Switch to chain 1 after XPND1 or TWTA1 failure
File: H_CRP_TTC_T10R.xls
Author: E. Picallo

Procedure Summary

Objectives

This procedure describes the steps needed to switch ON the transmitter 1 and the travelling wave tube assembly 1 after an onboard TTC-S switchover.

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 on-board lock;
- the value of the Output power level is always - 4dBm;
- the External ref. and Internal bit pattern generator are always OFF.
It is highlighted that the transponder needs a maximum warm-up of 20 minutes.

Before switching ON the branch 1 through physical command it is necessary to mark OK (not failed) the relevant units in the UIU table.

When the branch 1 has been switched ON it is necessary to reenable the entries in the Event-Action Table (EAT) through TC(19,4), thus the status of the ASW function "Event/Action Management" has to be "running".

Spacecraft Configuration

Start of Procedure

CDMU in default configuration.
Downlink active via TX2 and TWTA2.
Chain 1 marked as "failed" in UIU table.

End of Procedure

CDMU in default configuration.
Downlink active via TX1 and TWTA1.

Reference File(s)

Input Command Sequences

Output Command Sequences

HRRT10R1
HRRT10R2
HRRT10R3
HRRT10RF

Referenced Displays

ANDs **GRDs** **SLDs**

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ZAZ7I999	(None)
ZAZ7J999	
ZAZ7N999	
ZAZ7M999	

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
15/07/08		1	Created	R. Miniscalco	
30/07/08	1	1.01	Validation : ANDs association corrected	E. Picallo	
01/12/08		2	TC DCT18170 Configure Xpnd mask □ Update UIU update for a single TTC unit□ Analog parameters expected values updated	E. Picallo	
09/01/09	2	3	CDMU ASW V3.8 and BSW V2.4 alignment	E. Picallo	
14/03/09	2.2	4	Include encoder configuration and XPND bit rate configuration for LR1, LR2 and MBR	E. Picallo	
25/09/09	2.5	5	TTC chain 1 health check added□ comment on TC XPND2 OFF leaves LCL16 ON□ TM check Xpnd2Tx_L16 status & Current and XPND2_TX2_SUP_V updated□ EAT entry ID 161 (XPND2 invalid RT) remains DISABLED.	E. Picallo	

