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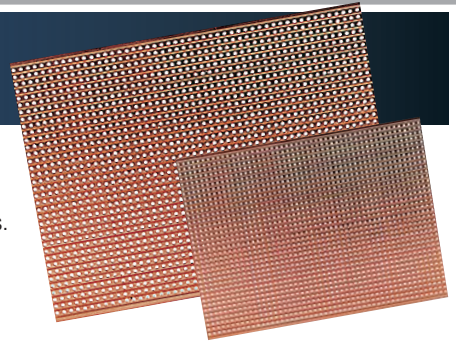
Accessories	879
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Stripboard

A range of low impedance capacitors that are suitable for high frequency operation. Intended for use in Electronic Control Unit (ECU) and other high temperature applications.

- Fully pierced stripboard used for prototype and development work.
- Can be readily cut to size
- Provides a simple form of printed circuit
- Copper strips form the interconnections and can easily be cut where required.
- Made from copper-clad laminated board
- All boards are punched on a 0.1in pitch

Technical specification	Tracks No.	Holes
Board Size		
25 x 64	9	25
64 x 95	24	37
95 x 127	36	50
95 x 432	36	170
119 x 455	46	179

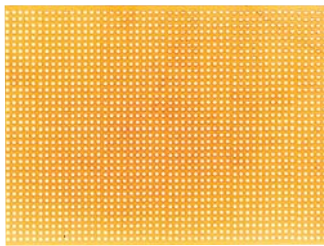


Board size (mm)	Order code	1+	10+	50+	100+
25 x 64	34-0500	0.23	0.21	0.19	0.15
64 x 95	34-0505	0.66	0.63	0.57	0.47
95 x 127	34-0515	1.25	1.12	1.05	0.92
95 x 432	34-0535	4.29	3.79	3.49	2.99
119 x 455	34-0540	5.35	5.05	4.90	4.45
95 x 127	34-0585	1.35	1.19	1.05	0.92

FROM ONLY £0.15

Prototyping boards

Matrix board



- Similar to stripboard but without copper strips.
- Manufactured in SRBP punched on a 2.54mm (0.1in) grid
 - May be readily cut to the size of the finished circuit

Board size (mm)	Holes	Order code	1+	10+	50+	100+
95 x 127	6 x 50	34-0585	1.30	1.14	1.03	0.88

Stripboard cutter



- Tool for simple copper track cutting.
- Insert tool at the point where break is required and twist clockwise

Type	Order code	1+	10+	50+
Stripboard cutter	34-0600	2.59	2.38	2.06

Terminal pins

- Press-fit terminal pins for use with stripboard.
- Supplied in **packs of 100 or 1000**
 - **Not** recommended for matrix board **34-0585**

Technical specification				
Approximate dimensions				
Diameter	1mm			
Length	7mm			
Head diameter	2mm			
Type	Order code	1+	10+	50+
100 single sided pins	34-0610	0.70	0.60	0.53
1000 single sided pins	34-0620	4.99	4.68	4.27

Copper track

- Useful for making up simple electrical and electronic circuits.
- 5mm wide
 - Self-adhesive backing
 - Supplied on a **33 metre reel**



Type	Order code	1+	10+
Copper track	34-0635	3.97	3.61

Mag Tags

- Matching pairs (N-S) of miniature high-strength neodymium-iron-boron nickel-plated magnets with tinned-copper flying leads that can be readily soldered.
- Make simple temporary connections to batteries, bulbs, etc., and any ferrous metal objects
 - Use for proximity sensors, reed switch triggering, connecting PCBs, prototyping, etc.
 - Ideal for applications where connections need to be repeatedly made and broken, quickly and easily
 - Great for project work involving electrical circuits
 - Dimensions 5 x 6mm dia., connected to 40 x 0.65mm dia. tinned copper flexible leads
 - Current rating 8A
 - Max. operating temperature 120°C
 - Supplied in **packs of 5 pairs**

Type	Order code	1+	5+	10+
Mag Tags - 5 pairs	34-0915	2.34	1.99	1.79

Logic trainer

- All the equipment you need to learn about logic in one comprehensive package.



- Basic logic gates - AND, OR, NAND, NOR, OR and NOT
- DC power supply +5V, -5V and ±15V
- Pulse generator
- Debounced logic switches
- Eight LED indicators
- Solderless breadboard with 1,896 tie points
- Console style case
- Complete with UK power lead and manual

Technical specification	
HI voltage level	<2.25V
LO voltage level	<0.8V
5V supply	5V±5% Max. current 1A
-5V supply	-5V±5% Max. current 500mA
±15V supply	±15V±5% Max. current 500mA
Pulse generator	Output voltage 5V 1s, 0.1s and 0.01s pulse width
LEDs	<15V DC
Breadboard	Takes all DIP sizes 0.3 to 0.8mm wire
Dimensions	420 x 360 x 200mm
Weight	4.2kg

Type	Order code	1+
Logic trainer	34-0932	207.95

Analog lab

- All the equipment you need to learn about analog electronics in one comprehensive package.
- DC power supplies +5V, -5V and ±0 to 15V variable
 - Function generator
 - Voltmeter
 - Ammeter
 - Slide switches
 - Two potentiometers
 - Six position rotary switch
 - Loudspeaker
 - Solderless breadboard with 1,896 tie points
 - Console style case
 - Complete with UK power lead and manual



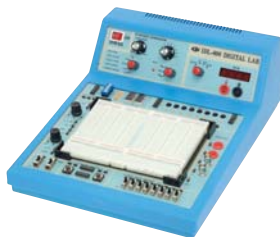
Technical specification	
Variable power supply	0 to +15V and 0 to -15V Max. current 300mA
5V supply	5V±0.25V Max. current 1A
-5V supply	-5V±0.25V Max. current 100mA
Function generator	Sine, triangle and square Output 0 to 8V p-p variable 1Hz to 100kHz in 5 ranges
Voltmeter	0 to 30V
Ammeter	0 to 100µA
Potentiometers	1kΩ and 100kΩ
Loudspeaker	57mm, 8Ω
Dimensions	420 x 360 x 200mm
Weight	4.2kg

Type	Order code	1+	3+
Analog lab	34-0934	218.35	207.95

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Digital lab

All the equipment you need to learn about digital electronics in one comprehensive package.



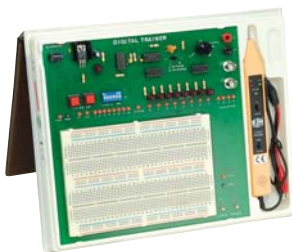
- DC power supplies +5V, -5V and ±0 to 15V variable
- Function generator
- Digital Voltmeter
- Two digit LED seven segment display
- Eight buffered LEDs
- Eight data switches
- Two function switches
- Two pulse switches
- Solderless breadboard with 1,896 tie points
- Console style case
- Complete with UK power lead and manual

Technical specification			
Variable power supply	0 to +15V and 0 to -15V	Max. current	300mA
5V supply	5V±0.25V	Max.current 1A	
-5V supply	-5V±0.25V	Max. current	100mA
Function generator	Sine, triangle and square Output 0 to 8V p-p variable 1Hz to 100kHz in 5 ranges		
Digital Voltmeter	3 1/2 digit LED display 0 - 199.9mV, 0 - 1.999V, 0 - 19.99V & 0 - 199.9V		
Seven-segment displays	Common cathode		
Dimensions	420 x 360 x 200mm		
Weight	4.2kg		
Type	Order code	1+	3+
Digital lab	34-0936	239.15	228.75

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Digital trainer

A compact digital training board in a handy folder style case.



