A recently encountered e-mail from Robert Calloway states that Tesla's bi-filar series-connected coil is effective in picking up radiant energy. In the light of that, and in the absence of further information from s1r9a9m9, the following suggestion might be useful for those who intend to try to reproduce his car design:

The car to test needs to be a gasoline type with a carburettor and no computer control so that the timing of the spark can be adjusted over a wide range and the fuel mixture set where you want it.

Components needed:
Heavy-duty insulated copper wire
110V ac 12V alternator of 400 watt or higher rating
Insulating material
Small plastic box
Two screw connector strips (large)
Diodes for microwave ovens (2 per cylinder)
"Autolite" (25) copper-core plugs (1 per cylinder)
PVC piping
Tape.

The first step is to get the engine ticking over on just water:

1. Replace the plugs with the cheap "Autolite" (25) copper-core plugs, set to 80 thou gap.

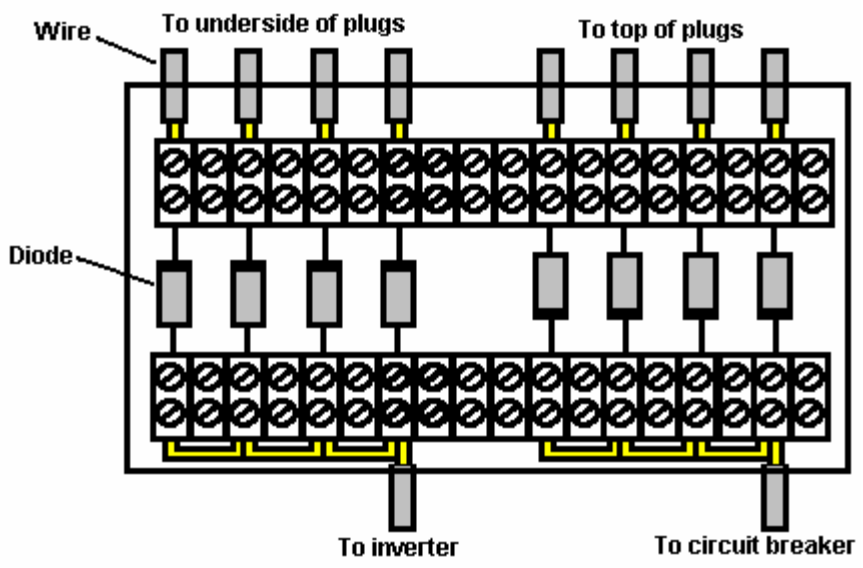
2. Retard the timing to about 30 degrees **after** Top Dead Centre.

3. Mount the inverter so that it is fully insulated from the engine block.

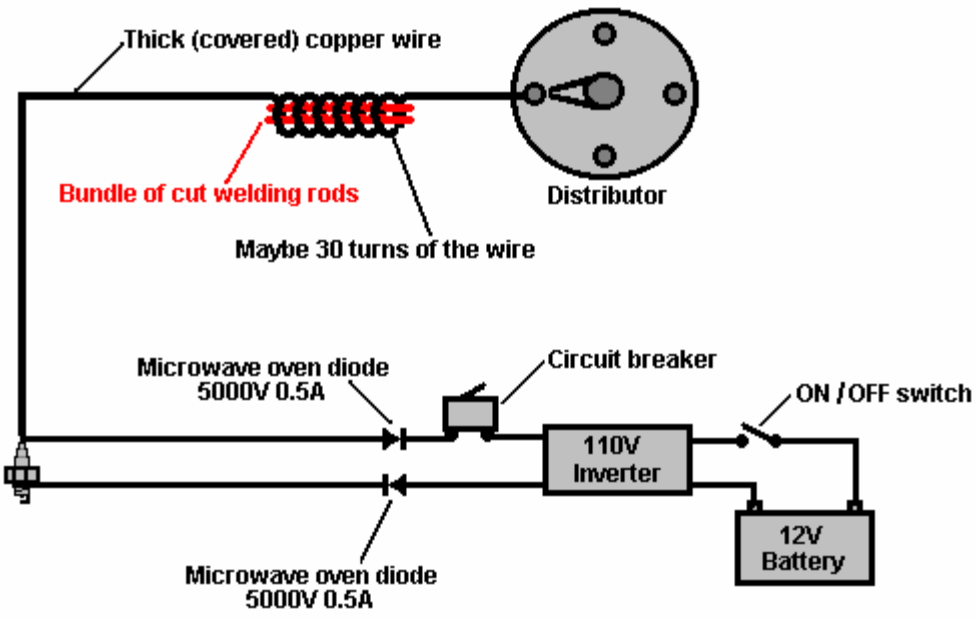
4. Get two microwave oven diodes per cylinder. These should be available from an electrical repair shop, or failing that, they should be able to tell you where you can get them locally.

