

MM Banks 0, 1, 2 and 3 power ON.
File: H_FCP_DHS_1010.xls
Author: S. Manganelli



Procedure Summary

Objectives

This is a dedicated procedure to achieve nominal SSMM bank configuration. It switches ON the SSMM banks 0, 1, 2 and 3 on both SSMM A and SSMM B. Note that bank 0 contains the ASW buffers and therefore the MTL cannot be used if bank 0 is not switched ON.

Summary of Constraints

Each MM board has four physical memory banks that can be individually switched ON or OFF.

It is foreseen to use all banks for each MM.

The mapping of the MM after a cold start is set to default, i.e. logic bank 0 is mapped to physical bank 0.

The physical bank, to which logic bank 0 is mapped, must be the first bank to be switched ON and the last bank to be switched OFF (BSW uses the bank mapped at position 0 for storage of internal data and communication buffers).

If it is switched OFF a bank where ASW buffers or packets stores are allocated, the buffers and packet stores will be deallocated.

The duration of a bank switch ON is approximately 12 minutes. Thus between two commands bank switch ON it is necessary to wait at least 12 minutes.

The banks are switched ON/OFF through TC(8,4,2,5); this TC will fail when there is an ongoing:

- TC(8,4,2,3) Check Mass Memory
- TC(8,4,2,4) Map Mass Memory
- TC(8,4,2,5) Turn Bank on/off
- TC(8,4,2,6) Initialise Mass Memory

Spacecraft Configuration

Start of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON
 - All MM banks OFF

End of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON
 - All MM banks ON , on MM A and MM B

Reference File(s)

Input Command Sequences

Output Command Sequences

Status : Version 9 - Unchanged
Last Checkin: 24/03/09

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HFD1010

Referenced Displays

ANDs	GRDs	SLDs
ZAZAB999		(None)
ZAD22999		

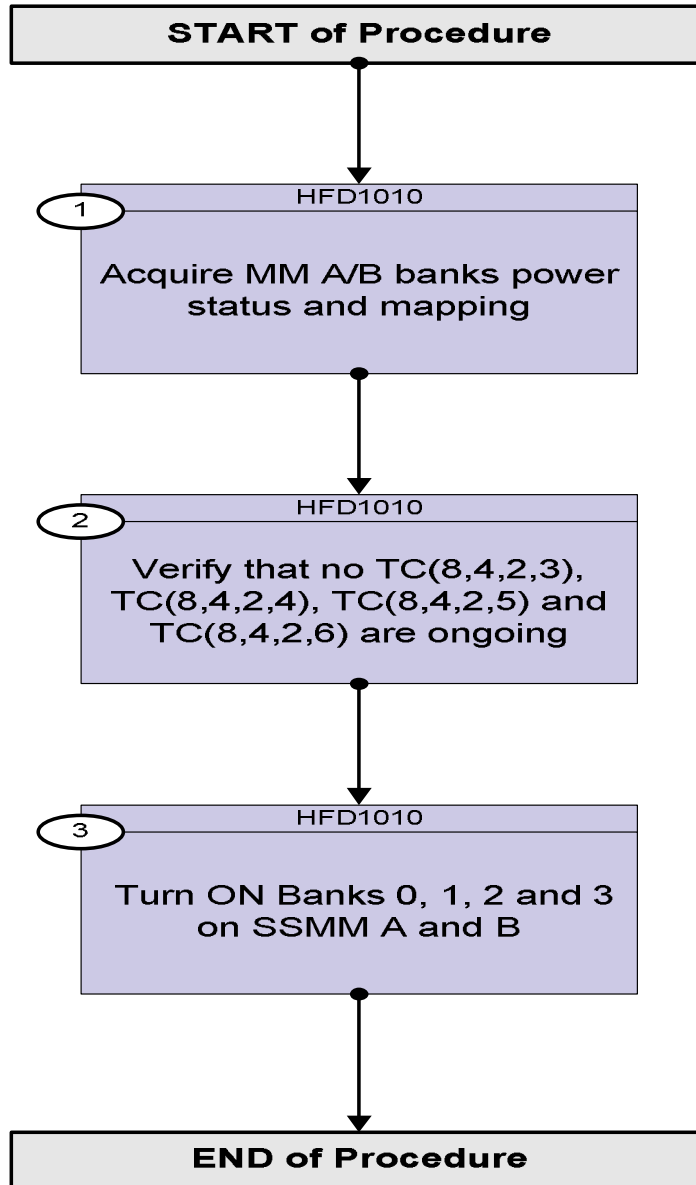
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
07/01/08		1	Created	S. Manganelli	
16/01/08		2	Batch update of TC flags	S. Manganelli	
16/02/08		3	Commands to mark MMA and MMB ON in UIU Table added.	cmevi-hp	
16/02/08	1	4	Commands to mark MMA and MMB ON in UIU Table removed and moved to Power_ON procedure.	cmevi-hp	
15/09/08		5	Syntax checked against OBSW 3.6 db.	cmevi-hp	
09/12/08		6	Modified for 4+4 banks configuration	S. Manganelli	
18/12/08		7	DB checked. Sequence exported.	cmevi-hp	
12/01/09	2	8	Updated following OBSW 3_8	S. Manganelli	
24/03/09	2.2	9	Procedure cover text modified following TAS-I inputs 3 march 09	S. Manganelli	

