

Professional Audio Products Application Note AN-17

High Performance Audio Electronics

Model 992Enh-Ticha & 994Enh-Ticha Opamp Module Mechanicals

The 992Enh-Ticha high performance operational amplifier comes standard with a 8-pin dual in line female "Pin Saver" style SMT socket and 8 gold plated "Pin Saver" pins installed. 4 extra pins are provided in the event that the user damages or breaks pins during installation. Additionally, two DIL8 female to male sockets are also provided. Utilizing the "Pin Saver" system also allows other mounting options. In every mounting situation, the 992Enh-Ticha operational amplifier interface is protected from accidental damage.

For the vertical installation option, many connector manufacturers can provide both vertical or horizontal right angle dip socket connectors. If additional height is required, the user can add an additional standard dual in line socket to the stack to facilitate connection to the PCB. Additionally, if the user is required to mount the Model 992Enh to the left or right side of the existing PCB socket, a horizontal or vertical right angle display socket can be used and the Model 992Enh is simply rotated 90 degrees.

In all mounting situations, the user must keep the connection from pin 1 of the Model 992Enh to pin 1 of the device being replaced. Pin 1 of the 992Enh is identified on the bottom side of the PCB assembly. Incorrect installation will damage the 992Enh and void the warranty.

Refering to the mechanical diagrams to the right, the user has additional height options if it is required to mount the Model 992 over tall components.

Refer to page 3 of this application note for mechanicals of the Sonic Imagery Labs Model 994Enh-Ticha DUAL opamp module.

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Model 992 and 994 Module Mechanics

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TOP VIEW

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For new designs where the Model 992Enh-Ticha high performance operational amplifier is required to be fastened to the printed circuit board, the designer can use the 4 heatsink option screw holes to mount the Model 992Enh to mating standoffs. The holes in the 992Enh are 0.064 inches in diameter and allow the use of #0-80 screws. These connections, standoffs, screws or nuts should be electrically isolated from any circuitry, ground or supply rail.

It is not required that all 4 standoff/holes have to be used, 2 is usually sufficient. The outer diameter of the standoff should not exceed 0.125 inches to prevent interferance with components on the bottomside of the Model 992Enh-Ticha. With that being stated the 2 left most hole positions provide more clearance for standoffs.

In environments subject to shock or vibration it is also recommended that all screws and nuts be secured using GLPT insulating varnish, transformer winding varnish or other non-conductive enamel to prevent loosening.

In all mounting situations, the user must keep the connection from pin 1 of the Model 992Enh to pin 1 of the device being replaced. Pin 1 of the 992Enh is identified on the bottom side of the PCB assembly. Incorrect installation will damage the 992Enh and void the warranty.

Refering to the mechanical printed circuit board pad pattern, note that this pattern also applies to the 994Enh-Ticha high performance operational amplifier as well.



The illustration below shows the standoff mounting method using 2 different standoff types. It is important to confirm standoff length requirements regarding tolerances and socket stack.



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The 994Enh-Ticha high performance operational amplifier comes standard with a 8-pin dual in line female "Pin Saver" style SMT socket and 8 gold plated "Pin Saver" pins installed. 4 extra pins are provided in the event that the user damages or breaks pins during installation. Additionally, two DIL8 female to male sockets are also provided. Utilizing the "Pin Saver" system also allows other mounting options. In every mounting situation, the 994Enh-Ticha operational amplifier interface is protected from accidental damage.

For the vertical installation option, many connector manufacturers can provide both vertical or horizontal right angle dip socket connectors. If additional height is required, the user can add an additional standard dual in line socket to the stack to facilitate connection to the PCB. Additionally, if the user is required to mount the Model 994Enh to the left or right side of the existing PCB socket, a horizontal or vertical right angle display socket can be used and the Model 994Enh is simply rotated 90 degrees.

In all mounting situations, the user must keep the connection from pin 1 of the Model 994Enh to pin 1 of the device being replaced. Pin 1 of the 994Enh is identified on the bottom side of the PCB assembly. Incorrect installation will damage the 994Enh and void the warranty.

Refering to the mechanical diagrams to the right, the user has additional height options if it is required to mount the Model 994 over tall components.



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In the illustration above, if the user is required to mount the Model 99XEnh-Ticha module to the left or right side of the existing PC Board socket, a horizontal or vertical right angle display socket can be used and the Model 994Enh is simply rotated 90 degrees. If additional height is required, the user can add an additional standard dual in line socket to the stack to facilitate connection to the PC Board.

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