

PACS_Disable_HK_OBS
 File: H_COP_PAC_A003.xls
 Author: R. Biggins



Procedure Summary

Objectives

The object of this procedure is to disable all regular HK for FDIR Test. The CDMU FDIR should automatically switch OFF PACS after it detects that no TM is being generated.

- Disable generation of PACS housekeeping
- Verify that the OBCP has correctly triggered
- Reset PACS TC routing
- Enable EAT entry (6)
- Enable MTL subschedule
- Reset PACS RTA

Based on the following PACS procedure:
 PACS_Disable_HK_OBS_16_10_2007_01.xls

Summary of Constraints

This procedure should be executed as part of the FDIR commissioning tests

Spacecraft Configuration

Start of Procedure

PACS is in SAFE mode
 - Nominal PACS units are powered on and connected

End of Procedure

PACS is OFF
 - All PACS units powered OFF
 - UIU table shows PACS units on (will be immediately switched on)

Reference File(s)

Input Command Sequences

Output Command Sequences

HCPA003

Referenced Displays

ANDs GRDs SLDs
 ZAZ97999
 ZAZ8U999

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
23/10/08		1	Created	R. Biggins	
13/11/08		2	Updates due to initial testing - New step (1) added for prerequisite check - Initial OBSID value changed to FP	R. Biggins	
07/01/09		3	- TCs in step 5 removed and comment updated	R. Biggins	

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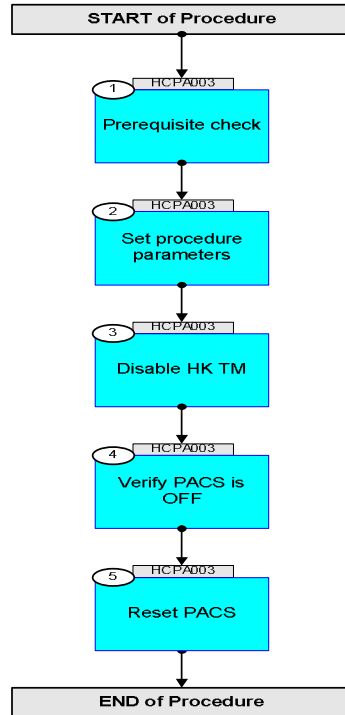


			Update to include proper recovery actions after OBCP triggered: - Reset PACS TC routing - Re-enable MTL subschedule - Re-enable EAT entry 6 (PACS Power Cycle)	R. Biggins	
21/01/09		4			
21/01/09		5	Added some CDMU TC verification details	S. Manganelli	
22/01/09	2	6	Updates made to step 5 - time tags updated - comments updated	R. Biggins	
02/04/09	2.3	7	Final updates before flight - Summary updated - TC flags updated - Procedure description/title updated	R. Biggins	
30/04/09	2.4	8	Update due to time tag problems in the sequence - ET times removed	R. Biggins	

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Procedure Flowchart Overview

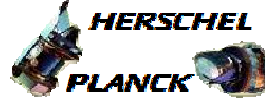


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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	Send TC DPU_DISABLE_PACKET_TRAN Command Parameter(s) : NUMBER_OF_TIMES PP010380 PACKT_TYPE PP016380 PACKT_SUBTYPE PP015380 DPU_STRUCTURE_ID PP002380 PACKT_TYPE PP016380 PACKT_SUBTYPE PP015380 DPU_STRUCTURE_ID PP002380 PACKT_TYPE PP016380 PACKT_SUBTYPE PP015380 DPU_STRUCTURE_ID PP002380 PACKT_TYPE PP016380 PACKT_SUBTYPE PP015380 DPU_STRUCTURE_ID PP002380 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 90 Det. descr. : DISABLE THE GENERATION OF TM PACKET OF SPECIFIED TYPE_SUBTYPE	PC021380	
	ET=+ UT=+00.00.01	DMC_SET_OBSID DMC_SET_OBSID Command Parameter(s) : OBSERVATION_ID PP069420 Subsch. ID : 90 Det. descr. : SET OBSID IN DMC	PC078420	
	ET=+ UT=+00.00.00	DMC_SET_BBID DMC_SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID PP070420 Subsch. ID : 90 Det. descr. : SET BBID IN DMC	PC079420	
		Verify that no TM is being generated by PACS on the following APIDs: Prime: 1152, 1154 Redundant: 1153, 1155		
4		Verify PACS is OFF		Next Step: 5
		Once the OBCP is triggered, the LCLs for PACS should be verified as being OFF		
4.1		Nominal instrument LCLs		□

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify: DPU LCL status PacsD_N_L41_S WM72B565	= OFF	AND=ZAZ97999
		Verify: SPU LCL status PacsS_N_L35_S WM52A565	= OFF	AND=ZAZ97999
		Verify: BOLC LCL status PacsB_N_L27_1S WM82D565	= OFF	AND=ZAZ97999
		Verify: Dec/Mec1 LCL status PacsMec1_L65_1S WM52E565	= OFF	AND=ZAZ97999
5		Reset PACS		Next Step: END
5.1		Reset PACS TC routing		<input type="checkbox"/>
		NOTE: The CDMU will disable the RT after no TM is received and so the RT must be re-initialised.		
		The following TCs should be sent to re-enable TC routing		
	ET=+ UT=+00.00.00	Execute Telecommand EnableDisableTcRouting Command Parameter(s) : TC_APID DH044161 TC_SRC DH045161 EOD DH009161 TC Control Flags : Subsch. ID : 10 Det. descr. : Enable/Disable TC Routing	DC006161 PACS Gnd-LoPrio ENABLED	
		Verify the TC success by requesting and inspecting the TC routing report		
	ET=+ UT=+00.00.03	Execute Telecommand ReportTcRoutingFilter Subsch. ID : 10 Det. descr. : Report TC Routing Filter	DC807180	
		It should be verified that the TC routing for PACS is enabled, i.e. the following values are set: TC_APID - PACS (1152) TC_SRC - Gnd-LoPrio EOD - Enabled This should be verified on the VPD		