- +5V DC power supply
- Eight buffered LEDs
- Eight data switches
- Two pulse switches
- Adjustable clock frequency
- Solderless breadboard with 1580 tie points
- Folder style case

Powered by a 9V, 1,500mA regulated DC adaptor, not included. Please see order code 85-2901 in **Power Supplies**.

Technical specification			
5V supply		Max.current	750mA
Clock frequency	Low		10 to 40Hz
	High		1 to 20kHz
Dimensions			310 x 250 x 45mm
Power supply	9V DC, 1,500mA		Not included
Type	Order code	1+	3+
Digital trainer	34-0942	103.95	96.67

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Digital-analog training system



A comprehensive digital and analog training system offering many advanced features.

- DC power supplies +5V, -5V and ±0 to 15V variable
- Two potentiometers
- Loudspeaker
- Function generator
- Eight buffered LEDs
- Eight data switches
- Two pulse switches
- Two digit LED seven segment display
- Solderless breadboard with 2712 tie points
- Console style case
- Complete with UK power supply and manual

Technical specification			
Variable power supply	0 to +15V and 0 to -15V	Max. current	500mA
5V supply		Max.current 1A	
-5V supply		Max. current	300mA
Function generator	Output 0 to 6V p-p variable 1Hz to 100kHz in 5 ranges TTL mode output 0 ± +5V		
Dimensions	325 x 250 x 95mm		
Weight	4.3kg		
Type	Order code	1+	3+
Digital-analog	34-0940	301.55	291.15

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Protobloc prototyping boards

Protobloc is a prototyping system offering a fast and economical method of circuit construction and development.

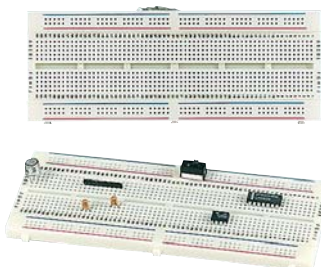


- Solderless in concept allowing components to be used time and time again
- Components are plugged into the board and are retained by double leaf spring contacts
- Sockets are on a 2.54mm matrix, allowing all dual-in-line integrated circuits, plus many other components to simply be plugged into the board
- An ideal system for the teaching of electronic systems and circuit design
- Total of 390 tie points
- Two sets of 29 rows of 5 interconnected contact sockets
- 4 rows of 25 interconnected sockets suitable for use as power supply rails
- All contact positions are clearly defined on an alphanumeric grid
- ABS polymer board mounted on an adhesive foam base
- Can accommodate up to three 16-pin devices
- An ideal introduction to solderless circuit development systems

Type	Order code	1+	10+	50+	100+
Protobloc 1	34-0650	2.64	2.38	2.18	2.03

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Protobloc 2



A protobloc with a total of 840 tie points consisting of two sets of 64 rows of 5 inter-connected sockets.

- 4 rows of 50 interconnected sockets suitable for use as power supply rails
- All contact positions are clearly defined on an alphanumeric grid
- ABS polymer board mounted on an adhesive foam base
- Can accommodate up to seven 16-pin devices

Type	Order code	1+	10+	50+	100+
Protobloc 2	34-0655	4.57	4.01	3.71	3.49

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Protobloc 2A



A protobloc with a total of 840 tie points consisting of two sets of 64 rows of 5 interconnected contact sockets.

- 4 rows of 50 interconnected sockets suitable for use as power supply rails
- All positions are clearly defined on an alphanumeric grid
- The ABS polymer board is mounted onto a rigid base plate complete with three 4mm terminals in red, black and green for power connections
- A mounting bracket, which clips into the base, is also provided to accept a variety of components including switches and potentiometers, etc.

Type	Order code	1+	10+	50+	100+
Protobloc 2A	34-0660	7.53	7.11	6.64	6.21

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Protobloc 2B

Offers the user ease of connection of power supply lines when used in a 4mm environment.



- Contains a total of 958 tie points
- Five colour-coded 4mm terminals are connected to contact sockets on the board for easy power supply connection
- Contains five sets of 28 rows of 6 interconnected contact sockets
- 5 screw terminals alongside, suitable for use as power supply rails
- All positions are clearly defined on an alphanumeric grid
- The ABS polymer board is mounted on an adhesive foam base and units can be clipped together to accommodate larger circuit designs

Type	Order code	1+	10+	50+	100+
Protobloc 2B	34-0662	7.62	7.20	6.75	6.21

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Protobloc 2C



Offers the user ease of connection of power supply lines when used in a 4mm environment.

- Total of 2854 tie points
- 5 colour-coded 4mm terminals are connected to contact sockets on the board for easy power supply connection, etc.
- Comprises 15 sets of 28 rows of 6 interconnected contact sockets
- 12 rows of 24 interconnected sockets suitable for power supply rails
- Suitable for many complex circuit design applications
- All positions are clearly defined on an alphanumeric grid
- ABS polymer board is mounted onto a rigid base plate

Type	Order code	1+	10+	50+	100+
Protobloc 2C	34-0664	16.59	15.81	15.00	14.27



Professional prototyping board

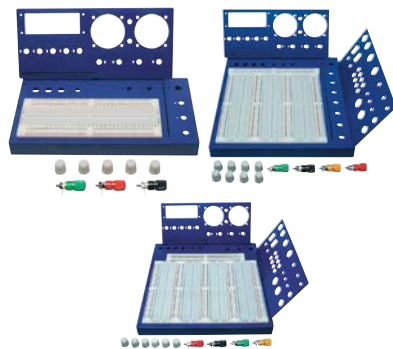


- Professional prototyping board with a total of 555 contacts arranged in two blocks of 43 rows of five interconnected sockets on a 2.54mm (0.1in) pitch.
- 5 other rows of 25 interconnected sockets, two on either side and one central between the two main blocks, are for use as bus-bars
 - The central gap between the two blocks of contacts allows DIL packaged devices to be inserted without the use of adaptors
 - Individual boards can be clipped together both sideways and end-on to produce larger boards
 - Contacts are replaceable from underneath the board if damaged
 - Dimensions (excluding joining lugs): 114 x 48 x 12mm
 - A connection and maintenance kit is available comprising ten 1m lengths of single cored, colour-coded PVC covered wire for interconnections, plus five strips of five-way contacts and one 25-way contact strip for replacements

Type	Order code	1+	10+	25+
Prototyping board	34-0550	8.11	7.84	7.44
Wire & contacts kit	34-0555	4.48	4.17	3.87



Professional prototyping boards



Low-cost, quality prototyping boards offering an easy and flexible means of constructing, experimenting and testing both analogue and digital designs.

- 64 connected contacts in 5 columns on each side of a central channel
- Contacts are clearly marked and are made from phosphor bronze/nickel silver to withstand at least 10,000 insertions
- Contacts will accept solid wire from 0.3 to 0.8mm in diameter (20-30AWG)
- 4 power buses of 25 connected terminals
- Construction is suitable for high frequency and static sensitive designs
- Housed in a blue, durable ABS body which has slots/cutouts and a row of contacts to accept binding posts, toggle switches, potentiometers etc.
- Additionally, either one or two edge plates are included to accept LCD displays, analogue meters, sockets, piezo speakers, etc.
- Edge plates also include a row of sockets to aid in connecting the peripheral devices to the main board

Model	Dimensions mm	Tie points	No. of edge plates	Supplied accessories
YJE-601	133 x 229 x 22	880	1	5x knobs, 3x binding posts
YJE-603	225 x 238 x 22	2492	2	8x knobs, 4x binding posts
YJE-304	242 x 256 x 22	3300	2	5x knobs, 4x binding posts

Type	Order code	1+	5+	10+	25+
YJE-601 board	34-0920	8.27	7.40	7.17	6.19
YJE-603 board	34-0926	13.47	12.28	11.41	9.97
YJE-604 board	34-0928	15.55	13.47	11.95	10.35

Buying in bulk?

