

Map a MM ID to a MM bank
File: H_FCP_DHS_3016.xls
Author: S. Manganelli



Procedure Summary

Objectives

This procedure describes the steps needed to map the four banks of the MM.

Summary of Constraints

It is possible to map any of the four banks to any of the four possible locations; moreover it is possible to map switched ON or OFF banks.

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

On an MM board with one or more switched ON banks, a switched ON bank must be mapped to position 0 (BSW uses the bank mapped to position 0 for storage of internal data and communication buffer).

A remapping of banks must never cause logic bank 0 to be remapped to a physical bank that is switched OFF, as long as any other bank is powered.

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

The banks are mapped through TC(8,4,2,4); 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

Notice that to acquire the MM banks mapping it is necessary to enable the generation of

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

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

Reference File(s)

Input Command Sequences

Output Command Sequences

HFD3016

Map a MM ID to a MM bank
 File: H_FCP_DHS_3016.xls
 Author: S. Manganelli



Referenced Displays

ANDs **GRDs** **SLDs**
 ZAZAB999
 ZAD22999

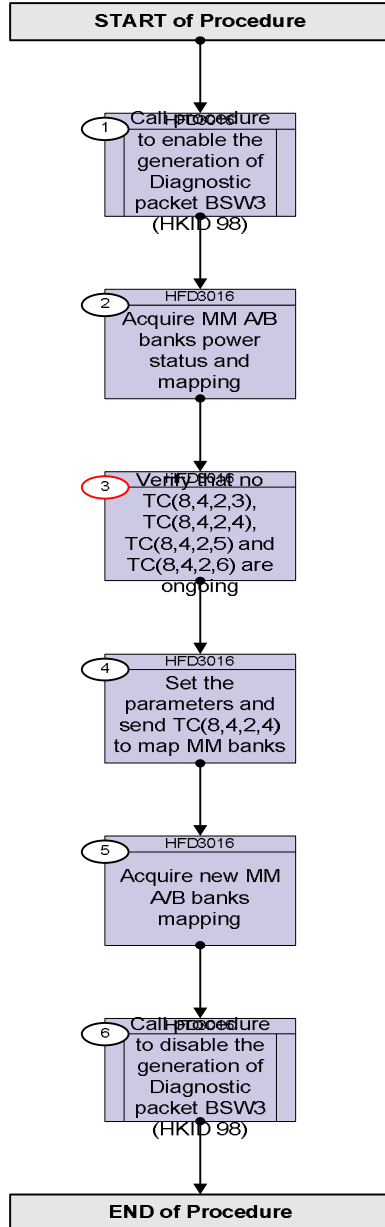
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
16/11/07		1	Created	cmevi-hp	
10/12/07		2	Formal parameters introduced.	cmevi-hp	
16/01/08	1	3	Batch update of TC flags	S. Manganelli	
14/11/08		4	Procedure updated according to latest version received from industry on 29/09/2008	cmevi-hp	
12/01/09	2	5	Updated following OBSW 3_8	S. Manganelli	

Map a MM ID to a MM bank
File: H_FCP_DHS_3016.xls
Author: S. Manganelli



Procedure Flowchart Overview



Map a MM ID to a MM bank
 File: H_FCP_DHS_3016.xls
 Author: S. Manganelli



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name :HFD3016 (Map a MM ID to a MM)				
TimeTag Type: N				
Sub Schedule ID:				
□				
1		Call procedure to enable the generation of Diagnostic packet BSW3 (HKID 98)		Next Step: 2
		Execute procedure H_FCP_DHS_3033.		
2		Acquire MM A/B banks power status and mapping		Next Step: 3
		The following parameters report, for each bank of the Mass Memory A and B, the power status and the mapping.		
		Verify Telemetry PWR_Sts_BankA0 DEECG160		AND=ZAZAB999
		Verify Telemetry A0_Phys_Bank DEEE1160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankA1 DEECH160		AND=ZAZAB999
		Verify Telemetry A1_Phys_Bank DEEF1160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankA2 DEECZ160		AND=ZAZAB999
		Verify Telemetry A2_Phys_Bank DEEG1160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankA3 DEECJ160		AND=ZAZAB999
		Verify Telemetry A3_Phys_Bank DEEH1160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankB0 DEECK160		AND=ZAZAB999
		Verify Telemetry B0_Phys_Bank DEEEG160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankB1 DEECL160		AND=ZAZAB999
		Verify Telemetry B1_Phys_Bank DEEEF160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankB2 DEECM160		AND=ZAZAB999

Map a MM ID to a MM bank
 File: H_FCP_DHS_3016.xls
 Author: S. Manganelli



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry B2_Phys_Bank DEEGG160		AND=ZAZAB999
		Verify Telemetry PWR_Sts_BankB3 DEECN160		AND=ZAZAB999
		Verify Telemetry B3_Phys_Bank DEEHG160		AND=ZAZAB999
3		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: 4
		Verify Telemetry TC_8-4-2-3_x DEE0J161	= FALSE	AND=ZAD22999
		Verify Telemetry TC_8-4-2-4_x DEE0K161	= FALSE	AND=ZAD22999
		Verify Telemetry TC_8-4-2-5_x DEE0L161	= FALSE	AND=ZAD22999
		Verify Telemetry TC_8-4-2-6_x DEE0M161	= FALSE	AND=ZAD22999
4		Set the parameters and send TC(8,4,2,4) to map MM banks		Next Step: 5
		<p>In the TC(8,4,2,4) it is necessary to set the following parameters:</p> <ul style="list-style-type: none"> - Mass Memory <ul style="list-style-type: none"> 0 = Mass Memory A 1 = Mass Memory B - Position of the bank 0 - Position of the bank 1 - Position of the bank 2 - Position of the bank 3 <p>For each bank:</p> <ul style="list-style-type: none"> 0 = Position 0, address 0-1 Gbyte 1 = Position 1, address 1-2 Gbyte 2 = Position 2, address 2-3 Gbyte 3 = Position 3 address 3-4 Gbyte 		

Map a MM ID to a MM bank
 File: H_FCP_DHS_3016.xls
 Author: S. Manganelli



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand MapMassMem Command Parameter(s) : EQU DH025160 BNK0 DH026160 BNK1 DH027160 BNK2 DH028160 BNK3 DH029160 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Map Mass Memory	DC804160 MM POS0 POS1 POS2 POS3	
5		Acquire new MM A/B banks mapping		Next Step: 6
		Verify Telemetry A0_Phys_Bank DEEE1160		AND=ZAZAB999
		Verify Telemetry A1_Phys_Bank DEEF1160		AND=ZAZAB999
		Verify Telemetry A2_Phys_Bank DEEG1160		AND=ZAZAB999
		Verify Telemetry A3_Phys_Bank DEEH1160		AND=ZAZAB999
		Verify Telemetry B0_Phys_Bank DEEEG160		AND=ZAZAB999
		Verify Telemetry B1_Phys_Bank DEEFG160		AND=ZAZAB999
		Verify Telemetry B2_Phys_Bank DEEGG160		AND=ZAZAB999
		Verify Telemetry B3_Phys_Bank DEEHG160		AND=ZAZAB999
6		Call procedure to disable the generation of Diagnostic packet BSW3 (HKID 98)		Next Step: END
		Execute procedure H_FCP_DHS_3033.		
End of Procedure				