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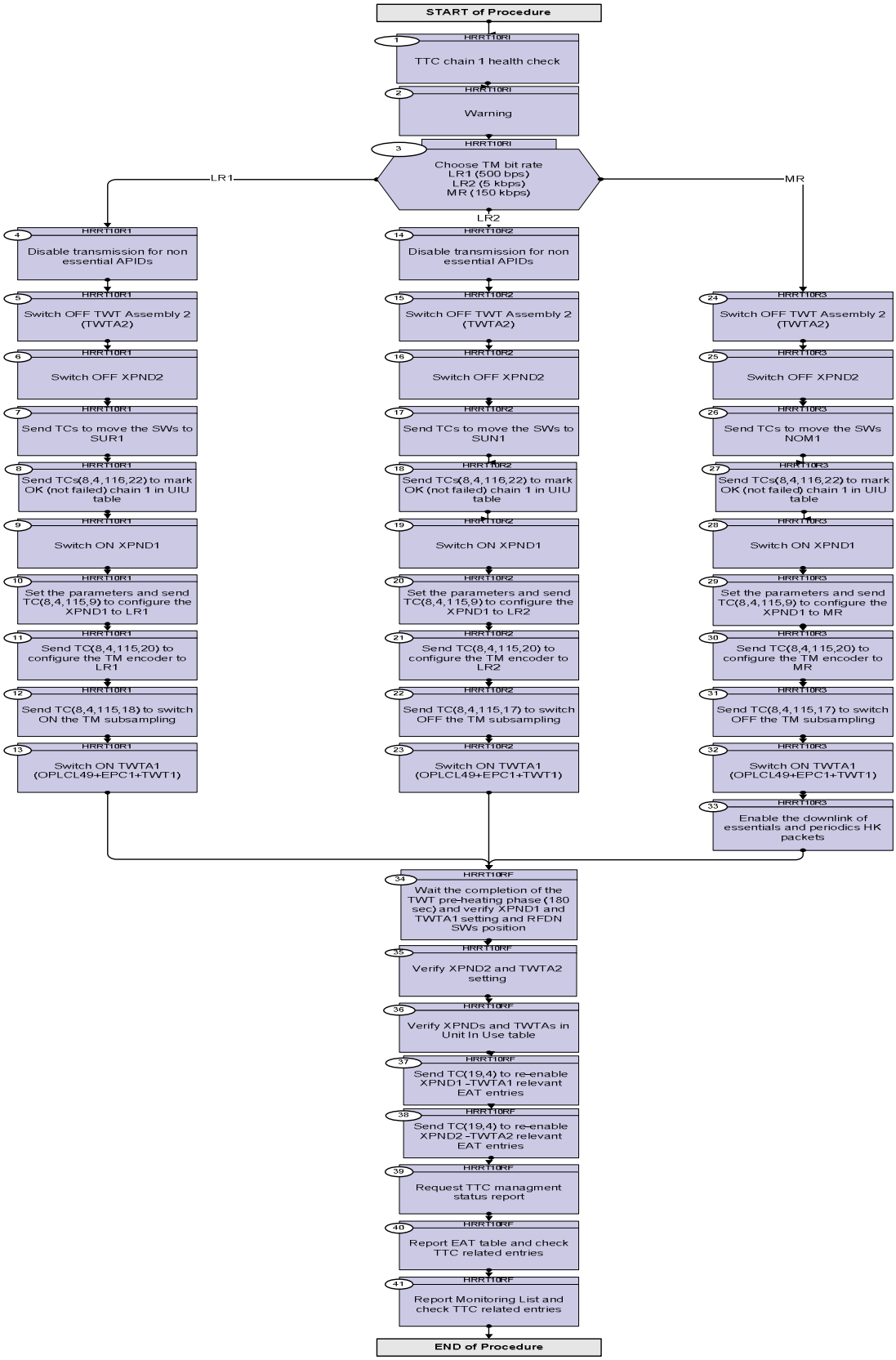
Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Beginning of Procedure		
		TC Seq. Name :HRRT10RI (Tx1+TWTA1ONfail Init) Switch to chain 1 after XPND1 or TWTA1 failure Initial *TimeTag Type: B* *Sub Schedule ID:*		
1		*TTC chain 1 health check*		Next Step: 2
		Call procedure H_CRP_TTC_T1HC (TTC chain 1 health check)		
2		*Warning*		Next Step: 3
		In the next step the downlink is deactived. Therefore no CLCW will be available to acknowledge the TCs **Send TCs time-tagged or switch to BD mode in order to avoid triggering the TC re-transmission.**		
3		*Choose TM bit rate* *LR1 (500 bps)* *LR2 (5 kbps)* *MR (150 kbps)*		Next Step: LR1 4 LR2 14 MR 24
		TC Seq. Name :HRRT10R1 (Tx1+TWTA1ON Fail LR1) Switch chain 1 after XPND1orTWTA1 fail Sun ater sep/Surv LR1 *TimeTag Type: B* *Sub Schedule ID:*		
4		*Disable transmission for non essential APIDs*		Next Step: 5
		Execute Procedure: **H_CRP_DHS_1001** **Disabling transmission for non essential APIDs.**		
5		*Switch OFF TWT Assembly 2 (TWTA2)*		Next Step: 6
		The following command switches OFF the TWT2, the EPC2 and open the TWTA2 OP-LCL.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta2Off** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 2 Off TC(8,4,115,1)	**DC07E170**	
6		*Switch OFF XPND2*		Next Step: 7
		The following command switches OFF the XPND2 TX, changes the configuration of the TX2 on the 1553 S/C bus (to "OFF" and "Invalid") though leaves the XPND2 LCL ON.		
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandXpnd2Off** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 2 Off TC(8,4,115,1)	**DCN81170**	
7		*Send TCs to move the SWs to SUR1*		Next Step: 8
		Launch/Sun acquisition after separation/Survival (SUR1) **RFDN SWs position BBBB** D/L path: TX1 - TWTA1 - LGA1 U/L path: LGA1 - RX1 (LGA2/3 – RX2)		
		Notice that at 500 bps another possible RFDN switches configuration would be Sun acquisition otherwise (SUN1) **RFDN SWs position BBAB** *D/L path:* TX1 - TWTA1 - LGA1 *U/L path:* LGA1 - RX1 *(MGA - RX2)* **In this case SW3_SW4 shall be commanded to Pos_B:** **TC DC58E170 (RfdnArmSW3_SW4LogB)** **TC DC78E170 (RfdnFireSW3_SW4_log_B)**		
		WARNING: if the commands are sent in real time, after the execution of the first pair of commands ("arm" and "fire") Ground station has to re-sweep the uplink to re-acquire the lock and sent the second pair of TCs.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW1_SW2_log_A** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm Command SW1/SW2 (logical) Position A TC(8,4,115,5)	**DC47E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW1_SW2_log_A** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW1/SW2 (logical) Position A TC(8,4,115,7)	**DC67E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW3_SW4_log_A** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm Command SW3/SW4 (logical) Position A TC(8,4,115,5)	**DC48E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW3_SW4_log_A** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW3/SW4 (logical) Position A TC(8,4,115,7)	**DC68E170**	
8		*Send TCs(8,4,116,22) to mark OK (not failed) chain 1 in UIU table*		Next Step: 9
		Mark Unit OK telecommand is used to modify the health status of a unit as OK. **Note that for XPND TX, XPND RX, TWT assembly, TWT amplifier, and EPC the Failed / Not Failed configuration status is common.**		
	ET=+00.00.05 UT=+	Execute Telecommand **MarkOKUnitA_XpndRx** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Fdir Mark OK Unit A XPND RX, TC(8,4,116,22)	**DCB0H170**	

