Amplitude Modulated 40 KHz CaveTransceiver and RDF Peter Robertson VSA Board Comp No Description Supplier DJS <sub>եւ</sub>Տրթթվ<del>ie</del>rs DS Jaycar Jaycar Altronics Altronics Price Part No. Price Part No. Notes Part No. Price ZL-355 \$0.9 74LS08 DICK SMITH 4908 LM567 DICK SMITH Z6167 IC3 DICK SMITH IC5 74LS90 DICK SMITH Z4990 \$1.30 LM78L05ACZ DICK SMITH IC6 Z6108 ZV-1539 \$1.00 DICK SMITH BC337 (Vic has BC549 or BC337) ZT-2115 TS2 BC337 DICK SMITH Z2190 ZT-2115 \$0.36 BC327 (Vic has BC307) Z2240 TS3 ZT-2110 \$0.36 1NJ1J8 DICK SMITH 7R-1100 D2 1N4148 DICK SMITH Z3120 ZR-1100 \$0.32 5 Pack 1N751A 5V1 5.1 Volt Zener diode (1N4733) DICK SMITH Z3405 ZR-1403 D3 \$0.40 1N5404 3 Amp Power diode DICK SMITH ZR-1014 FC1&2 M205 fuse clips DICK SMITH H1701 SZ-2018 \$1.70 8 Pack 3 Amp fuse Type M205 DICK SMITH P9316 5A Relay Type SPDT 5 Volt NEC MR301-5V RI 1 Pot Core 300 Turns 0.125mm See Note 1 DICK SMITH W3136 (216m) L 2 Pot Core PC1107-77 11.1Diam x 6.42H See Note 1 PC-1107-77 Newtek PC-1107-77 Pot Bobbin See Note 1 R1 150R R3 R5 150K R6 10K Trim Pot 10 (25) Turn See Note 2 RS Components 186-520 RT-465 R8 R9 150R R11 2K (15K AIT 800Hz Tone Level See Note 3) R12 10K R13 10K R14 27K R15 6K8 R16 6K8 R17 1000uF 35Volt Electrolytic Capacitor DICK SMITH C1 RE-6236 \$1.9 C2 RE-6042 2.2uF 63V (22uF 16Volt) \$0.20 C4 2.2uF 63V (16Volt) RE-6042 \$0.28 0.22uF 50V (0.47uF 16Volt Electro) RL-6406 \$0.2 224 (0.22uF Green Cap) \$0.18 C8 RM-7145 0.22uF 50V (16Volt) C9 \$0.18 C10 473 (0.047uF Green Cap) RG-5105 \$0.18 C11 .22uF 50V or 0.47uF 50V Electro (0.33uF Green Cap Note 102 (0.001 Green Cap)
Printed Circuit Board See Note 5
Red/Green Dual LED See Note 6 C12 RG-5010 PCB 2 \$15.00 LED DICK SMITH 74071 Press to Talk Push Button
Tone ON Push Button See Note 7 SW 1 DICK SMITH P7560 got SW 2 got SW 3 Tone OFF Push Button See Note 7 DICK SMITH got LS<sub>1</sub> Loudspeaker 8 Ohms 27mm dia small oudspeaker 8 Ohms 40mm dia larger SK1 BNC Chassis Mtg Socket DICK SMITH P2220 \$2.9 MIC Microphone 1.5 to 15VDC supply Shielded Signal Cable for interconnection between PCB 's etc Audio Cable 3Mtrs DICK SMITH W2031 0.5 Mtre Twin Shielded cable for Gain Pot DICK SMITH W2034 LOOP Wire 10 Amp Auto Cable 20M See Note 8 W2280 PL1 BNC Coax Cable Plug Coax Cable 2 Mtrs RG58 C/U CAB 1 Army Type Ammo box with clamp lid and fit inner chassis to mount PCB 's and Batteries etc CAB 2 Aluminium Extruded Cabinet See Note 9 RADIO PARTS 76 2H x 101W x 127D mm Plastic PCB Mounting Guide (Self Adhiesive) RS Components 580-023 Pot Core PC1107-77 11.1Diam x 6.42H Note 1 Newtek AMIDON Ferrite material 77 Electronics Permability 2000 Wollongong Wind with 300 turns 0.125mm enamel wire www.newtek.com.au Ph 4227-1620 Note 2 Potentiometer used to set tone decoder to 800Hz Note 3 Resistor value chosen depending on microphone used.Adjust value to give about 90% modulation on transmit or cleanest sounding tone Note 4 Adjust value to give best Sine wave across L1 at 800 Hz Note 5 Printed Circuit Board Designed and available from Peter Robertson PO.Box 150

Hawthorn 3122 Australia

Dual LED used to indicate Transmit

Note 6

## Amplitude Modulated 40 KHz CaveTransceiver and RDF Peter Robertson VSA

On and Receiver receiving 800Hz tone TX- RED RX- GREEN Mercury tilt switches can be used DICK SMITH P7860 Note 7 in waterproof cases to eliminate extra holes in cabinet Loop consists of 14 Turns of wire. Note 8 approx 20 Mtrs of wire To wind use as a former a piece of wood about 20 mm thick and 70cm long. Wind the 14 turns from end to end then slide the coil off and form a loop. Tape or use cable ties to hold it in a loop Solder the loop to one end of the coax and fit the BNC plug on the other. Fine tune the loop as necessary then seal bare connections to waterproof. Cabinet has two end caps, seal one end up with silicone sealant to waterproof. Note 9 Fit all external controls, Speaker, Power cable Gland Etc to other end. Install PCB Guides inside cabinet only after all parts have been fitted Please Note The parts listed as Dick Smith are given only as a reference to identify in their Catalogue. They can be purchased at many other outlets and Trade Houses.