Get a quote and save money on your order
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or

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Professional prototyping system

A professional quality prototyping system comprised of three prototyping boards, 34-0550, mounted on a sturdy metal base.



- Base also houses 5 binding post terminals with integral shrouded 4mm sockets
- Layout pad, pre-printed with the same contact arrangement as the three boards
- Circuits can be assembled on the board following a layout designed on the pad
- Circuits designed and modified on the board can be recorded on the layout pad
- Spare layout pads of approximately 24 sheets are available separately
- Overall dimensions 280 x 165 x 45
- Total number of contacts 1,665

Type	Order code	1+	5+
Prototyping system	34-0560	35.65	30.55
Layout pad	34-0565	2.74	2.44



Powered protobloc



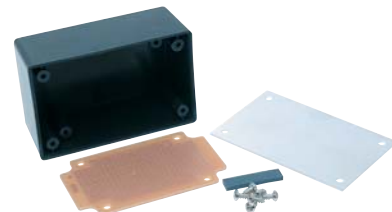
Large breadboarding area, with built-in PSU.

- Total 2420 tie points
- 3 sets of 64 rows of 5 connected sockets
- 5 rows of 50 connected sockets alongside, suitable for use as power supply rails
- The power supply consists of a benchtop 24V AC transformer unit, **supplied separately** (please see below) which feeds the full short-circuit and overload protected, regulator circuitry housed in the protobloc
- Regulated fixed outputs of 5V at 1A, and +15V and -15V at 500mA
- The +/- 15V supplies can both be continuously adjusted from 0 to 15V
- Protobloc unit features AC power switch, input fuse and 600mm AC power lead fitted with a 2.5mm DC power plug that mates with a socket on the AC transformer unit 34-0642
- The AC transformer unit is supplied fitted with 1.8m of mains lead terminated in a standard 13A plug
- Overall dimensions: **protobloc unit:** 250 x 200 x 80mm; **AC transformer unit:** 120 x 95 x 63mm, including output socket and mounting flanges

Type	Order code	1+	10+
Protobloc unit	34-0640	97.44	90.94
Transformer 2.5mm plug	34-0642	20.75	19.71



ABS/Aluminium project case



ABS boxes with aluminium lids and pre-drilled 2.54mm pitch matrix board with copper pads, ideal for projects and prototypes.

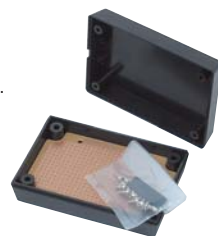
- Dimensions: 53 x 83 x 35mm
- Matrix board requires no cutting to fit
- Supplied complete with self-adhesive feet and fixing screws

Type	Order code	1+	10+	25+	100+
ABS/Al Project case	30-0650	0.99	0.884	0.8008	0.7176



ABS Project case

An ABS box with pre-drilled 2.54mm pitch matrix board with copper pads, ideal for projects and prototypes.



- Dimensions: 59 x 87 x 31mm
- Matrix board requires no cutting to fit
- 5mm hole in lid for LED mounting
- Supplied complete with self-adhesive feet and fixing screws

Type	Order code	1+	10+	25+	100+
ABS Project box	30-0652	1.55	1.24	1.14	1.06



Jumper links for protoblocs

Jumper links for use with Protobloc prototyping boards.

- Specially designed plugs are employed which significantly extend the life of the connector
- Available in a range of sizes
- Colour-coded for easy identification
- Supplied in packs of 10



Type	Order code	1+	10+
50mm jumper link	34-0450	2.69	2.38
70mm jumper link	34-0455	2.96	2.49
100mm jumper link	34-0460	3.01	2.59
150mm jumper link	34-0465	3.11	2.59



Jumper wire kit



350 pre-stripped, preformed jumper wires for use with Protobloc prototyping boards.

- 22 AWG solid wire

- 14 different lengths
- 25 of each length: 0.1 (uninsulated), 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1, 2, 3, 4 and 5in.
- Colour-coded for easy identification
- Convenient hinged plastic storage case
- Case size 270 x 124 x 30mm

Technical specification
25 pieces each
0.1in, 0.2in, 0.3in, 0.4in, 0.5in, 0.6in, 0.7in, 0.8in, 0.9in, 1in, 2in, 3in, 4in and 5in

Type	Order code	1+	10+
Jumper wire kit	34-0495	8.06	7.48

Copper clad board



Plain copper clad board

High quality 305g/m copper clad boards in epoxy glass material.

- Thickness 1.6mm
- Suitable etchant: ferric chloride solution



Type	Order code	1+	20+	50+
Eurocard size - single sided				
100x160	34-0800	0.94	0.74	0.65
233.4x160	34-0805	1.99	1.77	1.61
100x220	34-0810	1.20	1.05	0.90
233.4x220	34-0815	2.67	2.43	2.23
Double sided				
100x160	34-0820	1.01	0.81	0.70
233.4x160	34-0825	2.07	1.88	1.66
100x220	34-0830	1.13	1.01	0.94
233.4x220	34-0835	2.94	2.66	2.34
Other sizes - single sided				
203x95	34-0360	1.08	0.96	0.75
203x305	34-0365	3.13	2.82	2.57
Double sided				
203x305	34-0845	3.32	3.13	2.72



Low cost copper-clad board

Single-sided copper-clad printed circuit board made from SRBP: a paper-based material.

- Excellent for low-cost printed circuit boards
- Easier to drill than epoxy glass fibre
- Results in longer life for drills and cutting tools
- Suitable etchant ferric chloride solution



Type	Order code	1+	10+	50+	100+
100 x 160	34-0860	0.51	0.38	0.33	0.30
100 x 220	34-0862	0.70	0.52	0.45	0.42
233 x 160	34-0864	1.14	0.85	0.73	0.68
233 x 220	34-0866	1.58	1.17	1.02	0.95
203 x 305	34-0868	1.89	1.41	1.22	1.13

Grab yourself a deal



See our clearance section

www.rapidonline.com/clearance



Economy photo etch PCB

Fotoboard 2

is a lower cost alternative to the FR4 used on professional board.

A comprehensive data sheet is available online

for these boards, outlining the techniques involved in the successful production of PCBs employing photo-etch methods. Please see www.rapidonline.com.

- Manufactured in CEM/1 laminate with positive working UV-sensitive resist
- Boards are protected by black plastic film
- Particularly suited to educational users
- Requires half the concentration of developer than our previous Fotoboard 1
- Not recommended for professional use



Size (mm)	Order code	1+	10+	50+
Single sided				
100 x 160	34-0160	2.49	2.19	1.99
100 x 220	34-0162	3.12	2.76	2.48
203 x 114	34-0164	2.97	2.69	2.41
233.4 x 220	34-0166	6.45	6.10	5.57
305 x 457	34-0176	15.97	15.12	13.95
Double sided				
100 x 160	34-0168	2.97	2.69	2.41
100 x 220	34-0170	3.67	3.29	2.98
203 x 114	34-0172	3.67	3.29	2.98
233.4 x 220	34-0174	8.44	7.82	7.13
305 x 457	34-0178	19.47	18.23	16.84

Excellent value



Photo etch PCB

Fotoboard 2

is a Photo-resist board in FR4 epoxy glass coated with positive working UV-sensitive resist.