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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 :HFD1010 (MMAB bank0123 PWRON)				
TimeTag Type: N				
Sub Schedule ID:				
□				
1		Acquire MM A/B banks power status and mapping		Next Step: 2
		The following parameters report, for each bank of the Mass Memory A and B, the power status and the mapping. All banks are supposed to be OFF, all mappings as per default (0->0, 1->1, 2->2, 3->3) Note that the 8 logical-physical mapping parameters Ax_Phys_Bank and Bx_Phys_Bank are available only if the diagn pkt "BSW3" is enabled (follow FCP_DHS_3033)		
		Verify Telemetry PWR_Sts_BankA0 DEECG160 = OFF		AND=ZAZAB999
		Verify Telemetry A0_Phys_Bank DEEE1160 = PhysBank0		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankA1 DEECH160 = OFF		(None)
		Verify Telemetry A1_Phys_Bank DEEF1160 = PhysBank1		(None)
		Verify Telemetry PWR_Sts_BankA2 DEECZ160 = OFF		(None)
		Verify Telemetry A2_Phys_Bank DEEG1160 = PhysBank2		(None)
		Verify Telemetry PWR_Sts_BankA3 DEECJ160 = OFF		(None)
		Verify Telemetry A3_Phys_Bank DEEH1160 = PhysBank3		(None)
		Verify Telemetry PWR_Sts_BankB0 DEECK160 = OFF		(None)
		Verify Telemetry B0_Phys_Bank DEEEG160 = PhysBank0		(None)
		Verify Telemetry PWR_Sts_BankB1 DEECL160 = OFF		(None)
		Verify Telemetry B1_Phys_Bank DEEFG160 = PhysBank1		(None)
		Verify Telemetry PWR_Sts_BankB2 DEECM160 = OFF		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry B2_Phys_Bank DEEGG160	= PhysBank2	(None)
		Verify Telemetry PWR_Sts_BankB3 DEECN160	= OFF	(None)
		Verify Telemetry B3_Phys_Bank DEEHG160	= PhysBank3	(None)
2		Verify that no TC(8,4,2,3), TC(8,4,2,4), TC(8,4,2,5) and TC(8,4,2,6) are ongoing		Next Step: 3
		Verify Telemetry TC_8-4-2-3_x DEE0J161	= FALSE	AND=ZAD22999
		Verify Telemetry TC_8-4-2-4_x DEE0K161	= FALSE	(None)
		Verify Telemetry TC_8-4-2-5_x DEE0L161	= FALSE	(None)
		Verify Telemetry TC_8-4-2-6_x DEE0M161	= FALSE	(None)
3		Turn ON Banks 0, 1, 2 and 3 on SSMM A and B		Next Step: END
		The six TCs are going to be released at 13 minutes interval to respect the SSMM bank initialization timing constraints.		
	ET=+ UT=+00.00.00	Execute Telecommand Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Turn Bank On	TurnBankOn DC805160	MM A Bank 0
	ET=+ UT=+00.13.00	Execute Telecommand Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Turn Bank On	TurnBankOn DC805160	MM A Bank 1

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM A Bank 2	
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM A Bank 3	
		Verify Telemetry PWR_Sts_BankA0 DEECG160	= ON	AND=ZAZAB999
		Verify Telemetry A0_Phys_Bank DEEE1160	= PhysBank0	AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankA1 DEECH160	= ON	(None)
		Verify Telemetry A1_Phys_Bank DEEF1160	= PhysBank1	(None)
		Verify Telemetry PWR_Sts_BankA2 DEECZ160	= ON	(None)
		Verify Telemetry A2_Phys_Bank DEEG1160	= PhysBank2	(None)
		Verify Telemetry PWR_Sts_BankA3 DEECJ160	= ON	(None)
		Verify Telemetry A3_Phys_Bank DEEH1160	= PhysBank3	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM B Bank 0	
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM B Bank 1	
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM B Bank 2	
	ET=+ UT=+00.13.00	Execute Telecommand TurnBankOn Command Parameter(s) : EQU DH025160 BNK DH031160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Turn Bank On	DC805160 MM B Bank 3	
		Verify Telemetry PWR_Sts_BankB0 DEECK160	= ON	AND=ZAZAB999
		Verify Telemetry B0_Phys_Bank DEEEG160	= PhysBank0	AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankB1 DEECL160	= ON	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry B1_Phys_Bank DEEFG160	= PhysBank1	(None)
		Verify Telemetry PWR_Sts_BankB2 DEECM160	= ON	(None)
		Verify Telemetry B2_Phys_Bank DEEGG160	= PhysBank2	(None)
		Verify Telemetry PWR_Sts_BankB3 DEECN160	= ON	(None)
		Verify Telemetry B3_Phys_Bank DEEHG160	= PhysBank3	(None)
End of Procedure				