

PACS_Chopper_EnDis_PlateauTest_NoConf_ast
 File: H_COP_PAC_C103.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to verify the stability of the PACS chopper during a 5 second time period at an absolute position

Based on procedure:
 PACS_Chopper_EnDis_PlateauTest_NoConf_ast (v1)

Summary of Constraints

RT Science must be enabled to receive the Diagnostic HK packets

Spacecraft Configuration

Start of Procedure

PACS in NO_PRIME (SAFE) mode

End of Procedure

PACS in NO_PRIME (SAFE) mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HCPC103

Referenced Displays

ANDs GRDs SLDs

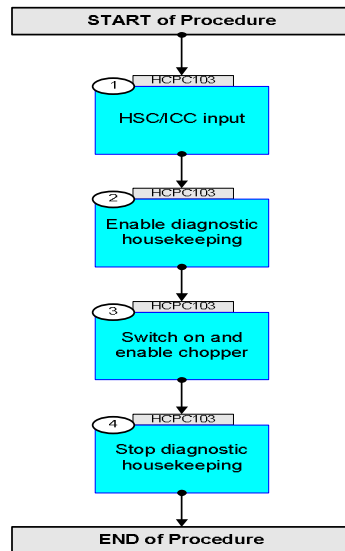
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
26/08/08		1	Created	R. Biggins	
19/11/08	2	2	Updates due to initial testing - Time tags added to TC in step 2	R. Biggins	
20/04/09	2.3	2.01	Validation : Final updates before flight - Summary updated - TC flags updated	R. Biggins	
30/05/09	2.5	3	- All ET times removed - 5 minute delay added after first occurrence of TC PC123420	R. Biggins	

PACS_Chopper_EnDis_PlateauTest_NoConf_ast
File: H_COP_PAC_C103.xls
Author: R. Biggins



Procedure Flowchart Overview



PACS_Chopper_EnDis_PlateauTest_NoConf_ast
 File: H_COP_PAC_C103.xls
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																								
Beginning of Procedure																												
<p><i>TC Seq. Name : HCPC103 (Chopper stab point)</i></p> <p><i>TimeTag Type: B</i> <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>																												
1		HSC/ICC input		Next Step: 2																								
		<p>Verify that the HSC/ICC has supplied a valid value for the two targets of the chopper:</p> <p>POINT_1 = 3000 (def) POINT_2 = 0 (def)</p>																										
2		Enable diagnostic housekeeping		Next Step: 3																								
	ET=+ UT=+00.00.01	<p>Execute Telecommand</p> <p style="text-align: right;">DMC_WRT_DIAG_HK_LIST</p> <p>PC160420</p> <p><i>Command Parameter(s) :</i></p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">DMC_DATA_LENGTH</td> <td style="text-align: right;">PP065420</td> <td style="text-align: right;">6 <dec></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">D1 <hex></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">F4 <hex></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">F5 <hex></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">102 <hex></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">231 <hex></td> </tr> <tr> <td style="text-align: right;">DMC_4_BYTES_WORDS_DATA</td> <td style="text-align: right;">PP067420</td> <td style="text-align: right;">FFFF <hex></td> </tr> <tr> <td style="text-align: right;">DMC_CHECKSUM</td> <td style="text-align: right;">PP066420</td> <td style="text-align: right;">7D1C <hex></td> </tr> </table> <p><i>TC Control Flags :</i></p> <p style="text-align: right;">GBM IL DSE</p> <p style="text-align: center;">--Y -- ---</p> <p><i>Subsch. ID : 90</i> <i>Det. descr. : WRITE THE LIST OF DIAGNOSTIC HK INTO DMC MEMORY</i></p>	DMC_DATA_LENGTH	PP065420	6 <dec>	DMC_4_BYTES_WORDS_DATA	PP067420	D1 <hex>	DMC_4_BYTES_WORDS_DATA	PP067420	F4 <hex>	DMC_4_BYTES_WORDS_DATA	PP067420	F5 <hex>	DMC_4_BYTES_WORDS_DATA	PP067420	102 <hex>	DMC_4_BYTES_WORDS_DATA	PP067420	231 <hex>	DMC_4_BYTES_WORDS_DATA	PP067420	FFFF <hex>	DMC_CHECKSUM	PP066420	7D1C <hex>		
DMC_DATA_LENGTH	PP065420	6 <dec>																										
DMC_4_BYTES_WORDS_DATA	PP067420	D1 <hex>																										
DMC_4_BYTES_WORDS_DATA	PP067420	F4 <hex>																										
DMC_4_BYTES_WORDS_DATA	PP067420	F5 <hex>																										
DMC_4_BYTES_WORDS_DATA	PP067420	102 <hex>																										
DMC_4_BYTES_WORDS_DATA	PP067420	231 <hex>																										
DMC_4_BYTES_WORDS_DATA	PP067420	FFFF <hex>																										
DMC_CHECKSUM	PP066420	7D1C <hex>																										
	ET=+ UT=+00.00.00	<p>DMC_START_DIAG_HK</p> <p style="text-align: right;">DMC_START_DIAG_HK</p> <p>PC146420</p> <p><i>Command Parameter(s) :</i></p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">DIAG_HK_PERIOD</td> <td style="text-align: right;">PP076420</td> <td style="text-align: right;">0 <dec></td> </tr> </table> <p><i>Subsch. ID : 90</i> <i>Det. descr. : START THE ACQUISITION OF THE DIAGNOSTIC HK</i></p>	DIAG_HK_PERIOD	PP076420	0 <dec>																							
DIAG_HK_PERIOD	PP076420	0 <dec>																										
		<p>NOTE: The verification of the generation of the TM(21,3) diagnostic packets cannot be done on the MCS, but can be seen on the NCTRS (VC7)</p>																										
3		Switch on and enable chopper		Next Step: 4																								

