

3.6 PARTS LIST

3.61 Combo board

Qty	Reference	Value	Description
10	C1, C2, C5, C8, C9, C13, C72, C74, C77, C91	2.2uF 50V	Miniature Radial Electrolytic - 4-5mm Dia, 2mm Pitch, Tolerance +- 20%
1	C7	470uF 16V	Non-Polarized Electrolytic Capacitor
1	C27	82pF	Ceramic Plate 2.5mm pitch (680 Series)
3	C17, C18, C96	100uF 16V	Miniature Radial Electrolytic - 6mm Dia, 2.5mm Pitch, Tolerance +- 20%
3	C25, C29, C33	1n	General Purpose Ceramic Disc 2.5mm pitch
2	C97, C14	2n2	Ceramic Plate 2.5mm pitch (629 Series)
1	C15	220pF	Low K Ceramic capacitor
1	C95	220pF	General Purpose Ceramic Disc 2.5mm pitch
1	C21	3p9	General Purpose Ceramic plate 2.5mm pitch
6	C22, C30, C49, C53, C58, C59	27pF	Ceramic Plate 2.5mm pitch (680 Series)
1	C32	68pF	Ceramic Plate 2.5mm pitch (680 Series)
1	C23	39pF	Ceramic Plate 2.5mm pitch (680 Series)
2	C10, C24	2n2	Ceramic Plate 2.5mm pitch (680 Series)
21	C3, C11, C16, C19, C26, C28, C36, C40, C41, C44, C51, C60, C61, C66, C68, C69, C71, C76, C85, C87, C92	100n Y5V	Radial Multilayer Ceramic 2.5mm pitch - Y5V Dielectric
5	C99, C100, C101, C102, C103	1uF Y5V	Radial Multilayer Ceramic 2.5mm pitch - Y5V Dielectric
2	C79, C98	100nF	Miniature Polyester Capacitor 5mm pitch (Dubilier DMP5 Series)
1	C31	15pF	Ceramic Plate 2.5mm pitch (680 Series)
2	C75, C86	12pF	Ceramic Plate 2.5mm pitch (680 Series)
8	C4, C38, C39, C42, C43, C50, C52, C56	47pF	General Purpose Ceramic Disc 2.5mm pitch
2	C73, C94	33pF	General Purpose Ceramic Disc 2.5mm pitch
2	C34, C20	47pF	Ceramic Plate 2.5mm pitch (680 Series)
2	C46, C47	6n8	Polyester 5mm pitch 250V DC
2	C45, C48	4n7	Polyester 5mm pitch 250V DC
7	C54, C57, C62, C63, C67, C70, C88	47uF 16V	Miniature Radial Electrolytic - 5mm Dia, 2mm Pitch, Tolerance +- 20%
3	C55, C93, C12	10uF 16V	Miniature Radial Electrolytic - 4-5mm Dia, 2mm Pitch, Tolerance +- 20%
3	C6, C89, C90	470uF 16V	Radial Electrolytic - 8mm Dia, 3.5mm Pitch, Tolerance +- 20% (Forever RB Series)
6	C64, C65, C78, C81, C82, C84	330pF	Ceramic Plate 2.5mm pitch Capacitor
1	C80	100pF	General Purpose Ceramic Disc 2.5mm pitch
1	C104	120pF	Ceramic Plate 2.5mm pitch
1	VC1	5-65pF	Variable Capacitor - 100V DC, Dia 10.5mm, Pitch 7.62x5.08mm- (BC 808 Series)
N.F	C35, C37, C83	n/a	Not fitted
1	D13	1N4001	Axial 1 Amp Silicon Rectifier Diode - DO41 Packate 0.8mm leads
29	D1-D12,D15-D30, D31	1N4148	Glass Axial General Purpose Diode - DO-35 Package
4	LED1-4	GREEN	Bi Directional 5mm Green LED - Vf 2.2V - (Kingbright L-57D Series)
1	LED5	RED	5mm Pitch Standard Red LED (eg Kingbright L-53 Series)
1	VD1	BB809 **	VHF Varicap Diode
1	L1	3.9mH	Radial Inductor (Toko 8RBS) #181LY-392J
1	L2	4.7mH	Radial Inductor (Toko 10RB) #181LY-472J
1	L3	MC100 075	Screened Variable Inductor (MC120) #E526HNA-100075
1	L4	MC100 112	Screened Variable Inductor (MC120) - #E526HNA-100112
1	L5	MC120 073	Screened Variable Inductor - (MC120) #E526HNA-100073
1	L6	0.33uH	Axial Inductor Body 7mm, Dia 2.8mm

