

NOVAG INDUSTRIES LIMITED

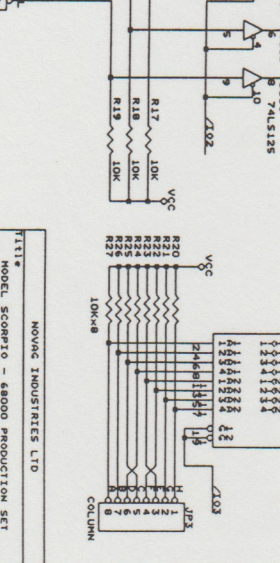
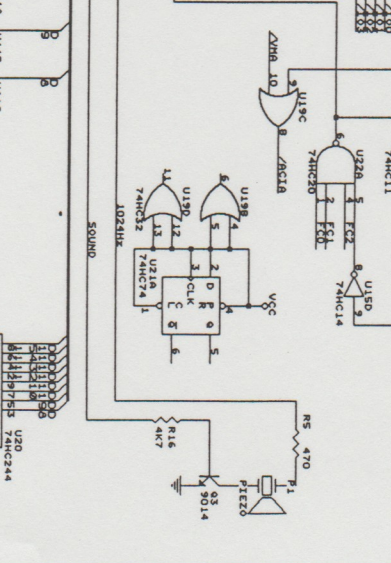
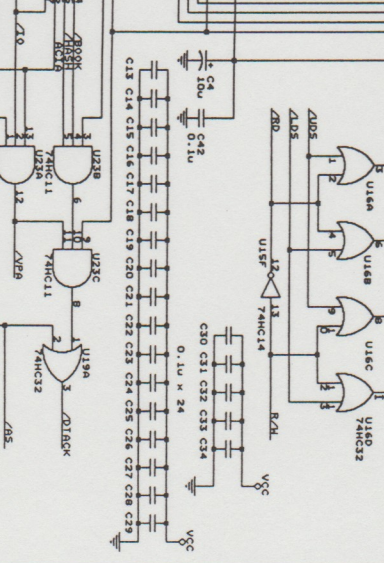
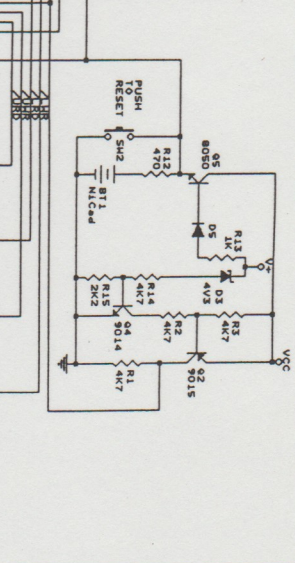
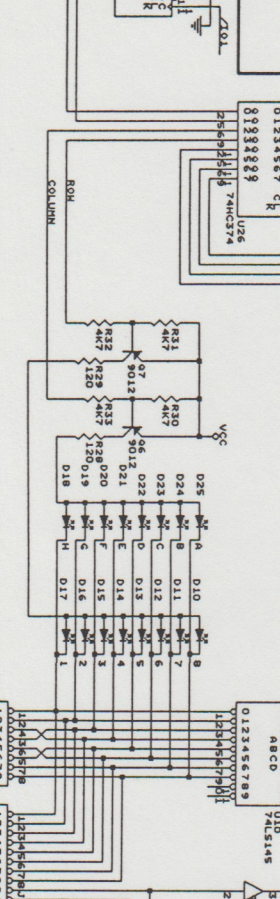
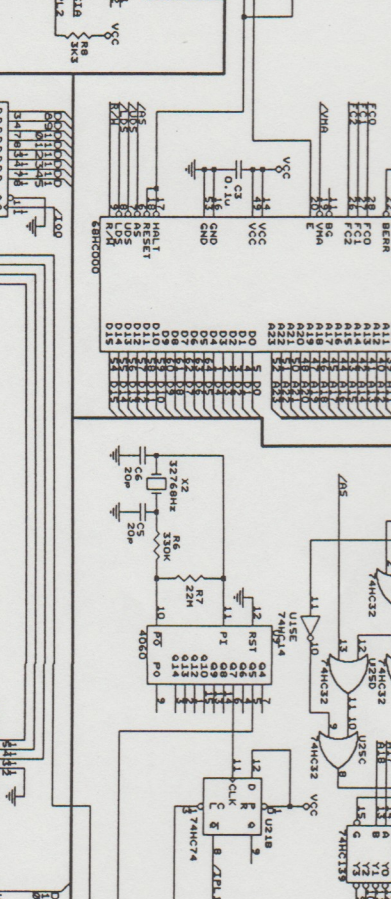
