

Switchover from chain 1 to 2
File: H_COP_TTC_T12.xls
Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps needed to perform a switchover from TTC chain 1 to chain 2.

Summary of Constraints

TTC units are managed through ASW TCs with function ID equal to 115, thus the status of the ASW function "TTC Management" has to be "running".

Note that:

- the value of the TM modulation index is always 1.2;
- the Coherent mode and Ranging modulator are set OFF because these parameters have to be commanded ON after confirmation of onboard lock;
- the value of the Output power level is always - 4dBm;
- the External reference and Internal bit pattern generator are always OFF.

The transponder needs a maximum warm-up of 20 minutes.

Before switching OFF the branch 1, through physical command, it is necessary to disable all EAT (Event-Action Table) entries.

Before switching ON the branch 2 through physical command it is necessary to mark as nominal, in the UIU table

When the branch 2 has been switched ON it is necessary to reenale the entries in the EAT.

It is recommended to command ON the coherent and ranging mode parameters by Ground only after confirmation of onboard lock.

The procedure is now including a preliminary check on XPND2 RT behaviour before proceeding with the TTC chain s/o.

Moreover the procedure is addressing as well the updated TTC configuration keeping XPND1 LCL ON and disabling EAT entry relevant to XPND1 RT Invalid.

Spacecraft Configuration

Start of Procedure

CDMU in default configuration.
Downlink active via TX1 and TWT1.
XPND1 LCL ON, XPND1 R/T declared ON & VALID on SDB
XPND2 LCL ON, XPND2 R/T declared OFF & INVALID on SDB
Rx1 TC rate = 4 Kbps, Rx2 TC rate = 125 bps
Chain 1 marked as "nominal" in UIU table.
Chain 2 marked as "redundant" in UIU table.

End of Procedure

CDMU in default configuration.
Downlink active via TX2 and TWT2.
XPND1 LCL ON, XPND1 R/T declared OFF & INVALID on SDB
XPND2 LCL ON, XPND2 R/T declared ON & VALID on SDB
Rx2 TC rate = 4 Kbps, Rx1 TC rate = 125 bps
Chain 1 marked as "redundant" in UIU table.
Chain 2 marked as "nominal" in UIU table.

Reference File(s)

Input Command Sequences

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Output Command Sequences

HCRT12I
 HCRT123
 HCRT12F

Referenced Displays

ANDs **GRDs** **SLDs**
 WALC1584
 ZAZ7I999
 ZAZ39999
 ZAZ7N999
 ZAD1L999
 ZAZ7J999
 ZAZ7M999
 (None)

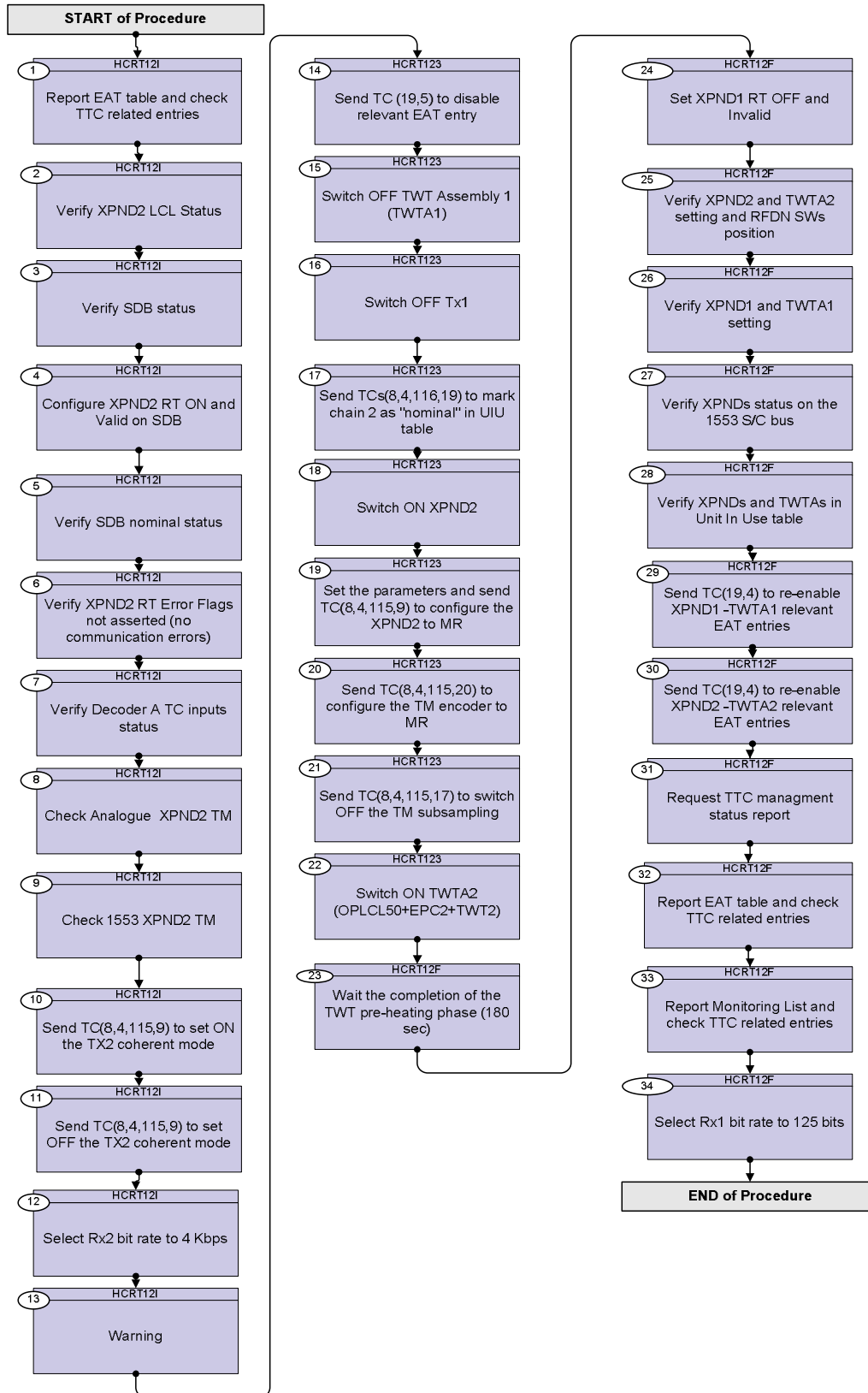
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
30/07/08		1	Created	E. Picallo	
30/07/08		2	Insert wait time before XPND configuration	E. Picallo	
31/07/08	1	3	Disable TTC EAT entries at the start and re-enable at the end deleted	E. Picallo	
06/01/09	2	4	TC DCT18170 Configure Xpnd mask update	E. Picallo	
14/03/09	2.2	5	Include encoder configuration and XPND bit rate configuration for LR1, LR2 and MBR Disable/re-enable EAT entries related to TTC added	E. Picallo	
07/04/09	2.3	6	Start config: Rx1 TC rate = 4 Kbps, Rx2 TC rate = 125 bps End config: Rx2 TC rate = 4 Kbps, Rx1 TC rate = 125 bps	E. Picallo	
15/06/09		7	Preliminary check on XPND2 RT behaviour before proceeding with the TTC chain s/o. Updated TTC configuration keeping XPND1 LCL ON and disabling EAT entry relevant to XPND1 RT Invalid.	E. Picallo	
17/06/09		7.01	Validation : Expected value of XPND1_TX1_SUP_V corrected	E. Picallo	
17/06/09		8	TC DC22F170 (TtcConfTmEnclnUseMedium) set to manual dispatch	E. Picallo	
26/06/09	2.5	8.01	Validation : TM TC1 Decoder status set to Active (Step #7) TM X2 TcBitRateTCB set to HIGH (Step #25.5)	E. Picallo	

