CHIPQUIK
SMD REMOVAL KIT

# How to Solder the New SMD to the PC Board

The most widely asked question is "now that I have safely removed the chip and cleaned the pads, how do I reinstall the new SMD?" Surprisingly enough the biggest challenge has always been to safely remove the chip without inflicting damage to the pads and adjacent components. Chip Quik® has solved that problem. Replacing the SMD requires some skill but is not that difficult. Most of us already own the necessary tools and equipment to do the job. You can do it.

## A FEW RESOLDER HELPFUL TIPS

An important factor in installing the new chip is to use a solder iron that will maintain its temperature and heat delivery. A quality iron will maintain its set temperature even when it is inserted into a solder joint with various thermal loads. This is done by having the heater element and a sensor right in the tip. The temperature is continuously sampled and corrected, thus accurately maintaining the set temperature. The result is that you can now effectively operate at a lower temperatures applying heat for less time to the solder joint. The real benefit is a better solder joint without inflicted damage. By using a good iron you can perform quality solder joints at 600deg.F or lower and you can remove SMD's with Chip Quik® at less than 500deg.F. Use a flat chisel tip wide enough to cover the pins and pads for good heat transfer. There are various tips available to perform drag soldering. One type is the mini-wave tip that has a little indented reservoir that holds molten solder in like a bubble. When dragged across the pins, the correct amount of solder is released on demand. Theoretically the tip never touches the pins but rides on a wave of solder. This works great on fine pitch SMD's where the pins could easily be bent by applying to much pressure. Lets start with the traditional chisel tip then try the mini-wave at a later time. I recommend using a different tip for solder and desolder. To desolder the tip is not as critical as the solder tip.

## READY TO RESOLDER THE SMD TO THE CIRCUIT BOARD

Before starting this step, it is important that the pads are clean and the solder on each pad is level. Apply tack flux generously on all pads. The tack flux helps to keep the chip from moving. Also it does not run when the board is tilted. Place the chip on the pads using good lighting and magnification to insure that the leads are centered on pads on all sides. Carefully hold the chip in place with a pick or tweezers. With a clean tinned iron tack solder in 3-4 locations so chip will not move. At this point check for placement accuracy. Now apply solder to the tip and slowly drag solder long the pins applying more solder and flux as needed. You will find that the solder will wick into each pin pad connection to form perfect solder joints. If a solder bridge is formed, it can be easily removed with solder braid. Clean solder joints with an acid brush and a good flux cleaner. Inspect all solder joints for defects. Try this easy method. You can do it.