

# FEATURES

## 6 GM Allison's Hybrid Drive Bus

*Innovative new diesel-hybrid electric system can dramatically improve fuel economy and reduce emissions by up to 90% – by Julian Edgar*

## 13 New 6-Chip Ultra-Bright LED

*It's brighter than a 20W halogen lamp and has applications ranging from workplace lighting to pocket video projectors, reading lights and car interiors*

## 14 Television: The Elusive Goal; Pt.1

*It's now 50 years since the start of television in Australia. Here's how it came about – by Kevin Poulter.*

## 78 Electric-Powered Model Aircraft; Pt.2

*Converting the Cub to a brushless motor for a greatly improved result – by Bob Young*

# PROJECTS TO BUILD

## 28 Pocket A/V Test Pattern Generator

*Easy-to-build design generates nine different video test patterns and has left and right audio outputs as well – by Mick Gergos*

## 38 Two-Way SPDIF/Toslink Digital Audio Converter

*Want to convert a Toslink digital audio optical signal into a coaxial SPDIF signal or vice versa? This low-cost unit converts digital audio bitstreams either way – by Jim Rowe*

## 84 Build A 2.4GHz Wireless A/V Link

*It's easy to build and is just the shot for sending A/V (audio/video) signals to a remote system – by Ross Tester.*

## 92 Starship "Enterprise" Door Sounder

*Simple circuit recreates the distinctive "ssshhhhhh-thump" sound of the sliding doors opening or closing on the "Starship Enterprise" – by Jim Rowe*

# SPECIAL 'COLUMNS

## 44 Circuit Notebook

*(1) PICAXE Drives Nokia LCD; (2) Improved PICAXE RGB LED Display; (3) Low-Coolant Alarm For EA-ED Falcons*

## 48 Serviceman's Log

*DOA – that's "Dead On Arrival" – by the TV Serviceman*

## 64 Salvage It!

*A high-current car battery charger for almost nothing – by Julian Edgar*

## 98 Vintage Radio

*The Kriesler 41-29 "Trans-Mantel" – by Rodney Champness*