

Modify SGM Configuration
File: H_CRP_AOC_2SGM.xls
Author: dsalt-hp



Procedure Summary

Objectives

The procedure allows the user to modify the selection of the SGM used by the ASW. The ASW has the ability to change the SGM configuration autonomously if write errors are detected, but the SGM configuration maintained by the ASW is lost after a PM reset. Permanent modification of the configuration stored in the RM context register guarantees that the ASW will use access only the selected SGM during initialisation.

USAGE:

The procedure should be used whenever a failure of the SGM itself or its interface with the PM prevents one of the units from executing correctly the requested pulses. The following failure symptoms may be present:

1. The BSW has declared the SPW interface between the currently active PM and one of the SGM's unhealthy.
2. One of the SGM's has been declared unhealthy by the BSW because of an uncorrectable error trapped by the CROME memory manager.
3. ASW has detected an error during SGM access.
4. Data stored in one of the SGM's appears corrupted.

The CPDU configuration is written in the RM context register. A consequence, the RM must be disabled before executing the TC which modifies the configuration

Summary of Constraints

Spacecraft Configuration

Start of Procedure

End of Procedure

Reference File(s)

Input Command Sequences

HFADRMR1
HFADRMR2

Output Command Sequences

NULLSEQ0
HRA2SGM1
HRA2SGM2
HRA2SGM3

Referenced Displays

ANDs GRDs SLDs

Status : Version 2 - Unchanged
Last Checkin: 24/03/09

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ZAA01999
 ZAAM0999
 ZAA07999

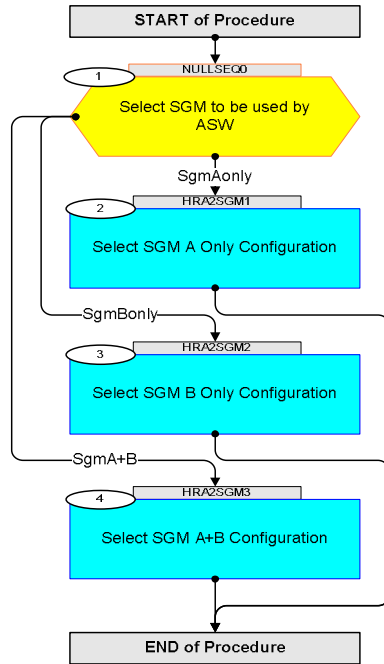
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
24/03/09		1	Created	dsalt-hp	
24/03/09	2.2	2	Sequence name correction	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 : NULLSEQ0 () TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
1		Select SGM to be used by ASW		Next Step: SgmAonly 2 SgmBonly 3 SgmA+B 4
1.1		Verify SGM in-use setting in ASW		<input type="checkbox"/>
		Verify Telemetry SgmInUse AESMS002	<to be read>	AND=ZAA01999
1.2		Load sequence HFADRM1 on the Manual Stack and uplink the single command inside the sequence		<input type="checkbox"/>
		Execute Sequence HFADRM1 GetRmAstatusReport v02 Sequence Grouping = - SSID : 0		SEQ
1.3		Verify SGM in-use setting in RM A		<input type="checkbox"/>
		Verify Telemetry MiscCfg SGM use AEW30109	<to be read>	AND=ZAAM0999
1.4		Load sequence HFADRM2 on the Manual Stack and uplink the single command inside the sequence		<input type="checkbox"/>
		Execute Sequence HFADRM2 GetRmBstatusReport v02 Sequence Grouping = - SSID : 0		SEQ
1.5		Verify SGM in-use setting in RM B		<input type="checkbox"/>
		Verify Telemetry MiscCfg SGM use AEW30109	<to be read>	AND=ZAAM0999
1.6		Select SGM		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		SGM A only -> GO TO STEP 2 SGM B only -> GO TO STEP 3 SGM A+B -> GO TO STEP 4		
TC Seq. Name :HRA2SGM1 (SelectSgmAonlyCfg) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
2		Select SGM A Only Configuration		Next Step: END
2.1		Load sequence HRA2SGM1 on the Manual Stack		<input type="checkbox"/>
2.2		Uplink 1st block of commands (tagged with release times)		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand <div style="text-align: right;">Ext_ACC_RM_A_Disable</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific	DCM22170	
	ET=+ UT=+00.00.05	Execute Telecommand <div style="text-align: right;">Use SGM-A RM-A</div> Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use SGM-A RM-A	ACYLP109	
	ET=+ UT=+00.00.05	Execute Telecommand <div style="text-align: right;">Get RM-A status</div> Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109	
2.3		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry <div style="text-align: center;">RMA_fromTTR-RMA AEE91050 = DISABLED</div>		AND=ZAA07999
		Verify Telemetry <div style="text-align: center;">RMA_fromTTR-RMB AEE92050 = DISABLED</div>		AND=ZAA07999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2.4		Verify update in ASW and RM A		<input type="checkbox"/>
		Verify Telemetry SgmInUse AESMS002	= SGM A	AND=ZAA01999
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMA	AND=ZAAM0999
2.5		Uplink Next Command		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Enable	DCM21170	
		TC Control Flags : GBM IL DSE --Y -- ---		
		Subsch. ID : 10 Det. descr. : External ACC RM A Enable - Mission Specific		
2.6		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
2.7		Uplink Next Block of Commands (tagged with release times)		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand Ext_ACC_RM_B_Disable	DCM25170	
		TC Control Flags : GBM IL DSE --Y -- ---		
		Subsch. ID : 10 Det. descr. : External ACC RM B Disable - Mission Specific		
	ET=+ UT=+00.00.05	Execute Telecommand Use SGM-A RM-B	ACYLV109	
		Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use SGM-A RM-B		
	ET=+ UT=+00.00.05	Execute Telecommand Get RM-B status	ACZZ5109	
		Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2.8		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999
2.9		Verify update in RM B		<input type="checkbox"/>
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMA	AND=ZAAM0999
2.10		Uplink Next Command		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Enable - Mission Specific GBM IL DSE --Y -- ---	DCM24170	
2.11		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= ENABLED	AND=ZAA07999
TC Seq. Name : HRA2SGM2 (SelectSgmBonlyCfg)				
TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
3		Select SGM B Only Configuration		Next Step: END
3.1		Load sequence HRA2SGM1 on the Manual Stack		<input type="checkbox"/>
3.2		Uplink 1st block of commands (tagged with release times)		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	Execute Telecommand Ext_ACC_RM_A_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific GBM IL DSE --Y -- ---	DCM22170	
	ET=+ UT=+00.00.05	Execute Telecommand Use SGM-B RM-A Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use SGM-B RM-A	ACYLR109	
	ET=+ UT=+00.00.05	Execute Telecommand Get RM-A status Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109	
3.3		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= DISABLED	AND=ZAA07999
3.4		Verify update in ASW and RM A		<input type="checkbox"/>
		Verify Telemetry SgmInUse AESMS002	= SGM B	AND=ZAA01999
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMB	AND=ZAAM0999
3.5		Uplink Next Command		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_A_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Enable - Mission Specific GBM IL DSE --Y -- ---	DCM21170	
3.6		Verify RM Status		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
3.7		Uplink Next Block of Commands (tagged with release times)		<input type="checkbox"/>
	ET=+ UT=+00.00.00	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	
	ET=+ UT=+00.00.05	Execute Telecommand Use SGM-B RM-B Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use SGM-B RM-B	ACYLW109	
	ET=+ UT=+00.00.05	Execute Telecommand Get RM-B status Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status	ACZZ5109	
3.8		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999
3.9		Verify update in RM B		<input type="checkbox"/>
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMB	AND=ZAAM0999
3.10		Uplink Next Command		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Ext_ACC_RM_B_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Enable - Mission Specific GBM IL DSE --Y -- ---	DCM24170	
3.11		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= ENABLED	AND=ZAA07999
TC Seq. Name :HRA2SGM3 (SelectSgmABconfig) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
4		Select SGM A+B Configuration		Next Step: END
4.1		Load sequence HRA2SGM1 on the Manual Stack		<input type="checkbox"/>
4.2		Uplink 1st block of commands (tagged with release times)		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand Ext_ACC_RM_A_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM A Disable - Mission Specific GBM IL DSE --Y -- ---	DCM22170	
	ET=+ UT=+00.00.05	Execute Telecommand Use both SGM RM-A Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use both SGM RM-A	ACYLS109	

