



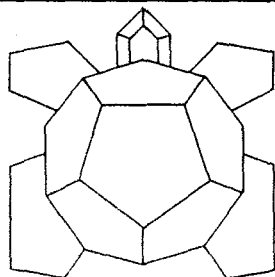
TITLE

PARTS LIST FOR MARK II VALIANT TURTLE

DOCUMENT N° VDL1/129

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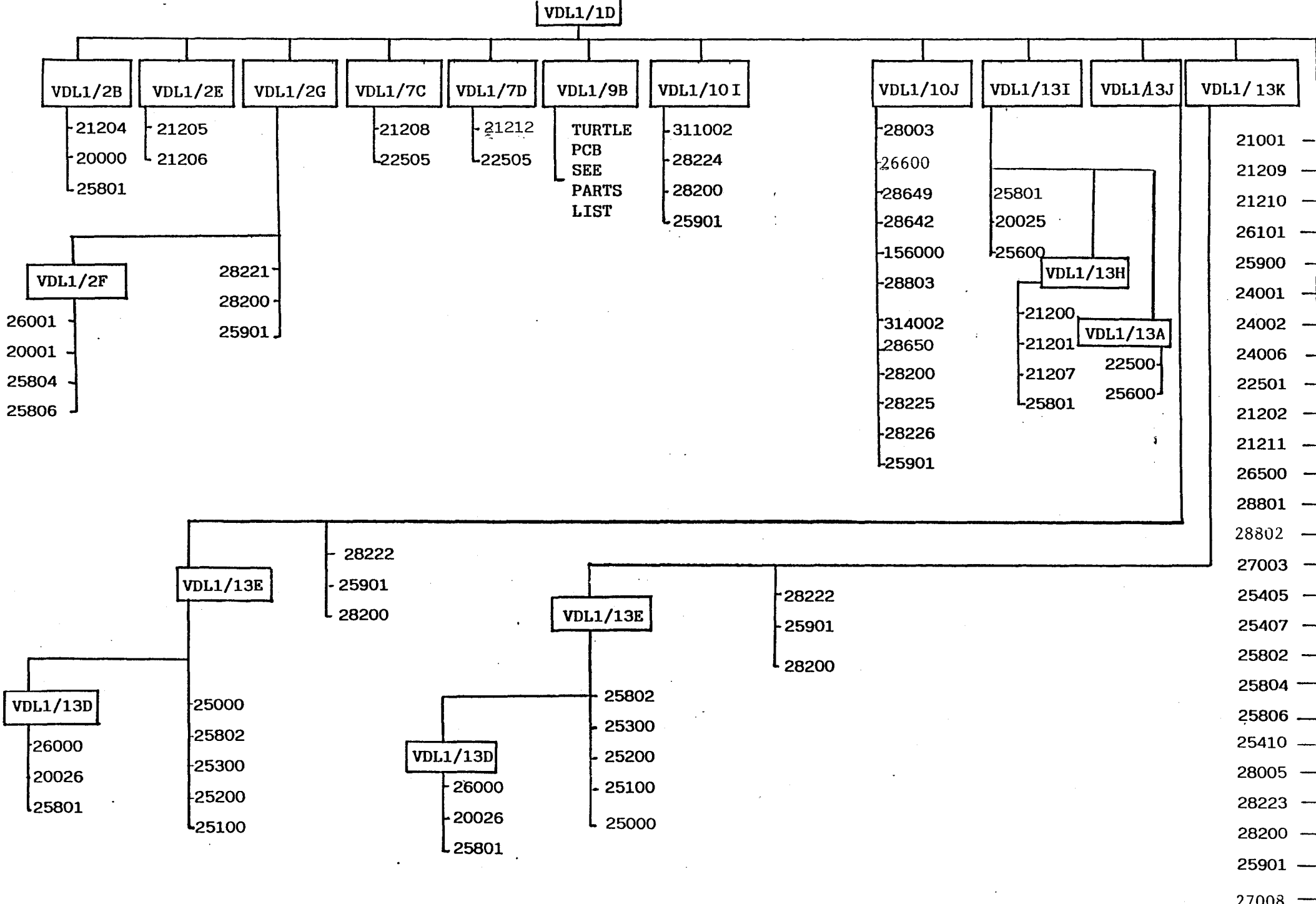
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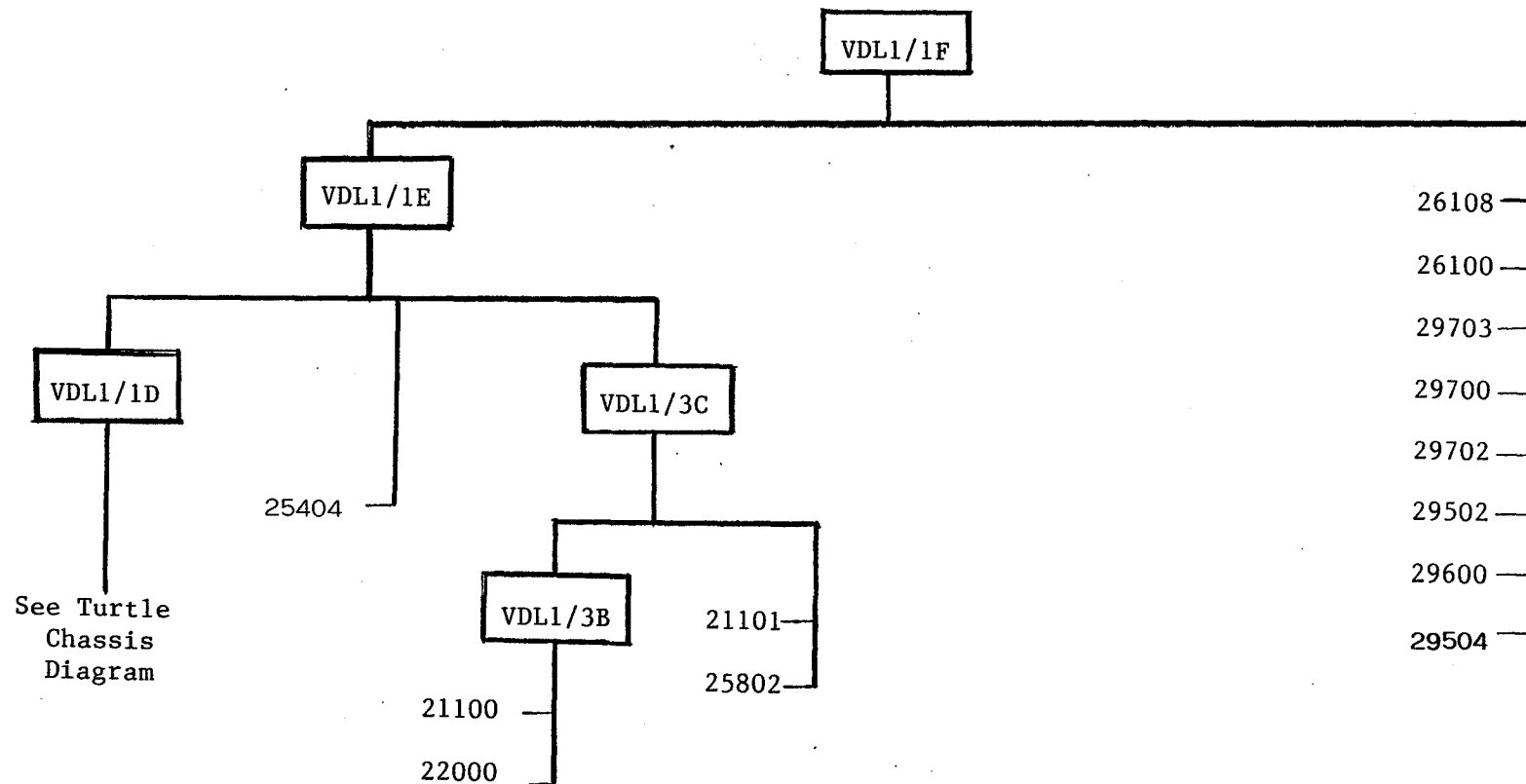


