

Amplitude Modulated 40 KHz Cave Transceiver and RDF
Design Peter Robertson VSA 1998

Modified Parts Built DJS 2007

Board	Comp No	Description	Supplier	Suppliers	DS	Jaycar	Jaycar	Jaycar	Altronics	Altronics
				Part No.	Price	Part No.	Price	Notes	Part No.	Price
1	IC1	TDA2003 (OLDLM383T)	RADIO PARTS	38210150	\$4.95					
	IC2	TDA2003 (OLDLM383T)	RADIO PARTS	38210150	\$4.95					
	IC3	CA3140E	RADIO PARTS	38170030	\$2.72				Z-2010	\$2.60
	IC4	CA3140E	RADIO PARTS	38170030	\$2.72				Z-2010	\$2.60
	IC5	CA3140E	RADIO PARTS	38170030	\$2.72				Z-2010	\$2.60
	IC7	LM78L05ACZ	DICK SMITH	Z6108		ZV-1539	\$1.00			
	TS1	2N5485 FET				ZT-2266	\$1.30			
	TS2	BC549	DICK SMITH	Z1319		ZT-2156	\$0.26			
	D1	1N4148	DICK SMITH	Z1320		ZR-1100	\$0.32	5 Pack		
	D2	1N4148	DICK SMITH	Z1320		ZR-1100	\$0.32	5 Pack		
	R1	2K2								
	R2	100 (180R)								
	R3	1K2 (2K2)								
	R4	4K7								
	R5	100 (180R)								
	R6	5K1								
	R7	39K								
	R8	5K TRIM POT set to 1K24	DICK SMITH	R1769		RT-4358	\$0.75			
	R9	500R TRIM POT set to 410	DICK SMITH	R1763		RT-4352	\$0.75			
	R10	5K1								
	R11	39K								
	R12	500R TRIM POT set to 418	DICK SMITH	R1763		RT-4352	\$0.75			
	R13	5K1	DICK SMITH	R7512						
	R14	39K								
	R15	500R TRIM POT set to 400	DICK SMITH	R1763		RT-4352	\$0.75			
	R16	100K GAIN POT	DICK SMITH	R7512		RP-8518	\$2.50	Small		
	R17	10R								
	R18	220R								
	R19	220R								
	R20	10R								
	R21	220R								
	R22	2K2								
	R23	10K trimmer (not used)								
	R24	15K								
	C1	473 (2x 0.039 or 1x.082 uF See Note 2)				RG-5105	\$0.18			
	C2	473 Green Caps				RG-5105	\$0.18			
	C3	102 (0.001 to 0.0047 uF See Note 3)				RG-5010	\$0.18	x5		
	C4	22uF 25V (47uF 16V Electrolytic Caps)				RE-6090	\$0.25			
	C5	10uF 25V (22uF 16V)				RE-6070	\$0.25			
	C6	10uF 25V (47uF 16V)				RE-6070	\$0.25			
	C7	472 (0.0047uF Green Caps)				RG-5047	\$0.18			
	C8	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C9	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C10	10uF 25V (0.47 uF 16V)				RE-6090	\$0.25			
	C11	47uF 16V				RE-6100	\$0.28			
	C12	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C13	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C14	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C15	102 (0.001uF Green Caps)				RG-5010	\$0.18			
	C16	103 (0.01uF Green Caps)				RG-5065	\$0.18			
	C17	1000uF 16V (35V)				RE-6236	\$1.95			
	C18	1000uF 16V				RE-6220	\$0.70			
	C19	100uF 16V (10uF 16V)				RE-6140	\$0.25			
	C20	224 (0.22uF Green Caps)				RG-5145	\$0.18			
	C21	224 (0.22uF Green Caps)				RG-5145	\$0.18			
	C22	0.22uF 16V (50V) Try Polyester Yellow				RM-7145	\$0.35			
	C23	1000uF 16V				RE-6220	\$0.70			
	C24	47uF 25V (16V)				RE-6100	\$0.28			
	C25	47uF 16V				RE-6100	\$0.28			
	C26	47uF 16V (10uF 16V)				RE-6100	\$0.28			
	PCB 1	Printed Circuit Board See Note 4	VSA		\$15.00					
	T 0	Output Transformer See Note 5	Newtek							
	Note 1	Requires Heatsink 25x10 X 50mm	ALCAN							
	Note 2	Adjust value to tune loop for max output on Transmit. Use Caps in parallel to handle the output current on Transmit. Or overheating will destroy them								
	Note 3	Adjust value to tune for max received signal across the capacitor								
	Note 4	PCB designed and available from Peter Robertson PO Box 150 Hawthorn 3122 Australia								
	Note 5	Ferrite pot core Type PC-2213-77	Newtek							
		Made by AMIDON 21.6 Dia x 9.4 mm	Electronics							
		Ferrite material 77 Permeability 2000	Wollongong							
		Primary winding 5 Turns 0.5mm	DICK SMITH	W3124		WW-4016	\$7.65	57m		
		Secondary1 O/P to loop 8 Turns 0.5mm	DICK SMITH	W3124		WW-4016	\$7.65	57m		
		Secondary2 RX input 100 Turns 0.125mm	DICK SMITH	W3136 (216m)	\$6.59					

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
