Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Procedure Summary

Objectives

The design of the RM allows the user to define different
responses to the same alarm pattern, which depend on how many
times the same pattern has occured before. This mechanism is used
in the H-P FDIR design to implement the principle of "graduated
response" for internal computer alarms in both ACC and CDMU. Each
RM is programmed to command only a PM reset when it responds to
an internal PM alarm for the first time and to escalate the
response to a full PM reconfiguration when the alarm occurs
again. The multiple attempt mechanism is not used for level 4
alarms, which always trigger a full reconfiguration.

The attempt mechanism is implemented in the RM by providing a
dedicated attempt counter register linked to each entry in the
PAP table. The counter is incremented whenever an RM successfully
executes a reconfiguration sequence corresponding to its
associated alarm pattern (the counter is not incremented if the
attempt executed is indicated as the last in the attempt
sequence). The initial default values of the counters are zero.

In the H-P implementation of level 3 response, the counter is
incremented from zero to 1 when the RM responds for the first
time to any of the internal ACC alarms. The response to repeated
occurrences of internal alarms depends on the configuration of
the RM's. In the default configuration with both RM's enabled, a
second alarm will trigger the response from the RM that lost
priority competition during the first alarm (this is the
consequece of priority toggling after each successful execution
of a reconfiguration sequence). If the attempt counter
corresponding to the internal alarm pattern is not reset, any
successive occurrence of an internal alarm will cause a level 3b
response with a full PM reconfiguration. The escalation to level
3b is the desired response if the internal alarm occurs as a
result of a permanent PM or software failure.

Internal alarm triggers, however, can have causes which are not
linked to permanent problems, such as the use of erroneous
software parameters, operational errors, inconsistencies in
EEPROM software images, etc. In these cases, the cause of the
error can be removed by appropriate corrective action and the
response to further failures should start again at level 3a. In
order to return to a level 3a responsse, the attempt counter
corresponding to the internal ACC alarm pattern must be reset.

The TC used by the procedure has a side effect, since apart from
the attempt counter it will also automatically reset the last
chance bit for the corresponding alarm pattern (the last chance
indicates that all attempts have been exhausted for a given PAP).

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USAGE:

The procedure is provided only for completeness and explicit
manipulation of the attempt counter should in principle never be
necessary. The recommended way to reset the attempt counter is to
use the procedure for the RM programming set, which resets all
attempt counters and last chance flags to zero.

The attempt counter procedure could also be used to increment the
attempt counter for the internal ACC alarm pattern from 0 to 1
forcing the ACC to respond to internal alarms by immediately
reconfiguring the PM without an attempt to reset the PM on the
first occurrence of the alarm. This use, however, is not foreseen
as recommended response for any contingency.

NOTE:

As in most cases when RM data are manipulated, the operator must
rigorously obey the restrictions on allowed values, because
incorrect control of the RM can have mission-threatening
consequences.

Summary of Constraints

N/A

Spacecraft Configuration

Start of Procedure

N/A

End of Procedure

N/A

Reference File(s)

Input Command Sequences

Output Command Sequences

HRAD2AC1
HRAD2AC2
HRAD2AC3
HRAD2AC4
HRAD2AC5
HRAD2AC6
HRAD2AC7
HRAD2AC8
HRAD2AC9
HRAD2ACA

Referenced Displays

ANDs	GRDs	SLDs
ZAAM2999	(None)	
ZAA07999		

```
Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp
```
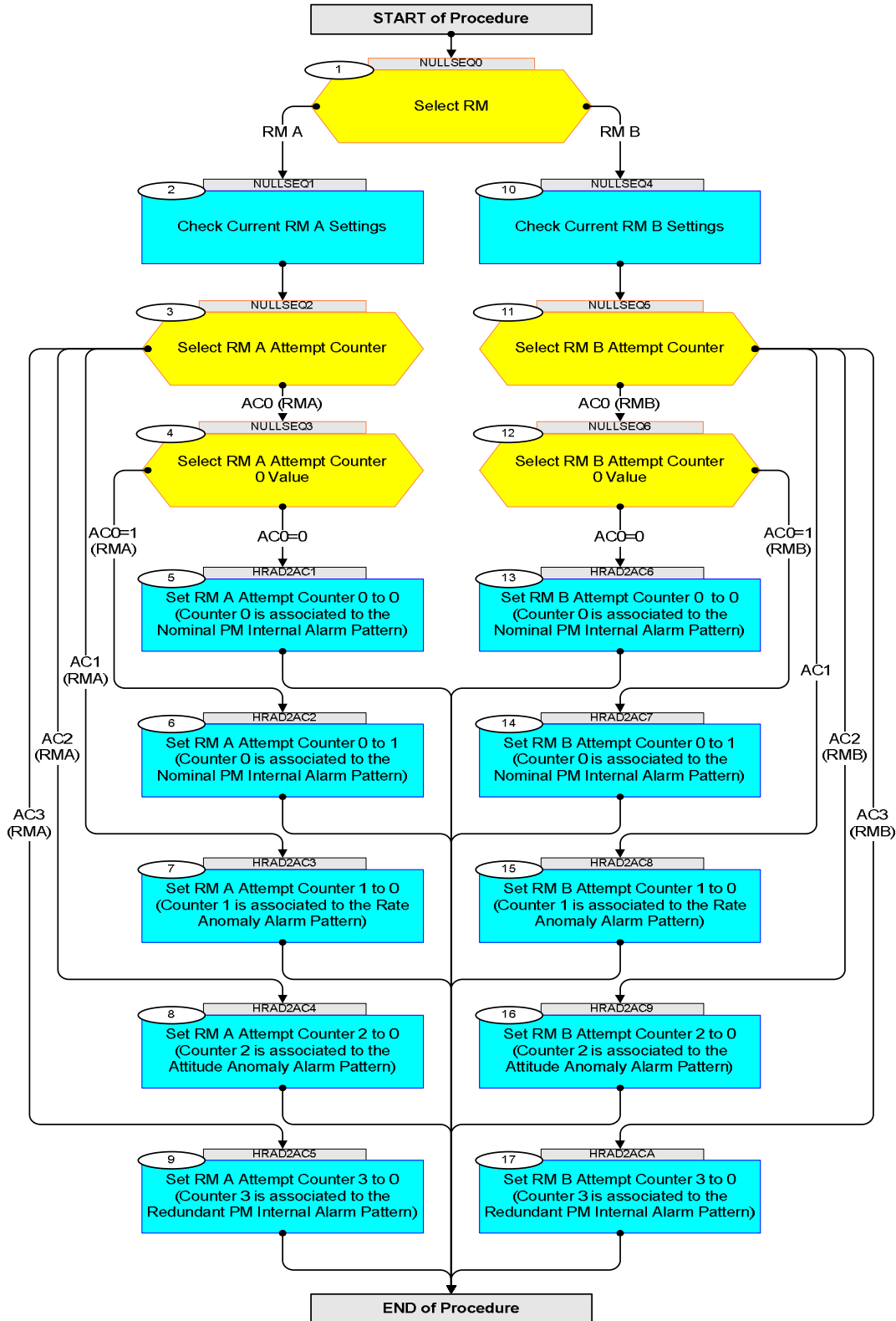
DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
10/01/09	2	1	Created	dsalt-hp	

