

Load OBSW image  
 File: H\_FCP\_HIF\_CLOM.xls  
 Author: R. Biggins



## Procedure Summary

### Objectives

The objective of this procedure is to load a new, complete OBSW image on the ICU  
 - Load new OBSW  
 - Check Program Memory  
 - Copy OBSW from PM to DM-low

Based on procedure:  
 HIFI\_Load\_OBSW (v3)

### Summary of Constraints

**This procedure is not version dependent**

**The Bus profile should be HIFI Prime (for the EEPROM dump only)**

### Spacecraft Configuration

**Start of Procedure**

HIFI in STANDBY I mode  
 Bus profile should be HIFI Prime

**End of Procedure**

HIFI in STANDBY I mode

### Reference File(s)

**Input Command Sequences**

**Output Command Sequences**

### Referenced Displays

**ANDs**      **GRDs**      **SLDs**  
 ZAZ9C999

### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
15/01/2008		1	Created	R. Biggins	
29/02/2008		2	Update due to testing against MOC Simulator and comments by D. Teyssier: - Telecommand flags updated - Editorial updates	R. Biggins	
06/03/2008		3	Update due to comments from D. Teyssier: - Memory check parameters corrected for v5.4.0 - Updated OBS procedure reference	R. Biggins	
06/06/2008	1	4	Updates due to SVT-1 testing: - Check memory TC parameters changed to formal parameters - Comments added to become less version-specific - Flags updated	R. Biggins	

Status : Version 6 - Updated  
 Last Checkin: 15/06/2009

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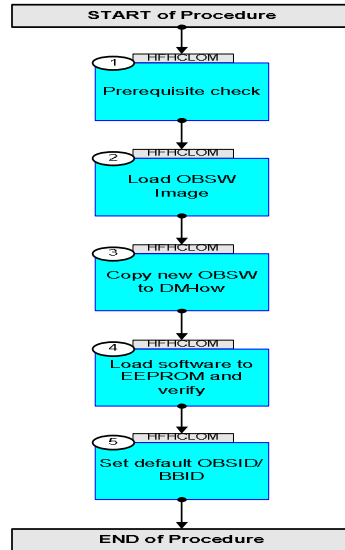


			Validation : Updates due to SVT-2/SOVT-2 testing <input type="checkbox"/> - Procedure updated to be compatible with software version 6.1.1 <input type="checkbox"/> <input type="checkbox"/>		
04/03/2009	2.1	4.01	- Summary updated	R. Biggins	
09/06/2009		5	- Update to make procedure version independent	R. Biggins	
15/06/2009	2.5	6	Update to disable HK collection from sub-units during the copy of memory from Hi to Low	R. Biggins	
10/02/2011	3.1	6.01	Validation : Comments updated for ICU software version 6.5.2	R. Biggins	

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## Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
<p><i>TC Seq. Name : HFHCLOM (Load OBSW image)</i></p> <p><i>TimeTag Type: N</i>  <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		□
		Verify that the HSC has supplied a valid OBSID value		
		OBS_ID = 0xnnnn nnnn		
		Verify that the correct information has been supplied by the ICC:		
		Software Image (verify with OBSM engineer) Software Version/Revision/Patch number (step 3)		
		Verify that HIFI have supplied the following formal parameters (values are given for version 6.5.2):		
		START_1 = 3FFFF <hex> END_1 = 400FE <hex> CRC_1 = 1BF1 <hex>  START_2 = 43FFF <hex> END_2 = 4557C <hex> CRC_2 = 7C28 <hex>  START_3 = 455FF <hex> END_3 = 58E14 <hex> CRC_3 = 357E <hex>		
2		Load OBSW Image		Next Step: 3
	ET=+ UT=+00.00.01	HIFI_Set_OBS_ID  Command Parameter(s) : HIFI_BB_ID          HP001197 HIFI_OBS_ID          HP000197  TC Control Flags :  GBM IL DSE --Y -- --  Subsch. ID : 70 Det. descr. : Set Observation-ID and Building-Block-ID	HIFI_Set_OBS_ID HC014289  1EF70001 <hex> OBS_ID	
		Verify Telemetry	BB_ID_per_hk                  HM004190 = 1EF70001 <hex>	AND=ZAZ9C999



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	HIFI_check_PM_memory  <b>HIFI_check_PM_memory</b>  Command Parameter(s) : HIF_check_start           HP231197 HIF_check_end            HP232197 HIF_check_crc            HP233197  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 70 Det. descr. : Compares checksum of specified PM memory with specified value	HC169289  START_3 END_3 CRC_3	
		A <b>TM(5,4)</b> packet will be produced only if the check fails, otherwise there is no response expected from HIFI.		
3		Copy new OBSW to DM-low		Next Step: 4
	ET=+ UT=+00.00.00	Execute Telecommand  <b>HIFI_notify_PDU_status</b>  Command Parameter(s) : HIF_FCU_S                HP006197 HIF_LCU_S                HP007197 HIF_WBSV_S               HP009197 HIF_WBSH_S               HP008197 HIF_HRSV_S               HP011197 HIF_HRSH_S               HP010197  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 70  Det. descr. : Notifies the power status of the subssystems to the OBS	HC015289  OFF (Def) OFF (Def) OFF (Def) OFF (Def) OFF (Def) OFF (Def)	
	ET=+ UT=+00.00.03	HIFI_copy_mem_to_low  <b>HIFI_copy_mem_to_low</b>  Command Parameter(s) : OBS_destination        HP447197 OBS_copy_length        HP448197  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 70 Det. descr. : Copy OBS-image to low-part of the memory and start it	HC171289  3FFFF <hex> (Def) 20000 <hex> (Def)	
		Verify Telemetry  HI_SW_Version            HM010190	Version	AND=ZAZ9C999
		Verify Telemetry  HI_SW_Revision           HM011190	Revision	AND=ZAZ9C999



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.15	Execute Telecommand  <b>HIFI_dump_memory</b>  Command Parameter(s) : OBS_mem_id            HP002197 OBS_mem_start        HP003197 OBS_mem_length       HP004197  Subsch. ID : 70 Det. descr. : Dumps part of any memory (LCU-ICU ICU-PRAM, ICU-DRAM)	HC004289  PM (Def) 20000 <hex> FFFF <hex>	
	ET=+ UT=+00.00.15	Execute Telecommand  <b>HIFI_dump_memory</b>  Command Parameter(s) : OBS_mem_id            HP002197 OBS_mem_start        HP003197 OBS_mem_length       HP004197  Subsch. ID : 70 Det. descr. : Dumps part of any memory (LCU-ICU ICU-PRAM, ICU-DRAM)	HC004289  PM (Def) 30000 <hex> FFFF <hex>	
5		Set default OBSID/BBID		Next Step: END
	ET=+ UT=+00.00.01	HIFI_Set_OBS_ID  <b>HIFI_Set_OBS_ID</b>  Command Parameter(s) : HIFI_BB_ID            HP001197 HIFI_OBS_ID           HP000197  TC Control Flags : GBM IL DSE --Y -- ---  Subsch. ID : 70 Det. descr. : Set Observation-ID and Building-Block-ID	HC014289  0 <hex> (Def) 0 <hex> (Def)	
		Verify Telemetry  BB_ID_per_hk            HM004190	= 0 <hex>	AND=ZAZ9C999
		Verify Telemetry  OBS_ID_per_hk           HM003190	= 0 <hex>	AND=ZAZ9C999
<b>End of Procedure</b>				