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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 : HCRT12I (Switch TTC 1to2 Init) Switchover from chain 1 to 2 Init TimeTag Type: B Sub Schedule ID: <input type="checkbox"/>				
1		Report EAT table and check TTC related entries		Next Step: 2
		Execute Telecommand <div style="text-align: right;">ReptEvtActTable</div> TC Control Flags : <div style="text-align: right;">GBM IL DSE --Y -- --</div> Subsch. ID : 10 Det. descr. : TEMPLATE Report The contents of the event/action table TC(19,6)	DCT86170	
		Check that the following EAT entries are enabled: EventID Event Description 0x00A0 XPND1_NOT_VIT_RT_INV 0x9218 EPC1_HelixCur_OutHi_Lim 0x9219 EPC2_HelixCur_OutHi_Lim 0x9228 EPC1_HelixCur_OutLo_Lim 0x9229 EPC2_HelixCur_OutLo_Lim 0x921A XPND1 RX Failure 0x921B XPND2 RX Failure		
		0x9200 RFDNSW1_Not_In_PosB_Fail 0x9201 RFDNSW1_Not_In_PosA_Fail 0x9202 RFDNSW2_Not_In_PosB_Fail 0x9203 RFDNSW2_Not_In_PosA_Fail 0x9204 RFDNSW3_Not_In_PosB_Fail 0x9205 RFDNSW3_Not_In_PosA_Fail 0x9206 RFDNSW4_Not_In_PosB_Fail 0x9207 RFDNSW4_Not_In_PosA_Fail		
		Check that the following EAT entries is disabled: EventID Event Description 0x00A1 XPND2_NOT_VIT_RT_INV		
2		Verify XPND2 LCL Status		Next Step: 3
		Verify Telemetry <div style="text-align: right;">Xpnd2Tx_L16_S WM92C565</div>	= ON	AND=WALC1584
		Verify Telemetry <div style="text-align: right;">Xpnd2Tx_L16_I WM908565</div>	>= 0.30 A <= 0.40 A	AND=ZAZ7I999
3		Verify SDB status		Next Step: 4

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		Verify Telemetry Active_Bus_A_B DEFJ1160	= BUS_A	AND=ZAZ39999
		Verify Telemetry BusA_HealthySts DEFJ2160	= Healthy	AND=ZAZ39999
		Verify Telemetry BusB_HealthySts DEFJ3160	= Healthy	AND=ZAZ39999
		Verify Telemetry SDB_FDIR DEFJ4160	= ENABLED	AND=ZAZ39999
4		Configure XPND2 RT ON and Valid on SDB		Next Step: 5
4.1		Set XPND2 RT ON and Valid		<input type="checkbox"/>
		Execute Telecommand ConfigureSDBFDIR DC005161 Command Parameter(s) :		
		RTA DH011161 XPND 2		
		M0 DH030161 Update status		
		M1 DH031161 Ignore Flag		
		M2 DH032161 Ignore Flag		
		M3 DH033161 Ignore Flag		
		M4 DH034161 Update status		
		M5 DH035161 Ignore Flag		
		M6 DH036161 Ignore Flag		
		M7 DH037161 Ignore Flag		
		F0 DH018161 ON		
		F1 DH019161 Alive		
		F2 DH020161 Well TC		
		F3 DH021161 Well TM		
		F4 DH022161 Valid		
		F5 DH023161 Non-vital		
		F6 DH024161 NOMINAL		
		F7 DH025161 ON		
		M12 DH051161 Ignore Flag		
		M_C DH043161 Ignore CNT		
		M8 DH038161 Ignore Flag		
		M9 DH039161 Ignore Flag		
		M10 DH040161 Ignore Flag		
		M11 DH041161 Ignore Flag		
		F12 DH050161 ENABLED		
		CNT DH042161 LoopCnt1		
		F8 DH026161 Bus A		
		F9 DH027161 Healthy		
		F10 DH028161 Healthy		
		F11 DH029161 ENABLED		
		TC Control Flags :		
		GBM IL DSE		
		--Y -- ---		
		Subsch. ID : 10		
		Det. descr. : Configure SDB FDIR		

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4.2		Verify XPND2 status on the 1553 S/C bus		<input type="checkbox"/>
		Verify Telemetry XPND2On_Off DEFD1160	= ON	AND=ZAZ7I999
		Verify Telemetry XPND2Val_Inval DEFD5160	= Valid	AND=ZAZ7I999
5		Verify SDB nominal status		Next Step: 6
		Verify Telemetry Active_Bus_A_B DEFJ1160	= BUS_A	AND=ZAZ39999
		Verify Telemetry BusA_HealthySts DEFJ2160	= Healthy	AND=ZAZ39999
		Verify Telemetry BusB_HealthySts DEFJ3160	= Healthy	AND=ZAZ39999
6		Verify XPND2 RT Error Flags not asserted (no communication errors)		Next Step: 7
6.1		Verify XPND2 Response Status Word		<input type="checkbox"/>
		<p>The XPND RT reports the following error flags in the Response Status Words via 1553 bus:</p> <ul style="list-style-type: none"> - RT message error bit: set by the RT upon detection of an error in the message or an illegal message identification. - RT busy bit: indicates that the RT or subsystem is unable to move data to or from the subsystem in compliance with the BC command. - RT terminal flag bit: indicates a RT fault condition. <p>These RT error bits are not supported by DLL FDIR mechanisms. Thus, if a permanent error is reported on one of these bits, this could indicate a failure in the XPND.</p> <p>Note: The XPND assert the subsystem error flag while TM acquisitions are being performed.</p>		
		<p>The following DIDs are available for XPND2:</p> <p>DID_XPND_2_SA11_RSP_STS_WORD DID_XPND_2_SA30_RSP_STS_WORD</p>		