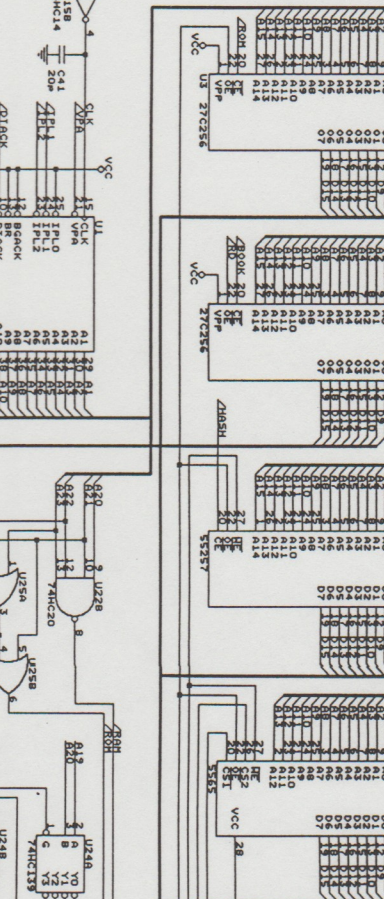
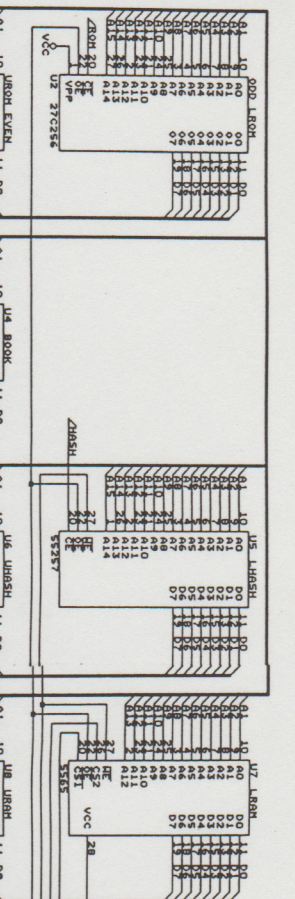
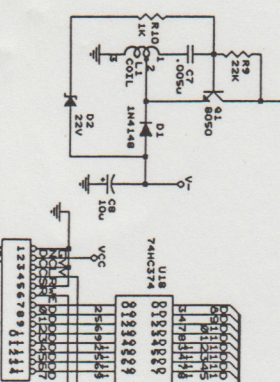
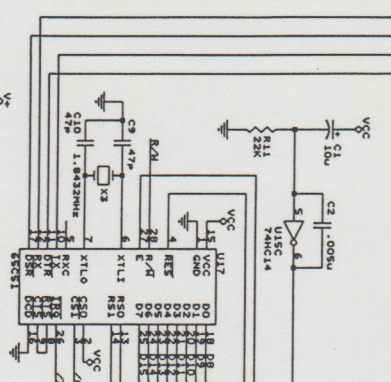
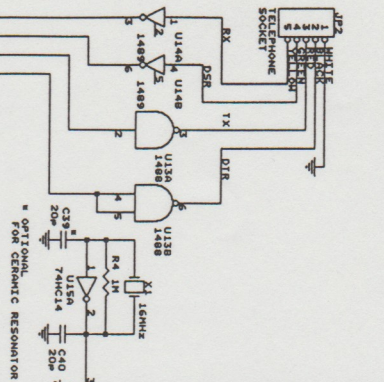
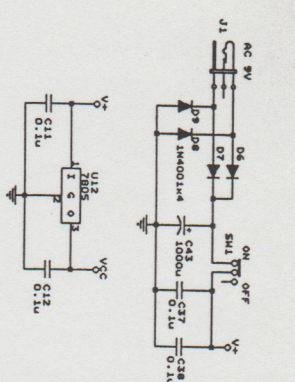
SCORPIO 909

