

Transponder in use Coherent Mode Activation/Deactivation
File: H_FCP_TTC_TUCM.xls
Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps needed to configure the "Coherent mode" for the transmitter in use when the downlink and the uplink are already established.

This procedure uses the logical addressing, thus can be executed under Ground control or not (the commands used can be inserted in the MTL).

Summary of Constraints

The transponder coherent mode is selected through ASW TC(8,4,115,9); thus the status of the ASW function "TTC Management" has to be "running".

The switching of the coherent mode will lead to a short loss of lock in the downlink TM stream.

It is highlighted that the Coherent mode have to be commanded ON after confirmation of on-board lock.

Spacecraft Configuration

Start of Procedure

CDMU in default configuration;
Downlink active via TX and TWTA marked as "Nominal" and "Not Failed" in the "Unit in Use" table (nominally the branch 1);
XPND 1/2 configuration: CM OFF or CM ON and RNG OFF.

End of Procedure

CDMU in default configuration;
Downlink active via TX and TWTA marked as "Nominal" and "Not Failed" in the "Unit in Use" table (nominally the branch 1);
XPND 1/2 configuration: CM ON or CM OFF and RNG OFF.

Reference File(s)

Input Command Sequences

Output Command Sequences

HFR TUCM1
HFR TUCM2

Referenced Displays

ANDs GRDs SLDs
ZAZ7I999

Configuration Control Information

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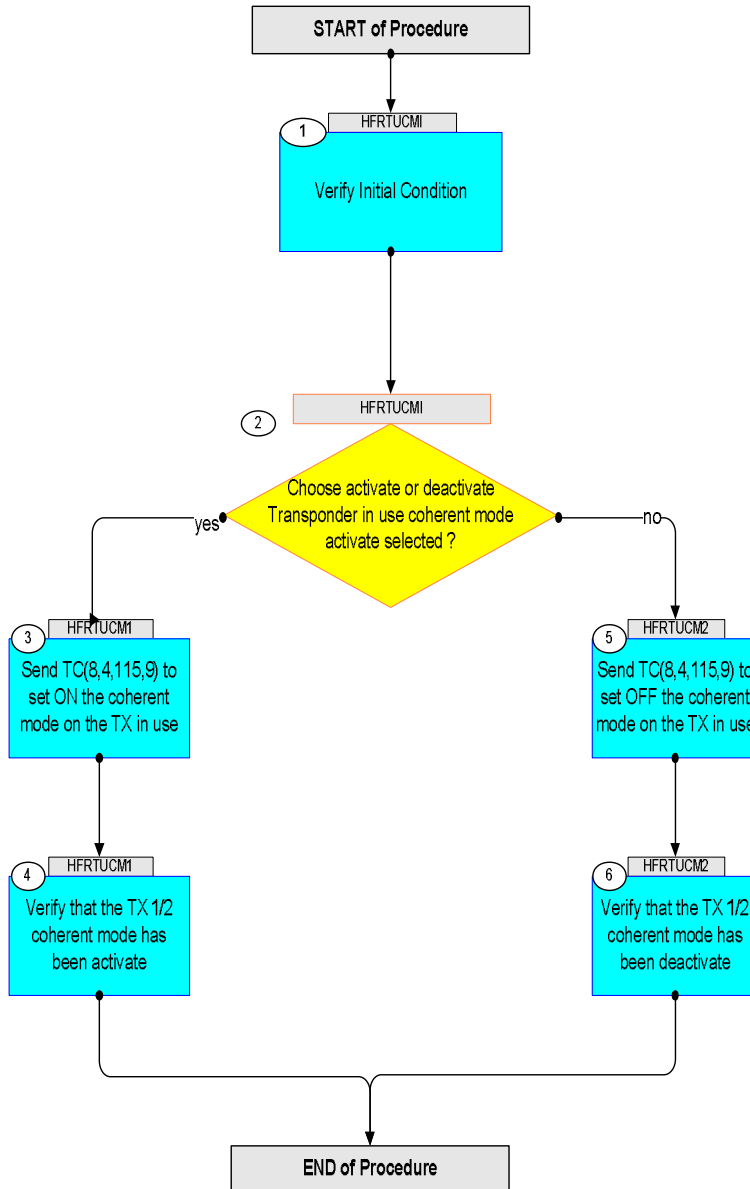


DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
14/07/08	1	1	Created	R. Miniscalco	
28/08/08	2	2	TC DCT18170 Configure Xpnd mask update	E. Picallo	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
HFRTUCM1 TX in use CM ON/OFF Transponder in use Coherent Mode Activation/Deactivation SSID :				
1		Verify Initial Condition		Next Step: 2
1.1		If XPND1 is in use verify		<input type="checkbox"/>
		Verify RX1 Lock status Telemetry X1 Rx Lock - RL RMB24442	= Locked	AND=ZAZ7I999
		Verify RX1 AGC Level Telemetry X1 AGC TMUplnk RMB20442	>= -141.00 dbmW <= -45.00 dbmW	AND=ZAZ7I999
		Verify Coherent Mode status Telemetry X1 Coher MOD-CM RMB26442		AND=ZAZ7I999
		Verify Ranging Mode status Telemetry X1 Rang MOD-RM RMB27442	= OFF	AND=ZAZ7I999
1.2		If XPND2 is in use verify		<input type="checkbox"/>
		Verify RX2 Lock status Telemetry X2 Rx Lock - RL RMB45442	= Locked	AND=ZAZ7I999
		Verify RX2 AGC Level Telemetry X2 AGC TMUplnk RMB41442	>= -141.00 dbmW <= -45.00 dbmW	AND=ZAZ7I999
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442		AND=ZAZ7I999
		Verify Ranging Mode status Telemetry X2 Rang MD - RM RMB48442	= OFF	AND=ZAZ7I999
2		Choose activate or deactivate Transponder in use coherent mode activate selected ?		Next Step: yes 3 no 5
HFRTUCM1 TX in use CM ON SSID :				
3		Send TC(8,4,115,9) to set ON the coherent mode on the TX in use		Next Step: 4

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6		Verify that the TX 1/2 coherent mode has been deactivate		Next Step: END																																																																																																																																																					
6.1		If XPND1 is in use verify		<input type="checkbox"/>																																																																																																																																																					
		Verify Coherent Mode status Telemetry X1 Coher MOD-CM	RMB26442 = OFF	AND=ZAZ7I999																																																																																																																																																					

Transponder in use Coherent Mode Activation/Deactivation
 File: H_FCP_TTC_TUCM.xls
 Author: E. Picallo



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6.2		<i>If XPND2 is in use verify</i>		<input type="checkbox"/>
		Verify Coherent Mode status Telemetry X2 Coher MOD-CM RMB47442	= OFF	AND=ZAZ7I999
End of Procedure				