

Set OBCP parameters  
File: H\_FCP\_DHS\_3044.xls  
Author: S. Manganelli



## Procedure Summary

### Objectives

The ASW function "OBCP Management" is responsible of executing the loaded Procedures.

This procedure describes the steps needed to change the parameters values for an active, stopped or suspended OBCP.

### Summary of Constraints

Default status of the function: "Stopped".

When the function is stopped, it does not accept any other telecommands than the:

- Start Function TC(8,1,107);
- Report Function Status TC(8,5,107).

Thus, if the function is stopped this procedure cannot be executed.

### 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

HFD3044A  
HFD3044B

### Referenced Displays

ANDs	GRDs	SLDs
ZAZAI999		(None)
ZAZ4U999		

### Configuration Control Information

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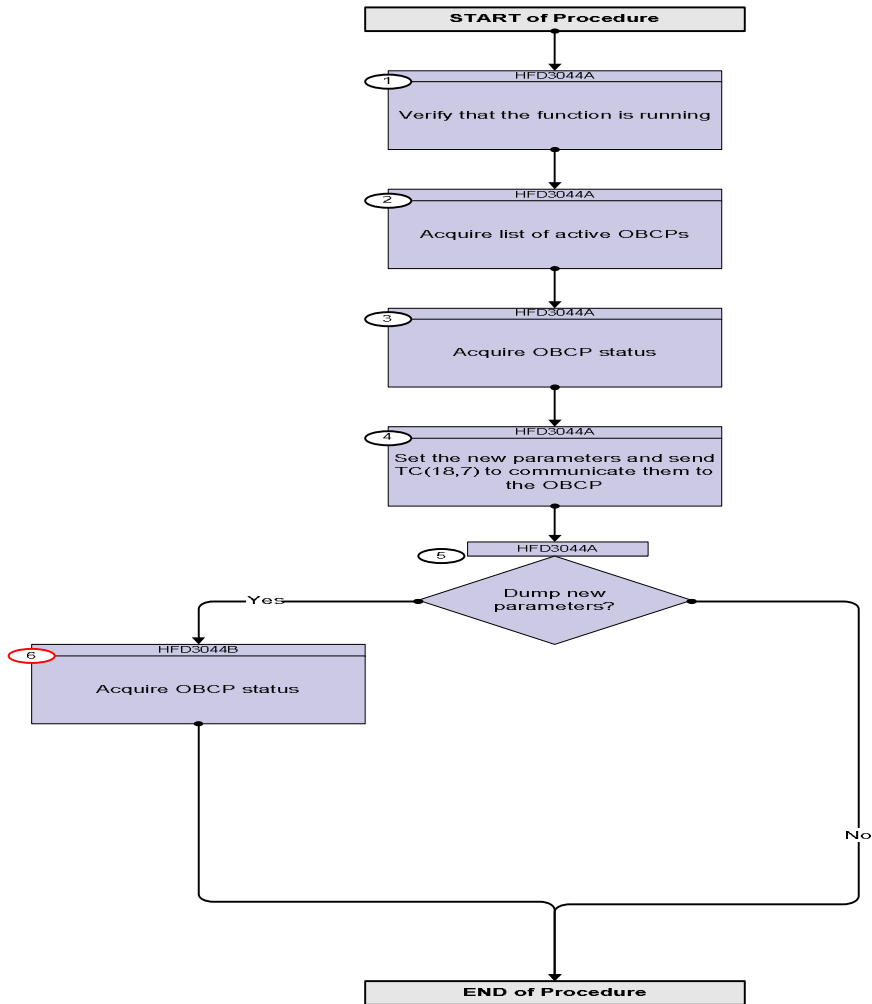


DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
05/11/07		1	Created	cmevi-hp	
10/06/08		2	TC Flag and Seq Properly changed	S. Manganelli	
03/07/08	1	3	1 added step 2 and sub-steps to acquire the list of active OBCPs, in line with TAS-F comment in HSVT1p2 Acceptance Matrix 080701 2. added step 3 and sub-steps to acquire OBCP status, in line with TAS-F comment in HSVT1p2 Acceptance Matrix 080701	Istefanov-hp	
01/12/08	2	4	Procedure updated according to latest version received from industry on 24/10/2008	cmevi-hp	
15/03/09	2.2	5	Fixed MOIS FP bug	S. Manganelli	

