

Disable CUA/B monit #1 (512s) packets  
File: H\_LEO\_CCU\_MON1.xls  
Author: E. Picallo



## Procedure Summary

### Objectives

The objective of this procedure is to Disable periodic CCU packets with period 512s (CCUA/B monit #1)after the launch

### Summary of Constraints

The data contained in the CCU A &B is needed every 8 sec at launch for valves status verification as well as for decontamination.

The corresponding data rate is 2x257 bps, which is compatible with current link budget in LEOP and commissioning.

The recommendation is to keep the CCU monitoring at 8 s with diagnostic packets CCU A Monit #2 and CCU B Monit #2 after the launch until the cryostat status has been verified (valve configuration and PPS start-up) or until the end of the decontamination.

For launch, it is foreseen to set the monitoring at 8 sec with CCU A/B Monit#2 packets. However, the enabling of CCU A/B Monit#1 (512 s) packets is included in the separation sequence.

To avoid the duplication of packets disable the CCU A/B Monit#1 packets after the launch.

### Spacecraft Configuration

#### Start of Procedure

CDMU in default configuration  
Periodic packets CCUA/B monit#1 are enabled.  
Diagnostic packets CCUA/B monit#2 are enabled.

#### End of Procedure

CDMU in default configuration  
Diagnostic packets CCUA/B monit#2 are enabled.

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

HLKMON1

### Referenced Displays

ANDs      GRDs      SLDs

### Configuration Control Information

Status : Version 2 - Unchanged  
Last Checkin: 18/03/09

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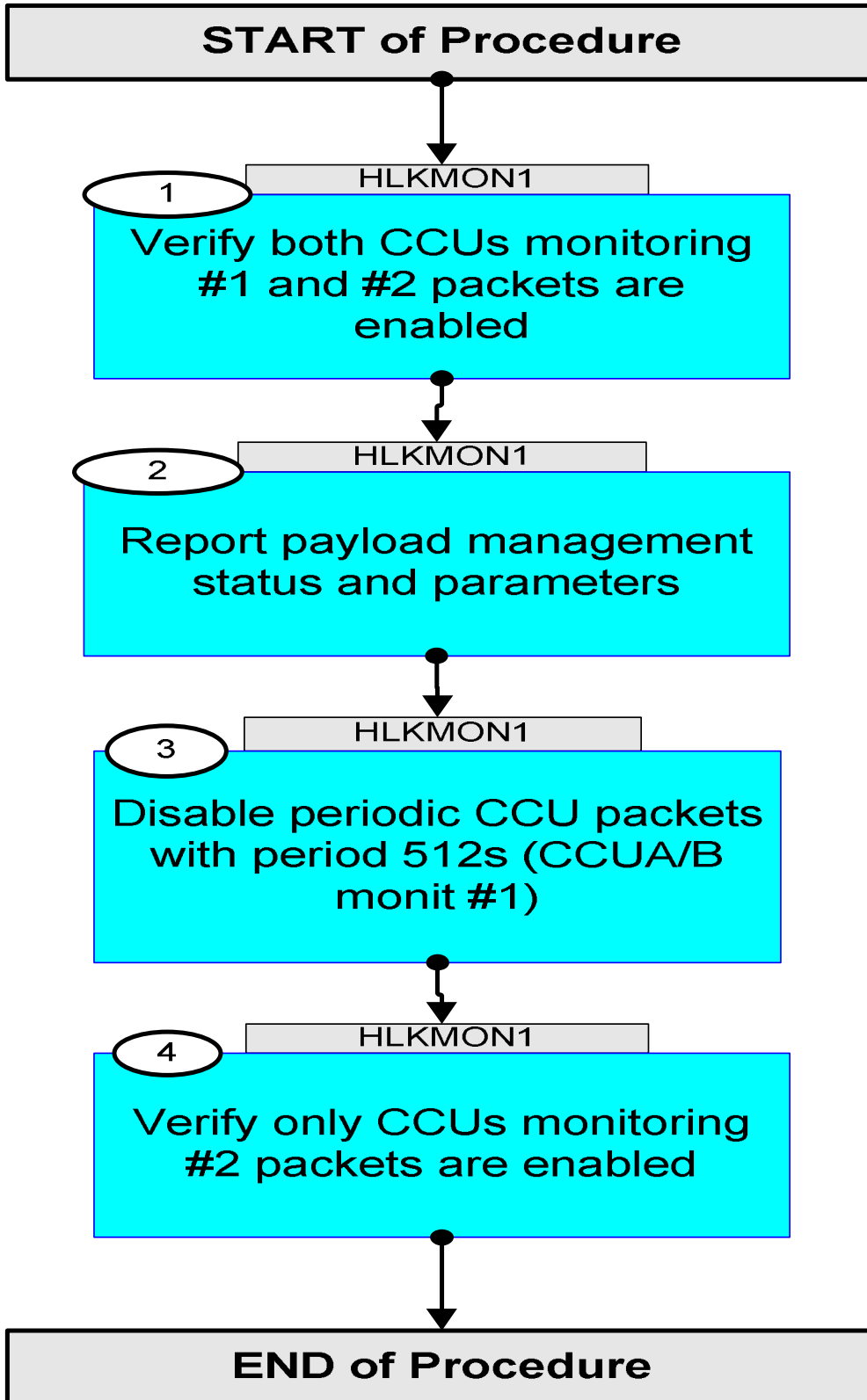
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DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
13/02/09	2.1	1	Created	E. Picallo	
18/03/09	2.2	2	Alignment with database related to CDMU ASW 3.8.2	E. Picallo	