A comprehensive PDF data sheet is available online for these boards, outlining the techniques involved in the successful production of PCBs employing photo-etch methods. Please see www.rapidonline.com.

- Boards are supplied with a protective black plastic film
- See this section for suitable developer and etchant
- Available single sided (SS) and double sided (DS) formats

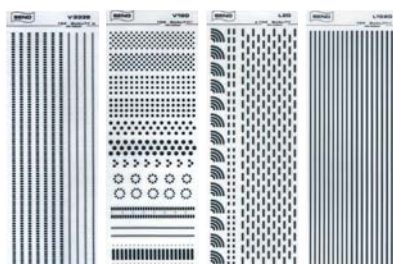


Size (mm)	Order code	1+	10+	50+
Single sided				
100 x 160	34-0105	2.97	2.69	2.41
100 x 220	34-0110	3.87	3.53	3.17
203 x 114	34-0115	4.27	3.98	3.47
233.4 x 220	34-0120	8.44	7.82	7.13
305 x 457	34-0145	19.47	18.23	16.84
Double sided				
100 x 160	34-0125	3.67	3.29	2.98
100 x 220	34-0130	4.87	4.59	4.12
203 x 114	34-0135	4.67	4.42	3.97
233.4 x 220	34-0140	10.64	9.62	8.65
305 x 457	34-0150	23.84	21.64	19.87

Drafting aids



Artwork aids



High quality etch-resist transfers for preparing PCB layouts.

- Circuits are prepared by rubbing down the transfers onto drafting film to produce artwork for UV exposure, etc.
- May also be applied directly on to copper-clad board
- Sheet size 255 x 90mm

Order code	Type	Description
34-0870	V180	Assorted pads
34-0872	V0203	Round pads 1.9 / 0.45mm, 2.1/0.45mm
34-0874	V0405	Round pads 2.5 / 0.45mm, 2.8/0.45mm
34-0876	V3335	DIL pads 34-0878 L0510 straight track 0.5/1.0mm
34-0880	L1520	Straight track 1.5/2.0mm
34-0878	L0510	Straight track 0.5/1.0mm
34-0882	L20	0.5mm tracks & curves
34-0884	L20	1.0mm tracks & curves
34-0886	L15	1.5mm tracks & curves
34-0888	L20	2.0mm tracks & curves

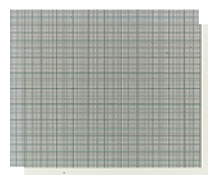
Type	Order code	1+	5+
V180	34-0870	2.49	2.29
V0203	34-0872	2.49	2.29
V0405	34-0874	2.49	2.29
V3335	34-0876	2.49	2.29
L0510	34-0878	2.49	2.29
L1520	34-0880	2.49	2.29
L20 0.5mm	34-0882	2.49	2.29
L20 1.0mm	34-0884	2.49	2.29
L15 1.5mm	34-0886	2.49	2.29
L20 2.0mm	34-0888	2.49	2.29



A4 Artwork drafting film

Used in conjunction with drafting tapes and transfer film to generate master PCB artwork.

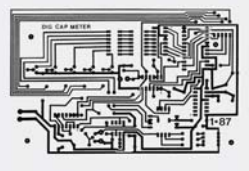
- Pack contains five A4 sheets of 0.08mm (0.003in) single matt polyester film and one A4 sheet 0.1mm (0.005in) film printed with 2.54mm (0.1in) grid for accurate layout of pads/symbols



Type	Order code	1+	10+
A4 Film	34-0796	5.19	4.69



Laser printer PCB artwork film



A specially formulated translucent film for the production of high-resolution PCB artwork directly from any laser printer.

- 75 micron base with special coating for high resolution keying and fixing of toner
- Produces crisp dense artwork
- Accepts copier toner, enabling usable artwork to be copied from printed originals
- Supplied in packs of 10 A4 or packs of 100 A4 size sheets of film

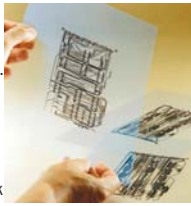
Type	Order code	1+
10 pack A4 Laser film	39-0774	5.49
100 pack A4 Laser film	39-0776	46.95



Jetstar Standard and Jetstar Premium inkjet artwork films

Specially formulated inkjet films for the production of artwork photo tools for graphics and PCB production.

- Special coatings allow dense images to be produced without the ink bleeding
- Use Jetstar Standard with printers using dye-based ink
- Use Jetstar Premium with printers using either dye-based or pigment-based ink
- Sheet size A4
- Available in packs of **10 and 100 sheets**



Please ensure that your printer is capable of printing on to clear sheets before purchase. JetStar Standard is **not suitable** for use with pigment-based inks.

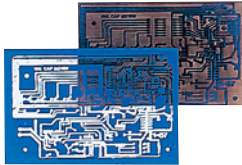
Type	Order code	1+
Standard 10 pack	39-0780	6.59
Standard 100 pack	39-0782	54.95
Premium 10 pack	39-0790	14.15
Premium 100 pack	39-0795	135.00



Press-n-Peel PCB transfers

A film which can be used to create PCB layouts quickly and easily.

- The image of the required PCB is printed directly onto the film using a photocopier or laser printer
- The film is then ironed onto plain copper clad material using a domestic iron and left to cool for a few minutes
- The film is then removed leaving the impression of the required circuit
- Etching can then be done in the normal fashion
- Supplied in 216 x 279mm (8.5 x 11in.) sheets (letter setting on printers)
- Supplied in **packs of 5 sheets**



Price per pack		
Type	Order code	1+
Pack of 5 sheets	34-4450	13.67

Etching



Seno GS etching system

Offers a new level of safety, convenience, cleanliness and efficiency to the etching of one-off PCBs.

- Supplied as a complete kit
- The kit comprises a sealable etching sleeve, etch chemicals in pellet form, leakproof storage box and neutraliser
- Sufficient for at least twelve 100 x 160mm Eurocards
- Sealed system protects user from dangers and mess associated with common etchants
- Allows a constant visual check to be maintained on the rate of etching
- Etching can be accelerated by simply heating under a warm tap
- Etching solution is stored in the leakproof box between applications
- When the solution is exhausted simply add the neutraliser, seal and mix
- Two hours later the neutralised pack is hard, ready for the dustbin



Type	Order code	1+	10+
Seno etching system	34-0385	10.49	9.95



Polypropylene tray

A general purpose polypropylene tray suitable for a wide variety of uses.

- Developing and etching printed circuit boards
- Filing and storage, etc.
- Overall size: 380 x 240 x 55mm, with all-round carrying lip
- Colour may vary



Type	Order code	1+
Polypropylene tray	34-0745	1.48



Processing tray

A high quality, rigid polystyrene processing tray for developing or tinning PCBs.

- Spout facilitates emptying
- All-round carrying lip
- Size 254 x 203 x 55mm
- Colour may vary



Type	Order code	1+	5+
Processing tray	34-0748	3.34	3.08



Copper etchant

High quality ferric chloride etchant which is supplied in convenient pellet form, ideal for etching copper clad boards.