SERVICE MANUAL

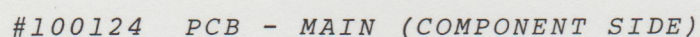
CONTENTS

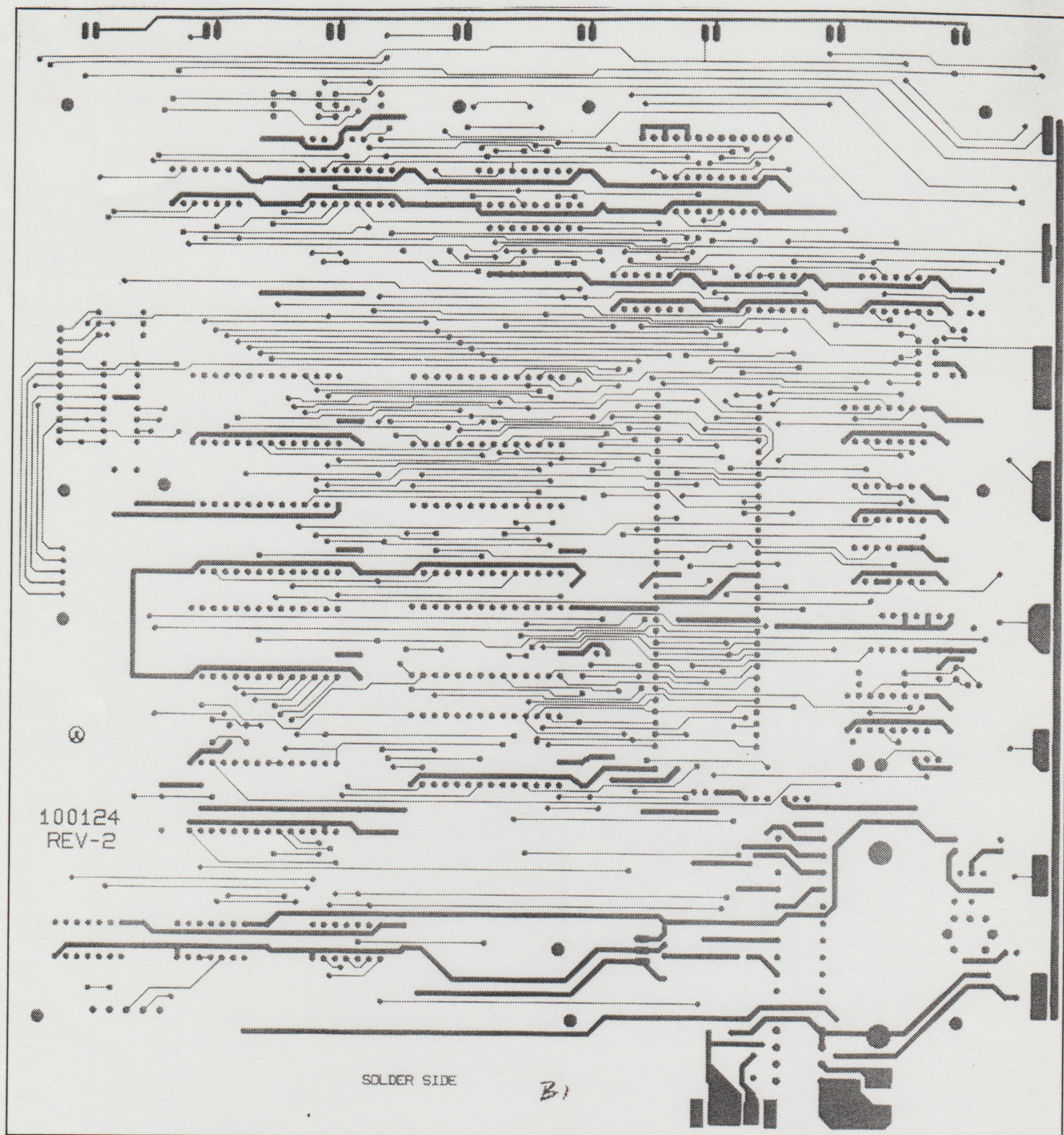
1. Schematic Diagram
2. PCB Layout (component and soldering sides)
- 3., Parts List