PACS_Chopper_EnDis_PlateauTest_NoConf_ast
 File: H_COP_PAC_C103.xls
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Connect chopper to amplifier and activate servo-loop		
	ET=+ UT=+00.00.10	DMC_SWON_CHOP_CONT TC Control Flags : Subsch. ID : 90 Det. descr. : SWITCH ON CHOPPER CONTROLLER	DMC_SWON_CHOP_CONT GBM IL DSE --Y -- ---	PC119420
	ET=+ UT=+00.00.20	DMC_ENABLE_CHOP_CONT Subsch. ID : 90 Det. descr. : ENABLE CHOPPER CONTROLLER	DMC_ENABLE_CHOP_CONT	PC121420
		Move to absolute position and then return		
	ET=+ UT=+00.00.20	DMC_SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID Subsch. ID : 90 Det. descr. : SET BBID IN DMC	DMC_SET_BBID PP070420	PC079420 41B00001 <hex>
	ET=+ UT=+00.00.01	DMC_MOVE_CHOP_ABS Command Parameter(s) : SET_POINT Subsch. ID : 90 Det. descr. : MOVE CHOPPER TO AN ABSOLUTE POSITION	DMC_MOVE_CHOP_ABS PP079420	PC123420 POINT_1
	ET=+ UT=+00.05.00	DMC_SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID Subsch. ID : 90 Det. descr. : SET BBID IN DMC	DMC_SET_BBID PP070420	PC079420 41B00002 <hex>
	ET=+ UT=+00.00.01	DMC_MOVE_CHOP_ABS Command Parameter(s) : SET_POINT Subsch. ID : 90 Det. descr. : MOVE CHOPPER TO AN ABSOLUTE POSITION	DMC_MOVE_CHOP_ABS PP079420	PC123420 POINT_2
		Disconnect chopper from amplifier and deactivate servo-loop		

PACS_Chopper_EnDis_PlateauTest_NoConf_ast
 File: H_COP_PAC_C103.xls
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	DMC_DISABLE_CHOP_CONT DMC_DISABLE_CHOP_CONT Subsch. ID : 90 Det. descr. : DISABLE CHOPPER CONTROLLER	PC122420	
	ET=+ UT=+00.00.20	DMC_SWOF_CHOP_CONT DMC_SWOF_CHOP_CONT Subsch. ID : 90 Det. descr. : SWITCH OFF CHOPPER CONTROLLER	PC120420	
4		Stop diagnostic housekeeping		Next Step: END
	ET=+ UT=+00.00.20	DMC_STOP_DIAG_HK DMC_STOP_DIAG_HK TC Control Flags : Subsch. ID : 90 Det. descr. : STOP THE ACQUISITION OF THE DIAGNOSTIC HK	PC147420	
		NOTE: The verification of the end of generation of the TM(21,3) diagnostic packets cannot be done on the MCS, but can be seen on the NCTRS (VC7)		
		Offline analysis is required by the ICC to analyse the behaviour of the chopper during the time that the chopper controller is enabled		
End of Procedure				