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
9		*Switch ON XPND1*		Next Step: 10
		Command XPND1 ON - TC(8,4,115,2) performs : **Switch LCL23 (XPND1) ON** **Configure TX1 "ON" and "VALID" on the 1553 S/C bus** **Switch XPND TX1 ON**		
	ET=+00.00.30 UT=+	Execute Telecommand **TtcCommandXpnd1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 1 On TC(8,4,115,2)	**DCN83170**	
10		*Set the parameters and send TC(8,4,115,9) to configure the XPND1 to LR1*		Next Step: 11
	ET=+00.00.30 UT=+	Execute Telecommand **XpndConfigure_Templ** *Command Parameter(s) :*	**DCT18170**	
		XpndId **DH018170**	**XpndA** (Def)	
		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**	
		XpndConfMask2_PG **DH230170**	**ON**	
		XpndConfMask2Unus **DH231170**	**11111111111 <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**	**OFF** (Def)	
		XpndConfDW1LRM1 **DH026170**	**ON**	
		XpndConfDW1LRM2 **DH027170**	**OFF** (Def)	
		XpndConfDW1_RMI **DH028170**	**0.6**	
		XpndConfDW1_TMI **DH029170**	**1.2**	
		XpndConfDW2_PG **DH030170**	**OFF** (Def)	
		XpndConfDW2Unus **DH031170**	**0 <dec>** (Def)	

