

# Technology Notes

## CONTAMINATION

### Spacecraft Cleanliness Checker

A hand-held vacuum probe which removes bacteria with the aid of ultrasonic vibration has been developed for the National Aeronautics and Space Administration to measure space vehicle contamination.

The device will be used to check the efficiency of spacecraft sterilization techniques. Though it is a very simple design—a Teflon tube probe, an aluminum filter housing and a handle—tests show it has an efficiency of more than 90 percent in removing microorganisms from a smooth surface.

Designed by Sandia Corp., Albuquerque, N. Mex., the probe gathers samples which are then transferred to a culture medium where they can grow and be analyzed.

## LASER TECHNOLOGY

### Seeing-eye Cane for the Blind

A seeing-eye cane that detects nearby objects with laser beams is being developed for the blind by Radio Corporation of America, Princeton, N. J.

Signals bouncing off a nearby object from two infrared lasers in the cane cause tiny rods in the cane's handle to vibrate against the user's hand. The entire unit weighs five pounds, including batteries.

## INTERNATIONAL COOPERATION

### U.N. Schedules Space Meeting

One of the largest space conferences ever held is planned by the United Nations to take place in Vienna from Sept. 11 to 23.

The U.N. expects nearly 1,000 delegates from 130 countries to take part in the meeting, devoted to the peaceful uses of outer space. The U.N. calls the planned session "the first major international space conference."

## MATERIALS

### Lightweight Chopper Armor

The British Ministry of Defense has slapped a top-secret label on a lightweight plastic armor developed by Bristol Aeroplane Plastics, Bristol.

The plastic armor is little over half the weight of conventional steel shielding, making it particularly valuable to helicopters. It reportedly has better resistance to bullets than steel of the same thickness.

In U.S. tests the new armor proved more effective than its makers claimed. Among the helicopters expected to use non-metallic armor is the Army's Advanced Aerial Fire Support System, being developed by Lockheed California Co., Burbank.

## INFORMATION RETRIEVAL

### Army Gets Computer Librarian

A computer system that "browses" through new technical literature, then tells each scientist what is new in his field, has begun operation at the U.S. Army Electronics Command, Ft. Monmouth, N.J.

Twice monthly the computer sorts through new ma-

terial, breaks it down into 7,144 separate categories and prints out individual bibliographic booklets containing the categories specified by any of the 3,000 potential users on the post.

The computer uses tapes prepared by the Defense Documentation Center.

## TRANSPORTATION

### Truck Meets Hovercraft

An amphibious "hovertruck" developed by the French firm of Bertin and Co. uses an air cushion effect generated by compressed air fed to 10 flexible, circular skirts fitted under the vehicle.

Propulsion and guidance are provided by wheels, through a hydraulic system with which the driver can transfer from 5 to 20 percent of the total vehicle weight to the wheels.

A pair of 50-horsepower Renault engines run the drive wheels, while a 140-horsepower Chevrolet engine powers the lift fans. Special paddle vanes fitted to the wheels allow an over-water speed of about four miles per hour. On rough or swampy ground the vehicle can carry a 6,000-pound payload at 30 mph.

## MILITARY ELECTRONICS

### Fold-away Radar

A fold-away radar which can be set up or taken down in less than 20 minutes has been developed by the U.S. Air Force.

Called the TPS-44, the unit will become part of the highly complex Tactical Air Control System (SN: 4/15). The contour of the antenna section is maintained despite the hinging and coupling needed to make it collapsible, according to the Air Force Systems Command. The antenna is capable of withstanding 60-mile-per-hour winds.

## ARCHAEOLOGY

### New Treasure Hunter

A new device for detecting buried or sunken objects may also be used in Alpine rescue missions. Called a pulsed magnetic induction locator, the device was developed at the Oxford University, England, Archaeological Research Laboratory.

The instrument generates a rectangular pulsed magnetic field covering 10 square feet and penetrating the ground a maximum of six feet. This field, by induction, creates around any buried object a secondary magnetic field which persists longer than the primary one, and can therefore be measured.

The device has already been used at six sites in England, including the supposed Camelot. This summer it will be used in an attempt to locate an ancient Greek shipwreck in the Mediterranean, and the Austrian army will try using it to find mountaineers trapped by avalanches.

The instrument is reportedly cheaper to produce than the proton magnetometer now in general use. In addition, it can be used to detect nonferrous metals, pottery and even earth anomalies such as potholes and hidden caves.