5. Connect one of the outputs from the inverter to the circuit breaker (either output will do).

6. Get a little plastic box and mount the diodes inside it. Two strips of screw connectors from a hardware store would be good for this. Get the largest size, place them in the box, along the outer edges and just screw the diodes across the box between the connectors. You can then run the wires to them through holes drilled in the box, straight into the connectors:

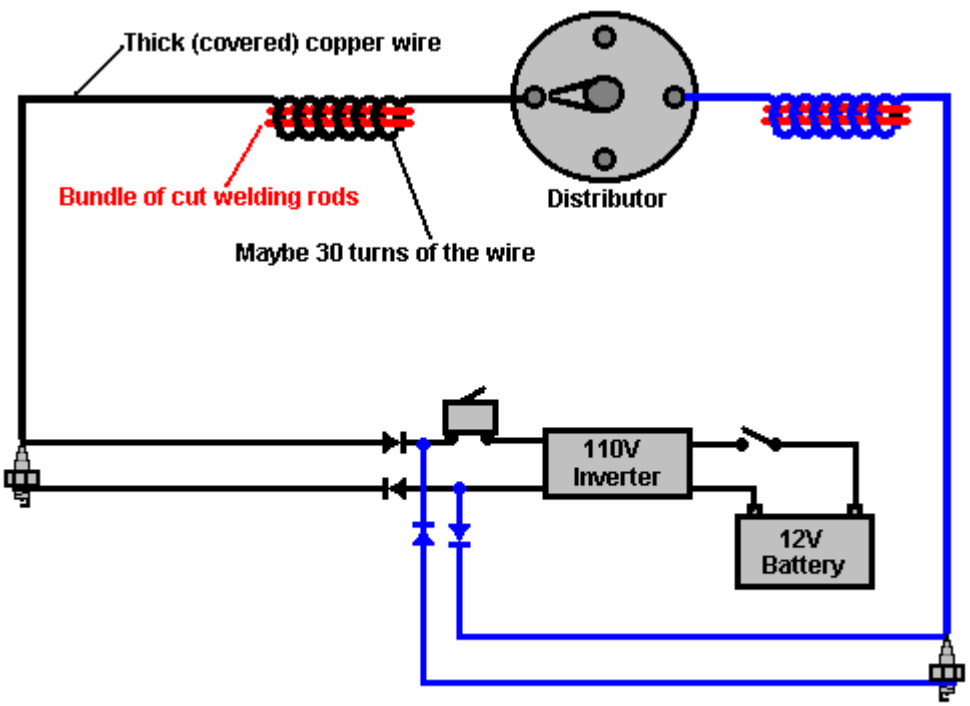


7. Run a 12-2 solid core wire from a diode to the underside of each plug. You can bend the wire round into a loop to fit tightly around the base of the plug, and then flatten the loop slightly with a hammer. The loop goes around the screw thread of the plug in a clockwise direction when looking down on it, so that turning the plug to tighten it, also tightens the copper wire loop. Alternatively, solder the open end of the loop to make it a rigid complete loop:



Wiring for One Cylinder

8. Be sure that the diodes going to the underside of the plugs are all the same way round and that the ones going to the circuit breaker are all the other way round as shown in the sketch. The other cylinders need to be wired like this:



The wiring for two of the cylinders

9. Now we come to the wires from the distributor. As I understand it, the existing wires need to be replaced with very heavy-duty copper wiring. We don't have s1r9a9m9's relays and it would be sensible to assume that we never will, nor will we get any further information about them. The spark will be much improved if there is a coil in the wire from the distributor to the spark plug, so I suggest that you wind about 30 turns of the connecting wire around an iron core. Initially, the core could be an iron bolt. A solid metal core will have electrical currents induced in it. These flow sideways, heating the core and wasting energy. This is why mains transformers are wound on laminated cores where thin iron strips are insulated from each other to block these 'eddy' currents and raise the efficiency of the transformer. So, later on, if your tests are successful, you might like to replace the bolts with lengths of steel welding rods with the coating cleaned off and painted to insulate them from each other.

10. Remove the gasoline feed pipe from the carburettor and seal it off very carefully. Connect a similar pipe to it and connect that pipe to a water tank, positioned so that the bottom of the water tank is higher than the carburettor.