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		<p>The value of the error bits is kept in all the above mentioned DIDs. In case of <u>permanent failures</u> this means that, for example, if DID_XPND_2_SA11_RSP_STS_WORD is indicating a RT message error condition, the same error will be reported in all the other DIDs for response status words.</p> <p>Then, it is enough to check only one of these Status Words. The parameters below correspond to: DID_XPND_2_SA11_RSP_STS_WORD</p>		
		Verify XPND2 RT message error bit status Telemetry MsgErr DEYT2161	= 0 <dec>	AND=ZAZ7N999
		Verify XPND2 RT busy bit status Telemetry Busy DEYT6161	= 0 <dec>	AND=ZAZ7N999
		Verify XPND2 RT subsystem error flag status Telemetry SubSys DEYT7161	= 1 <dec>	AND=ZAZ7N999
		Verify XPND2 RT terminal flag bit status Telemetry Term DEYT9161	= 0 <dec>	AND=ZAZ7N999
6.2		Verify XPND2 Local message Status Word		□
		Local message Status Word (MSW)		
		Verify Loopback command sync error Telemetry LoopCmdSync DE4YA161	= 0 <dec>	AND=ZAD1L999
		Verify Loopback data sync error Telemetry LoopDatSync DE4YB161	= 0 <dec>	AND=ZAD1L999
		Verify Loopback manchester error Telemetry LoopManch DE4YC161	= 0 <dec>	AND=ZAD1L999
		Verify Loopback parity error Telemetry LoopPar DE4YD161	= 0 <dec>	AND=ZAD1L999
		Verify Loopback word count error Telemetry LoopWdCnt DE4YE161	= 0 <dec>	AND=ZAD1L999
		Verify response 1 expected Telemetry Rsp1Expd DE4YF161	= 1 <dec>	AND=ZAD1L999
		Local message Status Word (LSW)		
		Verify Response 1 status sync error Telemetry Rsp1StsSync DE4YG161	= 0 <dec>	AND=ZAD1L999
		Verify Response 1 data sync error Telemetry Rsp1DatSync DE4YH161	= 0 <dec>	AND=ZAD1L999
		Verify Response 1 Manchester error Telemetry Rsp1Manch DE4YJ161	= 0 <dec>	AND=ZAD1L999
		Verify Response 1 parity error Telemetry Rsp1Par DE4YK161	= 0 <dec>	AND=ZAD1L999

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		Verify Response 1 word count error Telemetry Rsp1WdCnt DE4YL161	= 0 <dec>	AND=ZAD1L999
		Verify Response 1 store Data word Telemetry Rsp1Words DE4YM161	= 4 <dec>	AND=ZAD1L999
		Verify Response 2 expected Telemetry Rsp2Expd DE4YN161	= 0 <dec>	AND=ZAD1L999
		Verify Response 2 status sync error Telemetry Rsp2StsSync DE4YP161	= 0 <dec>	AND=ZAD1L999
		Verify Response 2 Manchester error Telemetry Rsp2Manch DE4YR161	= 0 <dec>	AND=ZAD1L999
		Verify Response 2 parity error Telemetry Rsp2Par DE4YS161	= 0 <dec>	AND=ZAD1L999
		Verify Response 2 word count error Telemetry Rsp2WdCnt DE4YT161	= 0 <dec>	AND=ZAD1L999
7		Verify Decoder A TC inputs status		Next Step: 8
		Verify TC0 Status Decoder A Telemetry TC0_Status_A DEEP7160	= Active	(None)
		Verify TC1 Status Decoder A Telemetry TC1_Status_A DEEP6160	= Active	(None)
		<p>The TC Active status TM provides the information that the following conditions are meet:</p> <ul style="list-style-type: none"> - Rx Demodulator locked on uplink carrier and - Rx Demodulator locked on uplink subcarrier <p>i.e. it is the logic AND of Carrier Lock Status and Squelch Status Telemetry</p> <p>Assuming U/L swept in wide range and modulated at 4kbps then Rx1 configured at 4 Kbps achieves bit-lock and Rx2 configured at 125 bps (multiple 4 kbps) achieves bit-lock as well.</p> <p>TC0_Status_A is Active (XPND1 Rx valid signal to Decoder A)</p> <p>TC1_Status_A is Active (XPND2 Rx valid signal to Decoder A)</p>		
8		Check Analogue XPND2 TM		Next Step: 9
		Verify RX AGC Level Telemetry XPD2_RX2_AGC_LV RMB10442	>= -140.0 dbmW	AND=ZAZ7I999
		Verify PLL Phase Error Telemetry XPD2_RX2_PLL_SP RMB12442	< 130.0 kHz > -130.0 kHz	AND=ZAZ7I999
		Verify RF Output Power Telemetry XPD2_RF2_OUT_PW RMB14442	< -13.0 dbmW	AND=ZAZ7I999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify RX TC rate Status Telemetry RX2 125-4K Stat RMB18442	= 125 bps	AND=ZAZ7I999
		Verify Transmitter temperature Telemetry TX2_TEMP RMB03442	> 20.0 degC	AND=ZAZ7I999
9		Check 1553 XPND2 TM		Next Step: 10
		Verify XPND2 status Telemetry X2 Status - XS RMB43442	= NoTmModeActive	AND=ZAZ7I999
		Verify Telemetry counter Telemetry X2 TLM counter RMB42442	= 80 <dec>	AND=ZAZ7I999
		Verify Low Rate-1 status Telemetry X2 LowRate-1 MD RMB51442	= OFF	AND=ZAZ7I999
		Verify Low Rate-2 status Telemetry X2 LowRate-2 MD RMB52442	= OFF	AND=ZAZ7I999
		Verify Medium Rate Modulator status Telemetry X2 MedRate-MRM RMB50442	= ON	AND=ZAZ7I999
		Verify High Rate status Telemetry X2 HIRateMD-HRM RMB49442	= OFF	AND=ZAZ7I999
		Verify Ranging Modulator status Telemetry X2 Rang MD - RM RMB48442	= OFF	AND=ZAZ7I999
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442	= OFF	AND=ZAZ7I999
		Verify RNG Modulation Index Telemetry X2 RNGMD ID-RMI RMB53442	= 0.6 rad	AND=ZAZ7I999
		Verify TM Modulation Index Telemetry X2 TM MD ID-TMI RMB54442	= 1.2 rad	AND=ZAZ7I999
		Verify Output Power Level Setting Telemetry X2 OutPowLevSet RMB56442	= -4 dbmW	AND=ZAZ7I999
		Verify Internal Bit Pattern Generator Telemetry X2 IntBitPatGen RMB55442	= OFF	AND=ZAZ7I999
		Verify External Reference Telemetry X2 Ext Ref - ER RMB46442	= OFF	AND=ZAZ7I999
		Verify Receiver lock status Telemetry X2 Rx Lock - RL RMB45442	= No locked	AND=ZAZ7I999
		Verify RX AGC Level Telemetry X2 AGC TMUpInk RMB41442	= 32.5 dbmW	AND=ZAZ7I999
		Verify PLL Phase Error Telemetry X2 RX PLL PhErr RMB40442	= 440.0 kHz	AND=ZAZ7I999
		Verify Squelch Status Telemetry X2 SqlchSts-SS RMB44442	= ON	AND=ZAZ7I999