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		XpndConfDW2OPLS DH032170 *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)	**-4**	
11		*Send TC(8,4,115,20) to configure the TM encoder to LR1*		Next Step: 12
	ET=+00.00.05 UT=+	Execute Telecommand **TtcConfigTmEncInUseLow1** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : TTC: Config TM Enc In Use Mode Low 1,500 bps, TC(8,4,115,20)	**DC12F170**	
12		*Send TC(8,4,115,18) to switch ON the TM subsampling*		Next Step: 13
	ET=+00.00.05 UT=+	Execute Telecommand **TtcSwitchTmSubsamplOn** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TTC: Switch TM Subsampling On TC(8,4,115,18)	**DC04F170**	
13		*Switch ON TWTA1 (OPLCL49+EPC1+TWT1)*		Next Step: 34
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 1 On TC(8,4,115,2)	**DC16E170**	
		TC Seq. Name :HRRT10R2 (Tx1+TWTA1ON Fail LR2) Switch chain 1 after XPND1orTWTA1 Fail Sun acq. otherwise LR2 *TimeTag Type: B* *Sub Schedule ID:*		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
14		*Disable transmission for non essential APIDs*		Next Step: 15
		Execute Procedure: **H_CRP_DHS_1001** **Disabling transmission for non essential APIDs.**		
15		*Switch OFF TWT Assembly 2 (TWTA2)*		Next Step: 16
		The following command switches OFF the TWT2, the EPC2 and open the TWTA2 OP-LCL.		
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta2Off** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 2 Off TC(8,4,115,1)	**DC07E170**	
16		*Switch OFF XPND2*		Next Step: 17
		The following command switches OFF the XPND2 TX, changes the configuration of the TX2 on the 1553 S/C bus (to "OFF" and "Invalid") though leaves the XPND2 LCL ON.		
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandXpnd2Off** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 2 Off TC(8,4,115,1)	**DCN81170**	
17		*Send TCs to move the SWs to SUN1*		Next Step: 18
		Sun acquisition otherwise (SUN1) **RFDN SWs position BBAB** *D/L path:* TX1 - TWTA1 - LGA1 *U/L path:* LGA1 - RX1 *(MGA - RX2)*		
		WARNING: if the commands are sent in real time, after the execution of the first pair of commands ("arm" and "fire") Ground station has to re-sweep the uplink to re-acquire the lock and send the second pair of TCs.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW1_SW2_log_A** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm Command SW1/SW2 (logical) Position A TC(8,4,115,5)	**DC47E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW1_SW2_log_A** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW1/SW2 (logical) Position A TC(8,4,115,7)	**DC67E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW3_SW4LogB** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm SW3/SW4 (logical) Position B TC(8,4,115,6)	**DC58E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW3_SW4_log_B** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW3/SW4 (logical) Position B TC(8,4,115,8)	**DC78E170**	
18		*Send TCs(8,4,116,22) to mark OK (not failed) chain 1 in UIU table*		Next Step: 19
		Mark Unit OK telecommand is used to modify the health status of a unit as OK. **Note that for XPND TX, XPND RX, TWT assembly, TWT amplifier, and EPC the Failed / Not Failed configuration status is common.**		
	ET=+00.00.05 UT=+	Execute Telecommand **MarkOKUnitA_XpndRx** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Fdir Mark OK Unit A XPND RX, TC(8,4,116,22)	**DCB0H170**	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
19		*Switch ON XPND1*		Next Step: 20
		Command XPND1 ON - TC(8,4,115,2) performs : **Switch LCL23 (XPND1) ON** **Configure TX1 "ON" and "VALID" on the 1553 S/C bus** **Switch XPND TX1 ON**		
	ET=+00.00.30 UT=+	Execute Telecommand **TtcCommandXpnd1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 1 On TC(8,4,115,2)	**DCN83170**	
20		*Set the parameters and send TC(8,4,115,9) to configure the XPND1 to LR2*		Next Step: 21
	ET=+00.00.30 UT=+	Execute Telecommand **XpndConfigure_Templ** *Command Parameter(s) :* **XpndId DH018170** **XpndConfMask1Unus DH220170** **XpndConfMask1_ER DH221170** **XpndConfMask1_CM DH222170** **XpndConfMask1_RM DH223170** **XpndConfMask1_HRM DH224170** **XpndConfMask1_MRM DH225170** **XpndConfMask1LRM1 DH226170** **XpndConfMask1LRM2 DH227170** **XpndConfMask1_RMI DH228170** **XpndConfMask1_TMI DH229170** **XpndConfMask2_PG DH230170** **XpndConfMask2Unus DH231170** **XpndConfMask2OPLS DH232170** **XpndConfDW1Unus DH020170** **XpndConfDW1_ER DH021170** **XpndConfDW1_CM DH022170** **XpndConfDW1_RM DH023170** **XpndConfDW1_HRM DH024170** **XpndConfDW1_MRM DH025170** **XpndConfDW1LRM1 DH026170** **XpndConfDW1LRM2 DH027170** **XpndConfDW1_RMI DH028170** **XpndConfDW1_TMI DH029170** **XpndConfDW2_PG DH030170** **XpndConfDW2Unus DH031170**	**DCT18170** **XpndA** (Def) **11 <bin>** **ON** **ON** **ON** **ON** **ON** **ON** **ON** **Update** **Update** **ON** **11111111111 <bin>** **Update** **0 <dec>** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **ON** **0.6** **1.2** **OFF** (Def) **0 <dec>** (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		XpndConfDW2OPLS DH032170 *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)	**-4**	
21		*Send TC(8,4,115,20) to configure the TM encoder to LR2*		Next Step: 22
	ET=+00.00.05 UT=+	Execute Telecommand **TtcConfigTmEncInUseLow2** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : TTC: Config TM Enc In Use Mode Low 2 - 5kbps, TC(8,4,115,20)	**DC17F170**	
22		*Send TC(8,4,115,17) to switch OFF the TM subsampling*		Next Step: 23
	ET=+00.00.05 UT=+	Execute Telecommand **TtcSwitchTmSubsamplOff** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TTC: Switch TM Subsampling Off TC(8,4,115,17)	**DC03F170**	
23		*Switch ON TWTA1 (OPLCL49+EPC1+TWT1)*		Next Step: 34
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 1 On TC(8,4,115,2)	**DC16E170**	
		TC Seq. Name :HRRT10R3 (Tx1+TWTA1ON Fail MBR) Switch chain 1 after XPND1orTWTA1 fail Nominal/Earth acq. MBR *TimeTag Type: B* *Sub Schedule ID:*		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
24		*Switch OFF TWT Assembly 2 (TWTA2)*		Next Step: 25
		The following command switches OFF the TWT2, the EPC2 and open the TWTA2 OP-LCL.		
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta2Off** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 2 Off TC(8,4,115,1)	**DC07E170**	
25		*Switch OFF XPND2*		Next Step: 26
		The following command switches OFF the XPND2 TX, changes the configuration of the TX2 on the 1553 S/C bus (to "OFF" and "Invalid") though leaves the XPND2 LCL ON.		
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandXpnd2Off** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 2 Off TC(8,4,115,1)	**DCN81170**	
26		*Send TCs to move the SWs NOM1*		Next Step: 27
		Nominal/Earth acquisition (NOM1) **RFDN SWs position ABAB** D/L path: TX1 - TWTA1 - MGA U/L path: MGA - RX1 (LGA1 - RX2)		
		WARNING: if the commands are sent in real time, after the execution of the first pair of commands ("arm" and "fire") Ground station has to re-sweep the uplink to re-acquire the lock and sent the second pair of TCs.		
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW1_SW2LogB** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm SW1/SW2 (logical) Position B TC(8,4,115,6)	**DC57E170**	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW1_SW2_log_B** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW1/SW2 (logical) Position B TC(8,4,115,8)	**DC77E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnArmSW3_SW4LogB** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Arm SW3/SW4 (logical) Position B TC(8,4,115,6)	**DC58E170**	
	ET=+00.00.05 UT=+	Execute Telecommand **RfdnFireSW3_SW4_log_B** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : Rfdn Fire SW3/SW4 (logical) Position B TC(8,4,115,8)	**DC78E170**	
27		*Send TCs(8,4,116,22) to mark OK (not failed) chain 1 in UIU table*		Next Step: 28
		Mark Unit OK telecommand is used to modify the health status of a unit as OK. **Note that for XPND TX, XPND RX, TWT assembly, TWT amplifier, and EPC the Failed / Not Failed configuration status is common.**		
	ET=+00.00.05 UT=+	Execute Telecommand **MarkOKUnitA_XpndRx** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Fdir Mark OK Unit A XPND RX, TC(8,4,116,22)	**DCB0H170**	
28		*Switch ON XPND1*		Next Step: 29
		Command XPND1 ON - TC(8,4,115,2) performs : **Switch LCL23 (XPND1) ON** **Configure TX1 "ON" and "VALID" on the 1553 S/C bus** **Switch XPND TX1 ON**		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.30 UT=+	Execute Telecommand **TtcCommandXpnd1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command Xpnd 1 On TC(8,4,115,2)	**DCN83170**	
29		*Set the parameters and send TC(8,4,115,9) to configure the XPND1 to MR*		Next Step: 30
	ET=+00.00.30 UT=+	Execute Telecommand **XpndConfigure_Templ** *Command Parameter(s) :* **XpndId** **DH018170** **XpndConfMask1Unus** **DH220170** **XpndConfMask1_ER** **DH221170** **XpndConfMask1_CM** **DH222170** **XpndConfMask1_RM** **DH223170** **XpndConfMask1_HRM** **DH224170** **XpndConfMask1_MRM** **DH225170** **XpndConfMask1LRM1** **DH226170** **XpndConfMask1LRM2** **DH227170** **XpndConfMask1_RMI** **DH228170** **XpndConfMask1_TMI** **DH229170** **XpndConfMask2_PG** **DH230170** **XpndConfMask2Unus** **DH231170** **XpndConfMask2OPLS** **DH232170** **XpndConfDW1Unus** **DH020170** **XpndConfDW1_ER** **DH021170** **XpndConfDW1_CM** **DH022170** **XpndConfDW1_RM** **DH023170** **XpndConfDW1_HRM** **DH024170** **XpndConfDW1_MRM** **DH025170** **XpndConfDW1LRM1** **DH026170** **XpndConfDW1LRM2** **DH027170** **XpndConfDW1_RMI** **DH028170** **XpndConfDW1_TMI** **DH029170** **XpndConfDW2_PG** **DH030170** **XpndConfDW2Unus** **DH031170** **XpndConfDW2OPLS** **DH032170** *TC Control Flags :* **GBM IL DSE** **-SY -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Configure Xpnd TC(8,4,115,9)	**DCT18170** **XpndA** (Def) **11 <bin>** **ON** **ON** **ON** **ON** **ON** **ON** **ON** **Update** **Update** **ON** **11111111111 <bin>** **Update** **0 <dec>** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **OFF** (Def) **ON** **OFF** (Def) **OFF** (Def) **0.6** **1.2** **OFF** (Def) **0 <dec>** (Def) **-4**	
30		*Send TC(8,4,115,20) to configure the TM encoder to MR*		Next Step: 31

