

MCU_OFF - Switch OFF the MCU
 File: H_FCP_SPI_MCUF.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to switch OFF the Mechanisms Control Unit (MCU)

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

SPIRE is in REDY mode

End of Procedure

SPIRE is in SCU_ON mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HFSMCUF

Referenced Displays

ANDs **GRDs** **SLDs**
 ZAZ91999

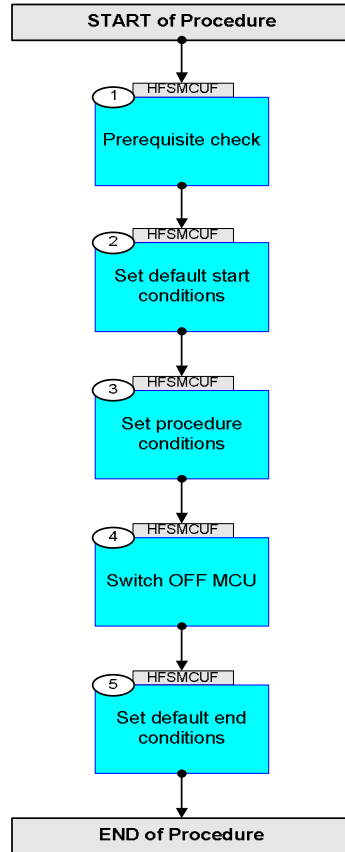
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
07/08/07		1	Created	R. Biggins	
15/01/08		2	Update due to initial testing against the simulator: - TCs updated due to new DB	R. Biggins	
29/01/08		3	Update due to changes in input file (MCU_OFF: version 3) □ - Execution times removed	R. Biggins	
22/02/08		4	□ Update due to testing against MOC Simulator: - Time Tags updated - BBID/OBSID TM checks added - Editorial updates	R. Biggins	
19/05/08	1	5	Updates due to SVT-1 testing: - TM checks added to RESET_DRCU_COUNTERS TC - Default OBSID value updated to 0x0000 0000 - flags updated - comments added - AND updated for all TM parameters	R. Biggins	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
HF5MCUF Switch OFF MCU				
SSID :				
1		Prerequisite check		Next Step: 2
		Verify Telemetry MODE SM00M500	= REDY	AND=ZAZ91999
2		Set default start conditions		Next Step: 3
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SET_OBS_STEP SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SET_BBID SC001500 80010001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= ClearObs	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SET_OBS_STEP SC003500 1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 SSID : 370	SET_OBSID SC000500 00000000 <hex>	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ91999

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	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SC001500 80020001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartObs	AND=ZAZ91999
3		Set procedure conditions		Next Step: 4
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS RESET_DRCU_COUNTERS SSID : 370	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter TRESET SM01T500	same as THSK	AND=ZAZ91999
		THSK SM00T500	any	AND=ZAZ91999
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SSID : 370	SET_OBS_STEP SP03N500 1 <hex>	SC003500
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SSID : 370	SET_OBSID SP00N500 OBS_ID	SC000500
		Verify Telemetry OBSID SM10N500	OBS_ID	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SSID : 370	SET_OBS_STEP SP03N500 0 <hex>	SC003500
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SSID : 370	SET_BBID SP01N500 80000000 <hex>	SC001500
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SSID : 370	SET_OBS_STEP SP03N500 0 <hex>	SC003500
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SSID : 370	SET_BBID SP01N500 89080001 <hex>	SC001500
		Verify Telemetry BBFULLTYPE SM2LN500	= MCU_Off	AND=ZAZ91999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 SSID : 370	SC002500 1fe <hex>	
		Verify Telemetry MODE SM00M500	= MCU_OFF	AND=ZAZ91999
4		Switch OFF MCU		Next Step: 5
		Note that after the following TC is sent, a TM(5,1) packet [No_MCU_Response_Error] and a TM(5,4) packet [ALARM_LSMCU_DEAD] are generated		
	ET=+ UT=+00.00.01	Send DRCU command to SetDRelOnOff SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 SSID : 370	SCD06505 A0870000 <hex> 0 <hex> (Def)	
		Verify Telemetry MCUP5V SM_4V515	= 20.0049 V	AND=ZAZ91999
		Verify Telemetry MCUP15V SM_0V515	= 75.364 V	AND=ZAZ91999
		Verify Telemetry MCUP14V SM_2V515	= 75.364 V	AND=ZAZ91999
		Verify Telemetry MCUM14V SM_3V515	= 75.364 V	AND=ZAZ91999
		Verify Telemetry MCUM15V SM_1V515	= 75.364 V	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 SSID : 370	SC002500 101 <hex>	
		Verify Telemetry MODE SM00M500	= SCU_ON	AND=ZAZ91999
5		Set default end conditions		Next Step: END
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SC001500 80030001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= EndObs	AND=ZAZ91999
	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 SSID : 370	SC000500 00000000 <hex>	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ91999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 SSID : 370	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 SSID : 370	SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ91999
End of Procedure				