Valiant Designs Ltd Park House 140 Battersea Park Road LONDON SW11 4NB ENGLAND

Tel: 01-720 3947/627 1351/627 0470 Telex: 946461 (Attn Valiant) NIMTEX G

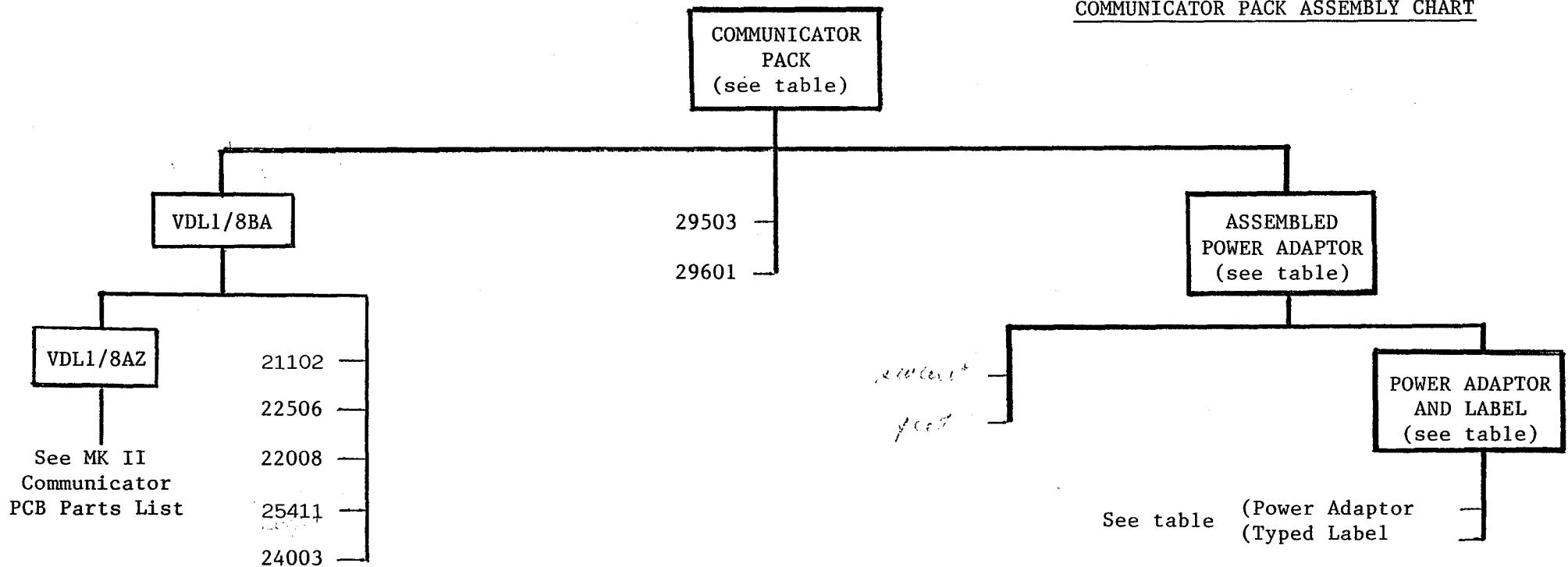
Directors: Prof T Stonier, AB, MS, PhD, FRSA (President) R R Fawcett, ACMA, MBCS (Chairman)
D Catlin, B Tech (Managing) G M Manvell (Marketing) T M Airey, BSc, FCA (Finance) (Secretary)
Reg in England No1626393 Reg Office: 56-60 St Mary Axe, London EC3A 8BJ VAT No 237 711955





MK II TURTLE ASSEMBLY CHART

COMMUNICATOR PACK ASSEMBLY CHART



COMMUNICATOR PACK ASSEMBLY REFERENCE TABLE

POWER SUPPLY		TYPED LABEL	POWER ADAPTOR	POWER ADAPTOR AND LABEL	ASSEMBLED POWER ADAPTOR	COMMUNICATOR PACK
1	240v 50HZ	24008	27006	VDL1/12E	VDL1/12B	VDL1/8BB
2	220v 50HZ	24009	27007	VDL1/12F	VDL1/12C	VDL1/8BC
3	110v 60HZ	24010	27005	VDL1/12G	VDL1/12D	VDL1/8BD

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MKII TURTLE CHASSIS

ASSEMBLY REF: VDL1/1D

ITEM NO.	DESCRIPTION	QTY PER ASSEMBLY	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Pen Housing	1	VDL1/2E		
2	Cam Shaft	1	VDL1/2B		
3	D.C. Motor Assembly	1	VDL1/2G		
4	Bottom Battery Cover - Port	1	VDL1/7C		
5	Bottom Battery Cover - Starboard	1	VDL1/7D		
6	PCB	1	VDL1/9B		
7	Turtle Loom	1	VDL1/10J		
8	Eye Assembly	1	VDL1/10I		
9	Traction Wheel Assembly	2	VDL1/13I		
10	Wired Starboard Stepper	1	VDL1/13J		
11	Wired Port Stepper	1	VDL1/13K		
12	Turtle Base	1	21001	CAMALLO	
13	Battery Cover Top	2	21209	CAMALLO	
14	Head Cover Plate	1	21210	CAMALLO	
15	3/4" Diameter Ball Bearing	1	26101		
16	PCB Mounting Pillars	3	25900	CONDALE LTD.	
17	ON/OFF/CHARGE Label	1	24001	MOCKRIDGE LABELS	
18	Name Plate	1	24002	MOCKRIDGE LABELS	
19	Eye Ring	2	24006	MOCKRIDGE LABELS	
20	Clamping Strap	1	22501	AYDEN	
21	Plain Bush	2	21202	CAMALLO	
22	Threaded Bush	2	21211	CAMALLO	
23	Helical Spring	2	26500	GILLSAN	
24	Short Conical Spring	3	28801	GILLSAN	
25	Long Conical Springs Connector	1	28802	GILLSAN	
26	1.2 Volt Batteries Nicaid	10	27003	SAFT	

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
27	No.6 Type B Tapping Screw ¼" Long Pan Head	10	25405	T.L. CASTLE	
28	No.8 Type B Self Tapping Pozidrive Pan Head screw ⅝" long	8	25408	T.L. CASTLE	
29	Adhesive	As reqd	25802	GEN.ENG. SUPPLY	BOSTIK 7434
30	DIL switch	1	28005	ERG COMPONENTS	
31	4 Pin IDC & 90mm Long Ribbon Cable	1	28223	SWANSE INDUSTRIAL	
32	1.5mm Rubber Sleeves	4	28200	CROYLEK LTD	
33	Solder	As reqd	25901	TO BE SUPPLIED BY CONTRACTOR	
34	Fuse	1	28805		