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.05 UT=+	Execute Telecommand **TtcConfTmEncInUseMedium** *TC Control Flags :* **GBM IL DSE** **-E- -- ---** *Subsch. ID : 10* Det. descr. : TTC: Config TM Enc In Use Mode Medium 150 kbps, TC(8,4,115,20)	**DC22F170**	
31		*Send TC(8,4,115,17) to switch OFF the TM subsampling*		Next Step: 32
	ET=+00.00.05 UT=+	Execute Telecommand **TtcSwitchTmSubsamplOff** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TTC: Switch TM Subsampling Off TC(8,4,115,17)	**DC03F170**	
32		*Switch ON TWTA1 (OPLCL49+EPC1+TWT1)*		Next Step: 33
	ET=+00.00.05 UT=+	Execute Telecommand **TtcCommandTwta1On** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Ttc Command TWTA 1 On TC(8,4,115,2)	**DC16E170**	
33		*Enable the downlink of essentials and periodics HK packets*		Next Step: 34
		Execute procedures H_FCP_DHS_1003 (Set the default values for the TRANSMIT/STORAGE flags with TC(14,5)) H_FCP_DHS_1009 (Enable the default HK (essential + periodic) packets with TC(14,1))		
		TC Seq. Name :HRRT10RF (Tx1+TWTA1ONfailFinal) *TimeTag Type: N* *Sub Schedule ID:*		