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		Verify Telemetry X2 TcBitRateTCB RMB62442	= Low	AND=ZAZ7I999																																																																																																																																														
		It is expected that the following XPND2 telemeries provided through 1553 bus are not reliable (value remain frozen): PLL Phase Error, RX AGC Level, TLM counter, XPND status, Squelsh status Rx lock status																																																																																																																																																
10		Send TC(8,4,115,9) to set ON the TX2 coherent mode		Next Step: 11																																																																																																																																														
		Execute Telecommand <p style="text-align: right;">XpndConfigure_Templ</p> <p>Command Parameter(s) :</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"></td> <td style="width: 20%; text-align: right;">XpndId</td> <td style="width: 20%; text-align: right;">DH018170</td> <td style="width: 20%; text-align: right;">XpndB</td> </tr> <tr> <td></td> <td style="text-align: right;">XpndConfMask1Unus</td> <td style="text-align: right;">DH220170</td> <td style="text-align: right;">11 <bin></td> </tr> <tr> <td></td> <td style="text-align: right;">XpndConfMask1_ER</td> <td style="text-align: right;">DH221170</td> <td style="text-align: right;">OFF (Def)</td> </tr> <tr> <td></td> <td style="text-align: right;">XpndConfMask1_CM</td> <td style="text-align: right;">DH222170</td> <td style="text-align: right;">ON</td> </tr> <tr> <td></td> <td style="text-align: right;">XpndConfMask1_RM</td> <td style="text-align: right;">DH223170</td> <td style="text-align: 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</tr> <tr> <td colspan="4"> </td> </tr> <tr> <td></td> <td colspan="2">Subsch. ID : 10</td> <td></td> </tr> <tr> <td></td> <td colspan="2">Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)</td> <td></td> </tr> </table>		XpndId	DH018170	XpndB		XpndConfMask1Unus	DH220170	11 <bin>		XpndConfMask1_ER	DH221170	OFF (Def)		XpndConfMask1_CM	DH222170	ON		XpndConfMask1_RM	DH223170	OFF (Def)		XpndConfMask1_HRM	DH224170	OFF (Def)		XpndConfMask1_MRM	DH225170	OFF (Def)		XpndConfMask1LRM1	DH226170	OFF (Def)		XpndConfMask1LRM2	DH227170	OFF (Def)		XpndConfMask1_RMI	DH228170	Ignore (Def)		XpndConfMask1_TMI	DH229170	Ignore (Def)						XpndConfMask2_PG	DH230170	OFF (Def)		XpndConfMask2Unus	DH231170	0 <dec> (Def)		XpndConfMask2OPLS	DH232170	Ignore (Def)		XpndConfDW1Unus	DH020170	0 <dec> (Def)		XpndConfDW1_ER	DH021170	OFF (Def)		XpndConfDW1_CM	DH022170	ON		XpndConfDW1_RM	DH023170	OFF (Def)		XpndConfDW1_HRM	DH024170	OFF (Def)		XpndConfDW1_MRM	DH025170	ON		XpndConfDW1LRM1	DH026170	OFF (Def)		XpndConfDW1LRM2	DH027170	OFF (Def)		XpndConfDW1_RMI	DH028170	0.6		XpndConfDW1_TMI	DH029170	1.2		XpndConfDW2_PG	DH030170	OFF (Def)		XpndConfDW2Unus	DH031170	0 <dec> (Def)						XpndConfDW2OPLS	DH032170	-4						TC Control Flags :					GBM IL DSE				--Y -- ---							Subsch. ID : 10				Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)		
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 || 10.1 | | Verify that the TX2 coherent mode has been activate | | □ |

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442	= ON	AND=ZAZ7I999
11		Send TC(8,4,115,9) to set OFF the TX2 coherent mode		Next Step: 12
		Execute Telecommand XpndConfigure_Templ Command Parameter(s) : XpndId DH018170 XpndB XpndConfMask1Unus DH220170 11 <bin> XpndConfMask1_ER DH221170 OFF (Def) XpndConfMask1_CM DH222170 ON XpndConfMask1_RM DH223170 OFF (Def) XpndConfMask1_HRM DH224170 OFF (Def) XpndConfMask1_MRM DH225170 OFF (Def) XpndConfMask1LRM1 DH226170 OFF (Def) XpndConfMask1LRM2 DH227170 OFF (Def) XpndConfMask1_RMI DH228170 Ignore (Def) XpndConfMask1_TMI DH229170 Ignore (Def) XpndConfMask2_PG DH230170 OFF (Def) XpndConfMask2Unus DH231170 0 <dec> (Def) XpndConfMask2OPLS DH232170 Ignore (Def) XpndConfDW1Unus DH020170 0 <dec> (Def) XpndConfDW1_ER DH021170 OFF (Def) XpndConfDW1_CM DH022170 OFF (Def) XpndConfDW1_RM DH023170 OFF (Def) XpndConfDW1_HRM DH024170 OFF (Def) XpndConfDW1_MRM DH025170 ON XpndConfDW1LRM1 DH026170 OFF (Def) XpndConfDW1LRM2 DH027170 OFF (Def) XpndConfDW1_RMI DH028170 0.6 XpndConfDW1_TMI DH029170 1.2 XpndConfDW2_PG DH030170 OFF (Def) XpndConfDW2Unus DH031170 0 <dec> (Def) XpndConfDW2OPLS DH032170 -4 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)	DCT18170	
11.1		Verify that the TX2 coherent mode has been deactivate		☐
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442	= OFF	AND=ZAZ7I999
12		Select Rx2 bit rate to 4 Kbps		Next Step: 13