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Procedure Flowchart Overview

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Beginning of Procedure		
		TC Seq. Name :NULLSEQ0 ( ) *TimeTag Type: N* *Sub Schedule ID:*		
1		*Select RM*		Next Step: RM A 2 RM B 10
		Select the reconfiguration module that needs change of attempt counter settings: *RM A -> GO TO STEP 2* *RM B -> GO TO STEP 13*		
		TC Seq. Name :NULLSEQ1 ( ) *TimeTag Type:* *Sub Schedule ID:*		
2		*Check Current RM A Settings*		Next Step: 3
		This step verifies if the current attempt counter settings are as expected. The attempt counter settings can be read as part of the telemetry packet returned by the TC_GET_RM_STATUS command.		
2.1		*Uplink Sequence HFADRMR1*		
		Execute Sequence **HFADRMR1 GetRmAstatusReport**		
2.2		*Check RM A Pointer Register Settings*		
		Verify Telemetry **RMH_PAPPTR** **AEW1Z109**	**<to be read>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATPTR** **AEW1Y109**	**<to be read>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT0** **AEW2G109**	**<to be read>**	AND=ZAAM2999

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **RMH_ATCNT1** **AEW2H109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT2** **AEW2J109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT3** **AEW2K109**	**\<to be read\>**	AND=ZAAM2999
		TC Seq. Name :NULLSEQ2 ( ) *TimeTag Type:* *Sub Schedule ID:*		
3		*Select RM A Attempt Counter*		Next Step: AC0 (RMA) 4 AC1 (RMA) 7 AC2 (RMA) 8 AC3 (RMA) 9
		The RM design allows the user to define different responses to the same alarm pattern, depending on how many times the same pattern has occured. On Herschel and Planck, four different alarm patterns have been identified, and attempt counters 0 to 3 have been associated to them as follows: *- Attempt counter 0 is associated to the nominal PM internal alarm pattern* *- Attempt counter 1 is associated to the rate anomaly alarm pattern* *- Attempt counter 2 is associated to the attitude anomaly alarm pattern* *- Attempt counter 3 is associated to the redundant PM internal alarm pattern*		
		Select the attempt counter that needs change of setting: *Attempt counter 0 -> GO TO STEP 4* *Attempt counter 1 -> GO TO STEP 7* *Attempt counter 2 -> GO TO STEP 8* *Attempt counter 3 -> GO TO STEP 9*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		TC Seq. Name :NULLSEQ3 ( )		
		TimeTag Type:		
		Sub Schedule ID:		
4		*Select RM A Attempt Counter 0 Value*		Next Step: AC0=0 5 AC0=1 (RMA) 6
		Attempt counter 0 that is associated to the nominal PM internal alarm pattern, is the only attempt counter allows you the choice of setting it to 0 or 1. All other attempt counters may only be set back to 0. The reason for setting attempt counter 0 to 1 could be to force the ACC to respond to internal alarms by immediately reconfiguring to the redundant PM without an attempt to reset the nominal PM on the first occurrence of the alarm *Select the appropriate option:* *Set attempt counter 0 to 0 -> GO TO STEP 5* *Set attempt counter 0 to 1 -> GO TO STEP 6*		
		TC Seq. Name :HRAD2AC1 (SelRmAattemptCnt0to0)		
		TimeTag Type: N		
		Sub Schedule ID:		
5		*Set RM A Attempt Counter 0 to 0* *(Counter 0 is associated to the Nominal PM Internal Alarm Pattern)*		Next Step: END
5.1		*Uplink Sequence HRAD2AC1*		
5.1.1		*Disable RM A*		
		Execute Telecommand **Ext_ACC_RM_A_Disable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* *Det. descr. : External ACC RM A Disable - Mission Specific*	DCM22170	