2	L9, L10	0.15uH	Axial Inductor Body 7mm, Dia 2.8mm - Sigma Inductors (C30 Series 0.25W)
2	L7,L8	220uH	Axial Inductor Body 9.2mm, Dia 4.0mm - Epcos Inductors (B78108S Series RF Inductors)
1	L11	MC141- 100 110	Screened Variable Inductor - (MC141) #NE547SNAS-100110
1	CON1	15 Way D	Right Angled Female Dual Double Height D-Type PCB-Mount Connector
2	CON2, CON3	R/A BNC	Right Angled BNC PCB-Mount Connectors
2	CON4, CON5	R/A XLR	Right Angled XLR PCB-Mount Connectors (F3FRAF)
0	CON6	2 Term	2 Way Screwless Terminal (Mask off, & do not fit)
3	CON7, CON9, CON13	MCX	MCX PCB Mount Socket
1	CON8	16 way	Straight IDC Header
3	CON10, CON11, CON12	4-way	4 Pin Jumper Header
1	DC1	B31215S	Bothand 2W Dual Output DC Converter
1	FB	n/a	Radial Axial Ferrite Bead
1	FIL1-2	5085	15kHz Block Filter- Separate board
1	Heatsink	TO5	TO5 Heatsink - Height 12.7mm (Aavid Thermalloy 5F)
1	IC Holders (14 pin) IC19,	14 pin	IC Holder - Dual wipe contacts - eg Eurocon TS1001-xx
4	IC Holders (16 pin) IC18, IC12, IC5, IC21	16 pin	IC Holder - Dual wipe contacts - eg Eurocon TS1001-xx
2	IC Holders (18 pin) IC13, IC17	18 pin	IC Holder - Dual wipe contacts - eg Eurocon TS1001-xx
14	IC Holders (8 pin) IC1, IC2, IC3, IC4, IC6, IC7, IC8, IC9, IC10, IC11, IC14, IC15, IC16, IC20	8 pin	IC Holder - Dual wipe contacts - eg Eurocon TS1001-xx
12	J1-12	3 pin	3 Pin Jumper Header - (2.54mm 3-Way Row)
12	J1-12 LINKS	n/a	Jumper Link 2.54mm - Protech 'Easy Pull' Style
1	RFT1	1 Turn	1 Complete Turn Ferrite Core
4	SW1-4	Dec Rota	Decimal Rotary PCB Switches
1	X1	4.864Mhz	HC49 Micro Crystal
1	X2	8.000MHz	HC49 Micro Crystal
1	RFT1 Wire	28Gauge Twist	Approx 3cm length per coil- 28 Gauge Self fluxing wire
1	R126	330uH	Axial Inductor
7	R1, R2, R3, R4, R5, R6, R9	10K	1/8 Watt Carbon Film - Tolerance +- 5%
1	R10	470R	1/8 Watt Carbon Film - Tolerance +- 5%
1	R100	1M	1/4 Watt Metal Oxide - Tolerance +- 1%
10	R101, R110, R112, R113, R114, R115, R116, R117, R118, R119	10K	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R103, R47, R68	5K1	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R106	3K6	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R107	12K	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R11	33K	1/8 Watt Carbon Film - Tolerance +- 5%
9	R12, R13, R17, R32, R33, R34, R35, R36, R37	1K2	1/8 Watt Carbon Film - Tolerance +- 5%
2	R22, R23	1K2	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R15, R16	680R	1/8 Watt Carbon Film - Tolerance +- 5%
1	R18	100R	0.4 Watt Carbon Film - Tolerance Low Noise
1	R105	100R	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R19	12K	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R20, R26, R29	4K7	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R21, R57, R78	220R	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R30	220R	1/8 Watt Carbon Film - Tolerance +- 5%
1	R24	68R	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R25	300R	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R28, R132	22R	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R31	4R7	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R39	2k2	1/4 Watt Metal Oxide - Tolerance +- 1%