- Provides reasonably safe etchant when combined with warm water
- Supplied in **250g bags**



Type	Order code	1+	6+	12+
250g Copper etchant	87-0722	6.07	5.75	5.08



Positive photoresist

A high quality positive photoresist for reproduction of circuits, diagrams and images on metals.

- Fast drying
- Develops using UV or sunlight
- Fine resolution down to 0.1mm
- Easily processed with alkali developer
- Resistant to non-alkali etching solutions
- Supplied in **200ml aerosols**



Type	Order code	1+	6+	12+
200ml Photoresist	87-0726	10.50	9.87	9.58



Photoresist developer

A high quality aqueous alkaline developer for use in conjunction with positive resists.

- Fast developing time
- Long active life
- Buffered to give repeatable accurate images
- 250ml of the concentrate makes 1250ml of working solution
- Supplied in **250ml bottles**



Type	Order code	1+	6+	12+
250ml Photoresist developer	87-0724	4.54	4.29	3.83

Downloadable datasheets
www.rapidonline.com

Eye protection



Tin plating crystals

Specially developed for depositing resistant tin surfaces.

- Powder is mixed with warm 50°C water, allowed to cool and used at room temperature
- No heated tanks are required
- Low operating temperature allows very small tin molecules to be deposited, giving a very smooth and hard surface
- The longer the board is left immersed, the thicker the deposit
- 1.5 to 2.0 microns in 30 minutes and 4.5 microns in up to 2 hours
- Solution will last up to six months, unmixed powder has unlimited shelf life
- Available in 90g (1 litre) or 450g (5 litres) packs
- Sufficient to cover 0.6m² or 2.7m² of boards



Type	Order code	1+
90g tin crystals (1 litre)	34-0775	14.95
450g tin crystals (5 litres)	34-0776	44.95



Ferric chloride solution

A special formulation of ferric chloride for etching metals and all types of copper circuit boards.

- Supplied as full strength (45 Baume), suitable for metals such as stainless steel, nickel, brass, etc.
- Dilute by an additional 30% with water for use with copper
- Supplied in **5 litre containers**, weight 7.5kg



Type	Order code	1+	10+
5 litre Ferric chloride	34-0758	14.95	13.49



PCB Developer

Suitable for use with all alkaline developed, positive photo resists and fully aqueous dry film photo resists.

- Available either in dry crystalline form, sufficient to produce 500ml solution (1 litre when used with Fotoboard 2), or as 1 litre of concentrate, to make 10 litres of working solution (20 litres when used with Fotoboard 2)
- Developer gives a long tank life and fast developing time
- The shelf life of the solution is considerably greater than the crystalline form and should be kept in undiluted form in an airtight container
- Safe to use: contains no sodium hydroxide
- Suitable for use in our tanks **34-0764** and **34-0765**



Type	Order code	1+	10+
20g developer (500ml)	34-0395	0.89	0.72
1 litre developer (10 litres)	34-0790	13.49	12.49



PCB Etchant



Ferric chloride etchant in a convenient pellet form.

- Combined with warm water provides a reasonably safe etchant
- Use 250g of pellets per 500ml of water
- Suitable for use with PCB tanks **34-0760**, **34-0764** and **34-0765**
- Available in **250g and 500g packs** and in **2.5kg buckets**



Type	Order code	1+	10+
250g pack (500ml)	34-0388	2.49	2.34
500g pack (1 litre)	34-0390	3.99	3.49
2.5kg bucket (5 litres)	34-0785	12.95	12.49



Clear PCB etchant

An alternative etchant, superior to standard ferric chloride.

- Completely odourless
- Remains clear
- Does not crystallise out
- Achieves satisfactory etching in 6 to 8 min. at 45 to 50°C
- Supplied in packs of approx. 400g or 1.1kg in powder form to produce approx. 2 or 5 litres respectively of working solution
- Suitable for use with etch tanks **34-0760**, **34-0764** and **34-0765**



Type	Order code	1+	10+
400g etchant (2 litres)	34-0392	8.99	8.49
1.1kg etchant (5 litres)	34-0394	22.49	



Ferric chloride stain remover

A powder for the removal of Ferric Chloride stains from clothing, PCB tanks, benches and other affected areas.

- Concentration required will depend upon nature of stain requiring removal
- Typical concentration in solution is between 100g/200ml and 100g/1000ml of water
- May be used directly on badly affected areas
- Supplied in **packs of 1kg**



Type	Order code	1+
1kg stain remover	34-0430	15.49



Universal solvent

A general-purpose non-toxic water miscible solvent.

- May be used for cleaning glass, PVC, ABS, perspex, etc.
- Removes unwanted solder flux from PCBs
- Strips photo-resist from etched boards
- Supplied in **50ml and 1l bottles**



Type	Order code	1+
50ml universal solvent	34-0778	2.69
1l universal solvent	34-0780	19.95



Etch resist stripper

A stripper to remove the photoresist from an etched circuit board.

- A 1 litre concentrate which makes 5 litres of working solution
- Best used in a PCB processing tank at 45 to 50°C
- Photoresist strips from the copper in approx. 2-3 minutes
- Supplied in **1l bottles**



Type	Order code	1+	5+
Etch resist stripper	34-0400	12.49	11.95



Seno PCB applicators



Applicators containing ready-to-use, room temperature chemicals.

- Completely sealed in a container with sponge applicator
- Valve mechanism dispenses precisely the right quantity of chemicals
- When not in use the sponge is protected by a cap
- Waste-free and completely safe
- Each mixture is non-hazardous
- Can be thrown away with normal refuse when exhausted
- Developers are totally free from sodium hydroxide
- Each applicator has a shelf life of two years
- The range of applicators available, which offer a real alternative to mixing hazardous chemicals in trays and tanks are:
 - **SN110 Normal developer applicator** - develops all alkaline positive working photo resists
 - **SN111 Soft developer** - as the normal developer but for the spray-on photo resists or very freshly applied photo resist
 - **SN100 Photo resist applicator** - easily applied, very quick drying, positive working photo resist.
 - **SN120 Resist strip** - removes photo resist after etching.
 - **SN140 Flux applicator** - provides protective flux to copper surfa

Type	Order code	1+	5+
SN110 Developer	34-0050	7.49	6.95
SN111 Soft developer	34-0055	7.49	6.95
SN100 Photo resist	34-0060	8.99	8.49
SN120 Resist strip	34-0065	7.49	6.95
SN140 Flux applicator	34-0070	7.49	6.95

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Vinyl gloves



PCB Production kits



Kits for the production of printed circuit boards using ultra-violet techniques.

- The kits are intended as an introduction to photo-etch PCB production and include comprehensive instructions enabling the complete novice to make excellent quality PCBs with minimum effort
- **Basic kit A**, comprises drafting transfers, etching tray, etching kit and printed circuit boards
- **Kit B** comprises all materials plus UV exposure unit
- **Complete kit C** comprises all materials plus UV exposure unit, PCB drill, stand and power supply

Photograph for illustrative purposes only - individual items may vary slightly from those shown.