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MK II TURTLE

ASSEMBLY REF: VDL1/1E

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	MK II Turtle Chassis	1	VDL1/1D		
2	Shell Assembly	1	VDL1/3C		
3	No.6 type B self tapping screw $\frac{1}{2}$ " long	3	25404	T.L. CASTLE	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: PACKAGED TURTLE ASSEMBLY REF: VDL1/1F
(ENGLISH VERSION)

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASS'MY NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	MK II Turtle	1	VDL1/1E		
2	Screwdriver	1	26108	MILLS	
3	Berol Colour Stick Pen	1	26100	BEROL	
4	User Guide	1	29703	EMBASSY PRESS	
5	Pen Up	1	29700	EMBASSY PRESS	
6	Talking Turtle	1	29702	EMBASSY PRESS	
7	Polystyrene Pack	1	29502	MIMO	
8	Turtle Carton	1	29600	EMBASSY PRESS	
9	Polythene Bag	1	29504	PREMIER POLYTHENE	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: CAM SHAFT

ASSEMBLY REF: VDL1/2B

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Cam	1	21204	CAMALLO	
2	40T/40DP Gear Wheel	1	20000	PENATUBE	
3	Adhesive	As Reqd	25801	BOSTIK	7431

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: PEN HOUSING

ASSEMBLY REF: VDL1/2E

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Top Housing	1	21205	CAMALLO	
2	Bottom Housing	1	21206	CAMALLO	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: D.C. MOTOR AND PINION

ASSEMBLY REF: VDL1/2F

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	1.5 Volt D.C. Motor	1	26001	PROOPS	RE-140-18100
2	10T/40DP Pinion	1	20001	PENATUBE	
3	Adhesive	As Reqd	25804	GEN ENG SUPPLY	BOSTIK M890
4	Adhesive Activator	As Reqd	25806	GEN ENG SUPPLY	Bostik Activator AX

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: D.C. MOTOR ASSEMBLY

ASSEMBLY REF: VDL1/2G

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	2 Pin IDC & 125mm Long Ribbon Cable	1	28221	SWANSEA INDUSTRIAL	
2	D.C. Motor and Pinion	1	VDL1/2F		
3	Rubber Sleeve 1.5mm	2	28200	CROYLEK LTD	
4	Solder	As Reqd	25901	TO BE SUPPLIED BY SUBCONTRACTOR	

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PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: SHELL TOP AND DUMMY LENS

ASSEMBLY REF: VDL1/3B

ITEM NO.	DESCRIPTION	QTY PER ASSM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF
1	Shell Top	1	21100	CAMALLO	
2	Dummy Lens	1	22000	DICE & GAMES	16mm Counter
3	Adhesive	As req'd	25302	GEN.ENG.SUPPLY	BOSTIK 7434

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: SHELL ASSEMBLY ASSEMBLY REF: VDL1/3C

ITEM NO.	DESCRIPTION	QTY PER ASSM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Shell Top and Dummy Lens	1	VDL/3B		
2	Shell Bottom	1	21101	CAMALLO	
3	Adhesive	As Reqd.	25804	GEN.ENG.SUPPLY	BOSTIK M890
4	Activator	As Reqd.	25806	GEN. ENG.SUPPLY	BOSTIK AX

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PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: BOTTOM BATTERY COVER - PORT

ASSEMBLY REF: VDL1/7C

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Bottom Battery Cap	1	21208	CAMALLO	
2	Battery Connecting Plate	2	28806	AYDEN	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: BOTTOM BATTERY COVER - STARBOARD ASSEMBLY REF: VDL1/7D

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Bottom Battery Cap	1	212121	CAMALLO	
2	Battery Connecting Plate	3	28806	AYDEN	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MKII COMMUNICATOR
PCB

ASSEMBLY REF: VDL1/8AZ

ITEM NO.	DESCRIPTION	QTY PER ASS'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFACTURER'S REFERENCE
1	THERMISTOR	1	314003	STC	YS 812
2	RESISTOR 75R 4 W	1	175100	VTM	KH-206-0-75R
3	RESISTOR 1K	4	110300	NEOHM	CFR25-1K0-5%
4	RESISTOR 10K	15	110403/ 4	NEOHM ITT	CFR25-10K-5% 77072F
5	RESISTOR 100K	1	110500	NEOHM	CFR25-100K-5%
6	RESISTOR 3R3	1	133000/ 1/ 2/ 3	NEOHM	RGPO207-3R3
7	RESISTOR 3K3	1	133300	NEOHM	CFR25-3K3-5%
8	RESISTOR 330K	1	133500	NEOHM	CFR25-330K-5%
9	3K9X9 SIL RESISTOR	1	139300	NEOHM	ME-9-392-J
10	RESISTOR 47K	1	147400	NEOHM	CFR25-47K-5%
11	RESISTOR 6K2	1	162300	NEOHM	CFR25-6K2-5%
12	RESISTOR 820R	1	18220	NEOHM	CFR25-820R-5%
13	8K2X9 SIL RESISTOR	1	182300	NEOHM	ME9-822-J
14	+5V REGULATOR	1	193000/ 1	NSC NSC	LM7805CT LM340T-5.0
15	100PF CAPACITOR	1	210201/ 0	FARNELL	146-447
16	0.1UF CAPACITOR	1	210500/	THOMSON	IRE/707/100NF
17	CAPACITOR 1UF 35V	1	210600/ 2	THOMSON	FAG 3031 MFM
18	100UF 25V CAPACITOR	1	210800/ 1	FARNELL DUB	143-652 CEA 10025
		1			
19	2U2 16V CAPACITOR	1	222601/ 2/ 3	DUB THOMSON NAT	100-876 FAC302 2.2MF10V ECSFIA E 225H