8	R40, R45, R51, R65, R71, R94, R98, R125	1k	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R41	560R	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R42	820R	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R43, R108, R121	75R	1/4 Watt Metal Oxide - Tolerance +- 1%
9	R44, R54, R60, R66, R76, R79, R86, R91, R96	12K	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R61, R62	7K5	1/4 Watt Metal Oxide - Tolerance +- 1%
10	R48, R49, R55, R56, R58, R73, R74, R75, R77, R102	24K	1/4 Watt Metal Oxide - Tolerance +- 1%
4	R27, R50, R85, R72	470R	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R59, R97, R104	3K3	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R52, R70	WLNK - 0/Ohms	WLNK - Wire Link across pads (use other resistor legs)
2	R53, R69	100K	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R63, R64	16K	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R7, R8, R14	330K	1/8 Watt Carbon Film - Tolerance +- 5%
2	R80, R81	470K	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R83, R88, R99	6K8	1/4 Watt Metal Oxide - Tolerance +- 1%
5	R38, R84, R89, R120, R131	10R	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R82, R87	13K	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R90	5K6	1/4 Watt Metal Oxide - Tolerance +- 1%
4	R92, R111, R46, R67	47K	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R93, R109	120K	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R95	4K3	1/4 Watt Metal Oxide - Tolerance +- 1%
1	R128	51R	1/4 Watt Metal Oxide - Tolerance +- 1%
2	R129, R130	4k7	1/4 Watt Metal Oxide - Tolerance +- 1%
3	R133, R134	470R	0.6 Watt Metal Oxide - Tolerance +- 1%
3	VR1, VR2, VR5	10K	Horizontal Multiturn (Bourns 3006P Series)
2	VR3, VR4	1K	Vertical Multiturn (Bourns 3296W Series - Top screw adjustment)
1	VR6	10K	Vertical 5mm Pitch (Spectrol 63M Series - Top screw adjustment)
1	VR7	200R	Vertical 5mm Pitch 63M - Top screw adjustment)
2	R122, R123	1k	1/8 Watt Carbon Film - Tolerance +- 5%
1	R127	180R	1/8 Watt Carbon Film - Tolerance +- 5%
1	R124	1K3	1/4 Watt Metal Oxide - Tolerance +- 1%
6	IC1, IC4, IC10, IC11, IC14, IC15	TL071	Low Noise Op Amp
1	IC12	DG201-HS (HI3) HI3-0201HS-5Z	Analog Switch
1	IC13	PIC16C620A-04P	8 Bit Microcontroller
1	IC17	PIC16CE624-20P	8 Bit Microcontroller
1	IC18	MC145170-P **	PLL Synthesiser
1	IC19	4066	Analog Switch
7	IC2, IC3, IC6, IC7, IC8, IC9, IC16	TL072	Low Noise Dual Op Amp
1	IC20	LF351	Bi-FET Op Amp
1	IC5	LM13700N	Transconductance Amplifier
1	IC21	ST232CN	ST232CN RS232 TRANSCIEVER
1	REG1	7815	1A TO220 15V Linear Regulator
1	REG2	7805	1A TO220 5V Linear Regulator
2	T1, T2	BC327 (C3271)	BC327-16 TO92 50V PNP GP TRANSIST
4	T3, T4, T5, T6	MPSH10	High Speed Switching Transistor
1	T11	ZVN4306A	Zetec Transistor
1	T7	2N4427	High Speed Switching Transistor APT
3	T8, T9, T10	BC337 (C3371)	C337-16 TO92 50V NPN GP TRANS