Technical specification

Kit A contents:		
1	Artwork drafting pack	34-0796
6	Assorted sheet transfer	
3	100 x 160mm single sided photo PCB	34-0105
1	203 x 114mm single sided photo PCB	34-0115
1	Pollifix block	34-0295
1	Polypropylene chemical tray	34-0745
2	Developer crystals	34-0395
1	Seno GS etching kit	34-0385

Kit B contents:		
1	Kit A as above	
1	UV exposure unit	34-0700

Kit C contents:		
1	Kit B as above	
1	Precision PCB drill + stand	85-0384
1	Power supply for drill	85-8008
2	0.8mm drill	85-0450
2	1.0mm drill	85-0455
1	1.4mm drill	85-0460

Type	Order code	1+	5+
Kit A	34-0685	50.95	47.20
Kit B	34-0690	152.95	145.53
Kit C	34-0695	239.65	224.35



Universal PCB processing tank

Develop, strip or tin PCBs with this universal tank.

- Accepts boards up to 320 x 260mm (12.6 x 10.23in.)
- Splash-proof lid
- Full length board holder
- 5 litre capacity
- Board holders feature yellow side clips which can be secured to close the sides of the mesh when very small boards are being processed
- Specially developed 500 watt heater and thermostat sensor with protective silica sheath
- Heater has an internal re-settable safety device to protect the tank if it is inadvertently turned on without any liquid in
- Splash proof electrical controls are located in a recessed panel on the case front
- Neons indicate when the mains heater is operative
- Supplied complete with a syphon, IEC socket and 2 metre mains cable with moulded 13amp plug
- Width 180mm, Depth 525mm, Height 380mm
- **Mega type PA107**



Technical specification	
Temperature range	10 to 55°C
Developing temperature	25°C
Resist strip temperature	45°C
Immerse tin temperature	21°C

Type	Order code	1+
Universal tank	34-0759	184.95

MEGA
 Electronics

PCB Etch tank

A single free-standing tank designed for the rapid production of PCBs from photo-resist coated, or conventional copper clad boards.

- Accepts boards up to 320 x 260mm
- Tank is moulded as a single piece eliminating the risk of leaks or splits from any welds
- The inside tank has a built-in heater and thermostat
- Rigid outer moulded protective case
- Splash-proof lid
- Mesh board holder
- Etchant capacity 5 litres
- A pump forces air through two bubble bars to provide agitation for efficient and even etching
- Splash-proof switches control mains power and the pump
- A neon light indicates when the heater is operating
- Temperature is set by adjusting the thermostat control
- Supplied complete with syphon, 2 metres of mains lead, 13A mains plug fused at 5A and comprehensive instructions
- The use of an RCD safety cut-out is recommended with this equipment
- Mega type 500-003



Board size (mm)	Order code	1+	3+
Bubble etch tank	34-0760	219.95	
Replacement heater	34-0761	31.95	
Bubble bar assembly	34-0767	8.49	7.95
Tank thermostat	34-0769	11.99	
Replacement lid/basket	34-0762	6.79	6.49

ONLY £219.95

MEGA
 Electronics

PCB Etch/spray wash tank



A free-standing tank system with an additional spray wash tank.

- Suitable for boards up to 320 x 260mm (12.6 x 10.23in)
- Solenoid operated spray wash
- Connections are provided at the rear for drain and cold water
- Integral spray wash tank offers safer and cleaner etching of boards
- Supplied complete with syphon, 2 metres of mains lead, 13A mains plug fused at 5A and comprehensive instructions
- The use of an RCD safety cut-out is recommended with this equipment
- **Mega type 500-005**

Type	Order code	1+	3+
PCB etch/spray wash tank	34-0764	284.95	
Replacement heater	34-0761	31.95	
Bubble bar assembly	34-0767	8.49	7.95
Tank thermostat	34-0769	11.99	
Replacement lid/basket	34-0762	6.79	6.49

MEGA
 Electronics

Tri-tank etch unit



A completely self-contained three-tank system for the production of printed circuit boards up to 320 x 260mm (12.6 x 10.2in).

- Heated developing tank, 20°C to 25°C
- Wash tank
- Heated bubble etch tank, 40°C to 45°C
- Enables the user to produce boards in a small convenient area without the need to transfer wet materials over wide areas
- The control switches, neons and variable thermostat controls are mounted on a recessed front panel in the moulded outer case
- Connections are provided at the rear for drain and cold water requirements
- Supplied complete with 2 syphons, 2 metres of mains cable with IEC socket, 13A mains plug fused at 5A and comprehensive instructions
- When using this tank, we recommend the use of an RCD safety cut-out
- **Mega type 500-006**

Type	Order code	1+	3+
Tri-tank system	34-0765	454.95	
Replacement heater	34-0761	31.95	
Bubble bar assembly	34-0767	8.49	7.95
Tank thermostat	34-0769	11.99	
Replacement lid/basket	34-0762	6.79	6.49

MEGA
 Electronics

Rota-Spray etch/developer system



This spray processing tank has many advanced features making it an ideal upgrade from a bubble etch tank.

- 3 to 4 times faster than a standard bubble etch tank
- Splash hopper helps to contain chemicals to aid clean processing
- Integral spray tank washes the entire board holder to keep whole etching process clean
- Adjustable spray bars
- Takes multiple small boards
- Low profile design means less etchant or developer collects on board holder keeping processing cleaner
- Panels can be examined after processing without removing (for better results use translucent Fotoboard 2)
- Set and control temperatures and processing times accurately with the digital controllers
- As the board is not immersed in liquid, there is no over-processing after completion
- As well as etching, the unit can be used to develop photoresists
- No syphoning is necessary
- The top of the processing tank is at an efficient working height of 110cm when using in conjunction with the optional base unit
- Optional base unit dimensions: 440 x 360 x 450mm (W x D x H)



Free delivery
 on all orders over £30
 (excl. VAT)
 (UK mainland only)

No minimum order value
 UK mainland only

- Note: Only Ferric Chloride etchants are suitable for use with Rota-Spray
- Spray processing
- Etches PCBs in less than 90 seconds
- Splash hopper included
- Board holder takes small boards
- Integral spray wash tank
- Transparent case design
- Digital temperature control
- Developer or etcher
- Bottom drain with secure fastening
- 254 x 305mm (10 x 12in.) board capacity
- Safety cut-out on lid
- Digital timer controls processing time
- **Mega type 500-702**

Type	Order code	1+
Rotary jet spray	34-0752	899.99
Base unit	34-0754	79.95



Rota-Station



The Rota-Station is an ideal unit to use in conjunction with the Rota-Spray, **34-0752**, or the Rota-Spray Plus, **34-0756**, to provide a complete PCB processing unit.

- Incorporates 2 digitally-controlled heated process tanks either side of a spray-wash tank
- Integral sink with hot and cold mixer tap
- When used with a Rota-Spray, one of the heated tanks can be used for developing and the second used for either stripping or tinning
- When used with a Rota-Spray Plus, the tanks can be used for stripping and tinning
- **Mega type 500-704**

Rota-Spray and Rota-Spray Plus units are not included, please see order codes **34-0752** and **34-0756**.

Type	Order code	1+
Rota-Station	34-0714	1,169.99



Rota-Spray Plus etch/wash/developer tank

A spray processor with many advanced features making it an ideal upgrade from a bubble etch tank. The Rota-Spray Plus is a spray processor with an in-built spray wash tank and is normally used for etch/spray wash. It also features a static unheated developing tank enabling the unit to be used as a develop/spray wash/spray etch combination.



- Digital temperature control
- Transparent case design for excellent visibility
- Integral spray wash tank
- Adjustable spray bars
- Etches PCBs in less than 90 seconds!

