

# Bendix Delivers Instruments For Moon Flight

The first scientific instruments to be placed on the moon's surface by astronauts have been delivered by the Bendix Corp. to NASA's Manned Spacecraft Center.

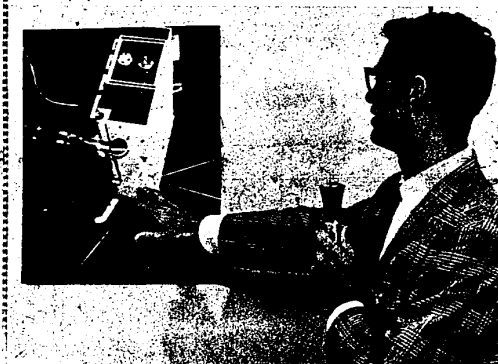
The formal announcement was made last week by J.F. Clayton, general manager of the Bendix Aerospace Systems Division, at a press conference in Ann Arbor, a host of NASA officials and scientists working on the ALSEP project attended the ceremony.

The package of scientific instruments known as the "Apollo Lunar Surface Experiments Package" (ALSEP) weighs approximately 280 pounds and will be carried to the moon on the Apollo flight.

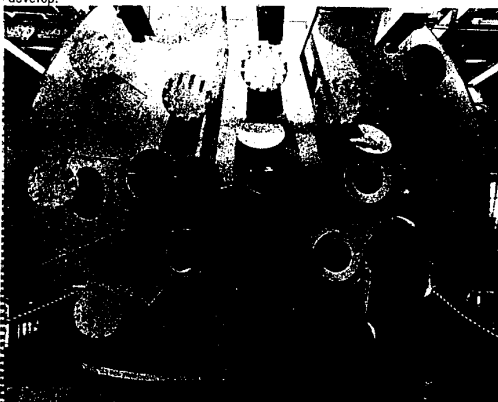
ASTRONAUTS WILL deploy and activate ALSEP near the landing site, collect geological samples and return to earth.



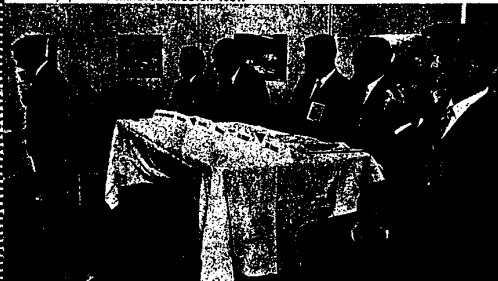
DR. PALMER DYAL, principal investigator for the ALSEP Lunar Surface Magnetometer Experiment, explains his project at a press conference in Ann Arbor.



THAT'S MY BABY — Dr. John Freeman of Rice University proudly describes the functions of ALSEP's Suprathermal Ion Detector, a project which he helped to develop.



TEST RUN — Within Bendix Space Chamber in Ann Arbor, the ALSEP qualification model is being exposed to the extreme hot and cold vacuum of a lunar day (28 earth days) in a simulated mission test.



ANYTHING GOES — A distinguished panel of Scientists from Bendix and NASA answered a barrage of questions from newsmen concerning the ALSEP project.

The ALSEP experiments left on the moon are planned to transmit scientific data for up to one year after the astronauts return home.

The ALSEP delivery constitutes the first integrated system to be accepted by NASA for the Apollo program.

"The data collected will provide NASA and the scientific community with an unprecedented knowledge of the lunar environment and interior," Clayton said.

"ALSEP will give us an excellent cross check on our theories of the formation of the earth. It is the first stepping stone to the scientific exploration of the planets."

The Bendix ALSEP contract calls for a qualification model of each of three types of ALSEP with different experiment combinations for a total of four flight systems.

"The qualification model is at present being exposed to the extreme hot and cold vacuum of a lunar day (28 earth days) in a simulated mission test in our space chamber here in Ann Arbor," C.J. Weathered, Bendix ALSEP program manager, reported.

THE ALSEP FLIGHT hardware includes a Central Station to act as a power and communication center for gathering information from the scientific experiments and for transmitting data to and from earth.

The electric power for the experiments is supplied by a radioisotope thermoelectric generator furnished by the Atomic Energy Commission.

There are a total of eight experiments in the ALSEP package.

The ALSEPs will include: a Passive Seismic Experiment to measure lunar quakes and to study the physical properties of the moon's interior; a Lunar Surface Magnetometer to measure the magnetic fields of the moon; a Solar Wind Experiment to measure the energy ranges of the flow of electrons and protons from the sun out into space; and a combined Suprathermal Ion Detector Experiment and Cold Cathode Gauge Experiment to study the lunar atmosphere and ionosphere.

THREE ADDITIONAL experiments will be included in later flights. They are the Heat Flow Experiment to measure the outward flux of heat from the

moon's interior; a Charged Particle Lunar Environment Experiment to measure proton and electron fluxes at the lunar surface; and an Active Seismic Experiment to measure the elastic properties of lunar subsurface material.

The principal investigators on ALSEP include Dr. Gary

Latham of Lamont Geological Observatory, Dr. Charles Sonett from NASA's Ames Research Center, Dr. Conway W. Snyder of Jet Propulsion Laboratories, Dr. John Freeman of Rice University, Dr. Francis Johnson of the Southwest Center for Advanced Studies, Dr. Brian J. O'Brien of Rice

University, Dr. Robert Kovach of Stanford University, and Dr. Marcus Langseth of Lamont Geological Observatory.

IN ADDITION to the work of the development of ALSEP, Bendix has been planning for lunar exploration for a number of years. Those plans have in-

cluded the study of Advanced ALSEP which would carry a larger array of experiments and operate on the lunar surface for several years. Advanced lunar science systems might also include a vehicle which could operate automatically or with a man to explore and to deploy instruments

away from the landing site. The first APOLLO space flight is scheduled to be launched sometime before 1970, according to Dr. Wilmut Hess, Director of Science and Applications for NASA. Subsequent flights will follow at two-and-a-half month intervals, he added.

## Sears

SEARS, ROEBUCK AND CO.



Save over \$22 on Smart 2-Pant Suit

Was \$7.50 **44<sup>88</sup>**

Always appreciated, a second pair of trousers. Wrinkle-shy 55% Dacron® polyester, 45% worsted wool. Brighter plaids, plaids, fancies, solids. Transfers feature Ban-rol® waistband for neatness. In popular sizes. Do hurry!

## Clearance of Men's Suits and Sport Coats

Sale ends Saturday, Aug. 3.

Debonair and Cool Sears 2-Pant Suit

Was \$79.95 to \$9.50 **59<sup>88</sup>**

Our finest lightweight 2-pant suits by Dalebreeze in wonderful wrinkle-shy Dacron® blends. Choose from self-confident plaids in multi-colors or black and white combinations. All are smart 2-button style in popular sizes.

Summer Suit in Dacron® and Rayon

Was \$39.95 to \$7.50 **31<sup>88</sup>**

Here they are — all the new light summer colors in quality tailored 2 and 3-button style suits. The trousers have neat Ban-rol® waistbands to prevent rolling, coats are sleeve and body lined with 100% nylon. In men's sizes.



## Lightweight Sport Coat Sale

An assortment of smart sport coats in wonderful easy-care fabrics. Choose from checks, plaids, solids all in the latest colors. Popular sizes.

Were \$24.95 to \$29.95 **12<sup>88</sup>**

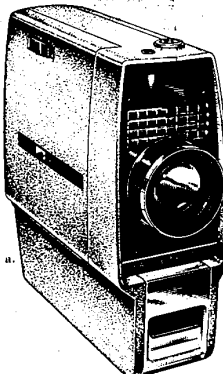
Assorted summer sport coats in fancies, Dacron® and wool blends in sharp 2 and 3-button styles. Popular sizes. Hurry to Sears, save.