PARTS LIST FOR COMMUNICATOR PCB

VDL1/8AZ

ITEM NO.	DESCRIPTION	QTY PER ASS'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFACTURER'S REFERENCE
22	CAPACITOR 22UF 35V	1	222701/ 2/ 3/ 0	DUB RS MULLARD FARNELL	K22MF-351 104-017 035-90005 143-243
23	COMMUNICATOR BOARD	1	23205	PLESSEY	
25	DUAL FLIP FLOP	1	270001/ 2 7	NSC MOTOROLLA SIGNETIC	CD4013BCN MC14013BCP HEF 4013 BPR
26	OCTAL LATCH	1	270003/ 8	SIGNETIC TI	N74LS374N SN74LS374N
27	QUAD O/C GATE	1	270004	NSC	SN74LS136N
28	MICROPROCESSOR	1	270006	SIGNETIC	8048
29	RS232 LINE DRIVER	1	270009/ 10	NSC TEXAS	DS1488N SN75188N
30	DIL SWITCH	1	28004	ERG	SDS-4 023
31	QUAD COMPARATOR	1	285000	NSC	LM339N
32	5 PIN PCB MTG DIN	1	28635		
33	15PIN PCB MRG D TYPE PLG	1	28636	G. ENGLISH	XTR-CO-HV-52
34	SUB MIN PCB MTG SKT	1	28641	G. ENGLISH	HEC 0470-01-640
35	TRANSISTOR	1	300007/ 8	MACRO	2N3904
36	POWER FET	1	304500/ 1	FERRANTI	ZVN2104A
37	DIODE	4	309003	MULLARD	1N4148
38	IR TX DIODE	4	31000 2/ 3	AEG	CQW-
39	LIGHT EMITTING RED DIODE	1	311000	TOS	TLR 102A
40	5.6V ZENER DIODE	1	312000	NSC	BZX 79C 5V6
41	12V ZENER DIODE	1	312001/ 2/ 3	MULLARD RS MULLARD	BZX 61-12V 282-707 BZT03-C12
42	6MHz CRYSTAL	1	315000/ 1/ 2/ 3/ 4	SEI FARNELL AEL SEI	P00600 ABI 103-884 4082 600ABZ

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MK II COMMUNICATOR ASSEMBLY ASSEMBLY REF: VDL1/8BA

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Mk II Communicator Box	2	21102	CAMALLO	
2	Backplate	1	22506	AYDEN	
3	Window	1	22008	VISIJAR TUCKER	
4	No.6 type B self tapping screws countersunk head x 1" long zinc plated	4	25411/09	T.L. CASTLE	
5	Name plate label	1	24003	MOCKRIDGE	
6	MKII Communicator PCB	1	VDL1/8AZ		
7	"Valiant" Turtle label	1	24011	MOCKRIDGE	
8	Stick on feet	4	26104	SYNTHOTECH MARINE	602202
9	Heat Sink Compound	1	26800	R.S.	
10	Heat Sink	1	22507	AYDEN	
11	Transistor Heat Sink	1	22508	Made from component no. 22501	
12	Screw M3	1	25000	T.L. CASTLE	
13	Nut M3	1	25100	T.L. CASTLE	
14	Washer M3	1	25200	T.L. CASTLE	
15	Spring Washer M3	1	25300	T.L. CASTLE	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MKII COMMUNICATOR PACKAGE
(240v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/8BB

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Assembled Power Adaptor	1	VDL1/12B		
2	MKII Communicator	1	VDL1/8BA		
3	Polystyrene Packaging	1	29503	MIMO	
4	Communicator Carton	1	29601	EMBASSY PRESS	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MKII COMMUNICATOR PACKAGE
(220v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/8BC

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Assembled Power Adaptor	1	VDL1/12C		
2	MKII Communicator	1	VDL1/8 BA		
3	Polystyrene Packaging	1	29503	MIMO	
4	Communicator Carton	1	29601	EMBASSY PRESS	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MK II COMMUNICATOR PACKAGE
(110v 60HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/8BD

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Assembled Power Adaptor	1	VDL1/12D		
2	MKII Communicator	1	VDL1/8BA		
3	Polystyrene Packaging	1	29503	MIMO	
4	Communicator Carton	1	29601	EMBASSY PRESS	

