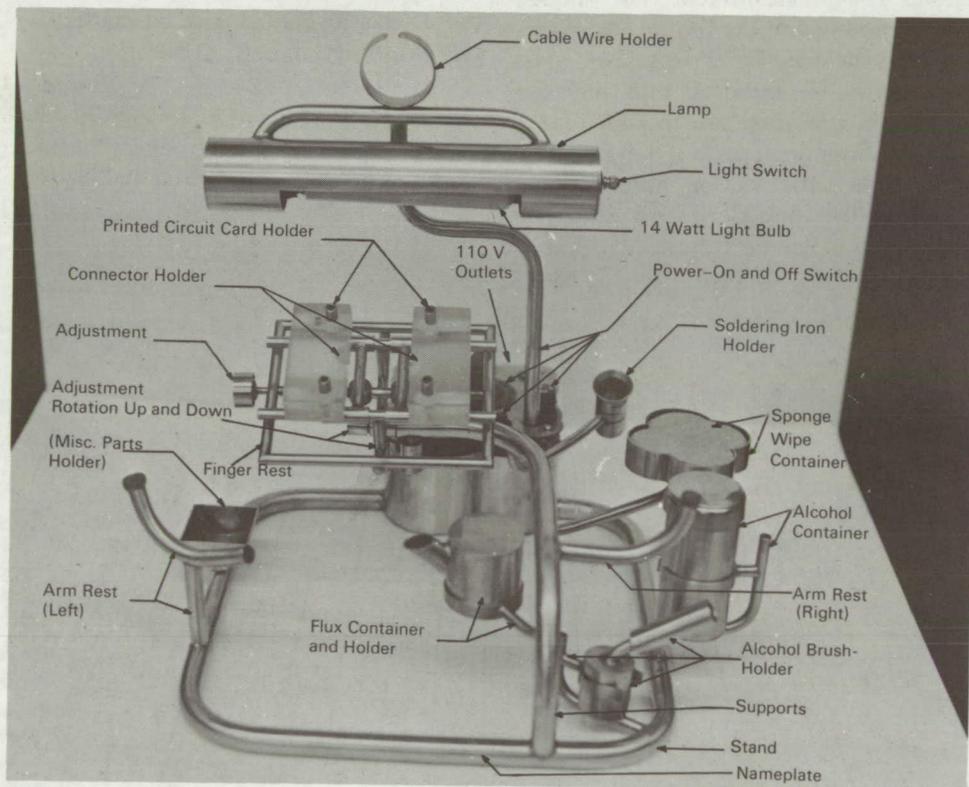


NASA TECH BRIEF



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Fixture Facilitates Soldering Operations



This soldering fixture, designed for printed circuit cards, is a basic bench-mounted, self-contained integral unit combining all soldering needs into a compact, readily available work station. All tools, materials, and accessories are made readily available to provide an ideal station to perform critical soldering. Special emphasis is placed on cleanliness, simplicity of operation, and special devices required to perform extremely critical soldering operations. The fixture lends itself to production-line or single-unit

work equally well. The prototype fixture was constructed of stainless steel to meet clean room requirements, but other materials could be utilized with a resultant cost savings. Overall dimensions of the fixture are 12×13×12 inches.

Electrical power is supplied by a single power connection to a normal 115 Vac, 60 Hz receptacle by power cord or bench-top mounting. Additional power receptacles are provided for thermal strippers, solder pot, and other accessories, when required.

(continued overleaf)

Many desirable characteristics have been incorporated in the fixture. Variable voltage level is supplied through a fused potentiometer for accurate control of soldering iron temperature. Indirect fluorescent lighting of 100 foot-candle power is supplied directly on the work area. A split ring at the top of the fixture provides a means for retaining wire harness assemblies from the work area. Containers for normal soldering materials (alcohol, flux pot when allowed) are provided as integral units and are designed for easy access and maximum cleanliness. A convenient soldering iron holder is mounted on the fixture which serves as a heat sink to maintain a constant iron temperature for intermittent operations. The soldering iron cord is connected to the fixture. A nylon brush drip cup with reverse brush holding provides for added system cleanliness. The sponge container is securely mounted to the fixture. A miscellaneous-parts holder is included for clips, screws, pins, etc., which may have to be removed and replaced during soldering. Solid arm rests are provided as a part of the fixture to minimize operator fatigue. The workpiece holder, with self-centering holding supports, is adjustable in two directions and holds or releases the work with a single adjustment knob.

Finger rests on the work-holding unit enable maximum control during critical soldering operations and ensure a high degree of cleanliness.

Although the fixture was originally designed for operation by right-handed persons, a minor change during fabrication can make the tool suited for left-handed operators.

Note:

Documentation is available from:

Clearinghouse for Federal Scientific
and Technical Information

Springfield, Virginia 22151

Price \$3.00

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Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C., 20546.

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