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
34		*Wait the completion of the TWT pre-heating phase (180 sec) and verify XPND1 and TWTA1 setting and RFDN SWs position*		Next Step: 35
34.1		*Rx1 power line status verification*		□
		Verify FCL3 (XPND1 Rx) voltage Telemetry **Xpnd1_Rx_FCL3_V WM703565**	**>= 27.96 V <= 28.71 V**	(None)
		Verify FCL3 (XPND1 Rx) current Telemetry **Xpnd1_Rx_FCL3_I WM702565**	**>= 0.20 A <= 0.35 A**	AND=ZAZ7I999
34.2		*Rx1 analogue telemetry verification*		□
		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 Rx1 TC bit rate Telemetry **RX1 125-4K Stat RMB17442**		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
34.3		*Tx1 power line status verification*		□
		Verify LCL23 (XPND1 Tx) status Telemetry **Xpnd1Tx_L23_S WM12D565**	**= ON**	AND=ZAZ7I999
		Verify LCL23 (XPND1 Tx) current Telemetry **Xpnd1Tx_L23_I WM109565**	**>= 0.41 A <= 0.55 A**	AND=ZAZ7I999
34.4		*Tx1 analogue telemetry verification*		□
		Verify Tx1 Status Telemetry **TX1 ON-OFF Stat RMB15442**	**= ON**	AND=ZAZ7I999
		Verify Tx1 RF Output Power Telemetry **XPD1_RF1_OUT_PW RMB13442**	**<= -4.2 dbmW >= -5.2 dbmW**	AND=ZAZ7I999

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		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
34.5		*Verify XPND1 status on the 1553 S/C bus*		
		Verify Telemetry **XPND1On_Off** **DEFCG160**	**= ON**	AND=ZAZ7I999
		Verify Telemetry **XPND1Val_Inval** **DEFCK160**	**= Valid**	AND=ZAZ7I999
34.6		*Verify XPND1 status on the 1553 S/C bus*		
		Verify XPND1 status **X1 Status - XS** **RMB22442**	**= TM mode active**	AND=ZAZ7I999
		Verify Low Rate-1 status Telemetry **X1 LowRate-1 MD** **RMB30442**		AND=ZAZ7I999
		Verify Low Rate-2 status Telemetry **X1 LowRate-2 MD** **RMB31442**		AND=ZAZ7I999
		Verify Medium Rate Modulator status Telemetry **X1 MedRate-MRM** **RMB29442**		AND=ZAZ7I999
		Verify High Rate status Telemetry **X1 HIRateMD-HRM** **RMB28442**	**= OFF**	AND=ZAZ7I999
		Verify Ranging Modulator status Telemetry **X1 Rang MOD-RM** **RMB27442**	**= OFF**	AND=ZAZ7I999
		Verify Coherent Mode status Telemetry **X1 Coher MOD-CM** **RMB26442**	**= OFF**	AND=ZAZ7I999
		Verify Ranging Modulation Index Telemetry **X1 RNGMD ID-RMI** **RMB32442**	**= 0.6 rad**	AND=ZAZ7I999
		Verify Telemetry Modulation Index Telemetry **X1 TM MD ID-TMI** **RMB33442**	**= 1.2 rad**	AND=ZAZ7I999
		Verify Power level at transmitter output Telemetry **X1 OutPowLevSet** **RMB35442**	**= -4 dbmW**	AND=ZAZ7I999
		Verify Internal Bit Pattern Generator status Telemetry **X1 IntBitPatGen** **RMB34442**	**= OFF**	AND=ZAZ7I999
		Verify External Reference status Telemetry **X1 Ext Ref - ER** **RMB25442**	**= OFF**	AND=ZAZ7I999
		Verify Receiver lock status Telemetry **X1 Rx Lock - RL** **RMB24442**		AND=ZAZ7I999

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Step No.	Time	Activity/Remarks		TC/TLM	Display/ Branch
		Verify RX AGC Level Telemetry **X1 AGC TMUplnk**	**RMB20442**	**>= -141.0 dbmW** **<= -45.0 dbmW**	AND=ZAZ7I999
		Verify PLL Phase Error Telemetry **X1 RX PLL PhErr**	**RMB19442**	**<= 130.0 kHz** **>= -130.0 kHz**	AND=ZAZ7I999
		Verify Squelch Status Telemetry **X1 SqlchSt - SS**	**RMB23442**		AND=ZAZ7I999
		Verify Tx1 TC Bit Rate Telemetry **X1 TcBitRateTCB**	**RMB61442**		
34.7		*TM Encoder (in use) verification*			
		Verify Telemetry **TME_BITRATE**	**DEMRF160**		AND=ZAZ7J999
		Verify Telemetry **BSW_TM_MODE**	**DEMF0160**		AND=ZAZ7J999
34.8		*TWTA1 setting verification*			
		Verify OPLCL49 (TWTA 1) Status Telemetry **Twta_1_L49_1S**	**WM22E565**	**= ON**	AND=ZAZ7J999
		Verify TWTA1 current Telemetry **Twta_1_L49_I**	**WM210565**	**>= 2.2 A** **<= 2.8 A**	AND=ZAZ7J999
		Verify EPC1 Status Telemetry **EPC1_ONOFF_STS**	**RMB05439**	**= ON**	AND=ZAZ7J999
		Verify EPC1 Anode Voltage Telemetry **EPC1_ANODE_VOLT**	**RMB01439**	**>= 1077.0 V** **<= 1137.0 V**	AND=ZAZ7J999
		Verify EPC1 Helix current Telemetry **EPC1_HELIX_CURR**	**RMB02439**	**>= 0.19 mA** **<= 1.2 mA**	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**	**= ON**	AND=ZAZ7J999
34.9		*RFDN SWs position verification*			

