

Operational Procedures

1. Operational procedures list

This section provides a set of routine and recommended procedures to be followed during the operations of the satellite, which can take one or several consecutive passes. These procedures are designed to ensure an efficient management of the satellite's vital functions, enabling operators to detect, respond and correct any issues that may arise during the mission.

Procedure ID	Title
1	Acquisition Of Signal
2	Upload Configuration File
3	Payload Scheduling
4	Deploy Payload
5	Manually Deploy COMMS
6	Resume RF Communications
7	Stop RF Communications
8	Change Operational Mode
9	Request On-Demand HT Packet
10	Download and Clear Payload Execution
11	Force Payload Executions
12	Hard Reboot Execution
13	Soft Reboot Execution
14	Operational Health Check
15	Update TLE Data
16	Clear All Experiments Memory
17	Clear All HT Memory

For a detailed explanation of the steps to be followed in each of the procedures, please refer to the attached file titled [OPS-SAT PoCat.xlsx](#). This document outlines the specific cases in which each procedure is applicable, the commands to be exchanged, the checks to be performed, and the

estimated time required for each procedure.

2. Procedure format/rules and example

Each procedure follows this structure:

Procedure ID	1
Title	Acquisition Of Signal
Objective	Manage the 1st contact with the satellite for each pass
Introduction	Manage the contact with the satellite once receiving the 1st TM beacon by sending a ping command to validate communications. Update onboard time. Validation of telemetry to know satellite state.
Expected duration	2 minuts
Procedure Description	1.1 Upon AOS, send a "ping" TC. 1.2 Wait for 20 seconds for the answer. If not successful, send again. 1.3 Wait for next TM beacon and check satellite system mode and battery voltage. If not in nominals/expected conditions, analyse and try to solve the problem. 1.4 Send the telecommand "update time" to send an updated timestamp to the satellite.
Expected outcome	Satellite processes ping TC correctly and is in the expected system mode. Battery voltage is over threshold.
Contingency scenario	If satellite does not answer to the hello but keeps sending TM, analyse system mode and perform soft reboot (ID: 12)
Cautions	None

To provide a log and historical record of the procedures and events that have been handled during a satellite pass, it is recommended to complete a summary table.

Additionally, this will facilitate an easy handover between operators and serve as a resource for investigating potential issues. An example of a template is provided below:

HANDOVER PROCEDURE		
	Outcome	Notes
Last Operator's name		
Date of last pass		
Hour of the last pass		
Satellite mode		
Battery voltage (V)		
Errors raised during operation (Yes/No)		
Payload scheduled (Yes/No)		
Pending procedures (Yes/No)		
Nominal track (Yes/No)		
Configuration Changes (Subsystem Name/No)		
Remarks		
Next Operator's name		
Date of first pass		
Hour of the first pass		
Satellite mode		
Battery voltage (V)		
Errors raised during no-operation (Yes/No)		
Payload packets ready to download (Yes/No)		
Pending procedures to execute (Yes/No)		
Nominal track (Yes/No)		
Configuration Changes (Subsystem Name/No)		
Remarks		

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