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **RMA_fromTTR-RMA** AEE91050	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** AEE92050	**= DISABLED**	AND=ZAA07999
5.1.2		*Set RM A Attempt Counter 0 to 0*		

		Execute Telecommand
		                    RMA Set PAP 0
		
		Command Parameter(s) :
		            AttemptCtDF86Cm AH821001
		            AttemptCtDD86Cm AH822001
		            AttemptCtr AtCt AHFP7001
		
		TC Control Flags :
		                        GBM IL DSE
		                        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMA Set PAP 0
			ACZGX109
			
			Enable 86
			Enable 86
			0 <dec>	

		Execute Telecommand
		                Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		            FireFun DF86Cmd AH8F1001
		            FireFun DD86Cmd AH8F2001
		
		TC Control Flags :
		                        GBM IL DSE
		                        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command – Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

5.1.3		*Verify Update via RM A Status Report*		

		Execute Telecommand
		                    Get RM-A status
		
		Command Parameter(s) :
		            RMStat DF86Cmd AH841001
		            RMStat DD86Cmd AH842001
		
		TC Control Flags :
		                        GBM IL DSE
		                        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-A status
			ACZZ4109
			
			Enable 86
			Enable 86	

Doc No.   :PT-HMOC-OPS-FOP-6001-OPS-OAH
Fop Issue :   3.0
Issue Date: 13/04/10

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **TM 8-6 for RM Status parametrized** *Packet Details:* APID: Type: Subtype: PI1: PI2:	A86_RMStatus 512 8 6 41600 1	
		Verify Telemetry **RMH_ATCNT0** **AEW2G109**	**= 0 <dec>**	AND=ZAAM2999
5.1.4		*Enable RM A*		
		Execute Telecommand **Ext_ACC_RM_A_Enable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM A Enable – Mission Specific	DCM21170	
		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC2 (SelRmAattemptCnt0to1) *TimeTag Type: N* *Sub Schedule ID:*		
6		*Set RM A Attempt Counter 0 to 1* *(Counter 0 is associated to the Nominal PM Internal Alarm Pattern)*		Next Step: END
6.1		*Uplink Sequence HRAD2AC2*		
6.1.1		*Disable RM A*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		                              Ext_ACC_RM_A_Disable
		
		TC Control Flags :
		                                GBM IL DSE
		                                --Y -- ---
		Subsch. ID : 10
		Det. descr. : External ACC RM A Disable - Mission Specific
			DCM22170	

		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	**= DISABLED**	AND=ZAA07999
6.1.2		*Set RM A Attempt Counter 0 to 1*		

		Execute Telecommand
		
		                              RMA Set PAP 0
		
		Command Parameter(s) :
		          AttemptCtDF86Cm **AH821001**
		          AttemptCtDD86Cm **AH822001**
		          AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		                                GBM IL DSE
		                                --Y -- ---
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMA Set PAP 0
			ACZGX109
			
			Enable 86
			Enable 86
			1 <dec>	

		Execute Telecommand
		
		                    Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		          FireFun DF86Cmd **AH8F1001**
		          FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		                                GBM IL DSE
		                                --Y -- ---
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

6.1.3		*Verify Update via RM A Status Report*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand 　　　　　　　　　　　**Get RM-A status** *Command Parameter(s) :* 　　　　　　**RMStat DF86Cmd**　　　　**AH841001** 　　　　　　**RMStat DD86Cmd**　　　　**AH842001** *TC Control Flags :* 　　　　　　　　　　　　**GBM IL DSE** 　　　　　　　　　　　　**--Y -- ---** *Subsch. ID : 20* Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109 **Enable 86** **Enable 86**	
		Verify Packet Reception 　　　　　　**TM 8-6 for RM Status parametrized** *Packet Details:* 　　　　　　　　　　　　　　**APID:** 　　　　　　　　　　　　　　**Type:** 　　　　　　　　　　　**Subtype:** 　　　　　　　　　　　　　**PI1:** 　　　　　　　　　　　　　**PI2:**	A86_RMStatus 512 8 6 41600 1	
		Verify Telemetry 　　　　　　**RMH_ATCNT0**　　　　**AEW2G109**	**= 1 <dec>**	AND=ZAAM2999
6.1.4		*Enable RM A*		
		Execute Telecommand 　　　　　　　　　**Ext_ACC_RM_A_Enable** *TC Control Flags :* 　　　　　　　　　　　　**GBM IL DSE** 　　　　　　　　　　　　**--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM A Enable - Mission Specific	DCM21170	
		Verify Telemetry 　　　　**RMA_fromTTR-RMA**　　　　**AEE91050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry 　　　　**RMA_fromTTR-RMB**　　　　**AEE92050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC3 (SelRmAattemptCnt1to0) *TimeTag Type: N* *Sub Schedule ID:*		
7		*Set RM A Attempt Counter 1 to 0* *(Counter 1 is associated to the Rate Anomaly Alarm Pattern)*		Next Step: END
7.1		*Uplink Sequence HRAD2AC3*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
7.1.1		*Disable RM A*		

		Execute Telecommand
		
		             Ext_ACC_RM_A_Disable
		
		TC Control Flags :
		               GBM IL DSE
		               --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : External ACC RM A Disable - Mission Specific
			DCM22170	

		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	= DISABLED	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	= DISABLED	AND=ZAA07999
7.1.2		*Set RM A Attempt Counter 1 to 0*		

		Execute Telecommand
		
		               RMA Set PAP 1
		
		Command Parameter(s) :
		      AttemptCtDF86Cm **AH821001**
		      AttemptCtDD86Cm **AH822001**
		      AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		               GBM IL DSE
		               --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMA Set PAP 1
			ACZGY109
			