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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 :HLKMON1 (CCU Disable mon#1pkt)</i>            Disable periodic CCU packets with period 512s (CCUA/B monit #1)</p> <p><i>TimeTag Type: N</i>  <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
1		Verify both CCUs monitoring #1 and #2 packets are enabled		Next Step: 2
		<b>Acquire the list of the current enabled TM packets and verify:</b>  - Periodic packets CUA/B monit#1 are enabled: <b>CCUA monit#1 -&gt; type=3, subtype=25, packet-ID=68</b> <b>CCUB monit#1 -&gt; type=3, subtype=25, packet-ID=71</b>  - Diagnostic packets CUA/B monit#2 are enabled: <b>CCUA monit#2 -&gt; type=3, subtype=26, packet-ID=102</b> <b>CCUB monit#2 -&gt; type=3, subtype=26, packet-ID=104</b>		
1.1		Send TC(14,3) to acquire the list of the current enabled TM packets		□
		<b>When this request is received, the enabled telemetry source packet of the CDMU are determined and a report (14,4) is generated</b>		
		Execute Telecommand <div style="text-align: right;"><b>ReportEnabledTm</b></div> <i>TC Control Flags :</i> <div style="text-align: right;">GBM IL DSE --Y -- --</div> <i>Subsch. ID : 10</i> <i>Det. descr. : Report Enabled Telemetry Packets</i>	DC904180	
1.2		Verify that TM(14,4) has been received		□
		Verify Packet Reception <div style="text-align: right;"><b>TM Packet Generation Status Report</b></div> <i>Packet Details:</i> <div style="text-align: right;"> <b>APID: 16</b>  <b>Type: 14</b>  <b>Subtype: 4</b>  <b>PI1:</b>  <b>PI2:</b> </div>	TMpktGenRep	
		Verify Packet Telemetry <div style="text-align: right;"><b>N DE140180</b></div>		
		Verify Packet Telemetry <div style="text-align: right;"><b>Type DE141180</b></div>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry Sub-Type DE142180		
		Verify Packet Telemetry Packet-ID DE143180		
2		Report payload management status and parameters		Next Step: 3
		<b>Verify the CCU A/B Monitoring Status and current period is 8 sec</b>		
		Execute Procedure: H_FCP_CCU_REPO Payload management status Report		
3		Disable periodic CCU packets with period 512s (CCUA/B monit #1)		Next Step: 4
		<b>Disable and CCU_A monit#1 (HK ID = 68 SID = 0x2618)</b> <b>Disable and CCU_B monit#1 (HK ID = 71 SID = 0x2AAA)</b>		
		Execute Telecommand DisableTmGen Command Parameter(s) : N DH017180 Sub-Type DH019180 Packet-ID DH020180 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Disable Generation of Telemetry Packets	DC902180 1 <dec> (Def) HK Report 68 <dec>	
		Execute Telecommand DisableTmGen Command Parameter(s) : N DH017180 Sub-Type DH019180 Packet-ID DH020180 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : Disable Generation of Telemetry Packets	DC902180 1 <dec> (Def) HK Report 71 <dec>	
4		Verify only CCUs monitoring #2 packets are enabled		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<b>Acquire the list of the current enabled TM packets and verify that onlt the Diagnostic packets CUA/B monit#2 are enabled:</b>  <b>CCUA monit#2 -&gt; type=3, subtype=26, packet-ID=102</b> <b>CCUB monit#2 -&gt; type=3, subtype=26, packet-ID=104</b>		
4.1		Send TC(14,3) to acquire the list of the current enabled TM packets		<input type="checkbox"/>
		<b>When this request is received, the enabled telemetry source packet of the CDMU are determined and a report (14,4) is generated</b>		
		Execute Telecommand <div style="text-align: right;"><b>ReportEnabledTm</b></div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : Report Enabled Telemetry Packets	DC904180	
4.2		Verify that TM(14,4) has been received		<input type="checkbox"/>
		Verify Packet Reception <div style="text-align: right;"><b>TM Packet Generation Status Report</b></div> Packet Details: <div style="text-align: right;">             APID: 16              Type: 14              Subtype: 4              PI1:              PI2:           </div>	TMpktGenRep	
		Verify Packet Telemetry <div style="text-align: right;"><b>N</b></div> <div style="text-align: right;"><b>DE140180</b></div>		
		Verify Packet Telemetry <div style="text-align: right;"><b>Type</b></div> <div style="text-align: right;"><b>DE141180</b></div>		
		Verify Packet Telemetry <div style="text-align: right;"><b>Sub-Type</b></div> <div style="text-align: right;"><b>DE142180</b></div>		
		Verify Packet Telemetry <div style="text-align: right;"><b>Packet-ID</b></div> <div style="text-align: right;"><b>DE143180</b></div>		
<b>End of Procedure</b>				