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **RFDN SW1 Pos A** **RMB05436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW1 Pos B** **RMB09436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW2 Pos A** **RMB06436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW2 Pos B** **RMB10436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW3 Pos A** **RMB07436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW3 Pos B** **RMB11436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW4 Pos A** **RMB08436**		AND=ZAZ7J999
		Verify Telemetry **RFDN SW4 Pos B** **RMB12436**		AND=ZAZ7J999
35		*Verify XPND2 and TWTA2 setting*		Next Step: 36
35.1		*RX2 power line status verification*		□
		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
35.2		*RX2 Analogue Telemetry verification*		□
		Verify RX2 AGC Level Telemetry **XPD2_RX2_AGC_LV** **RMB10442**		AND=ZAZ7I999
		Verify RX2 PLL SPE Telemetry **XPD2_RX2_PLL_SP** **RMB12442**		AND=ZAZ7I999
		Verify Receiver 2 bit rate Telemetry **RX2 125-4K Stat** **RMB18442**		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

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
35.3		*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**	**>= 0.3 A** **<= 0.4 A**	AND=ZAZ7I999
35.4		*TX2 Analogue Telemetry verification*		
		Verify TX2 Status Telemetry **TX2 ON-OFF Stat** **RMB16442**	**= OFF**	AND=ZAZ7I999
		Verify RF2 Output Power Telemetry **XPD2_RF2_OUT_PW** **RMB14442**	**< -13.0 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
35.5		*Verify XPND2 status on the 1553 S/C bus*		
		Verify Telemetry **XPND2On_Off** **DEFD1160**	**= OFF**	AND=ZAZ7N999
		Verify Telemetry **XPND2Val_Inval** **DEFD5160**	**= Invalid**	AND=ZAZ7N999
35.6		*Verify TWTA2 setting*		
		Verify OPLCL50 (TWTA 2) Status Telemetry **Twta_2_L50_1S** **WM92E565**	**= OFF**	AND=ZAZ7J999
		Verify Telemetry **Twta_2_L50_I** **WM910565**	**>= 0.0 A** **<= 0.1 A**	AND=ZAZ7J999
		Verify EPC2 Status Telemetry **EPC2_ONOFF_STS** **RMB07439**	**= OFF**	AND=ZAZ7J999
		Verify EPC2 Anode Voltage Telemetry **EPC2_ANODE_VOLT** **RMB03439**		AND=ZAZ7J999
		Verify EPC2 Helix current Telemetry **EPC2_HELIX_CURR** **RMB04439**		AND=ZAZ7J999
		Verify EPC2 Automatic Restart Status Telemetry **EPC2_AUT_RSTART** **RMB08439**	**= NOTACTIVE**	AND=ZAZ7J999