			Enable 86
			Enable 86
			0 <dec>	

		Execute Telecommand
		
		           Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		      FireFun DF86Cmd **AH8F1001**
		      FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		               GBM IL DSE
		               --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

7.1.3		*Verify Update via RM A Status Report*		

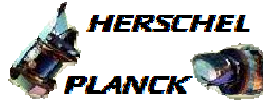Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		        Get RM-A status
		
		Command Parameter(s) :
		    RMStat DF86Cmd **AH841001**
		    RMStat DD86Cmd **AH842001**
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-A status
			ACZZ4109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		     TM 8-6 for RM Status parametrized
		Packet Details:
		        APID:
		        Type:
		   Subtype:
		        PI1:
		        PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry **RMH_ATCNT1** **AEW2H109**	**= 0 <dec>**	AND=ZAAM2999
7.1.4		*Enable RM A*		

		Execute Telecommand
		
		        Ext_ACC_RM_A_Enable
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : External ACC RM A Enable - Mission Specific
			DCM21170	

		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC4 (SelRmAattemptCnt2to0) *TimeTag Type: N* *Sub Schedule ID:*		
8		*Set RM A Attempt Counter 2 to 0* *(Counter 2 is associated to the Attitude Anomaly Alarm Pattern)*		Next Step: END
8.1		*Uplink Sequence HRAD2AC4*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
8.1.1		*Disable RM A*		
		Execute Telecommand **Ext_ACC_RM_A_Disable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM A Disable - Mission Specific	DCM22170	
		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	**= DISABLED**	AND=ZAA07999
8.1.2		*Set RM A Attempt Counter 2 to 0*		
		Execute Telecommand **RMA Set PAP 2** *Command Parameter(s) :* **AttemptCtDF86Cm** **AH821001** **AttemptCtDD86Cm** **AH822001** **AttemptCtr AtCt** **AHFP7001** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 20* Det. descr. : TC(8,1) - RMA Set PAP 2	ACZGZ109 **Enable 86** **Enable 86** **0 <dec>**	
		Execute Telecommand **Fire Set RM Attempt Ctr** *Command Parameter(s) :* **FireFun DF86Cmd** **AH8F1001** **FireFun DD86Cmd** **AH8F2001** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 20* Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr	ACZ1N109 **Enable 86** **Enable 86**	
8.1.3		*Verify Update via RM A Status Report*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		                        Get RM-A status
		
		Command Parameter(s) :
		        RMStat DF86Cmd AH841001
		        RMStat DD86Cmd AH842001
		
		TC Control Flags :
		                        GBM IL DSE
		                        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-A status
			ACZZ4109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		        TM 8-6 for RM Status parametrized
		Packet Details:
		                        APID:
		                        Type:
		                     Subtype:
		                        PI1:
		                        PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry RMH_ATCNT2 AEW2J109	= 0 <dec>	AND=ZAAM2999
8.1.4		*Enable RM A*		

		Execute Telecommand
		
		                    Ext_ACC_RM_A_Enable
		
		TC Control Flags :
		                        GBM IL DSE
		                        --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : External ACC RM A Enable - Mission Specific
			DCM21170	

		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
		TC Seq. Name :HRAD2AC5 (SelRmAattemptCnt3to0) *TimeTag Type: N* *Sub Schedule ID:*		
9		*Set RM A Attempt Counter 3 to 0* *(Counter 3 is associated to the Redundant PM Internal Alarm Pattern)*		Next Step: END
9.1		*Uplink Sequence HRAD2AC5*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
9.1.1		*Disable RM A*		

		Execute Telecommand
		
		       Ext_ACC_RM_A_Disable
		
		TC Control Flags :
		       GBM IL DSE
		      --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : External ACC RM A Disable - Mission Specific
			DCM22170	

		Verify Telemetry **RMA_fromTTR-RMA** **AEE91050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMA_fromTTR-RMB** **AEE92050**	**= DISABLED**	AND=ZAA07999
9.1.2		*Set RM A Attempt Counter 3 to 0*		

		Execute Telecommand
		
		       RMA Set PAP 3
		
		Command Parameter(s) :
		     AttemptCtDF86Cm **AH821001**
		     AttemptCtDD86Cm **AH822001**
		     AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		       GBM IL DSE
		      --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMA Set PAP 3
			ACZHA109
			
			Enable 86
			Enable 86
			0 <dec>	

		Execute Telecommand
		
		       Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		     FireFun DF86Cmd **AH8F1001**
		     FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		       GBM IL DSE
		      --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

9.1.3		*Verify Update via RM A Status Report*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		                              Get RM-A status
		
		Command Parameter(s) :
		          RMStat DF86Cmd AH841001
		          RMStat DD86Cmd AH842001
		
		TC Control Flags :
		                              GBM IL DSE
		                              --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-A status
			ACZZ4109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		          TM 8-6 for RM Status parametrized
		Packet Details:
		                              APID:
		                              Type:
		                           Subtype:
		                              PI1:
		                              PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry RMH_ATCNT3 AEW2K109	= 0 <dec>	AND=ZAAM2999
9.1.4		Enable RM A		

		Execute Telecommand
		
		                         Ext_ACC_RM_A_Enable
		
		TC Control Flags :
		                              GBM IL DSE
		                              --Y -- ---
		
		Subsch. ID : 10
		Det. descr. : External ACC RM A Enable - Mission Specific
			DCM21170	

		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
		TC Seq. Name :NULLSEQ4 ( ) TimeTag Type: Sub Schedule ID:		
10		Check Current RM B Settings		Next Step: 11

