

PM Nominal mode reset
File: H_CRP_AOC_2PNR.xls
Author: dsalt-hp



Procedure Summary

Objectives

The objective of this Herschel ACMS contingency procedure is to enable a reset of PMA or PMB in Nominal mode.

The procedure involves the following activities:

- check ACMS mode, configuration & PM relays
- reset PMA, if required
 - if PMA is currently in use, command the PMA_bit_0 relay to NOMINAL then commanding a SW Reset
- transition to SM with control on PMB, if required
 - if PMB is currently in use, command the PMB_bit_0 relay to NOMINAL then commanding a SW Reset

NOTE: These activities assume that the RM Programming Set is configured correctly for each option, though the option for reconfiguration is provided (call H_CRP_AOC_D2PS)

Summary of Constraints

Procedure execution has been authorised by SOM

Spacecraft Configuration

Start of Procedure

Spacecraft controlled by PMA or PMB in any nominal ACMS mode (SAM/OCM/SCM)

End of Procedure

Spacecraft controlled by either PMA or PMB, as necessary, in ACMS Sun Acquisition Mode (SAM)

Reference File(s)

Input Command Sequences

HFADRM1
HFADRM2

Output Command Sequences

NULL01
HRA2PNRA
HRA2PNRB

Referenced Displays

ANDs	GRDs	SLDs
ZAA01999		
ZAA07999		
ZAZ53999		

Configuration Control Information

Status : Version 1 - Unchanged
Last Checkin: 19/03/09

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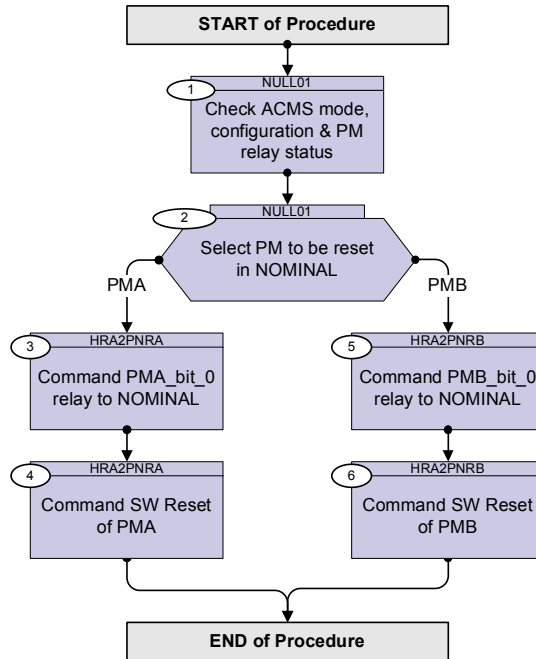


DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
19/03/09	2.2	1	Created	dsalt-hp	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name : NULL01 (Null Sequence 01)				
TimeTag Type: Sub Schedule ID: □				
1		Check ACMS mode, configuration & PM relay status		Next Step: 2
1.1		Check current ACMS mode		□
		Verify Telemetry AcmsMode AESMG002	<to be read>	AND=ZAA01999
		Verify Telemetry AcmsSubstate AESMF002	<to be read>	AND=ZAA01999
		Verify Telemetry AcmsMain AID AESM3002	<to be read>	AND=ZAA01999
		Verify Telemetry FDIR mode AEZ02002	<to be read>	AND=ZAA01999
1.2		Check current configuration		□
		Verify Telemetry Curr CPDU use AEZ01002	<to be read>	AND=ZAA01999
1.3		Check PM relay status		□
		Check ACC configuration (read by BSW at start-up through GPI)		
		Verify Telemetry PM_relay_0 AEG43050	<to be read>	AND=ZAA07999
		Verify Telemetry StartupSurvNom AEG44050	<to be read>	AND=ZAA07999
		Check ACC configuration (via PIO port of RM)		
		Verify Telemetry ACC_A_MODE AEE8G050	<to be read>	AND=ZAA07999
		Verify Telemetry ACC_A_IMAGE AEE8H050	<to be read>	AND=ZAA07999
		Verify Telemetry ACC_B_MODE AEE8Z050	<to be read>	AND=ZAA07999
		Verify Telemetry ACC_B_IMAGE AEE8J050	<to be read>	AND=ZAA07999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
1.4		Check current RM Programming Set		<input type="checkbox"/>
		<p>NOTE: The RM Programming Set consists of two pointers which identify, respectively, the location of the PAP table and the attempt table (the reconfiguration command sequences are stored in a unique CCS table common to all programming sets).</p> <p>For Herschel and Planck, the user has the possibility to select one of four predefined programming sets, for which the PAP and attempt tables are stored in the RM EEPROM's. Each programming set corresponds to one specific configuration of ACC PM's:</p> <p>(0) PMA = main, PMB = redundant; (1) PMB = main, PMA = redundant; (2) PMA = both main and redundant (PMB excluded from use); (3) PMB both main and redundant (PMA excluded from use).</p>		
1.4.1		Uplink Sequence HFADRMR1		<input type="checkbox"/>
		<p>Execute Sequence HFADRMR1 GetRmAstatusReport v02 Sequence Grouping = -</p> <p>SSID : 0</p>		SEQ
1.4.2		Check status of PMA relays		<input type="checkbox"/>
		Verify Telemetry PMA Bit 0 sts AEW07109 <to be read>		AND=ZAZ53999
		Verify Telemetry PMA Bit 1 sts AEW0C109 <to be read>		AND=ZAZ53999
		Verify Telemetry RMH_ATPTR AEW1Y109 <to be read>		AND=ZAZ53999
		Verify Telemetry RMH_PAPTR AEW1Z109 <to be read>		AND=ZAZ53999
1.4.3		Uplink Sequence HFADRMR2		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Sequence HFADRRM2 GetRmBstatusReport v02 Sequence Grouping = - <i>SSID : 0</i>		SEQ
1.4.4		Check status of PMB relays		<input type="checkbox"/>
		Verify Telemetry PMA Bit 0 sts AEW07109	<to be read>	AND=ZAZ53999
		Verify Telemetry PMA Bit 1 sts AEW0C109	<to be read>	AND=ZAZ53999
		Verify Telemetry RMH_ATPTR AEW1Y109	<to be read>	AND=ZAZ53999
		Verify Telemetry RMH_PAPPTR AEW1Z109	<to be read>	AND=ZAZ53999
2		Select PM to be reset in NOMINAL		Next Step: PMA 3 PMB 5
		Select PM to be used in Nominal, based upon TM read in Step 1		
TC Seq. Name :HRA2PNRA (PMAresetNom) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
3		Command PMA_bit_0 relay to NOMINAL		Next Step: 4
		NOTE: <i>If TM checks show the PMA_Bit_0 relay is already set to NOMINAL, this TC can be skipped.</i>		
		Execute Telecommand ACC_A_Nom_ACC_PMA_Bit_0 TC Control Flags : GBM IL DSE ---Y --- Subsch. ID : 10 Det. descr. : Set ACC A Nominal Mode = Reset ACC PM A Bit 0 - High Level	DCH13170	
		Verify Telemetry PM_relay_0 AEG43050	= RESET	AND=ZAA07999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ACC_A_MODE AEE8G050	= Nominal	AND=ZAA07999
4		Command SW Reset of PMA		Next Step: END
		Execute Telecommand TC Control Flags : Subsch. ID : 20 Det. descr. : TC(2,3) - PM A Reset - Mission Specific	PM A Reset ACY42109 GBM IL DSE --Y -- --	
<p>TC Seq. Name :HRA2PNRB (PMBresetNom)</p> <p>TimeTag Type: N Sub Schedule ID: □</p>				
5		Command PMB_bit_0 relay to NOMINAL		Next Step: 6
		NOTE: If TM checks show the PMB_Bit_0 relay is already set to NOMINAL, this TC can be skipped.		
		Execute Telecommand ACC_B_Nom_ACC_PMB_Bit_0 TC Control Flags : Subsch. ID : 10 Det. descr. : Set ACC B Nominal Mode = Reset ACC PM B Bit 0 - High Level	DCH15170 GBM IL DSE --Y -- --	
		Verify Telemetry PM_relay_0 AEG43050	= RESET	AND=ZAA07999
		Verify Telemetry ACC_B_MODE AEE8Z050	= Nominal	AND=ZAA07999
6		Command SW Reset of PMB		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand PM B Reset <i>TC Control Flags :</i> GBM IL DSE --Y -- -- Subsch. ID : 20 Det. descr. : TC(2,3) - PM B Reset - Mission Specific	ACY52109	
End of Procedure				