-- December 1991 --



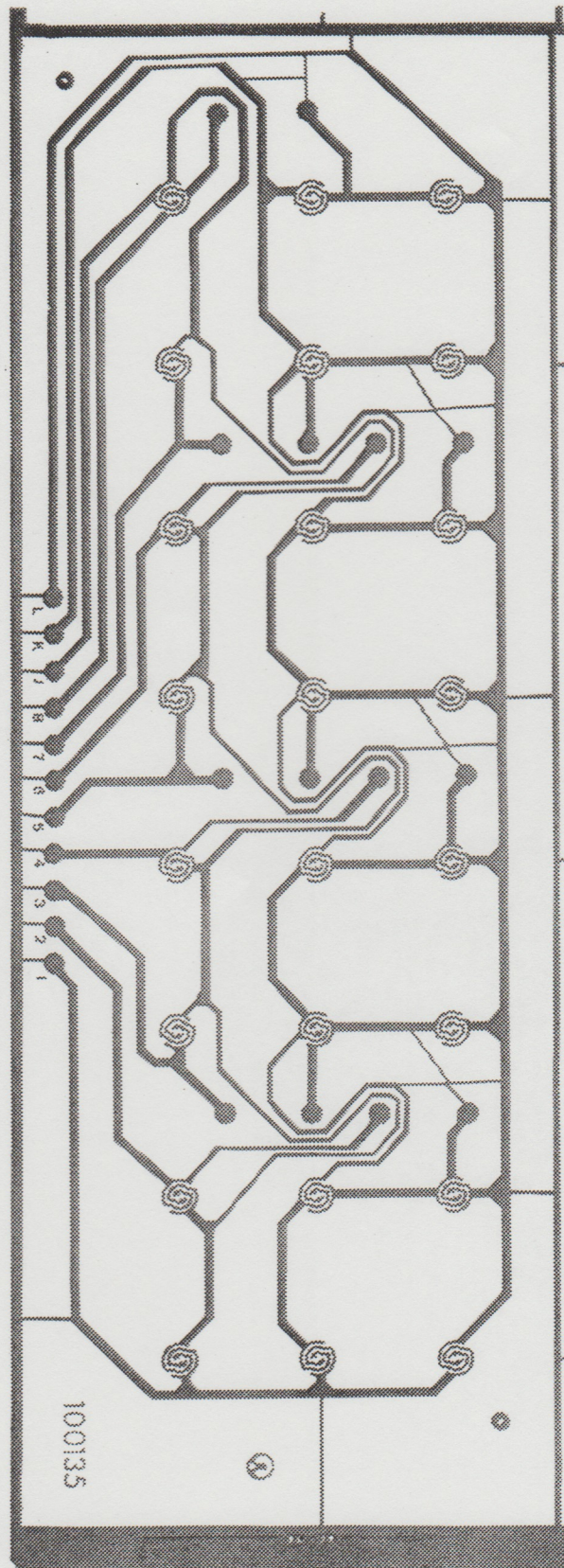
NOVAC INDUSTRIES LTD
MODEL SCORPIO - 68000 PRODUCTION SET
SITE DOCUMENT NUMBER
123456789
REV
C
NOVEMBER 26, 1991
1 OF 1





ART NO.909 SCRIPPO

#100124 PCB - MAIN (SOLDERING SIDE)



ART NO.909 SCRIPPO
#100135 PCB - KEYBOARD

(December 1991)

BILL OF MATERIALS

MODEL : SCORPIO (909)

A) ASSEMBLY : MAIN PCB				US\$
ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT PRC
1	020020	65C51	1	4.50
2	020030	CPU TMP68HC000P-16	1	19.00
3	030022	Regulator 7805	1	.40
4	030042	CMOS 4060	1	.55
5	030046	74HC139	1	.35
6	030050	74HC74	1	.25
7	030051	74LS145	1	.40
8	030053	74HC244	1	.45
9	030062	MC1488	1	.25
10	030063	MC1489	1	.25
11	030079	74HC14	1	.30
12	030081	74LS125	1	.30
13	030084	74HC11	1	.20
14	030085	74HC20	1	.20
15	030086	74HC32	3	.20
16	030087	74HC374	2	.50
17	050007	LED 2x5mm "RED"	16	.10
18	070059	CMOS RAM TC5565APL-10	2	5.30
19	070061	Eprom 57256/27C256 H0 -70ns	1	18.00
20	070061	Eprom 57256/27C256 L -70ns	1	18.00
21	070061	Eprom 57256/27C256 H1 -70ns	1	18.00

