

Change context (Open/Closed Loop)
 File: H_FCP_HIF_RCXT.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to open or close the chopper loop for the redundant HIFI units (and therefore move between the OPEN and CLOSED LOOP contexts)

Summary of Constraints

Spacecraft Configuration

Start of Procedure

HIFI is in Standby mode

End of Procedure

No change in HIFI mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HFHRCXT

Referenced Displays

ANDs	GRDs	SLDs
ZAZ9C999		
ZAZ9D999		

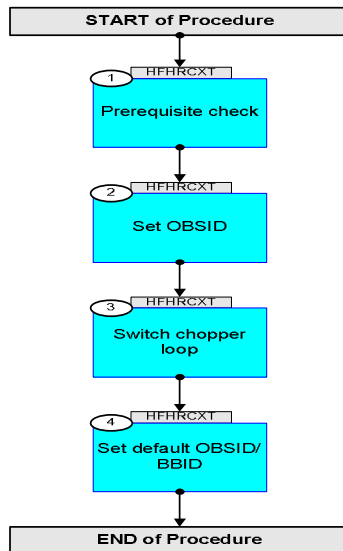
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
06/06/08	1	1	Created	R. Biggins	
04/11/08	2	2	Updates due to comments from D. Teyssier - TC parameter HF_CPR_Cal_Heater (HP217191) value updated in step 3 (TC HC182289)	R. Biggins	
30/04/09	2.4	3	Update due to FP problems - CHOPPER FP updated	R. Biggins	
19/05/09	2.5	4	Sequence incorrectly name HCHRCXT - renamed HFHRCXT	R. Biggins	
25/11/09	3	5	Updates due to Prime unit failure resulting in new operation scheme - Updated to reflect new mode name	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				
TC Seq. Name : HFHRCXT (Change loop context)				
TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		<input type="checkbox"/>
		Verify that the HSC has supplied a valid OBSID value OBS_ID = 0xnnnn nnnn		
		The following TM indicates the current context HF_DPR_CHLOOP_S HM198191	OPEN or CLOSED	AND=ZAZ9C999
		Verify with the HIFI ICC that the correct context should be applied: OPEN loop to CLOSED loop context (default): CONTEXT = CLOSE CHOPPER = -2.33mA CLOSED loop to OPEN loop context: CONTEXT = OPEN CHOPPER = 0.0mA		
1.2		Verify: HIFI mode		<input type="checkbox"/>
		Verify Telemetry HL_MODE_S HM258194	= standby1	AND=ZAZ9C999
		Verify Telemetry HI_Prime_red HM009190	= HIFI_redundant	AND=ZAZ9C999
1.3		Verify: Laser status		<input type="checkbox"/>
		Verify Telemetry HWH_Laser1_S HM017193	= OFF	AND=ZAZ9D999
		Verify Telemetry HWH_Laser2_S HM016193	= OFF	AND=ZAZ9D999
		Verify Telemetry HWV_Laser1_S HM056193	= OFF	AND=ZAZ9D999
		Verify Telemetry HWV_Laser2_S HM055193	= OFF	AND=ZAZ9D999

