



Subject: **Designing Cost OUT of Circuit Boards**

From: Doug Bartlett, President

Bartlett Manufacturing has spent two generations quoting printed circuit boards (having started in 1952) and has found that designing costs out of a board always yields greater savings than does negotiating the profit margin with the customer. We decided a decade ago to share this information with our customers so they can understand what design parameters impact the costs of their products and therefore, can design around them when possible to keep costs down.

It is not uncommon to talk to circuit board designers, buyers and engineers and find they do not understand what drives the costs (and therefore the selling price) of their circuit boards. If this knowledge is lacking, there are very few options left for the buyer to take when looking for cost reductions and this often leads to shopping the board around for the lowest price. This lowest price comes from a factory that has the lowest combination of cost to build the board and profit expectation. This is not always in the buyer's best interest as evidenced by the fact that half of the Circuit Board Manufacturers are no longer in business in this country and abroad.

Designing the cost out of circuit boards seems like a real "No-Brainer" but it is not easy to do. First of all, you need to have a method to understand the costs of making the product. Bartlett has gone to great lengths to understand the cost associated with manufacturing its products and understands how these costs affect the selling price. Most shops do not use this method to cost products, more likely they just "know" about what a board will sell for. Ask them to show you and explain to you how they do it and you will understand what we mean. You will find numbers and ratios but may find their explanation somewhat lacking in detail. Try it on a few and I believe you will see what we mean.

At Bartlett we provide a free seminar that teaches our customers what parameters are the keys to controlling the cost of a circuit board. Further, we give our customers our quoting program; **this allows your designers to immediately see the cost impact of each design parameter the moment it is inputted.** Armed with the information from the seminar and the quoting program, the designer can immediately evaluate a design in terms of cost savings versus design constraints, making sure they waste little to no money on a board.

The seminar is customized to meet your individual needs and is given at your location or our's. We cover the 4 most important parameters in reducing the cost of manufacturing a panel, this typically takes about two hours, and spend approximately 1 hour to explain how to get as many parts from the panel as possible. Minimum panel costs and maximized number of parts per panel substantially impacts your piece price.

To schedule a seminar or receive additional information please give me a call at 847-639-2102 extension 210 or you can contact your Bartlett representative. I look forward to hearing from you because this is a win-win situation for both Bartlett Manufacturing and our customers. You receive a lower piece price without giving anything up and we continue to earn your business by manufacturing a quality product at a fair and reasonable price.

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