Resistive Soldering System

The SuperChief 250 is built around a 250 watt power unit that allows modelers to tackle a wide range of jobs, from wire to rail, scratch builds and engine repair and refurbs. The tweezer handpiece permits the user to solder in tight locations and hold items in place to ensure correct alignment. And no system would be complete without a footswitch to free up an extra hand and ensure crisp clean solder joints.

Also available

- Flux pens and dispensers
- De-soldering braid
- Tweezers
- Soldering irons
- Resistance Soldering systems
- Manual soldering systems
- Conductive coating pens
- Track Cutters
- Air Dusters
- Cleaning wipes

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SOLDERING MATERIALS FOR MODEL MAKING

The four-stage process for effective soldering
Effective soldering is a four-stage process:

- **Stage One: Preparation**
  Preparation is a combination of ensuring the parts to be soldered are a good dry fit, then pre-cleaning the areas to be soldered with an abrasive such as wire wool. (Emery and sand paper should not be used as they cause silica particles to become embedded in the surface which prevents solder wetting.)

- **Stage Two: Tinning**
  Tinning ensures optimum solderability of the surfaces to be soldered. It is possible to tin using solder bar/wire and flux but the easiest way is to use a solder paint. Paint the area to be soldered, heat until the solder powder in the paint becomes molten. Wipe away excess paint leaving a shiny solderable finish.

- **Stage Three: Soldering**
  Apply a light coating of flux, then jig up the pieces to be soldered and apply a heat source (soldering iron or gas torch) to both surfaces simultaneously. If using an iron, clean the tip and load it with solder to assist heat transfer. When the surfaces are up to temperature, feed in sufficient solder (stick or wire) to make the joint. Remove the heat source and allow the solder to solidify and make the joint.

- **Stage Four: Post Cleaning**
  Active fluxes can stain and even corrode the metal. Remove all flux residues after soldering by cleaning thoroughly. Fluxes recommended by the Solder Connection can be cleaned effectively with warm soapy water. The addition of a little citric acid to the rinse water may be beneficial.

**Soldering Materials for Model Making**

**Solder Paint**

- **Fryolux**
  Fryolux is a uniform mixture of finely powdered tin/lead solder and zinc chloride activated flux. It has a creamy consistency and is ideal for pre-tinning, solder coating and soft solder assembly. It is applied easily by brush, swab or spray, to cold surfaces and then heated to melt the solder and make the joint. Only a thin coat is needed and as the solder and flux are both applied at once, it saves time.
  Available in 125gm and 500gm containers.

**Soldering Flux**

- **Fluxite Paste**
  Fluxite is a traditional grease paste flux. It can be brushed onto the substrate and will adhere to the solder stick prior to applying the heat. Fluxite is Zinc Chloride activated and residues require removal when the soldering process is complete.
  Available in 100gm tins.

**Solder alloys**

- **60/40 tin/lead solder**
  High purity solder that is made of 60% tin and 40% lead with a small plastic range of 5°C (183ºC to 188ºC).
  Available in:
  - Solder wire tubes 0.5mm and 0.9mm as standard, other sizes available on request
  - Blow pipe (8 Sticks, approx. 1/2 Kilo)
  - Solder wire 100gm and 250gm (0.7mm, 1.2mm or 1.6mm diameter)

- **Baker’s No. 3 Soldering Fluid**
  This water-based liquid flux is highly effective and many consider it easier to apply than grease-like alternatives. It can be used successfully to solder all yellow metals and cleaned mild steel but should not be used on Stainless Steel, Zinc or Aluminium.
  Post-soldering flux residues require cleaning with water.
  Available in 125ml and 250ml bottles.