

## Technology Forecast

### **42 Volts of Power!**

A new automotive system is on its way. What's in it for car owners? It has what drivers today want—more power.

A 42-volt system could soon take the place of the 12-volt system used in vehicles for the past few decades. The new system is needed because the current 12-volt design can't handle the electronic gadgets car owners love.

Today's cars already have all kinds of electronics. A 42-volt system will provide plenty of power for these devices. It will also power such new devices as electronic valves, a flywheel starter/alternator, and electric brakes.

And that's not all. The new system will allow smaller wires and parts. This will mean less weight, more efficiency, lower cost, and better packaging.

Plus, mechanical relays should no longer be needed. This will make diagnosis of systems with solid-state switches much easier. Circuits can be protected without traditional fuses. Multiplexing can be widely used. Multiplexing is sending multiple signals over one wire.

An interesting fact is that the 42-volt system will likely require two batteries. One would be a small 36-volt design for starting the engine. The other would be rated at 12 volts and provide electricity after the engine is started.

#### **Action Activity**

Using the Internet and other sources, find out whether the 42-volt system is available yet. If so, what make and model of automobile has this system? What will consumers and technicians need to know about the 42-volt system? Summarize your information in the form of a magazine advertisement.