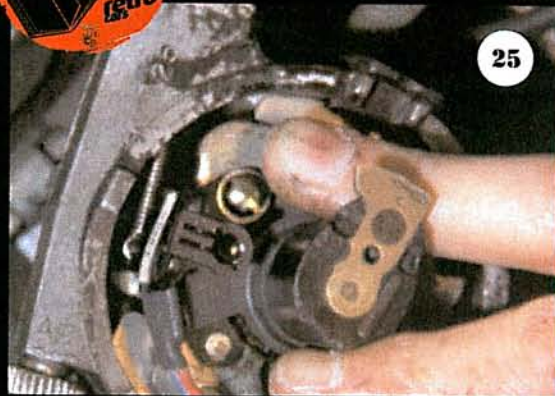
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Slip the supplied black plastic clip over the three wires, then locate it in the slot on the distributor body where the low-tension lead holder used to live.



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You need to adjust the wires in the holder so that there's just enough slack to allow for movement of the baseplate when the distributor advances, but not too much so that the chopper could damage the wires. Once you're happy, secure the wires to the baseplate using the cable tie supplied.



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Finally, replace the rotor arm.



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Locate the plastic loom connector and carefully remove the plastic sleeves in the end.



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Slip them over the Econogal connectors on the three wires from the distributor so that they're sitting on the crimped part, like so.



28

Slot them into the connector housing — the red wire goes to hole marked 1, black to 2 and blue to 3. Lumenition include a special tool to help you do this. You'll know when they're home as you'll feel a click.



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Connect the two halves of the loom together. It only goes one way.

### Time

You can fit this kit in an hour.

### Difficulty Rating

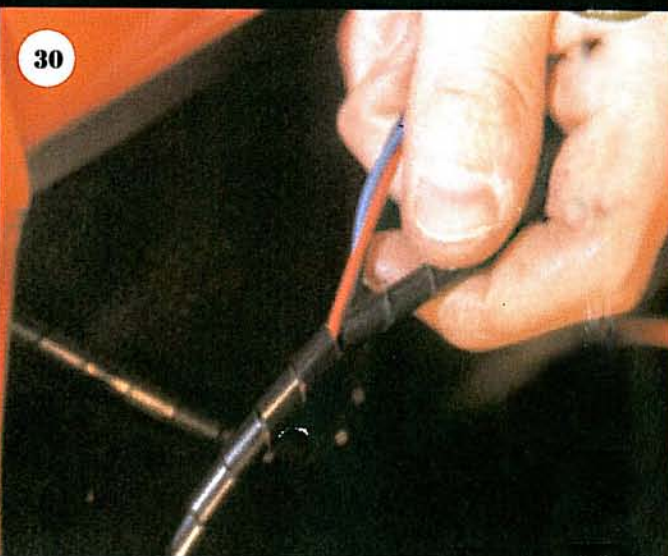
Satisfyingly straightforward.

### Cost

Lumenition Performance kit £??.??

Fitting kit (Lucas 25D) £??.??

Mounting bracket £??.??



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Finally, tidy up the loom wiring by hiding it in the supplied Spirap loom binding. This can then be secured to the wing/bulkhead using P-clips. Reconnect the battery, then for a proper job get the ignition timing checked and reset if necessary. And you're done.

### Toolkit

Drill and 3.5 mm drill bit

Pliers

Screwdrivers

Spanners

### Source

Autocar Electrical (Lumenition)

020 7403 4334

[www.lumenition.com](http://www.lumenition.com)