

# NASA TECH BRIEF



NASA Tech Briefs are issued to summarize specific innovations derived from the U.S. space program, to encourage their commercial application. Copies are available to the public at 15 cents each from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151.

## Gun Facilitates Adhesive Bonding of Studs to Surfaces



This tool will facilitate the bonding of thermo-plastic-backed studs to smooth, hard surfaces (such as marble). Such studs can be used for mounting loads, such as heavy pictures or signs, on walls in public buildings where defacement with drilled holes cannot be tolerated. These studs can easily be removed, when desired, by softening the plastic bonding with heat from the gun.

Design characteristics of the gun are as follows:

1. Maximum wattage 1 KW at 50 volts ac or dc.
2. Input controllable from external power supply (ac or dc).
3. Operating temperature to 700° F maximum.
4. Insulation protects user; exterior temperature rise does not exceed 36° F after 30 minutes operation.
5. Spring is easily removed to permit spring-force adjustment.
6. Standoffs interlock with trigger to prevent operation unless all standoffs are depressed indicating that the stud is perpendicular to surface.

7. Weight approximately 3 pounds.

### Note:

No additional documentation is available. Inquiries may be directed to:

Technology Utilization Officer  
Marshall Space Flight Center  
Huntsville, Alabama 35812  
Reference: B69-10009

### Patent status:

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

Source: W. G. Simpson and B. K. Davis  
Marshall Space Flight Center  
(MFS-20299)

Category 05