

Select RX in use TC bit rate
File: H_FCP_TTC_RUBR.xls
Author: E. Picallo



Procedure Summary

Objectives

This procedure describes the steps needed to select the TC uplink bit rate (high or low) on the receiver in use.

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 RX bit rate is selected through ASW TC(8,4,115,10); thus the status of the ASW function "TTC Management" has to be "running".

Note that:

- TC rate = 125 bps is foreseen when the S/C is in "Sun Acquisition otherwise" and in "Survival" mode;
- TC rate = 4 kbps is foreseen when the S/C is in "Launch", "Sun Acquisition after separation", "Nominal" and "Earth Acquisition" mode.

The TC bit rate from ground shall be in line with the on-board Rx TC bit rate, to permit to the S/C receivers to acquire the TC signal.

RXs TC threshold is - 120 dBm at 4Kbps TC rate
RXs TC threshold is - 133.5 dBm at 125 bps TC rate
Rx carrier acquisition threshold is - 137 dBm

Spacecraft Configuration

Start of Procedure

CDMU in default configuration;
RX in use set to any bit rate.

End of Procedure

CDMU in default configuration;
RX in use bit rate updated.

Reference File(s)

Input Command Sequences

Output Command Sequences

HFRRUBR1
HFRRUBR2

Referenced Displays

ANDs GRDs SLDs
ZAZ7I999

Configuration Control Information

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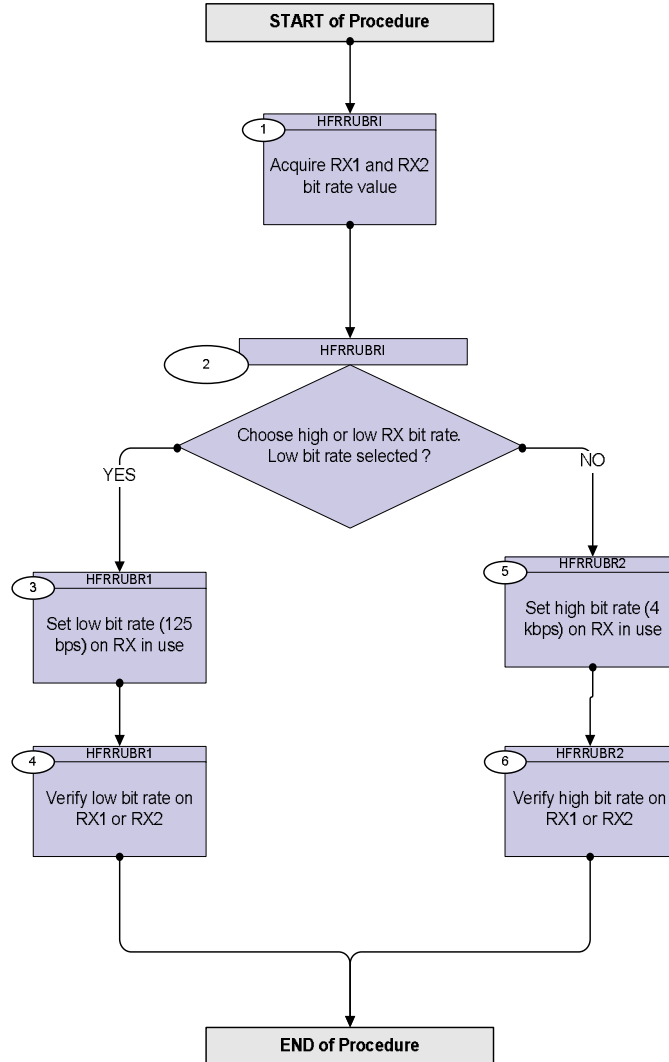


DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
14/07/08	1	1	Created	R. Miniscalco	
02/12/08	2	2	Added TC bit rate via 1553 TM	E. Picallo	
21/03/09	2.2	2.01	Validation : RXs TC thresholds constrain added	E. Picallo	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Rx1 TC Bit Rate Telemetry X1 TcBitRateTCB RMB61442	= Low	AND=ZAZ7I999
		The TC bit rate from ground shall be in line with the on-board Rx1 TC bit rate (125 bps), to permit to Rx1 to acquire the TC signal.		
4.2		Verify if Rx2 in use		<input type="checkbox"/>
		Verify Rx2 TC Bit Rate Telemetry RX2 125-4K Stat RMB18442	= 125 bps	AND=ZAZ7I999
		Verify Rx2 TC Bit Rate Telemetry X2 TcBitRateTCB RMB62442	= Low	AND=ZAZ7I999
		The TC bit rate from ground shall be in line with the on-board Rx2 TC bit rate (125 bps), to permit to Rx2 to acquire the TC signal.		
<p>TC Seq. Name : HFRRUBR2 (RX in use for HR)</p> <p>TimeTag Type: B Sub Schedule ID: <input type="checkbox"/></p>				
5		Set high bit rate (4 kbps) on RX in use		Next Step: 6
	ET=+00.00.00 UT=+	Execute Telecommand Xpnd_InUse_4kbps TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : XPND InUse Select Rx bit rate to 4kbps TC(8,4,115,10)	DC98E170	
6		Verify high bit rate on RX1 or RX2		Next Step: END
6.1		Verify if Rx1 in use		<input type="checkbox"/>
		Verify Rx1 TC Bit Rate Telemetry RX1 125-4K Stat RMB17442	= 4 Kbps	AND=ZAZ7I999
		Verify Rx1 TC Bit Rate Telemetry X1 TcBitRateTCB RMB61442	= High	AND=ZAZ7I999
		The TC bit rate from ground shall be in line with the on-board Rx1 TC bit rate (4 kbps), to permit to Rx1 to acquire the TC signal.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6.2		Verify if Rx2 in use		<input type="checkbox"/>
		Verify Rx2 TC Bit Rate Telemetry RX2 125-4K Stat RMB18442	= 4 Kbps	AND=ZAZ7I999
		Verify Rx2 TC Bit Rate Telemetry X2 TcBitRateTCB RMB62442	= High	AND=ZAZ7I999
		The TC bit rate from ground shall be in line with the on-board Rx2 TC bit rate (4 kbps), to permit to Rx2 to acquire the TC signal.		
End of Procedure				