

FEATURES

24 Advances In Diesel Engine Management, Pt.2

A look at the electronic control systems – by Julian Edgar

30 Review: ELAB-080 Electronics Lab

Five general-purpose instruments in one low-cost package – by Peter Smith

PROJECTS TO BUILD

6 Lead-Acid Battery Zapper & Condition Checker

Improved design can check battery condition and has output sockets so that you can monitor the zapping pulses using a multimeter – by Jim Rowe

44 Universal High-Energy LED Lighting System, Pt.2

Second article has all the construction details. And we show you how to make a very effective Luxeon-powered spotlight for bicycles – by John Clarke

62 A Passive Direct Injection Box For Musicians

Don't let hum & noise spoil your performance. This DI box performs as well as a powered unit but doesn't need batteries – by John Clarke

72 Remote Mains Relay Box

Switch mains voltages safely with this easy-to-build unit – by Bill de Rose & Ross Tester

78 Vehicle Voltage Monitor

Want to monitor the battery voltage, the airflow meter signal or the oxygen sensor signal in your car? Here's the answer – by John Clarke

88 Picaxe Goes Wireless, Pt.2

Networking, logging data, plus light & temperature sensors – by Clive Seager

100 Boost Your XBee's Range Using Simple Antennas

Simple "roll your own" antennas for the XBee – by Stan Swan

SPECIAL COLUMNS

32 Circuit Notebook

(1) Automatic Exhaust Fan; (2) Rotary Encoder For PIC Projects; (3) Tank To Cistern Pump; (4) Picaxe-Powered Pocket Timer; (5) LED Torch Bulbs

40 Serviceman's Log

The one-day technician – by the TV Serviceman

68 Salvage It!

Improving the sound of salvaged loudspeaker systems – by Julian Edgar

94 Vintage Radio

The rare Edison R6 console receiver – by Rodney Champness