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Step No.	Time	Activity/Remarks		TC/TLM	Display/ Branch
		Verify EPC2 Temperature Telemetry **EPC2_TEMP**	**RMB12439**		AND=ZAZ7J999
		Verify TWT2 Status Telemetry **TWT2_ONOFF_STS**	**RMB10439**	**= OFF**	AND=ZAZ7J999
36		*Verify XPNDs and TWTAs in Unit In Use table*			Next Step: 37
36.1		*XPND1 UIU table status verification*			□
		Verify Telemetry **XpndRx1FuncSts**	**DEL58170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **XpndRx1Use**	**DEL56170**	**= In_Use**	AND=ZAZ7M999
		Verify Telemetry **XpndRx1LogSts**	**DEL57170**	**= Nominal**	AND=ZAZ7M999
		Verify Telemetry **XpndRx1FailSts**	**DEL59170**	**= Not_Failed**	AND=ZAZ7M999
		Verify Telemetry **XpndTx1FuncSts**	**DEL27170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **XpndTx1Use**	**DEL29170**	**= In_Use**	AND=ZAZ7M999
		Verify Telemetry **XpndTx1LogSts**	**DEL28170**	**= Nominal**	AND=ZAZ7M999
		Verify Telemetry **XpndTx1FailSts**	**DEL26170**	**= Not_Failed**	AND=ZAZ7M999
36.2		*XPND2 UIU table status verification*			□
		Verify Telemetry **XpndRx2FuncSts**	**DEL62170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **XpndRx2Use**	**DEL60170**	**= Not_In_Use**	AND=ZAZ7M999
		Verify Telemetry **XpndRx2LogSts**	**DEL61170**	**= Redundant**	AND=ZAZ7M999
		Verify Telemetry **XpndRx2FailSts**	**DEL63170**	**= Not_Failed**	AND=ZAZ7M999
		Verify Telemetry **XpndTx2FuncSts**	**DEL31170**	**= Off**	AND=ZAZ7M999
		Verify Telemetry **XpndTx2Use**	**DEL33170**	**= Not_In_Use**	AND=ZAZ7M999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **XpndTx2LogSts DEL32170**	**= Redundant**	AND=ZAZ7M999
		Verify Telemetry **XpndTx2FailSts DEL30170**	**= Not_Failed**	AND=ZAZ7M999
36.3		*TWTA1 UIU table status verification*		
		Verify Telemetry **Twta1FuncSts DEL19170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **Twta1Use DEL21170**	**= In_Use**	AND=ZAZ7M999
		Verify Telemetry **Twta1LogSts DEL20170**	**= Nominal**	AND=ZAZ7M999
		Verify Telemetry **Twta1FailSts DEL18170**	**= Not_Failed**	AND=ZAZ7M999
		Verify Telemetry **Epc1FuncSts DEG25170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **Epc1Use DEG27170**	**= In_Use**	AND=ZAZ7M999
		Verify Telemetry **Epc1LogSts DEG26170**	**= Nominal**	AND=ZAZ7M999
		Verify Telemetry **Epc1FailSts DEG24170**	**= Not_Failed**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp1FuncSts DEH13170**	**= On**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp1Use DEH15170**	**= In_Use**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp1LogSts DEH14170**	**= Nominal**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp1FailSts DEH12170**	**= Not_Failed**	AND=ZAZ7M999
36.4		*TWTA2 UIU table status verification*		
		Verify Telemetry **Twta2FuncSts DEL23170**	**= Off**	AND=ZAZ7M999
		Verify Telemetry **Twta2Use DEL25170**	**= Not_In_Use**	AND=ZAZ7M999
		Verify Telemetry **Twta2LogSts DEL24170**	**= Redundant**	AND=ZAZ7M999
		Verify Telemetry **Twta2FailSts DEL22170**	**= Not_Failed**	AND=ZAZ7M999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **Epc2FuncSts DEG29170**	**= Off**	AND=ZAZ7M999
		Verify Telemetry **Epc2Use DEG31170**	**= Not_In_Use**	AND=ZAZ7M999
		Verify Telemetry **Epc2LogSts DEG30170**	**= Redundant**	AND=ZAZ7M999
		Verify Telemetry **Epc2FailSts DEG28170**	**= Not_Failed**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp2FuncSts DEH17170**	**= Off**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp2Use DEH19170**	**= Not_In_Use**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp2LogSts DEH18170**	**= Redundant**	AND=ZAZ7M999
		Verify Telemetry **TwtAmp2FailSts DEH16170**	**= Not_Failed**	AND=ZAZ7M999
37		*Send TC(19,4) to re-enable XPND1 -TWTA1 relevant EAT entries*		Next Step: 38
		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),** **160 (XPND1 invalid RT).**		
		Execute Telecommand **EnableActions** *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** *TC Control Flags :*	**DCT84170** **4 <dec>** **CDMS** (Def) **37400 <dec>** **CDMS** (Def) **37402 <dec>** **CDMS** (Def) **37416 <dec>** **CDMS** (Def) **160 <dec>**	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		GBM IL DSE **--Y -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Enable Actions TC(19,4)		
38		*Send TC(19,4) to re-enable XPND2 -TWTA2 relevant EAT entries*		Next Step: 39
		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).** **Note that EAT ID 161 (XPND2 invalid RT) remains Disabled.**		
		Execute Telecommand **EnableActions** *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** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Enable Actions TC(19,4)	**DCT84170** **3 <dec>** **CDMS** (Def) **37401 <dec>** **CDMS** (Def) **37403 <dec>** **CDMS** (Def) **37417 <dec>**	
39		*Request TTC managment status report*		Next Step: 40
		Execute Telecommand **TtcReportStatus** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *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		

Switch to chain 1 after XPND1 or TWTA1 failure
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
40		*Report EAT table and check TTC related entries*		Next Step: 41
		Execute Telecommand **ReptEvtActTable** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *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** **Check that the EAT entry 0x00A1 XPND2_NOT_VIT_RT_INV is disabled.**		
41		*Report Monitoring List and check TTC related entries*		Next Step: END
		Execute Telecommand **ReportMonitList** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *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 enabled , and** **Monitoring ID= 18,96,97 (TTC Chain 2) are disabled** **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)**		

End of Procedure