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		The following TC requests a subschedule status dump. Check on the OBQM model that the subschedule id=90 is enabled.																																																																																															
	ET=+ UT=+00.00.03	Execute Telecommand RetStatusOfCmdSchedule Subsch. ID : 10 Det. descr. : ReportStatusOfCmdSchedule, TC(11,18)	DC89F170																																																																																														
5.4		Reset RTA status		<input type="checkbox"/>																																																																																													
	ET=+ UT=+00.00.00	Execute Telecommand ConfigureSDBFDIR Command Parameter(s) : <table border="0"> <tr><td>RTA</td><td>DH011161</td><td>PACS A</td></tr> <tr><td>M0</td><td>DH030161</td><td>Update status</td></tr> <tr><td>M1</td><td>DH031161</td><td>Ignore Flag</td></tr> <tr><td>M2</td><td>DH032161</td><td>Update status</td></tr> <tr><td>M3</td><td>DH033161</td><td>Update status</td></tr> <tr><td>M4</td><td>DH034161</td><td>Update status</td></tr> <tr><td>M5</td><td>DH035161</td><td>Ignore Flag</td></tr> <tr><td>M6</td><td>DH036161</td><td>Ignore Flag</td></tr> <tr><td>M7</td><td>DH037161</td><td>Ignore Flag</td></tr> <tr><td>F0</td><td>DH018161</td><td>OFF</td></tr> <tr><td>F1</td><td>DH019161</td><td>Alive</td></tr> <tr><td colspan="3"> </td></tr> <tr><td>F2</td><td>DH020161</td><td>Well TC</td></tr> <tr><td>F3</td><td>DH021161</td><td>Well TM</td></tr> <tr><td>F4</td><td>DH022161</td><td>Invalid</td></tr> <tr><td>F5</td><td>DH023161</td><td>Non-vital</td></tr> <tr><td>F6</td><td>DH024161</td><td>NOMINAL</td></tr> <tr><td>F7</td><td>DH025161</td><td>OFF</td></tr> <tr><td>M12</td><td>DH051161</td><td>Ignore Flag</td></tr> <tr><td>M_C</td><td>DH043161</td><td>Ignore CNT</td></tr> <tr><td>M8</td><td>DH038161</td><td>Ignore Flag</td></tr> <tr><td>M9</td><td>DH039161</td><td>Ignore Flag</td></tr> <tr><td>M10</td><td>DH040161</td><td>Ignore Flag</td></tr> <tr><td>M11</td><td>DH041161</td><td>Ignore Flag</td></tr> <tr><td>F12</td><td>DH050161</td><td>ENABLED</td></tr> <tr><td>CNT</td><td>DH042161</td><td>LoopCnt1</td></tr> <tr><td>F8</td><td>DH026161</td><td>Bus A</td></tr> <tr><td colspan="3"> </td></tr> <tr><td>F9</td><td>DH027161</td><td>Healthy</td></tr> <tr><td>F10</td><td>DH028161</td><td>Healthy</td></tr> <tr><td>F11</td><td>DH029161</td><td>ENABLED</td></tr> </table> TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Configure SDB FDIR	RTA	DH011161	PACS A	M0	DH030161	Update status	M1	DH031161	Ignore Flag	M2	DH032161	Update status	M3	DH033161	Update status	M4	DH034161	Update status	M5	DH035161	Ignore Flag	M6	DH036161	Ignore Flag	M7	DH037161	Ignore Flag	F0	DH018161	OFF	F1	DH019161	Alive				F2	DH020161	Well TC	F3	DH021161	Well TM	F4	DH022161	Invalid	F5	DH023161	Non-vital	F6	DH024161	NOMINAL	F7	DH025161	OFF	M12	DH051161	Ignore Flag	M_C	DH043161	Ignore CNT	M8	DH038161	Ignore Flag	M9	DH039161	Ignore Flag	M10	DH040161	Ignore Flag	M11	DH041161	Ignore Flag	F12	DH050161	ENABLED	CNT	DH042161	LoopCnt1	F8	DH026161	Bus A				F9	DH027161	Healthy	F10	DH028161	Healthy	F11	DH029161	ENABLED	DC005161	
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		Verify Telemetry PACSA_OnOff DED2G161	= OFF	AND=ZAZ8U999																																																																																													
		Verify Telemetry PACSA_WellsiTC DED2Z161	= Well	AND=ZAZ8U999																																																																																													

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry PACSA_WellsiTM DED2J161	= Well	AND=ZAZ8U999
		Verify Telemetry PACSA_ValidInv DED2K161	= Invalid	AND=ZAZ8U999
End of Procedure				