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		This step verifies if the current attempt counter settings are as expected. The attempt counter settings can be read as part of the telemetry packet returned by the TC_GET_RM_STATUS command.		
10.1		*Uplink Sequence HFADRMR2*		
		Execute Sequence **HFADRMR2 GetRmBstatusReport**		
10.2		*Check RM B Pointer Register Settings*		
		Verify Telemetry **RMH_PAPPTR** **AEW1Z109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATPTR** **AEW1Y109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT0** **AEW2G109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT1** **AEW2H109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT2** **AEW2J109**	**\<to be read\>**	AND=ZAAM2999
		Verify Telemetry **RMH_ATCNT3** **AEW2K109**	**\<to be read\>**	AND=ZAAM2999
		TC Seq. Name :NULLSEQ5 ( ) *TimeTag Type:* *Sub Schedule ID:*		
11		*Select RM B Attempt Counter*		Next Step: AC0 (RMB) 12 AC1 15 AC2 (RMB) 16 AC3 (RMB) 17

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The RM design allows the user to define different responses to the same alarm pattern, depending on how many times the same pattern has occured. On Herschel and Planck, four different alarm patterns have been identified, and attempt counters 0 to 3 have been associated to them as follows: *- Attempt counter 0 is associated to the nominal PM internal alarm pattern* *- Attempt counter 1 is associated to the rate anomaly alarm pattern* *- Attempt counter 2 is associated to the attitude anomaly alarm pattern* *- Attempt counter 3 is associated to the redundant PM internal alarm pattern*		
		Select the attempt counter that needs change of setting: *Attempt counter 0 -> GO TO STEP 12* *Attempt counter 1 -> GO TO STEP 15* *Attempt counter 2 -> GO TO STEP 16* *Attempt counter 3 -> GO TO STEP 17*		
		TC Seq. Name :NULLSEQ6 ( ) *TimeTag Type:* *Sub Schedule ID:*		
12		*Select RM B Attempt Counter 0 Value*		Next Step: AC0=0 13 AC0=1 (RMB) 14

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Attempt counter 0 that is associated to the nominal PM internal alarm pattern, is the only attempt counter allows you the choice of setting it to 0 or 1. All other attempt counters may only be set back to 0. The reason for setting attempt counter 0 to 1 could be to force the ACC to respond to internal alarms by immediately reconfiguring to the redundant PM without an attempt to reset the nominal PM on the first occurrence of the alarm		
		Select the appropriate option:		
		Set attempt counter 0 to 0 -> GO TO STEP 13		
		Set attempt counter 0 to 1 -> GO TO STEP 14		
		TC Seq. Name :HRAD2AC6 (SelRmBattemptCnt0to0)		
		TimeTag Type: N *Sub Schedule ID:*		
13		*Set RM B Attempt Counter 0 to 0* *(Counter 0 is associated to the Nominal PM Internal Alarm Pattern)*		Next Step: END
13.1		*Uplink Sequence HRAD2AC6*		
13.1.1		*Disable RM B*		
		Execute Telecommand **Ext_ACC_RM_B_Disable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM B Disable - Mission Specific	DCM25170	
		Verify Telemetry **RMB_fromTTR-RMA** AEE93050	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** AEE94050	**= DISABLED**	AND=ZAA07999
13.1.2		*Set RM B Attempt Counter 0 to 0*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		           RMB Set PAP 0
		
		Command Parameter(s) :
		      AttemptCtDF86Cm **AH821001**
		      AttemptCtDD86Cm **AH822001**
		      AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		           GBM IL DSE
		           --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMB Set PAP 0
			ACZHB109
			
			Enable 86
			Enable 86
			0 <dec>	

		Execute Telecommand
		
		        Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		      FireFun DF86Cmd **AH8F1001**
		      FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		           GBM IL DSE
		           --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

13.1.3		*Verify Update via RM B Status Report*		

		Execute Telecommand
		
		          Get RM-B status
		
		Command Parameter(s) :
		      RMStat DF86Cmd **AH841001**
		      RMStat DD86Cmd **AH842001**
		
		TC Control Flags :
		           GBM IL DSE
		           --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-B status
			ACZZ5109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		      TM 8-6 for RM Status parametrized
		Packet Details:
		           APID:
		           Type:
		      Subtype:
		           PI1:
		           PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry **RMH_ATCNT0** **AEW2G109**	**= 0 <dec>**	AND=ZAAM2999
13.1.4		*Enable RM B*		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		 Ext_ACC_RM_B_Enable
		
		 TC Control Flags :
		
		                  GBM IL DSE
		
		                  --Y -- ---
		
		 Subsch. ID : 10
		 Det. descr. : External ACC RM B Enable – Mission Specific
			DCM24170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC7 (SelRmBattemptCnt0to1) *TimeTag Type: N* *Sub Schedule ID:*		
14		*Set RM B Attempt Counter 0 to 1* *(Counter 0 is associated to the Nominal PM Internal Alarm Pattern)*		Next Step: END
14.1		*Uplink Sequence HRAD2AC7*		
14.1.1		*Disable RM B*		

		Execute Telecommand
		
		 Ext_ACC_RM_B_Disable
		
		 TC Control Flags :
		
		                  GBM IL DSE
		
		                  --Y -- ---
		
		 Subsch. ID : 10
		 Det. descr. : External ACC RM B Disable – Mission Specific
			DCM25170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= DISABLED**	(None)
14.1.2		*Set RM B Attempt Counter 0 to 1*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		      RMB Set PAP 0
		
