SIEMENS

Only 4 Process Functions.

PL903S - Single PSU for Panel Plating
- panel size 10" x 12" 50A.

PL903D - Double PSU for Pattern Plating
- panel size 10" x 12" 100A.

PL904S - Single PSU for Panel Plating
- panel size 12" x 18" 100A.

PL904D - Double PSU for Pattern Plating
- panel size 12" x 18" 100A.

Wide window of operation.

Specially developed ABC Chemistry already being used by European PCB Manufacturers.

None of the nasty chemicals associated with other plating systems, (e.g. no Formaldehyde).

Line time only 48 minutes - half that of other systems. Stable chemistry even when used irregularly.

Minimum analysis - mostly done by replenishment (no specialist operator required).

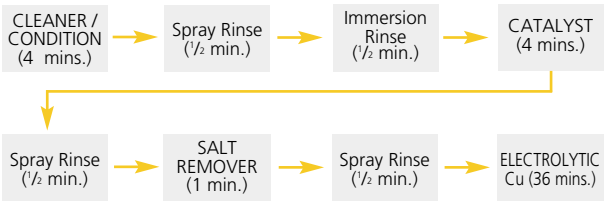
Very compact equipment - ideal for use where space is limited.

Solid state controls, dual current output - plating timer - re-settable amp/hour counter.

In a major step forward Mega introduces a new concept for the production of high quality Prototype and Production quantities of PTH boards. The process has none of the complexities of older style methods of production which are both time consuming and require expensive monitoring of processes on a daily basis. The heart of the system is our patented chemistry which has only three processes to prepare a panel to be electrolytically plated. Analysis of the chemistry is minimal, maintenance being by replenishment on an amp hour basis. So simple is the chemistry, we call it ABC. This new system features totally re-designed electrolytic plating power supplies. They have controllers with membrane touch pad and digital read out meters to set volts, current, plating time and amp hours. It is also possible to set different current outputs to each side of the board, (Twin PSU units only), essential for pattern plating especially where larger areas of copper or ground planes are on one side and small tracks and pads on the other.

The two methods of producing a PTH board (PANEL PLATING and PATTERN PLATING) are described on the opposite page, both of which will produce high quality boards. Pattern plating enables the board to be plated with a 10-12 microns thick durable layer of lead/tin which can then be re-flowed to give a bright shiny finish. Panel plating uses an immerse tin process which deposits pure tin 1-2 microns thick which is ideal for prototypes and boards where a long shelf life prior to soldering is not required.

Processing Sequence



	PL903S & PL903D	PL904S & PL904D
Max. Panel Size:	12" x 10" (305 x 254mm)	18" x 12" (457 x 305mm)
Max. finished PCB:	11.5" x 9" (292 x 228mm)	18" x 11" (457 x 280mm)
Tank capacity:	Process 5L, Plating 25L	Process 10L, Plating 50L
Rectifiers:	PL903S 1 x 50A, PL903D 2 x 50A	PL904S 1 x 100A, PL904D 2 x 50A
Agitation:	Mechanical to all process stages & air to plating	

	All units
Dimensions:	1500 x 620 x 910mm.
Electrics:	Single phase 220/240V 50Hz or 110/120V 60Hz.
Heaters:	500W Silica sheath.
Water in:	Standard washing machine hose fittings supplied.
Water out:	36mm push fit polypropylene drain.

Power Supply Features - common to all copper and lead/tin plating.

1. Independent Anode set current with digital meters
2. Set plating current time 0-99 minutes, digital.
3. Pause facility - disconnects plating current at any period - pressing run allows process to continue until plating time is completed.
4. 0-9999 Digital Re-settable Amp hour meters.
5. Sealed Membrane Front Panel Overlay with touch panel controls.

Rectifiers: PL903S 1 x 50A, PL903D 2 x 50A
PL904S 1 x 100A, PL904D 2 x 50A

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The Panel Plating Process	
1.	Drill double sided 18 micron copper blank with our CNC drill or with a template & hand/optical machines.
2.	Process the panel through the PL903S/PL904S ABC copper plating line as shown on page 22.
3.	Remove the panel from the copper plating bath, rinse and dry.
4.	Apply dry film Photoresist to both sides of the panel using our dry film Photoresist and laminator.
5.	Expose dry film with negative artwork in an AZ double sided vacuum UV, using dry peel film for ease of registration.
6.	Develop-Etch-Strip-Immerse Tin the exposed panel in the PB710/720 process lines or conveyorised systems.
7.	Cut the board to the finished size using one of our precision guillotines or for complicated profiles use our CNC machine in its routing mode. Then assemble and test the board.

The Pattern Plating Process	
1.	Drill double sided 18 micron copper blank with our CNC drill or with a template & hand/optical machine.
2.	Process panel through the PL903D/PL904D plating line, however, only copper plate for 10 minutes. Remove panel, rinse & dry.
3.	Apply dry film Photoresist, expose and develop as described in "Panel Plating", (5+6)
4.	Acid clean for 1 min. in Cleaner bath in PL901/PL902 Lead Tin Line and rinse panel for 0.5 minutes
5.	Micro-etch for 1 min. in PL901/PL902 Lead Tin Line and spray rinse.
6.	Sulphuric Acid dip for 1 min. in PL901/902 and spray rinse.
7.	Return panel to PL903D/PL904D and copper plate for further 20-25 mins. at 3 amps per dm^2.
8.	Remove and rinse panel and place it in Fluoboric acid tank in PL901/902 for 2 mins.
9.	Without rinsing place in PL901/902 for plating for 15 minutes at 1.5 amp per dm^2. Then spray rinse for 0.5 min.
10.	Strip dry film and spray rinse in conventional processor such as PB710/720 or conveyorised lines.
11.	Etch panel in etching tank in PB710/PB720 or conveyorised line for 8-10 mins using Sulphuric Peroxide etchant. Then spray rinse and dry panel.
12.	Hot Oil Reflow panels as shown on page 24.
13.	Cut the board to the finished size using one of our precision guillotines or for complicated profiles use our CNC machine in its routing mode. Then assemble and test the board.

For more information please contact:

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