- Static developing tank, unheated with bottom drain
- Bottom drain with secure fastening - no syphoning necessary
- Splash hopper included
- Safety cut-out on lid
- Board holder takes multiple small boards
- Digital timer controls processing time
- 254 x 305mm (10in. x 12in.) board capacity
- Dimensions : H 650, W 540, D 500mm
- Optional base unit
- Base unit dimensions: 440 x 360 x 450mm (W x D x H)

Type	Order code	1+
Rota-Spray Plus	34-0756	949.99
Base unit	34-0754	79.95



5-Tank PCB lab station



A high quality, popular multi-purpose PCB processing unit, designed for both the educational and industrial market.

- Three chemical process tanks separated by two integral spray wash tanks
- Integral sink with hot and cold water to keep PCB processing clean and efficient
- Hot and cold water inlets are through standard washing machine hoses (supplied), draining from standard 32mm push fitting (supplied)
- Possible processing sequence is develop/wash/etch/wash/immerse tin
- One piece polypropylene moulded top
- 250 x 300mm tanks moulded as one piece to eliminate the risk of splits from welds or seams
- RCD current trip socket
- Standard single phase 240V/50Hz 13A supply required
- Cabinet is made from steel with polypropylene sheeting and incorporates a lockable storage facility with doors manufactured from PVC
- Overall dimensions: 1190 x 625 x 790mm
- **Mega type 500-007**

Type	Order code	1+
5-Tank PCB lab station	34-0710	1,399.99



7-Tank PCB production line



A complete 7-tank PCB production line to enable the user to produce complete PCBs in less than 20 minutes,

designed to meet the requirements of both the industrial and educational market.

- 250 x 300mm board capacity with tanks moulded as one piece to eliminate the risk of splits from welds or seams
- Tanks have bottom drains so no syphoning is needed when tanks are emptied
- Four chemical process tanks separated by three integral spray wash tanks
- Integral sink with hot and cold water to keep PCB processing clean and efficient
- Hot and cold water inlets are through standard washing machine hoses (supplied), draining from standard 32mm push fitting (supplied)
- Processing sequence: develop/wash/etch/wash/resist strip/wash/ immerse tin
- One piece polypropylene top
- RCD current trip socket
- Standard single phase 240V/50Hz 13A supply required
- Cabinet is made from steel with polypropylene sheeting and incorporates a lockable storage facility with doors manufactured from PVC
- Overall dimensions: 1185 x 580 x 900mm
- **Mega type 500-048**

Type	Order code	1+
7-Tank lab station	34-0712	1,599.99

Accessories



Polifix block

Specially formulated, ultra-fine non-metallic polishing compound carried in an elastic bonding material.



- Cleans, degreases and polishes in one simple action.
- Simply polish back and forth in straight lines, then wipe with a cloth to remove traces of the abrasive.
- Size 30 x 40 x 20mm

Type	Order code	1+	10+
Polifix block	34-0295	2.39	2.29



Fibre glass pencil

A propelling pencil style holder which houses a 4mm diameter multistrand fibreglass brush.

- Ideally suited to cleaning printed circuit board tracks and general cleaning of components



Type	Order code	1+	10+
Fibreglass pencil	34-0292	3.56	3.05



Brass wire brush

A general purpose, brass wire brush.

- Ideal for cleaning terminals and printed circuit boards prior to soldering



Type	Order code	1+	10+
Brass wire brush	34-0290	0.88	0.68

Same day despatch GUARANTEED!

On all orders placed between 8am and 8pm Monday to Friday

STAEDTLER

Etch resist pen



For use on plain copper boards.

- Simply press the tip to promote ink flow
- Apply slow, even pressure in use

Type	Order code	1+	10+	50+
Etch resist pen	34-0300	1.01	0.98	0.94

rolson

Syphon pumps

A pair of syphon tubes with bulb-type priming pump. Once the syphon is primed, liquid will flow until the level falls below the bottom of the inlet pipe or until the bleed valve, located on the pump bulb, is opened destroying the syphon action.

- Tough moulded polythene construction
- Suitable for hot and cold liquids
- Temperature range -20 to +80°C
- Suitable for use with most PCB etchants
- May not be suitable for use with solvents such as etch-resist removers
- Flow rate 6.5 litres/min
- Approx. length 540mm
- **Supplied in pairs**



Type	Order code	1+	10+	50+
Syphon pump - pack of 2	34-0770	1.21	1.01	0.91

EDU-LAB

Plastic funnels

High quality plastic funnels available in 55mm, 65mm, 75mm and 95mm.

- 55mm and 65mm supplied in **packs of 10**
- 75mm and 95mm supplied **singly**



Type	Order code	1+
55mm Pack 10	52-0914	2.55
65mm Pack 10	52-0916	5.15
75mm Single	52-0918	0.55
95mm Single	52-0920	0.70

MEGA

Ultraviolet exposure unit with timer



An ultraviolet exposure unit for use in the preparation of photo resist circuit boards.

- 1:1 artwork, consisting of opaque transfers on translucent drafting film, is placed on the glass screen and the photo-sensitive material is placed on top

- Lid incorporates a foam pad which exerts an even pressure to hold the artwork and photo board in close contact when closed
- Exposure starts automatically when the six minute mechanical timer is rotated to the correct expose time
- Exposure area 240 x 165mm
- Incorporates two 8W actinic UV tubes, mains on/off switch and indicator, mains cable and 13A plug

Type	Order code	1+
UV exposure unit	34-0700	114.95
8W tubes (2) and starters set	34-0707	12.99

MEGA

Medium UV exposure unit



A large ultraviolet exposure unit for use in the preparation of photo resist circuit boards and front panels and labels.

- Exposure area is 330 x 260mm (13 x 10in) making the unit suitable for most PCBs
- Complete with a 0-500 second digital timer that is set with touch keys.
- Mains on/off switch and indicator
- The set time counts down exposure and then flashes when exposure is complete
- Incorporates 4 x 15W actinic UV tubes
- Supplied complete with 2 metres of mains lead and full instructions

Type	Order code	1+
Medium UV exposure unit	34-0705	234.95
Spare 15W tubes + starter	34-0709	14.99

MEGA

Double sided vacuum UV unit



A double sided UV unit is essential for the production of double sided PCBs.

- The ability to expose both sides of the board at once eliminates the immense problem of artwork registration for two separate exposures on a single sided unit
- The unit has an exposure area of 260 x 355mm making it ideal for most in-house circuit boards
- Robust steel case
- Four 15W tubes in both the base and the lid
- When the lid is closed, exposure time can be set (0-999 seconds) via the touch membrane control panel
- Integral vacuum pump removes the air from the chamber ensuring perfect contact between artwork and material
- Only when a vacuum has been achieved will the tubes activate and the exposure commence
- When completed, the vacuum pump turns off and a valve automatically releases the vacuum allowing the lid to be raised

- Tube status indicator shows if all the tubes are functioning correctly
- Bottom set of tubes to be turned off for single sided exposure work
- Supplied complete with mains lead

Type	Order code	1+
Double sided UV unit	34-0740	699.95
Spare 15W tubes + starter	34-0709	14.99

GCL

Lightboxes



These high quality lightboxes provide a valuable aid for all artwork preparation.