Cont'd ... /2

MODEL : SCORPIO (909)

page 2 cont'd

A) ASSEMBLY : MAIN PCB			US\$	
ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT PRC
22	070064	CMOS RAM TC55257BPL-10	2	11.00
23	100124	Main PCB	1	18.50
24	100135	Keyboard PCB	1	1.30
25	130009	Slide Switch MSK2x3-G-4	1	.15
26	130018	Dome Switch	1	.05
27	180005	Crystal 32768 Hz	1	.25
28	180012	Crystal 1.8432 MHz	1	1.60
29	180016	Crystal 16.0 Mhz	1	.70
30	250006	Converter Transformer	1	.20
31	350007	Female Jack	1	.10
32	400038	28 Pin IC Socket	3	.30
33	450035	Nicad Battery 2.4V	1	2.40
34		Transistor 8050	2	.15
35		Transistor 9012	2	.15
36		Transistor 9014C	2	.15
37		Transistor 9015C	1	.15
38		Rectifier 1N4001 1A 50V	4	.15
39		Switching Diode 1N4148	2	.10
40		Zener Diode 4.3V 1/2W	1	.10
41		Zener Diode 22.0V 1/2W	1	.10
42		E.Cap 10 MFD 10V +80 -20	3	.10

Cont'd ... /3

MODEL : SCORPIO (909)

page 3 cont'd

A) ASSEMBLY : MAIN PCB				US\$
ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT PRC
43		E.Cap 1000 MFD	1	.15
44		Cer.Cap 20 PF 50V	5	.10
45		Cer.Cap 47 PF 50V	2	.10
46		Cer.Cap 0.005 UF 50V	2	.10
47		Cer.Cap 0.1 UF 12V	28	.10
48		Resistor 120 Ohm 1/4W	2	.10
49		Resistor 1K Ohm 1/4W	2	.10
50		Resistor 2.2K Ohm 1/4W	1	.10
51		Resistor 3.3K Ohm 1/4W	1	.10
52		Resistor 4.7K Ohm 1/4W	9	.10
53		Resistor 10K Ohm 1/4W	11	.10
54		Resistor 22K Ohm 1/4W	2	.10
55		Resistor 47K Ohm 1/4W	2	.10
56		Resistor 330K Ohm 1/4W	1	.10
57		Resistor 1M Ohm 1/4W	1	.10
58		Resistor 22M Ohm 1/4W	1	.10

B) ASSEMBLY : LCD PCB				US\$
ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT PRC
1	060009	LCD Module	1	20.00
2	400056	14 Pin Header	1	.25
3	410044	14 Pin Cable Ass'y	1	2.10

Cont'd ... /4

MODEL : SCORPIO (909)

page 4 cont'd

C) ASSEMBLY : HOUSING

US\$

ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT	PRC
1	110016	Membrane Chessboard	1		3.90
2	400027	Telephone Socket 6 Pin	1		.40
3	400055	11 Pin Header	1		.20
4	410021	Silicon Rubber	2		.10
5	410069	11 Pin Cable Connector	1		1.65
6	510043	Rubber Keyboard	1		1.10
7	530047	Heat Sink	1		.40
8	530100	Metal Clamp	2		.10
9	530162	Metal Inlay	1		.50
10	600407	Top Housing	1		3.30
11	600408	Bottom Housing	1		2.10
12	600409	Front Trip	1		.20
13	800068	Chessboard Overlay	1		.50
14		Buzzer 27mm (Transducer)	1		.30
15		Rubber Feet	4		.10
16		Jumper Wire 12mm	7		.10
17		Stranded Wire (piezo)	2		.10
18		S/T Screw 2.6x6	16		.10
19		S/T Screw 2.6x14	11		.10
20		S/T Screw 2.6x10	4		.10
21		Screw M3x8x0.5mm	1		.10
22		Nut M3x0.5mm	1		.10

Cont'd ... /5

MODEL : SCORPIO (909)

page 5 cont'd

D) ASSEMBLY : PACKING

US\$

ITEM	PART NO.	DESCRIPTIONS	QTY	UNIT	PRC
1	520003	Pouch	1		.30
2	600276	Chess Pcs - Light Grey	1		1.90
3	600277	Chess Pcs - Black	1		1.90
4	700039	Polyfoam - Left	1		.25
5	700040	Polyfoam - Right	1		.25
6	960084	Warning Label 'R232....'	1		.10
7	970333	Instruction Manual	1		1.60
8	990174	Gift Box	1		2.00
9		Polybag - Unit	1		.10
10		Shipping Carton	1/5		1.50