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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>				
TC Seq. Name :HFD3044A (Change OBCP paramete)  TimeTag Type: N Sub Schedule ID:  <input type="checkbox"/>				
1		Verify that the function is running		Next Step: 2
		Verify Telemetry  <div style="text-align: center;">ObcpSts                      DEH36170</div>	= Running	AND=ZAZAI999
2		Acquire list of active OBCPs		Next Step: 3
2.1		Send TC(18,10) to acquire the list of active OBCPs		<input type="checkbox"/>
		Execute Telecommand  <div style="text-align: center;">ReptActiveObcps</div> TC Control Flags :  <div style="text-align: center;">GBM IL DSE --Y -- ---</div> Subsch. ID : 10 Det. descr. : TEMPLATE Report list of Active OBCPs TC(18,10)	DCT77170	
		<b>Note:</b> Following successful execution of TC(18,10), a report Type (18,11) is generated.		
2.2		Verify that TM(18,11) has been received		<input type="checkbox"/>
		<b>Note:</b> This Packet lists all the OBCPs which have been started, i.e. a TC(18,3) has been sent and are not currently suspended, though their execution might not have yet started as only 16 OBCPs can run in parallel.  In other words the packet lists all the <b>procedures</b> which are <b>not stopped or suspended</b> .		
		Verify Packet Reception <div style="text-align: center;">TM 18-9 List of on-board Procedures</div> Packet Details:  <div style="text-align: right;">             APID: 16              Type: 18              Subtype: 9              PI1:              PI2:           </div>	OnBrdObcpLst	
		Verify Telemetry  <div style="text-align: center;">N_Repetition                      DE014170</div>	= N	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<b>The following parameter is repeated N times</b>		
		Verify Telemetry <b>ProcedureID</b> <b>DE293170</b>		AND=ZAZ4U999
3		Acquire OBCP status		Next Step: 4
		<b>Check if selected OBCP is active or suspended</b>		
3.1		Send TC(18,12) to acquire the OBCP status and the last uploaded parameter values		<input type="checkbox"/>
		Execute Telecommand <b>ReptObcpStatus</b>  Command Parameter(s) : <b>ObcpId</b> <b>DH135170</b>  TC Control Flags : <b>GBM IL DSE</b> <b>--Y -- ---</b>  Subsch. ID : 10 Det. descr. : TEMPLATE Report OBCP Status and Parameters TC(18,12)	<b>DCT78170</b>  <b>OBCPID</b>	
		<b>Note:</b> Following successful execution of TC(18,12), a report Type (18,13) is generated.		
3.2		Verify that TM(18,13) has been received		<input type="checkbox"/>
		Verify Packet Reception <b>TM 18-13 OBCP Status Report</b> Packet Details: <b>APID: 16</b> <b>Type: 18</b> <b>Subtype: 13</b> <b>PI1:</b> <b>PI2:</b>	<b>ObcpStsRpt</b>	
3.2.1		Check: - OBCP status		<input type="checkbox"/>
		Verify Telemetry <b>ProcedureID</b> <b>DE293170</b>		AND=ZAZ4U999
		Verify Telemetry <b>OBCPStatus</b> <b>DEZA8170</b>		(None)
		Verify Telemetry <b>StepID</b> <b>DEZA9170</b>		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
3.2.2		Check: - 32 bit parameters last uploaded values		<input type="checkbox"/>
		Verify Telemetry N_Repetition DE014170	= N	(None)
		Note: N can take values from 0 to 38		
		<b>The following parameters are repeated N times</b>		
		Verify Telemetry ObcpPid DE296170		AND=ZAZ4U999
		Verify Telemetry ObcpPidVal32 DE312170		(None)
3.2.3		Check: - 64 bit parameters last uploaded values		<input type="checkbox"/>
		Verify Telemetry N64 DER1E170	= N	(None)
		Note: N can take values from 0 to 23		
		<b>The following parameters are repeated N times</b>		
		Verify Telemetry ObcpPid DE296170		AND=ZAZ4U999
		Verify Telemetry ObcpPidVal64 DER1D170		(None)
4		Set the new parameters and send TC(18,7) to communicate them to the OBCP		Next Step: 5
		<b>When this request is received, new parameter values are handed over to the OBCP, which replace previous or default values of parameters. The status of the OBCP is unchanged.</b>		
		<b><u>WARNING: the following TC is a variable length TC which does not allow the definition of a generic procedure. The following is therefore only an example.</u></b>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>In the TC(18,7) it is necessary to set the following parameters:</p> <p><b>Procedure-ID:</b> the unique identification of the On-Board Control Procedure that is stored.</p> <p><b>N1:</b> the number of couplets of OBCP parameter identifiers (OBCP-PID) and 32-bit long OBCP parameter values which follow (maximum value 38). If N1 = zero, no 32-bit long OBCP parameter is sent together with the Start-Telecommand.</p> <p><b>Repeated N1 time:</b>  <b>OBCP-PID:</b> the identification of the parameter whose value follows.  <b>Value:</b> the 32 bits value of the corresponding parameter</p>		
		<p><b>N2:</b> the number of couplets of OBCP parameter identifiers (OBCP-PID) and 64-bit long OBCP parameter values which follow (maximum value 23). If N2=0, no 64-bit long OBCP parameter is sent together with the Start-Telecommand.</p> <p><b>Repeated N2 time:</b>  <b>OBCP-PID:</b> the identification of the parameter whose value follows.  <b>Value:</b> the 64 bits value of the corresponding parameter</p>		
		<b>WARNING: the following TC is intended to be just an example.</b>		
		<pre> Execute Telecommand                                 CommObcParam                                 DCT75170  Command Parameter(s) :       ObcPid           DH135170    OBCPID       NParam32         DH138170    1 &lt;dec&gt; (Def)       ObcPid           DH139170    OBCP 32 bits       ParamValSignInt DH140170    parameter ID       NParam64         DH142170    32 bits parameter       ObcPid           DH139170    value       Param64Val       DH143170    1 &lt;dec&gt; (Def)                                 OBCP 64 bits                                 parameter ID                                 64 bits parameter                                 value TC Control Flags :                                 GBM IL DSE                                 --Y -- ---           </pre>		
		<pre> Subsch. ID : 10 Det. descr. : TEMPLATE Communicate Parameters to OBCP TC(18,7) This Telecommand will not be included in the export           </pre>		
5		Dump new parameters?		Next Step: Yes 6 No END