3.62 LCD control board

Qty	Reference	Value	Description
4	C1, C2, C13, C18	2.2uF	63V Electrolytic Cap
2	C12, C15	100n	2.5mm Pitch Radial Multilayer Ceramic (Y5V)
2	C3, C4	33pF	33pF Ceramic 2.5mm Pitch
10	C5, C6, C7, C8, C9, C10, C11, C14, C16, C17	560pF	560pF Ceramic
1	D1	1N4148	1N4148
1	LED1	3mm	Mini 3mm Green LED - L-7104GD
1	LED2	3mm	Mini 3mm Red LED - L-7104GD
3	R1, R2, R16	33k	1/8 W Metal Film 1% - CR12
3	R12, R13, R14	1k8	1/8 W Metal Film 1% - CR12
4	R15, R18, R20, R22	100R	1/8 W Metal Film 1% - CR12
1	R17	560R	1/8 W Metal Film 1% - CR12
1	R19	100k	1/8 W Metal Film 1% - CR12
6	R3, R7, R8, R9, R10, R11	820R	1/8 W Metal Film 1% - CR12
2	R4, R5	390R	1/8 W Metal Film 1% - CR12
1	R6	10k	1/8 W Metal Film 1% - CR12
1	R21	4k7	1/8 W Metal Film 1% - CR12
1	R23, R24	4R7	1/8 W Metal Film 1% - CR12
1	R25	1K	1/8 W Metal Film 1% - CR12
1	VR3	200R	Bourns 3296 W 3/8in
1	VR1	500R	Bourns Minipot
1	VR2	100k	Minipot Spectrol 63M
1	Reg1	7805	7805CV 1A VOLTAGE REGULATOR
1	IC1	40 Pin	40 Pin PIC16F877-20P (NOT FITTED)
1	IC2	CA3240EZ	CA3240 Op Amp
0	IC3	TBA	NOT FITTED
3	SW1-3	9.5mm	9mm Tactile Switch
1	X1	8MHz	8MHz Crystal
1	Connector	20-Way	Header Strip (20-Way)
1	LCD Screen	LCD	Blue LCD Display
1	IC1	40-Pin	40 Pin IC Socket
2	IC2,IC3	8-Pin	8-Pin IC Socket
3	Panel Buttons	n/a	Molded Cap for Switch (NOT FITTED)
1	Con1	10-Way	10 Way Boxed Header
1	Con2	16-Way	16 Way Boxed Header

3.631 PSU Interface

Qty	Reference	Value	Description
1	R1	3k3	1/4W Metal Film Resistor
1	R2	22R	1/8W Carbon Film Resistor
0	R3	N/A	NOT FITTED
1	R4	1k2	1/4W Metal Film Resistor
1	R5	15k	1/4W Metal Film Resistor
1	C1	100uF	5mm Pitch Electrolytic Capacitor
2	C2,C3	470uF	5mm Pitch Electrolytic Capacitor
1	D1	UF5401	3A Ultrafast rectifier diodes
1	D2	LED	3mm Green LED
1	L1	100uH	DVE SRL 104
1	LM2575HVT-ADJ		LM2575HVT-ADJ/NOPB Regulator

3.632 Bus Bar

Qty	Reference	Value	Description
1	R1	5k	Minature Disc Thermistor
1	R2	1R	3W Wirewound Resistor
2	C1,C4	100uF	35V Radial electrolytic capacitor
2	C5,C6	10pF	Ceramic disc capacitor
1	CON1	CONN-DIL36	36 Way card edge connector
1	CON2	CONN-SIL2	2.1mm DC Power socket
1	CON3	CONN-SIL4	4 Way, 45° screwless terminal

3.633 Controller PCB

Qty	Reference	Value	Description
1	R1	22k	2512 0.05% Resistor
1	R2	1k8	0805 5% Resistor
3	R3,R8,R14	33R	0805 5% Resistor
2	R4,R11	5k1	0805 5% Resistor
8	R5,R6,R12,R13,R16,R17,R19,R30	10k	0805 5% Resistor
	R23	18k	0805 5% Resistor
2	R7,R24	1M	0805 5% Resistor
2	R10,R22	100k	0805 5% Resistor
2	R15,R21	22k	0805 5% Resistor
2	R18,R25	NOTUSED	0805 1% Resistor
1	R20	6k2	0805 1% Resistor
6	R26-R28,R32-R34	NOTUSED	0805 5% Resistor
1	R29	680R	0805 5% Resistor
1	R31	4k7	0805 5% Resistor
1	R35	5k6	0805 5% Resistor
1	R9	15k	0805 5% Resistor
1	VR1	0R	1206 0 Ohm Link
1	VR2	10k	10k 20% 4mm 3314G SMT Cermet Trimmer
1	VR3	NOTUSED	SMT Cermet Trimmer Resistor
1	C1	NOTUSED	SMT Capacitor (4X5.4mm)
15	C2-C4,C6,C9-C16,C18-C21	100nF	100N 0805 50V Y5V Capacitor
1	C16	1uF	0805 SMT Capacitor
2	C5,C7	1nF	0805 SMT Capacitor
1	C8	10uF	SMT Capacitor (4X5.4mm)