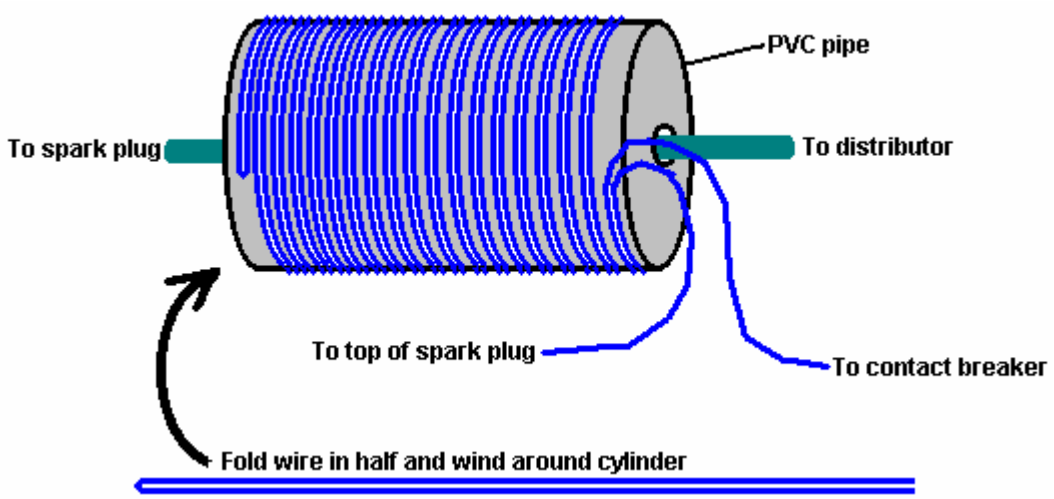
11. Connect the inverter to the battery, placing an insulated ON/OFF switch (not shown on the diagram) in the lead to the side of the battery which is not connected to the car body - this is normally the Plus side of the battery, but not always, so check it.

12. Turn the engine over to get rid of any gasoline in the carburettor.

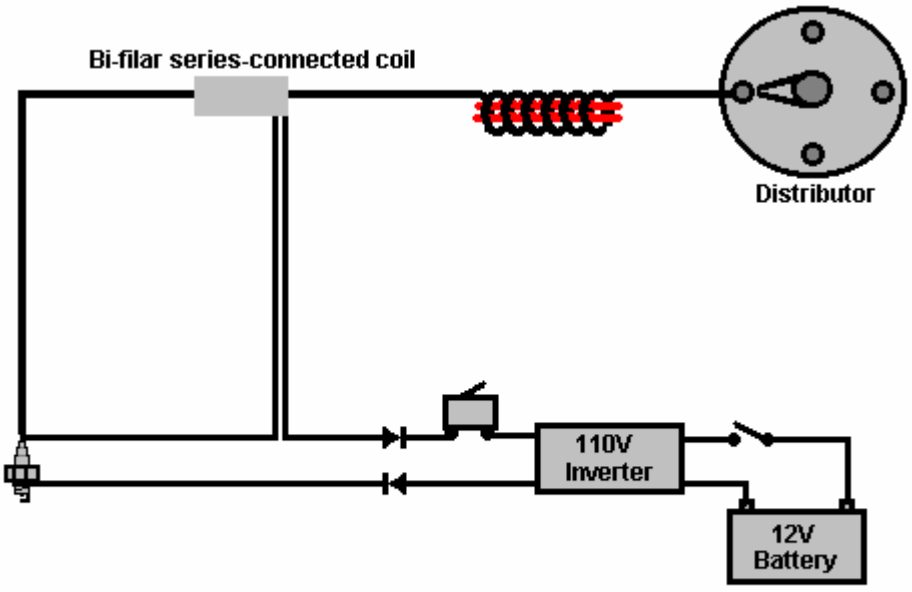
13. Heat some water in a kettle to get it hot but not nearly boiling and pour it into the water tank.

You are now ready for your tests. The engine is not likely to fire before turning over four or five times. You will probably need a battery charger to keep topping up your test battery (the one already in the car) when you run it down through trying to get the motor to fire. It will take a lot of fiddling around to get it to work. It may be necessary to adjust the carburettor jets to allow more water vapour into the engine to get it to run. Who knows? Only s1r9a9m9 has managed it so far.

OK, so it ain't firing and looks as if it never will. It might be worth trying the following for each cylinder:
Take a few inches of PVC pipe of say, three inch diameter. Cut a couple of discs to fit the ends. Take a length of the wire used to connect the 110V inverter, double it over and wrap it around the cylinder like this:



You can tape the wire in place on the cylinder. Now, run the spark plug wire through the cylinder to produce this arrangement:



Possible experimental test

This may give you a better spark and get the engine running. The reason for this is that Ed Gray managed to pick up a major amount of extra energy from a copper cylinder arrangement somewhat like this. He got enough extra energy to run a 80 HP electrical engine on it, so you might well get enough extra energy to get your engine going, especially as it appears that the coil

shown here is much more effective at picking up extra energy from the current pulse to the spark plug.

It is said that magnetic fields do not help the pick up of the extra energy, so the larger the diameter of the PVC tubing, the lower the magnetic field on the winding.

If you succeed in getting your engine to tick over on just water, then:

1. Replace the carburettor jets with ones two sizes larger.
2. Adjust the timing to get the smoothest running.
3. Feed the pipe from the exhaust manifold into a water tank with baffles as shown below.
4. Connect a second battery in parallel with the existing battery, or add a second alternator: