



8-31-66

BENDIX SYSTEMS DIVISION ANN ARBOR, MICH.

NO.

REV.NO.

ALSEP System Orientation Manual
(4-Hour Course)
Topical Outline

ATM-492

PAGE 1 OF 9 PAGES

Copy for Ferguson

This ATM presents the scope of information and its format to be included in the ALSEP System Orientation Manual (4-Hour Course).

This outline is submitted as per requirement contained in:

ALSEP-MA-17; Management Control Plan, System Support 9752, Dated 10 February 1966 (C Revision), Support Manuals Task No. 5, page 3-5, and Support Manuals MCP Schedule, page 3-18.

Prepared by:

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Prepared by

Support Manuals Section
System Support 9752



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FRONT MATTER

Title Page

(The Title Page will contain the following information:

1. The technical manual number positioned in the upper right corner of the title page.
2. The technical manual title positioned in the upper center portion of the page and slightly below the technical manual number. MSC contract NAS 9-5829, Exhibit C requirement: "(Type I) documents shall be marked 'Preliminary - NASA Approval Pending or Approved by NASA as appropriate'" is applicable to the ALSEP System Orientation Manual.
3. Nomenclature of the ALSEP System will be positioned immediately below the title.
4. The manufacturers identification will appear below the system nomenclature.
5. The contract number applicable to the technical manual procurement will appear just below the manufacturers identification.
6. The authority notice-- "Published Under Authority of NASA/Manned Spacecraft Center" will be positioned in the lower center portion of the page.
7. The publication date will be positioned in the lower right portion of the page, slightly below the authority notice.)



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List of Effective Pages

The List of Effective Pages (referred to as "A" Page) will contain a list of all pages in the support manual.

Table of Contents

The Table of Contents will contain a centered title, section number and title, and page number for all first and second order paragraph headings in the support manual.

List of Illustrations

The List of Illustrations will follow the table of contents and will contain a centered title, figure number and title, and page number of all illustrations in the support manual.

List of Tables

The List of Tables will follow the list of illustrations and will contain a centered title, table number and title, and page number of all tables in the support manual.

INTRODUCTION

The Introduction will start a right-hand page and will identify the ALSEP System by system nomenclature. It will provide a brief explanation of the purpose of the manual and any other relevant information which may increase the utility of the manual—such as reference to other related ALSEP support manuals.



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Scope of Manual; General

The ALSEP System Orientation Manual will contain: physical and functional description of system, subsystem, major components and associated interface requirements; mission and operational planning information; and a physical and functional description of the system test and handling equipment.

The manual will be prepared for use in the orientation and training (4-Hour Course) of ALSEP program personnel having a technical engineering background.



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ALSEP

SYSTEM ORIENTATION MANUAL

(4-HOUR COURSE)

SECTION I

MISSION PROFILE

1-1 APOLLO-ALSEP MISSION

(This part, Section I, will describe the relationship of the Lunar Module (LM) and ALSEP, and the astronaut in the Apollo Mission.)

1-2 OPERATIONAL OBJECTIVES

(This part of Section I will relate the ALSEP objectives for obtaining long-term scientific measurements of various physical and environmental properties of the moon.)



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SECTION II

DESCRIPTION

2-1 SYSTEM PHYSICAL AND FUNCTIONAL DESCRIPTION

(The physical description, part of Section II, will include a tabulation of the major subsystems of the ALSEP and will identify each according to their physical location within the ALSEP subpackages. A table of leading particulars will be included and will list weight, volume and dimensions of each of the ALSEP subsystems. A composite illustration of the ALSEP will also be included.)

(The functional description will provide a brief account of what the ALSEP System does, how it does it, and the part that each subsystem plays in overall system operation. An overall system block diagram will also be included.)

2-2 SUBSYSTEM PHYSICAL AND FUNCTIONAL DESCRIPTION

(This part of Section II will describe the physical characteristics and functional operation of each of the following subsystems:)

- Passive Seismic Experiment Subsystem
- Magnetometer Experiment Subsystem
- Solar Wind Spectrometer Experiment Subsystem
- Suprathermal Ion Detector Experiment Subsystem
- Heat Flow Experiment Subsystem
- Charged-Particle Lunar Environment Experiment Subsystem
- Active Seismic Experiment Subsystem
- Data Subsystem
- Electrical Power Subsystem
- Structural/Thermal Subsystem
- Lunar Geological Equipment Subsystem



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SECTION III

OPERATION

3-1 LUNAR SURFACE OPERATIONS

(This part of Section III will cover a general description of the astronaut's activities and operations for deployment and activation of the ALSEP System on the lunar surface.

3-2 GROUND OPERATIONS

(This part of Section III will cover a general description of the ground operational activities (i. e., Manned Space Flight Network (MSFN), Mission Control Center (MCC), Principle Investigators (P.I.).



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SECTION IV

EQUIPMENT REQUIRED FOR MAINTENANCE

4-1 ALSEP MAINTENANCE CONCEPT

(This part of Section IV will describe the ALSEP Maintenance Concept and the two levels of maintenance into which it is divided. It will describe the purpose, scope and type of tests performed for Level A Maintenance of the ALSEP System at KSC.)

4-2 ALSEP SYSTEM TEST SET

(This part of Section IV will briefly describe the System Test Set and its associated equipment. It will establish the philosophy that the System Test Set is functioning correctly, energized, calibrated, and ready for ALSEP System testing. This paragraph will reference Volume II of ALSEP Flight System and System Test Set Field Maintenance Manual that will provide check-out procedures to assure that the System Test Set is ready for functional testing of the ALSEP.)

4-3 SUPPORTING EQUIPMENT

(This part of Section IV will list and explain the function of all supporting equipment required for maintenance of the ALSEP-other than the System Test Set. Included in the list will be handling equipment, standard test equipment, peripheral equipment (i. e., peculiar ALSEP equipment required for maintenance not part of the System Test Set), etc.)