Were \$35 to \$39.95 **24<sup>88</sup>**

Charge It — It's Quick and Convenient

Sears Men's Dress Clothing (not at Grosse Pointe, Wyandotte)

## Photograph Your Family Now! Save on Cameras and Accessories



### a. Sears Super 8 Movie Camera

This feature-packed camera has fixed focus lens and an automatic electric eye adjusts lens continuously for best film exposure as you shoot. 15mm f:1.8 lens requires no focusing. Battery drive (needs no winding) automatic film footage indicator, cartridge loading, no threading or reversing of film. Sturdy die-cast aluminum body.

Reg. \$9.98

**29<sup>97</sup>**

### b. Super 8 Movie Projector

Features spring-loaded sprockets and low heat projection lamp. Forward, still and reverse projection and it's self threading! F1.6 lens, 400-ft. reels, one is included. With power rewind, framer trimmer, die cast aluminum body. Complete with self-contained case. 110-120-v.

Reg. \$9.98

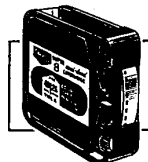
**79<sup>97</sup>**

### c. Easi-Load Camera Outfits

Everything you need to take fine photos! The sturdy Easi-Load camera with rapid wind lever advance, 12-exposure Kodachrome film, 2 batteries and a 4-shot flashcube. Camera has fixed focus lens, no threading and it's cartridge loading. Takes 3 1/2 x 3 3/8-in. color prints. Save now at Sears!

Reg. \$12.98

**11<sup>97</sup>**



### d. Automatic Slide Projector

Features a timer for 5, 10 or 20 second intervals. Runs forward or reverse and focuses by remote control. 5-in. f:2.8 anastigmat lens projects a sharper picture over a greater distance than any 4" lens. Twin blowers protect slides, keep projector comfortable to handle. Save \$15!

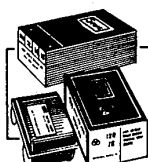
Reg. \$9.98

**84<sup>97</sup>**

Color Movie Film

Sears low price **3 19**

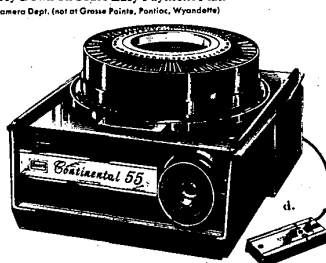
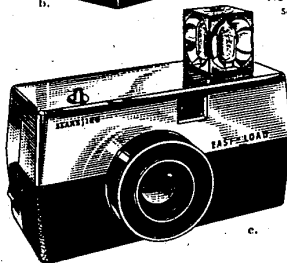
Price includes processing! 50-ft. of finished movies in full color. For Super 8 Camera only.



12 Color Prints 126 Cartridge Film

Sears low price **3 69**

Price includes processing! 126 film for Easi-Load and Instamatic cameras. You get 12 prints in brilliant true color.



Open Monday, Thursday, Friday, Saturday 9 to 9, Tuesday, Wednesday 9 to 5:30

**Sears**  
SEARS, ROEBUCK AND CO.

- Grand River at Oakman, ME 3-3300
- Grand at Van Dyke, WA 5-0100
- Woodward, Highland Park, TO 8-1300
- Lincoln Park, Southfield at Dix, DI 3-7000
- Lincoln Mall, 7 Mile at Middlefield, 316-6000
- Woodward, Highland Park, TO 8-1300
- Lincoln Mall, 14 Mile Rd. at John R, 585-1000
- Lincoln Park, Southfield at Dix, DI 3-7000
- Lincoln Mall, 7 Mile at Middlefield, 316-6000
- Lincoln Mall, 14 Mile Rd. at John R, 585-1000
- Pontiac, 151 N. Saginaw, PE 5-1171
- Wyandotte, Biddlefield, 4V 4-9000
- Grosse Pointe, 7 Mile, TU 4-6000