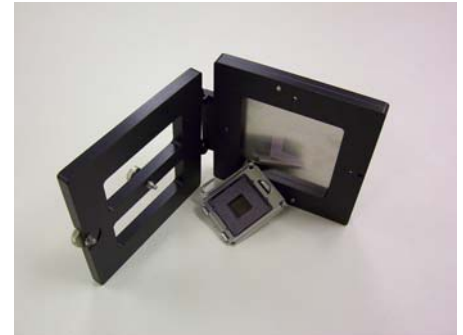


## Introduction

Application of solder paste for BGA rework requires accurate volumetric control. Two methods of paste dispense are commonly used – paste dispense systems and stencil printing.

Paste dispense systems use liquid dispense pumps (or valves) to deliver a small volume (dot) of paste onto each pad of the board rework site. Paste dispensers are very flexible and require no specific tooling, but command a high purchase price.

Stencil printing for rework is typically performed using small, component sized stencils to apply paste onto the rework site. Stencil printing is fast and inexpensive, but can be difficult to perform with the required control and accuracy.



## Component Print Station

The Component Print Station provides a novel approach to paste deposit for rework. Rather than depositing the paste onto the pads of the board, the Component Print Station deposits paste onto solder balls of the component. This approach has many benefits:

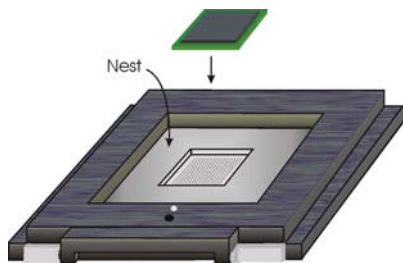


Figure 1

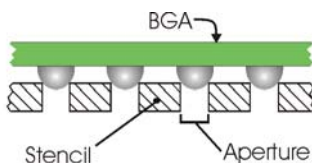


Figure 2

*Ease of Use* – Unlike commonly used stencil printing for rework, the Component Print Station stencil dimensions are not limited by adjacent components, tedious stencil to board alignment is not required, and access to the stencil for paste application is not restricted by fixturing.

*Alignment Accuracy* – The Component Print Station is self aligning. An internal nest may be used to position the component body with respect to the stencil (see figure 1). The solder balls protrude slightly into the stencil apertures providing accurate alignment (see figure 2).

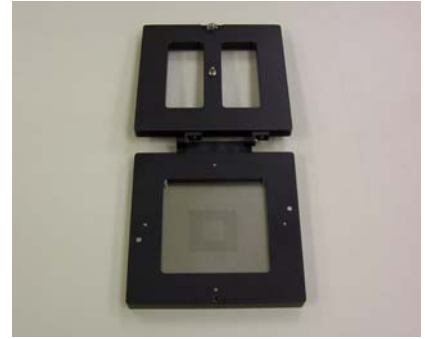
*Volumetric Accuracy* – The Component Print Station pre-loads the component against the stencil, assuring proper contact between the solder balls and the stencil. In addition, since the Component Print Station may be used on any convenient work surface, and held in any convenient orientation, maintaining squeegee angle and pressure is much easier than with typical micro stencils.

*Eliminate Paste Slump* – Components are not subjected to elevated temperature until after they are placed onto the board. Therefore the paste is not heated during board conditioning, eliminating paste slump and the possibility of over-activating the flux.

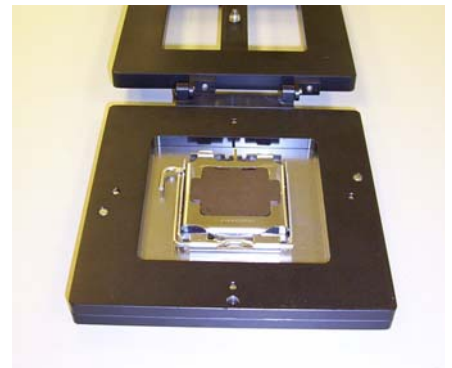
## How to use the component Print Station

1) Insert the component into the Component Print Station

A) Open the lid of the Component Print Station



B) Place the component, solder balls down, into the Component Print Station nest



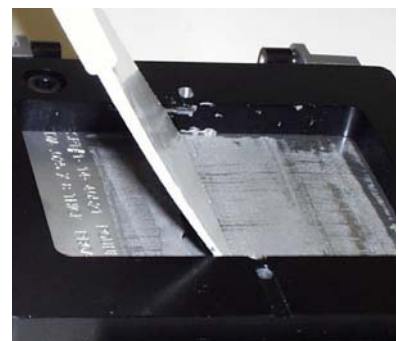
C) Close the lid and secure into place with the thumb screw.