1	C17	NOTUSED	0805 SMT Capacitor
1	C22	NOTUSED	0805 SMT Capacitor
1	C23	NOTUSED	0805 SMT Capacitor
1	C24	47uF	SMT Electrolytic Capacitor
1	C25	2n2	0805 SMT Capacitor
3	D5-D7	NOTUSED	SMT Diode
3	IC1-IC3		CA3240EZ DUAL BIMOS Op-Amp
2	CON1,CON2	NOTUSED	
1	CON3	CONN-H10	10 WAY Straight boxed header

3.634 15W Driver

Qty	Reference	Value	Description
1	R1	43k	1/4W Metal film resistor
1	R2	2k2	1/4W Metal film resistor
1	R3	3k3	1/4W Metal film resistor
1	R4	10R	1/4W Metal film resistor
1	R5, R9	75R	1/4W Metal film resistor
1	R6	100R	1/4W Metal film resistor
1	VR1	1k	6mm Cermet trimmer potentiometer
2	C1,C2	470uF	Radial electrolytic capacitors
1	C3	27pF	Low K ceramic plate capacitor
2	C4,C12	10nF	Ceramic disc capacitors
2	C5,C10	560pF	Ceramic disc capacitors
1	C6	39pF	Low K ceramic plate capacitor
1	C7	100uF	63V Radial electrolytic capacitor
1	C8	47pF	Ceramic disc capacitor
1	C9	82pF	Low K ceramic plate capacitor
1	C11	220nF	Polyester Capacitor
0	C13-C15	Not fitted	Ceramic disc capacitor
1	FB1		Axial Bead inductor
1	L1	330uH	Choke Inductor
1	L2	1.5t	S18 Toko Inductor
1	L3	Loop	Wire Loop Inductor
1	L4	2.5t	S18 Toko Inductor
1	L5	3.5t	S18 Toko Inductor
1	L6	330uH	Choke Inductor
0	L7	Not fitted	S18 Toko Inductor
1	D1	UF5401	300A, 100V Fast diode
1	D2	GREEN	5mm Greem LED
1	T1	IRL510	IRL510PBF
0	CON1	MCX	MCX PCB Socket N.F
1	CON2	CONN-H2	MCX PCB Socket
1	REG1	LM2575HV-ADJ	Step down switch regulator

3.635 Double Pallet

Qty	Reference	Value	Description
2	R1,R6	5k1	SMT 1/8W Resistor
2	R2,R5	100R	SMT 1/8W Resistor
4	R3,R4,R7,R8	3R3	SMT 1W Resistor
2	R9,R17	22K	SMT 1W Resistor
6	R10-R12,R14-R16	12R	SMT 1W Resistor
1	R13	100R	400W Power Resistor

4	R18-R21	100R	SMT 1W Resistor
3	VR1-VR3	10k	SMT 10k Variable Resistor
2	C1,C4	82pF	SMT 100nF Capacitor
4	C5,C14,C15,C18	100nF	SMT 100nF Capacitor
2	C6,C13	100uF	100uF 63V Electrolytic Capacitor
2	C7,C12	15nF	SMT 100V Capacitor
2	C8,C11	1nF	Polyester Capacitor
2	C9,C10	3p3	Metal clad capacitor
2	C16,C17	Not fitted	SMT 100nF Capacitor
1	C19	100nF	SMT Capacitor
2	FB1,FB2	1H	SMT Ferrite Bead, 11.4 x 6.5mm
6	D1-D6	BLU-LED	SMT Blue LED
2	D7,D8	Not fitted	SMT Blue LED
2	T1,T2	BLF278	BLF278 Transistor
1	CON1	CONN-H2	MCX Connector
2	PCB1,PCB2	PCB	PCB Feedback Inductor
1	PCB3	PCB	
2	RFT1,RFT2	4-1 SemiRigid Coax CCW	
2	RFT3,RFT4	PCB	PCB Transformer
1	TEMP	LM335Z	

3.636 Output Combiner

Qty	Reference	Value	Description
1	R1	47R	1W Resistor
1	R2	120R	1W Resistor
3	R3,R4,R5,R6,R7	120R	1W Resistor
2	R8,R9	68R	1W Resistor
2	LINKS	18k	Bridge points
3	C1,C3,C5	27pF	
3	C2,C8,C10	1nF	
2	C4,C6	2n2	
5	D1-D4,D6	BAT42 DIODE	
2	D5,D7	LED	
4	L1-L4	2.5T	