PARTS LIST FOR MARK II VALIANT TURTLEASSEMBLY: TURTLE PCBASSEMBLY REF: VDL1/9B

ITEM NO.	DESCRIPTION	QTY PER ASSM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	RESISTOR 100R	1	110200	NEOHM	CFR25-100R-5%
2	RESISTOR 1K0	6	110300	NEOHM	CFR25-1K0-5%
3	RESISTOR LOW NOISE 10K	2	110400/1/2	NEOHM	LR1-10K-1%
4	RESISTOR 10K	3	110403	NEOHM	CFR25-10K-5%
5	10K x 8 SIL RESISTOR PK	1	100405/7	NEOHM	ME-8-103-J
6	SIL RESISTOR 4 x 10K	1	110408	NEOHM	ME-4-103-J
7	RESISTOR 100K	1	110500	NEOHM	CFR25-100K-5%
8	RESISTOR 100K 1%	1	110501	NEOHM	LR1-100K-1%
9	RESISTOR 1K8	2	118300	NEOHM	CFR25-1K8-5%
10	RESISTOR 2K0	1	120300	NEOHM	CFR25-2K0-5%
11	RESISTOR 20K	1	120400	NEOHM	CFR25-20K-5%
12	RESISTOR 22R	2	122100/1	NEOHM	RGP0207-22R
13	RESISTOR 220R 1%	1	122200	NEOHM	LR1-220R-1%
14	RESISTOR 220R	1	122201/2/3	NEOHM	RGP0414-220R
15	RESISTOR 2K2	1	122300	NEOHM	CFR25-2K2-5%
16	RESISTOR LOW NOISE 22K	1	122400/2	NEOHM	LR1-22K-1%
17	RESISTOR 22K	1	122401	NEOHM	CFR25-22K-5%
18	RESISTOR 27R	1	127100	NEOHM	CFR25-27R-5%
19	RESISTOR 270R	1	127200	NEOHM	CFR25-270R-5%
20	RESISTOR LOW NOISE 2K7	1	127300/1	NEOHM MUL	LR1-2K7-1% SFR25-2K7-5%
21	RESISTOR 2K7	1	127302	NEOHM	CFR25-2K7-5%
22	RESISTOR 330R	1	133202	NEOHM	CFR25-330R-5%
23	RESISTOR 4K7	2	147300	NEOHM	CFR25-4K7-5%
24	RESISTOR 47K	1	147400	NEOHM	CFR25-47K-5%
25	RESISTOR 510R	1	151200	NEOHM	CFR25-510R-5%
26	RESISTOR 5K6	1	156300	NEOHM	CFR25-5K6-5%
27	RESISTOR 820R 1%	1	182201	NEOHM	LR1-820R-1%
28	RESISTOR 82K	1	182400		
29	+5V REGULATOR	1	193000/1	NSC	LM780-5CT

PARTS LIST FOR MARK II TURTLE PCB

VDL1/9B

Page 2 of 2

ITEM NO.	DESCRIPTION	QTY PER ASSM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
30	ADJUSTABLE REGULATOR	1	193002	NSC	LM 317 L2
31	CAPACITOR 0.01UF	5	210401/0	FARNELL	629 0103
32	CAPACITOR 0.1UF	1	210500/1/2	THOMPSON	IRE/707/100NE
33	CAPACITOR 1UF	6	210600/2	THOMPSON	FAG 303 IMFM
34	CAPACITOR 10UF	3	210700/1/2/3	THOMPSON	FAC 305 10MFM
35	CAPACITOR 22PF	1	222101/0	FARNELL	146-483
36	CAPACITOR 0.22UF	1	222500/1/2	THOMPSON	IRD/807/220NE
37	PCB	1	23206	PLESSEY	
38	CAPACITOR 4.7PF	1	247001/6	FARNELL	146-477
39	PCB PLUG RT ANGLE 4 WAY	1	28651	MOLEX	22-05-1042
40	PCB PLUG RT ANGLE 6 WAY	1	28652	MOLEX	22-05-1062
41	PCB PLUG RT ANGLE 2 WAY	2	28653	MOLEX	22-05-1022
42	PCB PLUG RT ANGLE 5 WAY	2	28654	MOLEX	22-05-1052
43	DUAL FLIP FLOP	1	270001/2/7	MACRO	HEF-4013-BP
44	DARLINGTON DRIVER x 7	2	270005	TEXAS	ULN-2001AN
45	MICROCOMPUTER	1	270006	MACRO	8048
46	DUAL COMPARATOR	2	285001/6	TEXAS	LM-393P
47	TRANSISTOR	4	30000/1	FERRANTI	2N 5086L
48	TRANSISTOR	1	300002	NSC	2N5771
49	TRANSISTOR	1	300003	MOT	2N3906
50	TRANSISTOR	1	300004	TEXAS	TIP115
51	TRANSISTOR	2	300005/6	MACRO	BC327
52	DIODE	3	309000/1/2	MOT	IN40015
53	LIGHT EMITTING DIODE RED	1	311000	TOS	TL-R-102A
54	LIGHT EMITTING DIODE YELLOW	1	311001	TOS	TLY-102A
55	ZENER DIODE 5V6	1	312000	MUL	B2X-79C-5V6
56	ZENER 12V	1	312004	MUL	B2X-79C-12
57	PHOTODIODES	6	313000/1	FERRANTI	BPW-41D
58	6MHz CRYSTAL	1	315000/1/2 /3/4	SEI	600 AB2
59	RESISTOR 8K2	1	182301	NEOHM	CFR25-8K2-5%