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HERSCHEL - CDMS HK PACKETS											
Packet Type	HK Identifier	SID	Packet Name	Number of DIDs	Timing (µs)	Size (bits)	Header + SID + CRC (bits)	Total size (bits)	Period (s)	bps	bps including the correction factor in the frame (1115/1099)
<b>Essential</b>	HK ID = 0	0x0000	High Rate	222	2974	2848	160	3008	4	752	762
	HK ID = 8	0x1000	Low Rate	180	2324	3120	160	3280	64	51	51
<b>Periodic</b>	HK ID = 64	0x2000	P1	64	823	1344	160	1504	1	1504	1525
	HK ID = 65	0x2186	P4	63	903	720	160	880	4	220	223
	HK ID = 66	0x230C	P64	51	777	1232	160	1392	64	21	21
	HK ID = 68	0x2518	CCUA Monit #1	118	1413	1872	160	2032	512	3	3
	HK ID = 71	0x2AAA	CCU B Monit #1	118	1413	1872	160	2032	512	3	3
<b>Diagnostic</b>	HK ID = 96	0x5000	BSW 1	43	473	848	160	1008	8	126	127
	HK ID = 97	0x5186	BSW 2	36	396	896	160	1056	8	132	133
	HK ID = 98	0x530C	BSW 3	35	385	720	160	880	8	110	111
	HK ID = 99	0x5492	ASW	54	486	1728	160	1888	64	29	29
	HK ID = 100	0x5618	TCS	147	3234	2352	160	2512	64	39	39
	HK ID = 101	0x579E	CCUA DLDM	61	729	960	160	1120	1	1120	1136
	HK ID = 102	0x5924	CCUA Monit #2	118	1413	1872	160	2032	8	254	257
	HK ID = 103	0x5AAA	CCU B DLDM	61	729	960	160	1120	1	1120	1136
HK ID = 104	0x5C30	CCU B Monit #2	118	1413	1872	160	2032	8	254	257	

Doc No. : PT-HMOC-OPS-FOP-6001-OPS-OAH  
Fop Issue : 3.0  
Issue Date: 13/04/10

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Status : Version 2 - Unchanged  
Last Checkin: 18/03/09