		Command Parameter(s) :
		   AttemptCtDF86Cm **AH821001**
		   AttemptCtDD86Cm **AH822001**
		   AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMB Set PAP 0
			ACZHB109
			
			Enable 86
			Enable 86
			1 <dec>	

		Execute Telecommand
		
		     Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		   FireFun DF86Cmd **AH8F1001**
		   FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

14.1.3		*Verify Update via RM B Status Report*		

		Execute Telecommand
		
		      Get RM-B status
		
		Command Parameter(s) :
		   RMStat DF86Cmd **AH841001**
		   RMStat DD86Cmd **AH842001**
		
		TC Control Flags :
		        GBM IL DSE
		        --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-B status
			ACZZ5109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		    TM 8-6 for RM Status parametrized
		Packet Details:
		
		        APID:
		        Type:
		      Subtype:
		        PI1:
		        PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry **RMH_ATCNT0** **AEW2G109**	**= 1 <dec>**	AND=ZAAM2999
14.1.4		*Enable RM B*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		    Ext_ACC_RM_B_Enable
		
		TC Control Flags :
		     GBM IL DSE
		     --Y -- ---
		Subsch. ID : 10
		Det. descr. : External ACC RM B Enable – Mission Specific
			DCM24170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC8 (SelRmBattemptCnt1to0) *TimeTag Type: N* *Sub Schedule ID:*		
15		*Set RM B Attempt Counter 1 to 0* *(Counter 1 is associated to the Rate Anomaly Alarm Pattern)*		Next Step: END
15.1		*Uplink Sequence HRAD2AC8*		
15.1.1		*Disable RM B*		

		Execute Telecommand
		
		    Ext_ACC_RM_B_Disable
		
		TC Control Flags :
		     GBM IL DSE
		     --Y -- ---
		Subsch. ID : 10
		Det. descr. : External ACC RM B Disable – Mission Specific
			DCM25170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= DISABLED**	AND=ZAA07999
15.1.2		*Set RM B Attempt Counter 1 to 0*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand **RMB Set PAP 1** *Command Parameter(s) :* **AttemptCtDF86Cm** **AH821001** **AttemptCtDD86Cm** **AH822001** **AttemptCtr AtCt** **AHFP7001** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,1) - RMB Set PAP 1*	**ACZHC109** **Enable 86** **Enable 86** **0 <dec>**	
		Execute Telecommand **Fire Set RM Attempt Ctr** *Command Parameter(s) :* **FireFun DF86Cmd** **AH8F1001** **FireFun DD86Cmd** **AH8F2001** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,4) Fire Command - Fire Set RM* *Attempt Ctr*	**ACZ1N109** **Enable 86** **Enable 86**	
15.1.3		*Verify Update via RM B Status Report*		
		Execute Telecommand **Get RM-B status** *Command Parameter(s) :* **RMStat DF86Cmd** **AH841001** **RMStat DD86Cmd** **AH842001** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,1) - Get RM-B status*	**ACZZ5109** **Enable 86** **Enable 86**	
		Verify Packet Reception **TM 8-6 for RM Status parametrized** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**A86_RMStatus** **512** **8** **6** **41600** **1**	
		Verify Telemetry **RMH_ATCNT1** **AEW2H109**	**= 0 <dec>**	AND=ZAAM2999
15.1.4		*Enable RM B*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand **Ext_ACC_RM_B_Enable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM B Enable – Mission Specific	**DCM24170**	
		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2AC9 (SelRmBattemptCnt2to0) *TimeTag Type: N* *Sub Schedule ID:*		
16		*Set RM B Attempt Counter 2 to 0* *(Counter 2 is associated to the Attitude Anomaly Alarm Pattern)*		Next Step: END
16.1		*Uplink Sequence HRAD2AC9*		
16.1.1		*Disable RM B*		
		Execute Telecommand **Ext_ACC_RM_B_Disable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM B Disable – Mission Specific	**DCM25170**	
		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= DISABLED**	AND=ZAA07999
16.1.2		*Set RM B Attempt Counter 2 to 0*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand 　　　　　　　　　　　　　　**RMB Set PAP 2** *Command Parameter(s) :* 　　　　　**AttemptCtDF86Cm**　　　**AH821001** 　　　　　**AttemptCtDD86Cm**　　　**AH822001** 　　　　　**AttemptCtr AtCt**　　　　**AHFP7001** *TC Control Flags :* 　　　　　　　　　　　　　　**GBM IL DSE** 　　　　　　　　　　　　　　**--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,1) - RMB Set PAP 2*	ACZHD109 **Enable 86** **Enable 86** **0 <dec>**	
		Execute Telecommand 　　　　　　　　　**Fire Set RM Attempt Ctr** *Command Parameter(s) :* 　　　　　**FireFun DF86Cmd**　　　**AH8F1001** 　　　　　**FireFun DD86Cmd**　　　**AH8F2001** *TC Control Flags :* 　　　　　　　　　　　　　　**GBM IL DSE** 　　　　　　　　　　　　　　**--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr*	ACZ1N109 **Enable 86** **Enable 86**	
16.1.3		*Verify Update via RM B Status Report*		
		Execute Telecommand 　　　　　　　　　　**Get RM-B status** *Command Parameter(s) :* 　　　　　**RMStat DF86Cmd**　　　**AH841001** 　　　　　**RMStat DD86Cmd**　　　**AH842001** *TC Control Flags :* 　　　　　　　　　　　　　　**GBM IL DSE** 　　　　　　　　　　　　　　**--Y -- ---** *Subsch. ID : 20* *Det. descr. : TC(8,1) - Get RM-B status*	ACZZ5109 **Enable 86** **Enable 86**	
		Verify Packet Reception 　　　　　**TM 8-6 for RM Status parametrized** *Packet Details:* 　　　　　　　　　　　　　**APID:** 　　　　　　　　　　　　　**Type:** 　　　　　　　　　**Subtype:** 　　　　　　　　　　　　　**PI1:** 　　　　　　　　　　　　　**PI2:**	A86_RMStatus **512** **8** **6** **41600** **1**	
		Verify Telemetry 　　　　　**RMH_ATCNT2**　　　　**AEW2J109**	**= 0 <dec>**	AND=ZAAM2999
16.1.4		*Enable RM B*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		Ext_ACC_RM_B_Enable
		