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Procedure: H_FCP_TTC_R2BR Select RX2 TC bit rate		
		Initial Rxs configuration is RX1 TC rate = 4 Kbps and RX2 TC rate= 125 bps. Before the TTC switch-over from chain 1 to chain 2 both RXs are set to 4 kbps TC rate.		
13		Warning		Next Step: 14
		In the next step the downlink is deactivated. Therefore no CLCW will be available to acknowledge the TCs Sent TCs time-tagged in order to avoid triggering the TC re-transmission.		
<p>TC Seq. Name :HCRT123 (Switch TTC 1to2 MBR) Switch TTC 1 to 2 Sun Acq otherwise at MBR</p> <p>TimeTag Type: B Sub Schedule ID: <input type="checkbox"/></p>				
14		Send TC (19,5) to disable relevant EAT entry		Next Step: 15
		When this request is received, the action-telecommand associated with the corresponding event shall be disabled. In the TC(19,5) it is necessary to set the following parameters: N, number of events to be disabled. APID, identifier of the Application Process generating this event report, in this case always equal to 16 (CDMU). Event ID, identifier of the event to be disabled, in this case equal to: 37400 & 37416 (TWTA1 failure), 37401 & 37417 (TWTA2 failure), 37402 (XPND1 RX failure), 37403 (XPND2 RX failure), 160 (XPND1 invalid RT), 161 (XPND2 invalid RT).		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+	Execute Telecommand DisableActions Command Parameter(s) : N_Repetition DH041170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170	DCT85170 8 <dec> CDMS (Def) 37400 <dec> CDMS (Def) 37401 <dec> CDMS (Def) 37402 <dec> CDMS (Def) 37403 <dec> CDMS (Def) 37416 <dec>	
		APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Disable Actions TC(19,5)	CDMS (Def) 37417 <dec> CDMS (Def) 160 <dec> CDMS (Def) 161 <dec>	
15		Switch OFF TWT Assembly 1 (TWTA1)		Next Step: 16
		The following command switches OFF the TWT1, the EPC1 and open the TWTA1 OP-LCL.		
	ET=+00.00.05 UT=+	Execute Telecommand TtcCommandTwtalOff TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Ttc Command TWTA 1 Off TC(8,4,115,1)	DC06E170	
16		Switch OFF Tx1		Next Step: 17
		The following command switches OFF the XPND1 TX RF part maintaining the TX1 configuration on the 1553 S/C bus ("ON" and "Valid") and keeping the XPND1 LCL closed.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET+=00.00.05 UT=+	Execute Telecommand TtcCommandTx1Off TC Control Flags : Subsch. ID : 10 Det. descr. : Ttc Command Tx 1 Off TC(8,4,115,1) GBM IL DSE --Y -- --	DC03E170	
17		Send TCs(8,4,116,19) to mark chain 2 as "nominal" in UIU table		Next Step: 18
		Select Nominal Unit telecommand is used for choosing the unit A (1) or unit B (2) of a redundant unit pair to be considered as the nominal unit. After the execution of this TC the other unit of the commanded unit pair is considered the redundant unit.		
	ET+=00.00.05 UT=+	Execute Telecommand SelNomUnitB_XpndRx TC Control Flags : Subsch. ID : 10 Det. descr. : Fdir Select Nominal Unit B XPND RX, TC(8,4,116,19) GBM IL DSE --Y -- --	DC71G170	
18		Switch ON XPND2		Next Step: 19
		Command XPND2 ON - TC(8,4,115,2) performs : Switch LCL16 (XPND2) ON Configure TX2 "ON" and "VALID" on the 1553 S/C bus Switch XPND TX2 ON		
	ET+=00.00.05 UT=+	Execute Telecommand TtcCommandXpnd2On TC Control Flags : Subsch. ID : 10 Det. descr. : Ttc Command Xpnd 2 On TC(8,4,115,2) GBM IL DSE --Y -- --	DCN84170	
19		Set the parameters and send TC(8,4,115,9) to configure the XPND2 to MR		Next Step: 20

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.30 UT=+	Execute Telecommand XpndConfigure_Templ Command Parameter(s) : XpndId DH018170 XpndB XpndConfMask1Unus DH220170 11 <bin> XpndConfMask1_ER DH221170 ON XpndConfMask1_CM DH222170 ON XpndConfMask1_RM DH223170 ON XpndConfMask1_HRM DH224170 ON XpndConfMask1_MRM DH225170 ON XpndConfMask1LRM1 DH226170 ON XpndConfMask1LRM2 DH227170 ON XpndConfMask1_RMI DH228170 Update XpndConfMask1_TMI DH229170 Update	DCT18170	
		XpndConfMask2_PG DH230170 ON XpndConfMask2Unus DH231170 1111111111 <bin> XpndConfMask2OPLS DH232170 Update XpndConfDW1Unus DH020170 0 <dec> (Def) XpndConfDW1_ER DH021170 OFF (Def) XpndConfDW1_CM DH022170 OFF (Def) XpndConfDW1_RM DH023170 OFF (Def) XpndConfDW1_HRM DH024170 OFF (Def) XpndConfDW1_MRM DH025170 ON XpndConfDW1LRM1 DH026170 OFF (Def) XpndConfDW1LRM2 DH027170 OFF (Def) XpndConfDW1_RMI DH028170 0.6 XpndConfDW1_TMI DH029170 1.2 XpndConfDW2_PG DH030170 OFF (Def) XpndConfDW2Unus DH031170 0 <dec> (Def)		
		XpndConfDW2OPLS DH032170 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)	-4	
20		Send TC(8,4,115,20) to configure the TM encoder to MR		Next Step: 21
	ET=+00.00.05 UT=+	Execute Telecommand TtcConfTmEncInUseMedium TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : TTC: Config TM Enc In Use Mode Medium 150 kbps, TC(8,4,115,20)	DC22F170	
21		Send TC(8,4,115,17) to switch OFF the TM subsampling		Next Step: 22