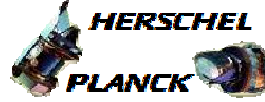
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<p>TC Seq. Name :HFD3044B (Report OBCP paramete)</p> <p>TimeTag Type: N            Sub Schedule ID:</p> <p>□</p>				
6		Acquire OBCP status		Next Step: END
6.1		Send TC(18,12) to acquire the OBCP status and the last uploaded parameter values		□
		Execute Telecommand <p style="text-align: right;"><b>ReptObcpStatus</b></p> Command Parameter(s) : <p style="text-align: right;"><b>ObcpId                    DH135170</b></p> TC Control Flags : <p style="text-align: right;"><b>GBM IL DSE</b>  <b>--Y -- ---</b></p> Subsch. ID : 10 Det. descr. : TEMPLATE Report OBCP Status and Parameters TC(18,12)	DCT78170  OBCPID	
		<b>Note:</b> Following successful execution of TC(18,12), a report Type (18,13) is generated.		
6.2		Verify that TM(18,13) has been received		□
		Verify Packet Reception <p style="text-align: right;"><b>TM 18-13 OBCP Status Report</b></p> Packet Details: <p style="text-align: right;"><b>APID:                    16</b>  <b>Type:                    18</b>  <b>Subtype:                13</b>  <b>PI1:</b>  <b>PI2:</b></p>	ObcpStsRpt	
6.2.1		Check: - OBCP status		□
		Verify Telemetry <p style="text-align: right;"><b>ProcedureID            DE293170</b></p>		AND=ZAZ4U999
		Verify Telemetry <p style="text-align: right;"><b>OBCPStatus            DEZA8170</b></p>		(None)
		Verify Telemetry <p style="text-align: right;"><b>StepID                    DEZA9170</b></p>		(None)



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6.2.2		Check: - 32 bit parameters last uploaded values		<input type="checkbox"/>
		Verify Telemetry N_Repetition DE014170	= N	(None)
		Note: N can take values from 0 to 38		
		<b>The following parameters are repeated N times</b>		
		Verify Telemetry ObcpPid DE296170		AND=ZAZ4U999
		Verify Telemetry ObcpPidVal32 DE312170		(None)
6.2.3		Check: - 64 bit parameters last uploaded values		<input type="checkbox"/>
		Verify Telemetry N64 DER1E170	= N	(None)
		Note: N can take values from 0 to 23		
		<b>The following parameters are repeated N times</b>		
		Verify Telemetry ObcpPid DE296170		AND=ZAZ4U999
		Verify Telemetry ObcpPidVal64 DER1D170		(None)
<b>End of Procedure</b>				