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: EYE ASSEMBLY

ASSEMBLY REF: VDL1/10I

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	LED	2	311002	IMO	5119/RDA
2	2 Pin IDC & 200mm Ribbon Cable	1	28224	SWANSEA IND.	
3	1.5mm Rubber Sleeve	2	28200	CROYLEK LTD.	
4	Solder	As Reqd	25901	TO BE SUPPLIED BY SUBCONTRACTOR	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MAIN WIRE LOOM ASSEMBLY REF: VDL1/10J

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y NO.	COMPONENT OR ASSEM'Y	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	ON-OFF-CHARGE Switch 2P 3T	1	28003	G.ENGLISH	SS-23F19
2	Fuse Holder	1	28804	ARIEL PRESSINGS	RA 3395
3	Power Socket	1	28642	G.ENGLISH	HEC0749-01-020
4	Resistor	1	156000	FARNELL	104-251
5	Battery Spring	2	28803	GILLSAN	
6	Thermistor	1	314002	STC	YBA020TB
7	6 Way Cable Shell	1	28650	FARNELL	143-095 (22-01-1063)
8	1.5mm Rubber Sleeving	12	28200	CROYLEK LTD.	
9	Stranded core, single 7/0.2mm copper conductors PVC wall coverings 100mm long	6	28225	Supplied by subcontractor	
10	Stranded core, single 7/0.2mm copper conductors PVC wall coverings 55mm long	3	28226	Supplied by subcontractor	
11	Crimp terminals	6	28649	FARNELL	143-201
12	Solder	As Reqd.	25901	Supplied by Subcontractor	
13	PTFE Sleeving	35mm	28227	RS	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: ASSEMBLED POWER ADAPTOR
(240v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12B

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Power Adaptor and label	1	VDL1/12E		
2	Stick on feet	4	26104	SYNTHOTECH MARINE	N 602202
3	Sealant	As reqd.			

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: ASSEMBLED POWER ADAPTOR
(220v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12C

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Power Adaptor and label	1	VDL1/12F		
2	Stick on feet	4	26104	SYNTHOTECH MARINE	N 602202
3	Sealant	As reqd.			

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: ASSEMBLED POWER ADAPTOR
(110v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12D

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Power Adaptor and label	1	VDL1/12G		
2	Stick on feet	4	26104	SYNTHOTECH MARINE	N 602202
3	Sealant	As reqd.			

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: POWER ADAPTOR AND LABEL
(240v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12E

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Power Adaptor 240v/50HZ	1	27006	FERROGLEN	TV202
2	Typed label 240v/50HZ	1	24008	MOCKRIDGE	(from 24004)

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: POWER ADAPTOR AND LABEL
(220v 50HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12F

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Power Adaptor 220v/50HZ	1	27007	FERROGLEN	
2	Typed label 220v/50HZ	1	24009	MOCKRIDGE	(from 24004)

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: POWER ADAPTOR AND LABEL
110v 60HZ MAINS SUPPLY)

ASSEMBLY REF: VDL1/12G

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Power Adaptor 110v/60HZ	1	27005	FERROGLEN	TV201
2	Typed label 110v/60HZ	1	24010	MOCKRIDGE	(from 24004)

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: SHAFT AND CIRCLIP

ASSEMBLY REF: VDL1/13A

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Shaft	1	22500	HARVILL	
2	Circlip	1	25600	MECRO	AM 1800-15

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: MOTOR & PINION

ASSEMBLY REF: VDL1/13D

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Stepper Motor	1	26000	IMPEX	9904-112-31004
2	Pinion	1	20026	CAMALLO	
3	Adhesive	As Reqd	25801	GEN.ENG. SUPPLY	BOSTIK 7431

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: STEPPER MOTOR & FIXING SCREWS

ASSEMBLY REF: VDL1/13E

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Stepper Motor & Pinion	1	VDL1/13D		
2	Screw M3 x 12	2	25000	T.L.CASTLE	
3	Adhesive	As	25802	SMAIL	BOSTIK 7434
4	M3 Washer	Reqd 1	25200	T.L.CASTLE	
5	M3 Single Coil Spring Washer	2	25300	T.L.CASTLE	
6	M3 Full Hexagon Nut	2	25100	T.L.CASTLE	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: WHEEL & TYRE ASSEMBLY