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	ET=+ UT=+00.00.05	Execute Telecommand Get RM-A status Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-A status	ACZZ4109	
4.3		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= DISABLED	AND=ZAA07999
4.4		Verify update in ASW and RM A		<input type="checkbox"/>
		Verify Telemetry SgmInUse AESMS002	= SGM A and B	AND=ZAA01999
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMA+SGMB	AND=ZAAM0999
4.5		Uplink Next Command		<input type="checkbox"/>
		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	
4.6		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMA_fromTTR-RMA AEE91050	= ENABLED	AND=ZAA07999
		Verify Telemetry RMA_fromTTR-RMB AEE92050	= ENABLED	AND=ZAA07999
4.7		Uplink Next Block of Commands (tagged with release times)		<input type="checkbox"/>

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	ET=+ UT=+00.00.00	Execute Telecommand Ext_ACC_RM_B_Disable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Disable - Mission Specific GBM IL DSE --Y -- ---	DCM25170	
	ET=+ UT=+00.00.05	Execute Telecommand Use both SGM RM-B Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use both SGM RM-B	ACYLX109	
	ET=+ UT=+00.00.05	Execute Telecommand Get RM-B status Subsch. ID : 20 Det. descr. : TC(8,1) - Get RM-B status	ACZZ5109	
4.8		Verify RM Status		<input type="checkbox"/>
		Verify Telemetry RMB_fromTTR-RMA AEE93050	= DISABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB AEE94050	= DISABLED	AND=ZAA07999
4.9		Verify update in RM B		<input type="checkbox"/>
		Verify Telemetry SgmInUse AESMS002	= SGM A and B	AND=ZAA01999
		Verify Telemetry MiscCfg SGM use AEW30109	= SGMA+SGMB	AND=ZAAM0999
4.10		Uplink Next Command		<input type="checkbox"/>
		Execute Telecommand Ext_ACC_RM_B_Enable TC Control Flags : Subsch. ID : 10 Det. descr. : External ACC RM B Enable - Mission Specific GBM IL DSE --Y -- ---	DCM24170	
4.11		Verify RM Status		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry RMB_fromTTR-RMA	AEE93050 = ENABLED	AND=ZAA07999
		Verify Telemetry RMB_fromTTR-RMB	AEE94050 = ENABLED	AND=ZAA07999
End of Procedure				