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET+=00.00.05 UT=+	Execute Telecommand TtcSwitchTmSubsAMPLoff <i>TC Control Flags :</i> Subsch. ID : 10 Det. descr. : TTC: Switch TM Subsampling Off TC(8,4,115,17) GBM IL DSE --Y -- --	DC03F170	
22		Switch ON TWTA2 (OPLCL50+EPC2+TWT2)		Next Step: 23
	ET+=00.00.05 UT=+	Execute Telecommand TtcCommandTwta2On <i>TC Control Flags :</i> Subsch. ID : 10 Det. descr. : Ttc Command TWTA 2 On TC(8,4,115,2) GBM IL DSE --Y -- --	DC17E170	
<p><i>TC Seq. Name : HCRT12F (Switch TTC 1to2Final)</i> Switchover from chain 1 to 2 of Chain ON Final</p> <p><i>TimeTag Type: N</i> <i>Sub Schedule ID:</i></p> <p>□</p>				
23		Wait the completion of the TWT pre-heating phase (180 sec)		Next Step: 24
24		Set XPND1 RT OFF and Invalid		Next Step: 25
		Execute Telecommand ConfiguresDBFDIR <i>Command Parameter(s) :</i> RTA DH011161 XPND 1 M0 DH030161 Update status M1 DH031161 Ignore Flag M2 DH032161 Ignore Flag M3 DH033161 Ignore Flag M4 DH034161 Update status M5 DH035161 Ignore Flag M6 DH036161 Ignore Flag M7 DH037161 Ignore Flag F0 DH018161 OFF F1 DH019161 Alive	DC005161	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		F2 DH020161 F3 DH021161 F4 DH022161 F5 DH023161 F6 DH024161 F7 DH025161 M12 DH051161 M_C DH043161 M8 DH038161 M9 DH039161 M10 DH040161 M11 DH041161 F12 DH050161 CNT DH042161 F8 DH026161 F9 DH027161 F10 DH028161 F11 DH029161 TC Control Flags : Subsch. ID : 10 Det. descr. : Configure SDB FDIR GBM IL DSE --Y -- ---	Well TC Well TM Invalid Non-vital NOMINAL ON Ignore Flag Ignore CNT Ignore Flag Ignore Flag Ignore Flag Ignore Flag Ignore Flag ENABLED LoopCnt1 Bus A Healthy Healthy ENABLED	
24.1		Verify XPND1 status on the 1553 S/C bus		<input type="checkbox"/>
		Verify Telemetry XPND1On_Off DEFCEG160	= OFF	AND=ZAZ7I999
		Verify Telemetry XPND1Val_Inval DEFCK160	= Invalid	AND=ZAZ7I999
25		Verify XPND2 and TWTA2 setting and RFDN SWS position		Next Step: 26
25.1		RX2 power line status verification		<input type="checkbox"/>
		Verify FCL4 (XPND2 Rx) voltage Telemetry Xpnd2_Rx_FCL4_V WM403565	>= 27.96 V <= 28.71 V	(None)
		Verify FCL4 (XPND2 Rx) current Telemetry Xpnd2_Rx_FCL4_I WM402565	>= 0.20 A <= 0.35 A	AND=ZAZ7I999
25.2		RX2 Analogue Telemetry verification		<input type="checkbox"/>
		Verify Receiver 2 bit rate Telemetry RX2 125-4K Stat RMB18442	= 4 Kbps	AND=ZAZ7I999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify RX2 AGC Level Telemetry XPD2_RX2_AGC_LV RMB10442	>= -141.0 dbmW	AND=ZAZ7I999
		Verify RX2 PLL SPE Telemetry XPD2_RX2_PLL_SP RMB12442	<= 130.0 kHz >= -130.0 kHz	AND=ZAZ7I999
		Verify RX2 Supply Voltage Telemetry XPND2_RX2_SUP_V RMB08442	>= 4.8 V <= 5.5 V	AND=ZAZ7I999
		Verify Rx2 temperature Telemetry RX2_TEMP RMB04442		AND=ZAZ7I999
25.3		TX2 power line status verification		☐
		Verify LCL16 (XPND2 Tx) voltage Telemetry Xpnd2Tx_L16_S WM92C565	= ON	AND=ZAZ7I999
		Verify LCL16 (XPND2 Tx) current Telemetry Xpnd2Tx_L16_I WM908565	>= 0.41 A <= 0.55 A	AND=ZAZ7I999
25.4		TX2 Analogue Telemetry verification		☐
		Verify TX2 Status Telemetry TX2 ON-OFF Stat RMB16442	= ON	AND=ZAZ7I999
		Verify RF2 Output Power Telemetry XPD2_RF2_OUT_PW RMB14442	<= -4.0 dbmW >= -4.8 dbmW	AND=ZAZ7I999
		Verify TX2 Supply Voltage Telemetry XPND2_TX2_SUP_V RMB06442	>= 6.0 V <= 6.9 V	AND=ZAZ7I999
		Verify TX2 Temperature Telemetry TX2_TEMP RMB03442		AND=ZAZ7I999
25.5		XPND2 1553 S/C bus TM verification		☐
		Verify XPND2 status Telemetry X2 Status - XS RMB43442	= NoTmModeActive	AND=ZAZ7I999
		Verify Low Rate-1 status Telemetry X2 LowRate-1 MD RMB51442	= OFF	AND=ZAZ7I999
		Verify Low Rate-2 status Telemetry X2 LowRate-2 MD RMB52442	= OFF	AND=ZAZ7I999
		Verify Medium Rate Modulator status Telemetry X2 MedRate-MRM RMB50442	= ON	AND=ZAZ7I999
		Verify High Rate status Telemetry X2 HIRateMD-HRM RMB49442	= OFF	AND=ZAZ7I999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Ranging Modulator status Telemetry X2 Rang MD - RM RMB48442	= OFF	AND=ZAZ7I999
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442	= OFF	AND=ZAZ7I999
		Verify Telemetry X2 RNGMD ID-RMI RMB53442	= 0.6 rad	AND=ZAZ7I999
		Verify Telemetry X2 TM MD ID-TMI RMB54442	= 1.2 rad	AND=ZAZ7I999
		Verify Telemetry X2 OutPowLevSet RMB56442	= -4 dbmW	AND=ZAZ7I999
		Verify Telemetry X2 IntBitPatGen RMB55442	= OFF	AND=ZAZ7I999
		Verify Telemetry X2 Ext Ref - ER RMB46442	= OFF	AND=ZAZ7I999
		Verify Receiver lock status Telemetry X2 Rx Lock - RL RMB45442	= No locked	AND=ZAZ7I999
		Verify RX AGC Level Telemetry X2 AGC TMUplnk RMB41442	= 32.5 dbmW	AND=ZAZ7I999
		Verify PLL Phase Error Telemetry X2 RX PLL PhErr RMB40442	= 440.0 kHz	AND=ZAZ7I999
		Verify Squelch Status Telemetry X2 SqlchSts-SS RMB44442	= ON	AND=ZAZ7I999
		Verify Telemetry X2 TcBitRateTCB RMB62442	= High	AND=ZAZ7I999
		It is expected that the following XPND2 telemeries provided through 1553 bus are not reliable (value remain frozen): PLL Phase Error, RX AGC Level, TLM counter, XPND status, Squelsh status Rx lock status		
25.6		Verify TM encoder TM bit rate		<input type="checkbox"/>
		Verify Telemetry TME_BITRATE DEMRF160	= 150 Kbps	AND=ZAZ7J999
25.7		Verify TWTA2 setting		<input type="checkbox"/>
		Verify OPLCL50 (TWTA 2) Status Telemetry TwtA_2_L50_1S WM92E565	= ON	AND=ZAZ7J999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Twta_2_L50_I WM910565	>= 2.2 A <= 2.8 A	AND=ZAZ7J999
		Verify EPC2 Status Telemetry EPC2_ONOFF_STS RMB07439	= ON	AND=ZAZ7J999
		Verify EPC2 Anode Voltage Telemetry EPC2_ANODE_VOLT RMB03439	<= 1058.0 V >= 998.0 V	AND=ZAZ7J999
		Verify EPC2 Helix current Telemetry EPC2_HELIX_CURR RMB04439	>= 0.46 mA <= 1.59 mA	AND=ZAZ7J999
		Verify EPC2 Automatic Restart Status Telemetry EPC2_AUT_RSTART RMB08439	= NOTACTIVE	AND=ZAZ7J999
		Verify EPC2 Temperature Telemetry EPC2_TEMP RMB12439		AND=ZAZ7J999
		Verify TWT2 Status Telemetry TWT2_ONOFF_STS RMB10439	= ON	AND=ZAZ7J999
25.8		RFDN SWS position verification		<input type="checkbox"/>
		Verify Telemetry RFDN SW1 Pos A RMB05436	= ON	AND=ZAZ7J999
		Verify Telemetry RFDN SW2 Pos B RMB10436	= ON	AND=ZAZ7J999
		Verify Telemetry RFDN SW3 Pos A RMB07436	= ON	AND=ZAZ7J999
		Verify Telemetry RFDN SW4 Pos B RMB12436	= ON	AND=ZAZ7J999
26		Verify XPND1 and TWT A1 setting		Next Step: 27
26.1		Rx1 power line status verification		<input type="checkbox"/>
		Verify FCL3 (XPND1 Rx) voltage Telemetry Xpnd1_Rx_FCL3_V WM703565	>= 27.96 V <= 28.71 V	
		Verify FCL3 (XPND1 Rx) current Telemetry Xpnd1_Rx_FCL3_I WM702565	>= 0.20 A <= 0.35 A	AND=ZAZ7I999
26.2		Rx1 Analogue Telemetry verification		<input type="checkbox"/>

