

SM2A-03-BLOCK II-J-(2)
APOLLO OPERATIONS HANDBOOK

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FOREWORD

This handbook contains the flight crew operational procedures for all active J-series spacecraft.

Volume II constitutes the crew Normal/Backup, Abort, Malfunction and Emergency procedures. Normal procedures are defined as those used if all systems are operating normally. Backup procedures are those used to accomplish the objective of the normal procedures when system failure or some other anomaly prevents use of the normal procedures. Malfunction and Emergency procedures encompass the recognition, diagnosis, and corrective action for system malfunctions or failure.

Spacecraft Page Identification

Pages of this handbook which are usable only on a single J-series vehicle are identified by including the spacecraft number parenthetically as a part of the page number.

Pages applicable to a specific series of vehicles are identified by including the spacecraft number and the letter S parenthetically as a part of the page number. The "S" indicates the page is applicable to the spacecraft number shown and to subsequent vehicles as well.

Common pages (pages with no spacecraft identification in the page number) are used for all J-series spacecraft.

Some pages have been repeated in order to satisfy page requirements for all spacecraft covered by the current handbook.

Utilization and Updates

This handbook concept requires the use of specific pages to provide specific vehicle coverage. It is suggested that the list of effective pages in the front of the handbook be used when changes to the book are made or to verify a specific vehicle configuration of the manual.

To prepare the manual for use on a particular vehicle, select the complete set of common pages and those pages indicated for a particular vehicle as indicated on the list of effective pages.

When pages identified as applicable only to other vehicles have been removed in preparation of a manual for a specific vehicle, redundant pages will have been eliminated. Do not discard the removed pages. These pages are current for other vehicles until superseded by subsequent change.

Volume 1 - Spacecraft Description, SM2A-03-BLOCK II-(1), is bound separately and contains the description portion of the spacecraft systems and equipment. User of Volume 2 procedures should be thoroughly familiar with spacecraft and system descriptions in Volume 1.

Comments or suggested change to this handbook should be addressed to the Spacecraft Systems Branch, FCSB, MSC, Office Code CF22, Telephone NUJ-5558.

INTRODUCTION

PROCEDURE COLUMN

Procedural steps in this section are presented in tabular form and in numerical sequence. Steps are further organized by subgroups into related functions. Column headings of the Normal/Backup procedures consist of STATION/TIME (ST/PT), STEP, PROCEDURE, PANEL and REMARKS. An explanation of each of these column headings is provided as follows:

- ST/PT The station is equivalent to the crewmember assigned to the spacecraft location where a procedure or step is performed. Station COM (commander), CMP (command module pilot) and LMP (lunar module pilot) correspond to the left, middle, and right crew couch positions, respectively. The CMP also pertains to the lower equipment bays (accessible to the other crewmembers). The time column (PT) will contain mission time, event time or altitude.
- STEP The step is the numerical indication of the elements to be followed and their sequence in performing a complete procedure.
- PROCEDURE The procedure is a group of steps of overall task involved in performing a complete function or operation. If a perimeter of 2s are around a procedure, it constitutes a backup procedure relative to the preceding step.
- PANEL The panel location is the location of a particular control or display by panel number. The main display console (MDC) panels are numbered 1 through 17; the lower equipment bay (LEB), 300 through 324; the right-hand equipment bay (REB), 325 through 350; the left-hand equipment bay (LHB), 351 through 387; the left-hand forward equipment bay (LFB), 388 through 394; and the upper equipment bay (UEB), 500 through 604 and 13 - ORIGNAL BOX. (See figure 2-1 for panel locations.)

REMARKS

This column provides the rationale supporting the adjacent step and the operational procedure. Rationale will grow in scope as the operational procedures are refined through continued application by the Flight Crew as applied during mission simulation using Apollo evaluators and simulators. As the Flight Crew becomes more familiar with the spacecraft and increases its proficiency, the Abbreviated Checklist is expected to diminish in overall coverage. Volume 2, however, with its supporting rationale will become a repository of comprehensive data providing a reference baseline to the Abbreviated Checklist and for use by support personnel more recently assigned to the program.

SHORT-FORM NOMENCLATURE AND ASSOCIATIONS

Spacecraft controls and displays and their relative positions and indications are called out by their respective placard titles. Exceptions have been taken, where titles are lengthy by adoption of short-form nomenclature.

Whenever a designated symbol refers to a control or display, it is identified by one of the following:

Light	lt
Switch	sw
Emergency type switch	swl
Circuit breaker	cb
Talkback indicator	tb
Valve	v/s
Indicator	ind
Positioner	ph
Potentiometer or rheostat	cont
Thumbwheel	tw

For Symbols and Definitions, refer to Appendix A in the Apollo Operations Handbook, Block II Spacecraft, Volume 1 - Spacecraft Description (SMA-63-64800 II-11) (R3).