		TC Control Flags :
		
		        GBM IL DSE
		        --Y -- ---
		Subsch. ID : 10
		Det. descr. : External ACC RM B Enable – Mission Specific
			DCM24170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= ENABLED**	AND=ZAA07999
		TC Seq. Name :HRAD2ACA (SelRmBattemptCnt3to0) *TimeTag Type: N* *Sub Schedule ID:*		
17		*Set RM B Attempt Counter 3 to 0* *(Counter 3 is associated to the Redundant PM Internal Alarm Pattern)*		Next Step: END
17.1		*Uplink Sequence HRAD2ACA*		
17.1.1		*Disable RM B*		

		Execute Telecommand
		
		Ext_ACC_RM_B_Disable
		
		TC Control Flags :
		
		        GBM IL DSE
		        --Y -- ---
		Subsch. ID : 10
		Det. descr. : External ACC RM B Disable – Mission Specific
			DCM25170	

		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= DISABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= DISABLED**	AND=ZAA07999
17.1.2		*Set RM B Attempt Counter 3 to 0*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch

		Execute Telecommand
		
		       RMB Set PAP 3
		
		Command Parameter(s) :
		   AttemptCtDF86Cm **AH821001**
		   AttemptCtDD86Cm **AH822001**
		   AttemptCtr AtCt **AHFP7001**
		
		TC Control Flags :
		         GBM IL DSE
		         --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - RMB Set PAP 3
			ACZHE109
			
			Enable 86
			Enable 86
			0 <dec>	

		Execute Telecommand
		
		      Fire Set RM Attempt Ctr
		
		Command Parameter(s) :
		   FireFun DF86Cmd **AH8F1001**
		   FireFun DD86Cmd **AH8F2001**
		
		TC Control Flags :
		         GBM IL DSE
		         --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,4) Fire Command - Fire Set RM Attempt Ctr
			ACZ1N109
			
			Enable 86
			Enable 86	

17.1.3		*Verify Update via RM B Status Report*		

		Execute Telecommand
		
		       Get RM-B status
		
		Command Parameter(s) :
		   RMStat DF86Cmd **AH841001**
		   RMStat DD86Cmd **AH842001**
		
		TC Control Flags :
		         GBM IL DSE
		         --Y -- ---
		
		Subsch. ID : 20
		Det. descr. : TC(8,1) - Get RM-B status
			ACZZ5109
			
			Enable 86
			Enable 86	

		Verify Packet Reception
		     TM 8-6 for RM Status parametrized
		Packet Details:
		         APID:
		         Type:
		       Subtype:
		         PI1:
		         PI2:
			A86_RMStatus
			
			512
			8
			6
			41600
			1	

		Verify Telemetry **RMH_ATCNT3** **AEW2K109**	**= 0 <dec>**	AND=ZAAM2999
17.1.4		*Enable RM B*		

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: dsalt-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand **Ext_ACC_RM_B_Enable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : External ACC RM B Enable – Mission Specific	**DCM24170**	
		Verify Telemetry **RMB_fromTTR-RMA** **AEE93050**	**= ENABLED**	AND=ZAA07999
		Verify Telemetry **RMB_fromTTR-RMB** **AEE94050**	**= ENABLED**	AND=ZAA07999

End of Procedure

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: jdebruin-hp

Tables & Figures

11.3   RM Programming Set 1: PM A as Nominal

PAP Name	Internal Alarm (PMA)	Rate Anomaly (PMA)	Attitude Anomaly (PMA)	Internal Alarm (PMB)
PAP#	0	1	2	3
Watchdog toggle	OR	X	X	OR
CRS 1	X	OR	X	X
CRS 2	X	OR	X	X
CRS 3	X	OR	X	X
AAD 1	X	X	OR	X
AAD 2	X	X	OR	X
Separation Strap 1	X	1	1	X
Separation Strap 2	X	X	1	X
External 7	X	X	X	X
PM A CPU*	OR	X	X	X
PM A COCOS	OR	X	X	X
PM A Undervoltage alarm*	OR	X	X	X
PM A Software alarm	OR	X	X	X
PM B CPU*	X	X	X	OR
PM B COCOS	X	X	X	OR
PM B Undervoltage alarm*	X	X	X	OR
PM B Software alarm	X	X	X	OR
Select PM (High = PM B)	0	0	0	1
Not used	X	X	X	X
Not used	X	X	X	X
Not used	X	X	X	X
Watchdog enable	X	X	X	X
1st Attempt	Yes	Yes	Yes	Yes
2nd Attempt	Yes	No	No	No
Further Attempt	No	No	No	No