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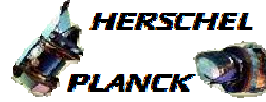
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify RX1 AGC Level Telemetry XPD1_RX1_AGC_LV RMB09442	>= -141.0 dbmW	AND=ZAZ7I999
		Verify RX1 PLL SPE Telemetry XPD1_RX1_PLL_SP RMB11442	<= 130.0 kHz >= -130.0 kHz	AND=ZAZ7I999
		Verify Receiver 1 bit rate Telemetry RX1 125-4K Stat RMB17442	= 4 Kbps	AND=ZAZ7I999
		Verify Rx1 Supply Voltage Telemetry XPND1_RX1_SUP_V RMB07442	>= 4.8 V <= 5.5 V	AND=ZAZ7I999
		Verify Rx1 temperature Telemetry RX1_TEMP RMB02442		AND=ZAZ7I999
26.3		TX1 power line status verification		<input type="checkbox"/>
		Verify LCL23 (XPND1 Tx) status Telemetry Xpnd1Tx_L23_S WM12D565	= ON	AND=ZAZ7I999
		Verify LCL23 (XPND1 Tx) current Telemetry Xpnd1Tx_L23_I WM109565	>= 0.3 A <= 0.4 A	AND=ZAZ7I999
26.4		TX1 Analogue Telemetry verification		<input type="checkbox"/>
		Verify Tx1 Status Telemetry TX1 ON-OFF Stat RMB15442	= OFF	AND=ZAZ7I999
		Verify RF1 Output Power Telemetry XPD1_RF1_OUT_PW RMB13442	<= -13.0 dbmW	AND=ZAZ7I999
		Verify Tx1 Supply Voltage Telemetry XPND1_TX1_SUP_V RMB05442	>= 6.0 V <= 6.9 V	AND=ZAZ7I999
		Verify Tx1 Temperature Telemetry TX1_TEMP RMB01442		AND=ZAZ7I999
26.5		TWTA1 Status verification		<input type="checkbox"/>
		Verify OPLCL49 (TWTA 1) Status Telemetry Twta_1_L49_1S WM22E565	= OFF	AND=ZAZ7J999
		Verify TWTA1 current Telemetry Twta_1_L49_I WM210565	> 0.0 A < 0.1 A	AND=ZAZ7J999
		Verify EPC1 Status Telemetry EPC1_ONOFF_STS RMB05439	= OFF	AND=ZAZ7J999
		Verify EPC1 Anode Voltage Telemetry EPC1_ANODE_VOLT RMB01439		AND=ZAZ7J999

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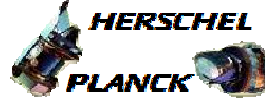
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify EPC1 Helix current Telemetry EPC1_HELIX_CURR RMB02439		AND=ZAZ7J999
		Verify EPC1 Automatic Restart Status Telemetry EPC1_AUT_RSTART RMB06439	= NOTACTIVE	AND=ZAZ7J999
		Verify EPC1 Temperature Telemetry EPC1_TEMP RMB11439		AND=ZAZ7J999
		Verify TWT1 Status Telemetry TWT1_ONOFF_STS RMB09439	= OFF	AND=ZAZ7J999
27		Verify XPNDs status on the 1553 S/C bus		Next Step: 28
		Verify Telemetry XPND1On_Off DEF0160	= OFF	AND=ZAZ7I999
		Verify Telemetry XPND1Val_Inval DEF0160	= Invalid	AND=ZAZ7I999
		Verify Telemetry XPND2On_Off DEF0160	= ON	AND=ZAZ7I999
		Verify Telemetry XPND2Val_Inval DEF05160	= Valid	AND=ZAZ7I999
28		Verify XPNDs and TWTAs in Unit In Use table		Next Step: 29
28.1		XPND2 UIU table status verification		□
		Verify Telemetry XpndRx2FuncSts DEL62170	= On	AND=ZAZ7M999
		Verify Telemetry XpndRx2Use DEL60170	= In_Use	AND=ZAZ7M999
		Verify Telemetry XpndRx2LogSts DEL61170	= Nominal	AND=ZAZ7M999
		Verify Telemetry XpndRx2FailSts DEL63170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry XpndTx2FuncSts DEL31170	= On	AND=ZAZ7M999
		Verify Telemetry XpndTx2Use DEL33170	= In_Use	AND=ZAZ7M999
		Verify Telemetry XpndTx2LogSts DEL32170	= Nominal	AND=ZAZ7M999
		Verify Telemetry XpndTx2FailSts DEL30170	= Not_Failed	AND=ZAZ7M999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
28.2		<i>TWTA2 UIU table status verification</i>		<input type="checkbox"/>
		Verify Telemetry Twta2FuncSts DEL23170	= On	AND=ZAZ7M999
		Verify Telemetry Twta2Use DEL25170	= In_Use	AND=ZAZ7M999
		Verify Telemetry Twta2LogSts DEL24170	= Nominal	AND=ZAZ7M999
		Verify Telemetry Twta2FailSts DEL22170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry Epc2FuncSts DEG29170	= On	AND=ZAZ7M999
		Verify Telemetry Epc2Use DEG31170	= In_Use	AND=ZAZ7M999
		Verify Telemetry Epc2LogSts DEG30170	= Nominal	AND=ZAZ7M999
		Verify Telemetry Epc2FailSts DEG28170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry TwtAmp2FuncSts DEH17170	= On	AND=ZAZ7M999
		Verify Telemetry TwtAmp2Use DEH19170	= In_Use	AND=ZAZ7M999
		Verify Telemetry TwtAmp2LogSts DEH18170	= Nominal	AND=ZAZ7M999
		Verify Telemetry TwtAmp2FailSts DEH16170	= Not_Failed	AND=ZAZ7M999
28.3		<i>XPND1 UIU table status verification</i>		<input type="checkbox"/>
		Verify Telemetry XpndRx1FuncSts DEL58170	= On	AND=ZAZ7M999
		Verify Telemetry XpndRx1Use DEL56170	= Not_In_Use	AND=ZAZ7M999
		Verify Telemetry XpndRx1LogSts DEL57170	= Redundant	AND=ZAZ7M999
		Verify Telemetry XpndRx1FailSts DEL59170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry XpndTx1FuncSts DEL27170	= Off	AND=ZAZ7M999
		Verify Telemetry XpndTx1Use DEL29170	= Not_In_Use	AND=ZAZ7M999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry XpndTx1LogSts DEL28170	= Redundant	AND=ZAZ7M999
		Verify Telemetry XpndTx1FailSts DEL26170	= Not_Failed	AND=ZAZ7M999
28.4		TWTA1 UIU table status verification		☐
		Verify Telemetry TwtalFuncSts DEL19170	= Off	AND=ZAZ7M999
		Verify Telemetry TwtalUse DEL21170	= Not_In_Use	AND=ZAZ7M999
		Verify Telemetry TwtalLogSts DEL20170	= Redundant	AND=ZAZ7M999
		Verify Telemetry TwtalFailSts DEL18170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry Epc1FuncSts DEG25170	= Off	AND=ZAZ7M999
		Verify Telemetry Epc1Use DEG27170	= Not_In_Use	AND=ZAZ7M999
		Verify Telemetry Epc1LogSts DEG26170	= Redundant	AND=ZAZ7M999
		Verify Telemetry Epc1FailSts DEG24170	= Not_Failed	AND=ZAZ7M999
		Verify Telemetry TwtAmplFuncSts DEH13170	= Off	AND=ZAZ7M999
		Verify Telemetry TwtAmplUse DEH15170	= Not_In_Use	AND=ZAZ7M999
		Verify Telemetry TwtAmplLogSts DEH14170	= Redundant	AND=ZAZ7M999
		Verify Telemetry TwtAmplFailSts DEH12170	= Not_Failed	AND=ZAZ7M999
29		Send TC(19,4) to re-enable XPND1 -TWTA1 relevant EAT entries		Next Step: 30