ASSEMBLY REF: VDL1/13H

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Tyre	1	21200	RITMAN & SMITH	
2	Traction Wheel	1	21201	CAMALLO	
3	Retaining Ring	1	21207	CAMALLO	
4	Adhesive	As Reqd	25801	GEN.ENG. SUPPLY	BOSTIK 7434

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: TRACTION WHEEL ASSEMBLY

ASSEMBLY REF: VDL1/13 I

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
<hr/>					
1	Shaft and Circlip	1	VDL1/13A		
2	Wheel and Tyre Assembly	1	VDL1/13 H		
3	Anti-Backlash Gear	1	20025	CAMALLO	
4	Circlip	1	25600	ANDERTON	AM 1800-S
5	Adhesive	As Reqd.	25804	GEN ENG SUPPLY	BOSTIK M890
6	Activator	As Reqd.	25806	GEN ENG SUPPLY	BOSTIK AX

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: WIRED STARBOARD STEPPER MOTOR

ASSEMBLY REF: 13 J

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Stepper Motor and Fixing Screws	1	VDL1/13E		
2	5 Pin IDC Connector & 75mm Long Ribbon Cable	1	28222	SWANSEA INDUSTRIAL	
3	Solder	As Reqd	25901	SUPPLIED BY SUBCONTRACTOR	
4	1.5mm Rubber Sleeve	5	28200	CROYLEK LTD	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: WIRED PORT STEPPER MOTOR

ASSEMBLY REF: VDL1/13K

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	Stepper Motor & Fixing Screws	1	VDL1/13E		
2	5 Pin IDC Connector & 50mm Long Ribbon Cable	1	28221	SWANSEA INDUSTRIAL	
3	Solder	As Reqd	25901	SUPPLIED BY SUBCONTRACTOR	
4	1.5mm Rubber Sleeve	5	28200	CROYLEK LTD	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEAD FOR
SPECTRUM WITH INTERFACE 1

ASSEMBLY REF: VDL1/14A

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	9 PIN 'D' PLUG	1	28415	R.S.	466.179
2	9 PIN 'D' COVER	1	28416	R.S.	
3	5 PIN DIN 180° PLUG	1	28417	R.S.	
4	1.5mm RUBBER SLEEVE	3	28235	CROYLEK	
5	1.3 mts OF 3 CORE CABLE	1	28226	R.S.	358.141

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEAD FOR
APPLE SUPER SERIAL

ASSEMBLY REF: VDL1/14D

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	25 PIN 'D' PLUG	1	28405	R.S.	466.191
2	25 PIN 'D' COVER	1	28411	R.S.	467.706
3	5 PIN DIN 180° PLUG	1	28417	R.S.	
4	1.5mm RUBBER SLEEVE	3	28235	CROYLEK	
5	3 CORE CABLE	1.3mts	28226	R.S.	358.141

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEAD FOR
IBM PC PARALLEL

ASSEMBLY REF: VDL1/14E

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	25 PIN 'D' PLUG	1	28405	R.S.	466.191
2	25 PIN 'D' COVER	1	28411	R.S.	467.706
3	11 CORE SCREENED CABLE & MOULDED ON 15 PIN 'D' SOCKET	1	24026	G. ENGLISH	
4	1.5mm RUBBER SLEEVE	3	28235	CROYLEK	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEAD FOR
IBM PC **SERIAL**.

ASSEMBLY REF: VDL1/14F

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	25 PIN 'D' SOCKET	1	28412	R.S.	466.220
2	25 PIN 'D' COVER	1	28411	R.S.	467.706
3	5 PIN DIN 180° PLUG	1	28417	R.S.	
4	3 CORE CABLE 7/0.2	1.3 mts	28226	R.S.	358.141
5	1.5mm RUBBER SLEEVE		28235	CROYLEK	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEAD FOR
CBM 64

ASSEMBLY REF: VDL1/14G

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	CBM 64 PCB EDGE CONNECTOR	1	28400	ROXBOROUGH	031.12134.200
2	KEY	2	28401	ROXBOROUGH	01.1100
3	CBM 64 CONNECTOR COVER	1	28404	STACK	
4	11 CORE SCREENED CABLE 1.3M LONG & MOULDED ON ON 15 PIN 'D' SOCKET	1	24026	G. ENGLISH	
5	1.5 RUBBER SLEEVE	11	28235	CROYLEK	

VALIANT DESIGNS LIMITED

PARTS LIST FOR MARK II VALIANT TURTLE

ASSEMBLY: COMMUNICATOR LEADS

ITEM NO.	DESCRIPTION	QTY PER ASSEM'Y	COMPONENT OR ASSEM'Y NO.	SUPPLIER OR MANUFACTURER	MANUFAC'S REF.
1	BBC SERIAL	1	24025	G. ENGLISH	
2	RML 480Z	1	24027	G. ENGLISH	
3	RML 380Z	1	24028	G. ENGLISH	
4	BBC PARALLEL	1	24029	3M	
5	APPLE ARISTOCARD	1	24030	3M	
6	APPLE ORANGE MICRO STANDARD GRAPPLER	1	24031	3M	