2) Apply Solder Paste

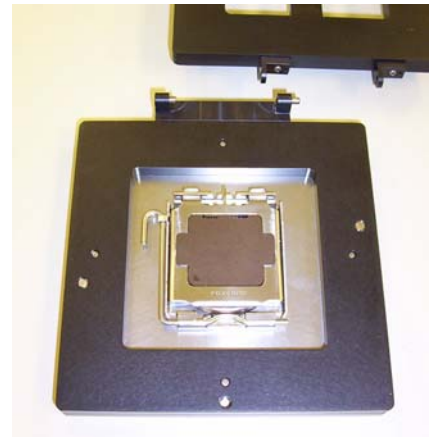
A) Turn the component print station over so that the stencil is facing upwards.

B) Squeegee the paste across the print area (apertures).



### 3) Place and Reflow the Component

- A) Return the Component Print Station to the upright position and remove the lid.

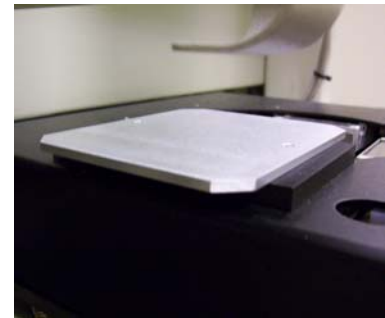


- B) Place the Component Print Station Alignment Plate on the Summit 1000/1100 shuttle or Summit 2100 table.

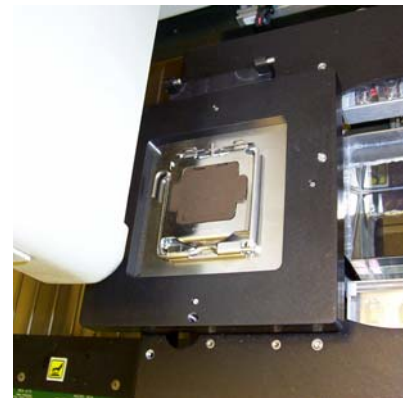
Part Number:

9025-3418-00 Summit 750/1100/2100RS

9025-3418-01 Summit 1000

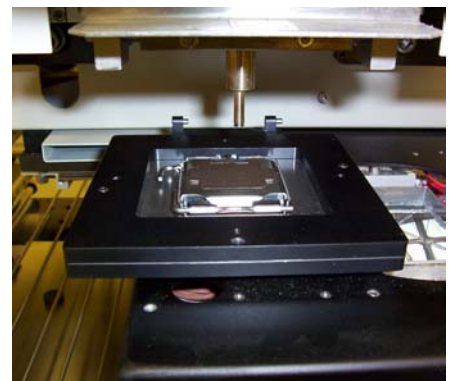


- C) Place the Component Print Station on the Alignment Plate. (The Component Print Station acts as the component nest.)



- C) Execute the appropriate sequence (i.e., Place, Release, Reflow).

*Note: Some sockets require special sequences.*



## Converting the Component Print Station

The Component Print Station may be easily converted to accommodate different part types. Two screws provide access to replace the stencil and nest. Centering pins assure proper alignment and simple reassembly.

Stencils are specific to array patterns

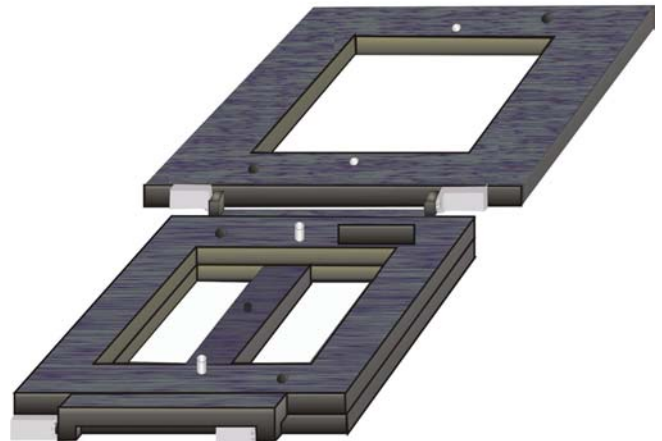


Stencil

Nests are specific to component body dimensions.



Nest



*Preparing the Component Print Station*