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																					
		<p>When this request is received, the action-telecommand associated with the corresponding event shall be enabled. In the TC(19,4) it is necessary to set the following parameters: N, number of events to be enabled APID, identifier of the Application Process generating this event report, in this case always equal to 16 (CDMU). Event ID, identifier of the event to be enabled, in this case equal to: 37400 & 37416 (TWTA1 failure), 37402 (XPND1 RX failure),</p> <p>Note that the event 160 (XPND1 invalid RT) is kept disabled.</p>																							
		<p>Execute Telecommand</p> <p style="text-align: right;">EnableActions</p> <p>Command Parameter(s) :</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">N_Repetition</td> <td style="width: 30%;">DH041170</td> <td style="width: 40%;">3 <dec></td> </tr> <tr> <td>APID_for_EAT_TC</td> <td>DH236170</td> <td>CDMS (Def)</td> </tr> <tr> <td>EventId</td> <td>DH146170</td> <td>37400 <dec></td> </tr> <tr> <td>APID_for_EAT_TC</td> <td>DH236170</td> <td>CDMS (Def)</td> </tr> <tr> <td>EventId</td> <td>DH146170</td> <td>37402 <dec></td> </tr> <tr> <td>APID_for_EAT_TC</td> <td>DH236170</td> <td>CDMS (Def)</td> </tr> <tr> <td>EventId</td> <td>DH146170</td> <td>37416 <dec></td> </tr> </table> <p>TC Control Flags :</p> <p style="text-align: right;">GBM IL DSE --Y -- ---</p>	N_Repetition	DH041170	3 <dec>	APID_for_EAT_TC	DH236170	CDMS (Def)	EventId	DH146170	37400 <dec>	APID_for_EAT_TC	DH236170	CDMS (Def)	EventId	DH146170	37402 <dec>	APID_for_EAT_TC	DH236170	CDMS (Def)	EventId	DH146170	37416 <dec>	DCT84170	
N_Repetition	DH041170	3 <dec>																							
APID_for_EAT_TC	DH236170	CDMS (Def)																							
EventId	DH146170	37400 <dec>																							
APID_for_EAT_TC	DH236170	CDMS (Def)																							
EventId	DH146170	37402 <dec>																							
APID_for_EAT_TC	DH236170	CDMS (Def)																							
EventId	DH146170	37416 <dec>																							
		<p>Subsch. ID : 10 Det. descr. : TEMPLATE Enable Actions TC(19,4)</p>																							
30		<p>Send TC(19,4) to re-enable XPND2 -TWTA2 relevant EAT entries</p>		Next Step: 31																					
		<p>When this request is received, the action-telecommand associated with the corresponding event shall be enabled. In the TC(19,4) it is necessary to set the following parameters: N, number of events to be enabled. APID, identifier of the Application Process generating this event report, in this case always equal to 16 (CDMU). Event ID, identifier of the event to be enabled, in this case equal to: 37401 & 37417 (TWTA2 failure), 37403 (XPND2 RX failure), 161 (XPND2 invalid RT).</p>																							

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: right;">EnableActions</p> Command Parameter(s) : N_Repetition DH041170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 APID_for_EAT_TC DH236170 EventId DH146170 TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 10 Det. descr. : TEMPLATE Enable Actions TC(19,4)	DCT84170 4 <dec> CDMS (Def) 37401 <dec> CDMS (Def) 37403 <dec> CDMS (Def) 37417 <dec> CDMS (Def) 161 <dec>	
31		Request TTC managment status report		Next Step: 32
		Execute Telecommand <p style="text-align: right;">TtcReportStatus</p> TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 10 Det. descr. : TTC: Report TTC Management Status TC(8,5,115)	DC30F170	
		Check that all the information of the TTC Management function is consistent		
32		Report EAT table and check TTC related entries		Next Step: 33
		Execute Telecommand <p style="text-align: right;">ReptEvtActTable</p> TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 10 Det. descr. : TEMPLATE Report The contents of the event/action table TC(19,6)	DCT86170	
		Check that the following EAT entries are enabled: EventID Event Description 0x00A1 XPND2_NOT_VIT_RT_INV 0x9218 EPC1_HelixCur_OutHi_Lim 0x9219 EPC2_HelixCur_OutHi_Lim 0x9228 EPC1_HelixCur_OutLo_Lim 0x9229 EPC2_HelixCur_OutLo_Lim 0x921A XPND1_RX Failure 0x921B XPND2_RX Failure		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
33		Report Monitoring List and check TTC related entries		Next Step: 34
		Execute Telecommand <p style="text-align: right;">ReportMonitList</p> TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- ---</p> Subsch. ID : 10 Det. descr. : TEMPLATE Report current monitoring list, TC(12,8) no appl. data	DC51F170	
		Verify that the TTC entries status are as follows Monitoring ID= 17,76,77 (TTC Chain 1) are disabled , and Monitoring ID= 18,96,97 (TTC Chain 2) are enabled where: MonID Parameter ID 17 XPND1_RX_Power: DID_ASW_CCC_RES_5:6 76 DID_EPC1_HELIX_CURRENT (4.25 mA Threshold) 77 DID_EPC1_HELIX_CURRENT (0.6 mA Threshold) 18 XPND2_RX_Power: DID_ASW_CCC_RES_5:7 96 DID_EPC2_HELIX_CURRENT (4.25 mA Threshold) 97 DID_EPC2_HELIX_CURRENT (0.6 mA Threshold)		
34		Select Rx1 bit rate to 125 bits		Next Step: END
		Execute Procedure: H_FCP_TTC_R1BR Select RX1 TC bit rate		
End of Procedure				