- Provides an even illumination over the whole viewing area
- Cool white fluorescent tubes are mounted below a perspex diffuser and protected by a toughened glass working surface
- Robust mild steel construction
- Attractive two-tone tough grey epoxy paint finish
- Louvres on all sides to ensure natural air flow
- Available in A4, A3 and A2 sizes
- The A3 and A2 versions have an on/off switch which also selects one/two tube operation. They also have a tilt facility, which adjusts the viewing angle
- Supplied with 2m UK/ICE mains lead
- Replacement tubes are available separately

Technical specification	Viewing area	Tubes	Order code
A4	230 x 380mm	2x 8W, 300mm	34-0960
A3	300 x 488mm	2x 15W, 450mm	34-0962
A2	433 x 600mm	2x 20W, 600mm	34-0964

Type	Order code	1+	2+	4+
Lightbox A4	34-0960	131.58	127.30	122.30
Lightbox A3	34-0962	151.98	145.66	139.54
Lightbox A2	34-0964	182.58	176.26	168.10
8W tube 300mm	34-0966	4.03	3.67	3.37
15W tube 450mm	34-0968	5.20	4.69	4.28
20W tube 600mm	34-0970	3.76		

Lightcraft

Lightboxes



Ideal for tracing designs and patterns for stencilling, embossing, quilting, calligraphy, lettering and displaying slides and transparencies.

- Wood finish with white polystyrene work surface
- Integral holders and slots for pens, pencils, rulers, paint brushes and other materials
- Lip to retain paper and pens
- No assembly - ready to use
- Includes energy-saving tube(s): A4: 1x 11W, A3: 2x 13W
- Spare tubes available separately
- Complete with fitted UK 13A plug and 1.5m cable
- Available in A4 and A3 sizes

Type	Order code	1+	5+
Lightbox A4	34-0622	25.45	21.92
11W tube (A4 box)	34-0624	4.03	
Lightbox A3	34-0626	35.65	32.12
13W tube (A3 box)	34-0628	5.05	

Timed delivery service

See page 4 for table of charges

MEGA electronics
PCB Shears



Powerful, cost effective shears which have the ability to accurately cut PCB laminates, plastics up to 2mm thick and aluminium up to 1.5mm.

- Access to the cutting area is prevented by heavy perspex shielding extending along both sides of the blade
- A safety latch is fitted to the pivot to prevent accidental operation
- For positional accuracy the cutting bed is fitted with a metric rule which is recessed to assist in securing the PCB or sheeting whilst cutting
- The smaller unit has a cutting capacity of 203mm (8in.) for normal 1.6mm PCB laminate and is extremely compact with an overall height of only 575mm and a base of 275 x 140mm
- The larger shear will cut 1.6mm PCB laminates up to 305mm (12in.) wide and has a height of 670mm and a base of 430 x 135mm
- Replacement blade sets are available separately

Type	Order code	1+
200mm PCB shear	34-0950	179.95
300mm PCB shear	34-0955	229.95
Blade set 200mm	34-0951	49.95
Blade set 300mm	34-0956	89.95

MEGA electronics
Benchtop shear



A benchtop shear suitable for cutting printed circuit laminates, plastic labels, front panel materials and thin sheet metal.

- 457mm (18in.) cutting capacity
- Cuts aluminium sheet up to 2mm thick
- A spring-loaded clamp holds the material securely during cutting
- Epoxy powder-coated cast aluminium frame
- Hardened and ground steel blade
- Clear acrylic front safety guard protects operator without obscuring view of cutting line
- Metric and imperial edge scales
- Fully adjustable front stop for batch work
- **Mega type 27-18032**

Type	Order code	1+
457mm shear	34-0958	469.95

MEGA electronics
Universal PCB holder



A low cost board holder for up to 20 boards.

- Manufactured from polypropylene
- Impervious to almost all PCB manufacturing chemicals
- Can be washed clean
- Virtually indestructible
- Excellent value for money
- Greater rigidity over vacuum-formed alternatives
- Size 400 x 77 x 25mm

Type	Order code	1+	5+
Universal PCB Holder	34-3630	5.69	5.29

Richco
PCB Card guide

Specifically designed for mounting of printed circuit boards within chassis and rack systems.



- Self-adhesive backing
- Accept 1.6mm thick PCBs
- Length 204mm
- Supplied **singly**

Type	Order code	1+	25+	50+
Card guide	34-0916	1.01	0.91	0.77

Richco
PCB Mounting strip

Mounting strips for printed circuit boards.



- Single mount
- Self-adhesive backing
- Accepts 1.6mm thick PCBs
- Length 205mm
- Supplied **singly**

Type	Order code	1+	25+	50+
Mounting Strip	34-0918	1.01	0.91	0.77

CLIFF
PCB Assembly jig



A PCB assembly jig for holding printed circuit boards firmly in position during assembly.

- Ideally suited to prototyping and small batch production

- Constructed from extruded aluminium
- Supplied complete with centre and two sliding rails which can be adjusted to accommodate a wide range of PCB sizes
- The board retention bars are spring-loaded to facilitate easy insertion and removal of PCBs - essential in a busy production environment
- A hinged lid, with 25mm thick non-conductive antistatic foam and adjustable height controls, accepts a wide range of component sizes and shapes
- Upon closing the lid, the components are all held firmly in position allowing the workframe to be inverted, component leads cut, and then soldered
- The angle of the working surface can be continuously adjusted via a sliding mechanism housed in the base of the jig
- Recessed holes are provided enabling the jig to be permanently secured to the working surface
- Bench mounting clamps are also supplied

Type	Max. capacity	Centre rail	Order code
WF1	510 x 230mm	510 x 110 + 510 x 110mm	34-3610
WF2	510 x 360mm	510 x 175 + 510 x 175mm	34-3620

Type	Order code	1+	3+
WF1 assembly jig	34-3610	122.35	
WF2 assembly jig	34-3620	135.61	130.51

RVFM
3-axis machine



Build and develop your own CNC drilling machine!

- Based on Parallax Stamp2 processor
- Suitable for hobbyists and education
- Resolution 0.1mm on all axes
- Pre-cut board frame provides strength and stability
- Each axis driven by a powerful 12V stepper motor
- Developed to require minimal alignment during construction
- All electronic components are mounted on a custom PCB located at the rear of the machine
- Supplied with BASIC Stamp and Windows software allowing the machine to be used for PCB drilling
- See **Power tools** section for suitable miniature power drills
- The PC imports industry standard Excellon NC drill files created by many CAD packages
- Features include: software selected drill feed, lift, inter-tool parking position and skip tool change options
- Average drilling rate 20 holes per minute
- Working area approx. 200 x 150 x 75mm

Software requires serial port and Windows 98, XP or compatible operating system.

Type	Order code	1+
3-axis Machine	13-0760	233.58

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ETCH/WASH/DEVELOPER TANK****AND GET ALL THESE FREE!**

A spray processor with many advanced features making it an ideal upgrade from a bubble etch tank. The Rota-Spray Plus is a spray processor with an in-built spray wash tank and is normally used for etch/spray wash. It also features a static unheated developing tank enabling the unit to be used as a develop/spray wash/spray etch combination.

- Digital temperature control
- Transparent case design for excellent visibility
- Integral spray wash tank
- Adjustable spray bars

- Etches PCBs in less than 90 seconds!
- Static developing tank, unheated with bottom drain
- Bottom drain with secure fastening, no syphoning necessary
- Splash hopper included
- Safety cut-out on lid
- Board holder takes multiple small boards
- Digital timer controls processing time
- 254 x 305mm (10in. x 12in.) board capacity
- Dimensions: H 650, W 540, D 500mm
- Base unit dimensions: 440 x 360 x 450mm (W x D x H)

ALL FOR ONLY £899.95
34-0757

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Lead-free solder

18SWG 100g	85-1162
18SWG 500g	85-1164
22SWG 100g	85-1166
22SWG 500g	85-1168

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