Table 11-7

PAP#	Retry Delay
0	0.5 sec
1	2.5 sec
2	2.5 sec
3	2.5 sec

Table 11-8

PAP#	PAP Name	First Attempt	Second Attempt
0	Internal alarm (PMA)	Reset PMA (CCS 0)	Switch to PMB (CCS 1)
1	Rate anomaly (PMA)	Full reconfiguration from PMA to PMB (CCS 2)	
2	Attitude anomaly (PMA)	Full reconfiguration from PMA to PMB (CCS 2)	
3	Internal alarm (PMB)	Reset PMB after switch-over (CCS 3)	

Table 11-9

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: jdebruin-hp

Tables & Figures

11.4   RM Programming Set 2: PM B as Nominal

PAP Name	Internal Alarm (PMB)	Rate Anomaly (PMB)	Attitude Anomaly (PMB)	Internal Alarm (PMA)
PAP#	0	1	2	3
Watchdog toggle	OR	X	X	OR
CRS 1	X	OR	X	X
CRS 2	X	OR	X	X
CRS 3	X	OR	X	X
AAD 1	X	X	OR	X
AAD 2	X	X	OR	X
Separation Strap 1	X	1	1	X
Separation Strap 2	X	X	1	X
External 7	X	X	X	X
PM A CPU*	X	X	X	OR
PM A COCOS	X	X	X	OR
PM A Undervoltage alarm*	X	X	X	OR
PM A Software alarm	X	X	X	OR
PM B CPU*	OR	X	X	X
PM B COCOS	OR	X	X	X
PM B Undervoltage alarm*	OR	X	X	X
PM B Software alarm	OR	X	X	X
Select PM (High = PM B)	1	1	1	0
Not used	X	X	X	X
Not used	X	X	X	X
Not used	X	X	X	X
Watchdog enable	X	X	X	X
1st Attempt	Yes	Yes	Yes	Yes
2nd Attempt	Yes	No	No	No
Further Attempt	No	No	No	No

Table 11-10

PAP#	Retry Delay
0	0.5 sec
1	2.5 sec
2	2.5 sec
3	2.5 sec

Table 11-11

PAP#	PAP Name	First Attempt	Second Attempt
0	Internal alarm (PMB)	Reset PMB (CCS 4)	Switch to PMA (CCS 5)
1	Rate anomaly (PMB)	Full reconfiguration from PMB to PMA (CCS 6)	
2	Attitude anomaly (PMB)	Full reconfiguration from PMB to PMA (CCS 6)	
3	Internal alarm (PMA)	Reset PMA after switch-over (CCS 7)	

Table 11-12

Set RM Attempt Counter
File: H_CRP_AOC_D2AC.xls
Author: jdebruin-hp

Tables & Figures

11.5 RM Programming Set 3: PMA only

PAP Name	Internal Alarm	Rate Anomaly	Attitude Anomaly
PAP#	0	1	2
Watchdog toggle	OR	X	X
CRS 1	X	OR	X
CRS 2	X	OR	X
CRS 3	X	OR	X
AAD 1	X	X	OR
AAD 2	X	X	OR
Separation Strap 1	X	1	1
Separation Strap 2	X	X	1
External 7	X	X	X
PM A CPU*	OR	X	X
PM A COCOS	OR	X	X
PM A Undervoltage alarm*	OR	X	X
PM A Software alarm	OR	X	X
PM B CPU*	X	X	X
PM B COCOS	X	X	X
PM B Undervoltage alarm*	X	X	X
PM B Software alarm	X	X	X
Select PM (High = PM B)	X	X	X
Not used	X	X	X
Not used	X	X	X
Not used	X	X	X
Watchdog enable	X	X	X
1st Attempt	Yes	Yes	Yes
2nd Attempt	No	No	No
Further Attempt	No	No	No

Table 11-13

PAP#	Retry Delay
0	0.5 sec
1	0.5 sec
2	0.5 sec

Table 11-14

PAP#	PAP Name	First Attempt	Second Attempt
0	Internal alarm	Switch to PMA (CCS 5)	Rest PMA after switchover (CCS 7)
1	Rate anomaly	Full reconfiguration from PMB to PMA (CCS 6)	-
2	Attitude anomaly	Full reconfiguration from PMB to PMA (CCS 6)	-

Table 11-15

Tables & Figures

11.6 RM Programming Set 4: PMB only

PAP Name	Internal Alarm	Rate Anomaly	Attitude Anomaly
PAP#	0	1	2
Watchdog toggle	OR	X	X
CRS 1	X	OR	X
CRS 2	X	OR	X
CRS 3	X	OR	X
AAD 1	X	X	OR
AAD 2	X	X	OR
Separation Strap 1	X	1	1
Separation Strap 2	X	X	1
External 7	X	X	X
PM A CPU*	X	X	X
PM A COCOS	X	X	X
PM A Undervoltage alarm*	X	X	X
PM A Software alarm	X	X	X
PM B CPU*	OR	X	X
PM B COCOS	OR	X	X
PM B Undervoltage alarm*	OR	X	X
PM B Software alarm	OR	X	X
Select PM (High = PM B)	X	X	X
Not used	X	X	X
Not used	X	X	X
Not used	X	X	X
Watchdog enable	X	X	X
1st Attempt	Yes	Yes	Yes
2nd Attempt	No	No	No
Further Attempt	No	No	No

Table 11-16

PAP#	Retry Delay
0	0.5 sec
1	0.5 sec
2	0.5 sec

Table 11-17

PAP#	PAP Name	First Attempt	Second Attempt
0	Internal alarm	Switch to PMB (CCS 1)	Rest PMB after switchover (CCS 3)
1	Rate anomaly	Full reconfiguration from PMA to PMB (CCS 2)	-
2	Attitude anomaly	Full reconfiguration from PMA to PMB (CCS 2)	-

Table 11-18