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2		Set OBSID		Next Step: 3
	ET=+ UT=+00.00.00	HIFI_Set_OBS_ID HIFI_Set_OBS_ID Command Parameter(s) : HIFI_BB_ID HP001197 HIFI_OBS_ID HP000197 Subsch. ID : 70 Det. descr. : Set Observation-ID and Building-Block-ID	HC014289 1EF20001 <hex> OBS_ID	
		Verify Telemetry BB_ID_per_hk HM004190	= 1EF20001 <hex>	AND=ZAZ9C999
		Verify Telemetry OBS_ID_per_hk HM003190	OBS_ID	AND=ZAZ9C999
3		Switch chopper loop		Next Step: 4
	ET=+ UT=+00.00.01	HIFI_Configure_FCU_Power HIFI_Configure_FCU_Power Command Parameter(s) : HIFI_BB_ID HP001197 HF_CPR_Mixer_H_S HP203191 HF_CPR_Mixer_V_S HP204191 HF_CPR_Chopper_S HP205191 HF_CPR_UCH_S HP206191 HF_CPR_UCV_S HP207191 Subsch. ID : 70 Det. descr. : Switch ON or OFF the five FCU-boards (mixer H/V, chopper, IF HV)	HC027289 1C200001 <hex> ON (Def) ON (Def) ON (Def) ON (Def) ON (Def)	
		Verify Telemetry BB_ID_per_hk HM004190	= 1C200001 <hex>	AND=ZAZ9C999
	ET=+ UT=+00.00.00	HIFI_R_Configure_FCU HIFI_R_Configure_FCU Command Parameter(s) : HIFI_BB_ID HP001197 HF_CPR_MXBAND HP202191 HF_CH1_DPFPF1 HP176191 HF_CH2_FIF1_Drain_V HP177191 HF_CH2_FIF1_Drain_C HP178191 HF_CH2_FIF2_Drain_V HP179191 HF_CH2_FIF2_Drain_C HP180191 HF_CH2_SIF1_Drain_V HP181191 HF_CH2_SIF1_Drain_C HP182191 HF_CH2_SIF2_Drain_V HP183191 HF_CH2_SIF2_Drain_C HP184191	HC183289 1C200001 <hex> 0 <dec> (Def) 0 <dec> 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		HF_CH2_SIF3_Drain_V HP185191 HF_CH2_SIF3_Drain_C HP186191 HF_CV1_DPFP1 HP191191 HF_CV2_FIF1_Drain_V HP192191 HF_CV2_FIF1_Drain_C HP193191 HF_CV2_FIF2_Drain_V HP194191 HF_CV2_FIF2_Drain_C HP195191 HF_CV2_SIF1_Drain_V HP196191 HF_CV2_SIF1_Drain_C HP197191 HF_CV2_SIF2_Drain_V HP198191 HF_CV2_SIF2_Drain_C HP199191 HF_CV2_SIF3_Drain_V HP200191 HF_CV2_SIF3_Drain_C HP201191 HF_CPR_CH_SINE_S HP211191 HF_CPR_CH_LOOP_S HP210191 HF_CPR_CHFPG1 HP212191 HF_CPR_CHFPG2 HP213191 HF_CPR_CHFPZ1 HP214191 HF_CPR_CHFPG2 HP215191 HF_CPR_CHFPG2 HP216191 HF_CPR_Cal_Heater_C HP217191 HF_CH1_MXBIAS_V HP172191 HF_CH1_MX_MG_C HP173191 HF_CV1_MXBIAS_V HP187191 HF_CV1_MX_MG_C HP188191 HF_R_Chopper_Rot HP455191 HF_CH1_DFACT_C HP174191 HF_CV1_DFACT_C HP189191	0.075 V (Def) 0.5 mA (Def) 0 <dec> 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) 0.075 V (Def) 0.5 mA (Def) ON (Def) CONTEXT 17 <dec> 201 <dec> (Def) 1010 <dec> 885 <dec> (Def) 149 <dec> (Def) 1.1 mA 0.5 mV 15.0 mA 0.5 mV 15.0 mA CHOPPER 0.0 mA 0.0 mA	
		Subsch. ID : 70		
		Det. descr. : Configure the FCU-subsystem (redundant)		
	ET=+ UT=+00.00.03	HIFI_CH1_MX_MG_C Command Parameter(s) : HIFI_BB_ID HP001197 HF_CH1_MX_MG_C HP173191 Subsch. ID : 70 Det. descr. : Send single command to set H mixer magnet current	HIFI_CH1_MX_MG_C HC096289 1C200001 <hex> 0.5 mA	
	ET=+ UT=+00.00.00	HIFI_CV1_MX_MG_C Command Parameter(s) : HIFI_BB_ID HP001197 HF_CV1_MX_MG_C HP188191 Subsch. ID : 70 Det. descr. : Send single command to set V mixer magnet current	HIFI_CV1_MX_MG_C HC099289 1C200001 <hex> 0.5 mA	
		Verify: Chopper Loop status HF_DPR_CHLOOP_S HM198191	as CONTEXT FP	AND=ZAZ9C999
		Verify Telemetry HF_DPR_CH_ROT2 HM196191	as CHOPPER FP	AND=ZAZ9C999

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4		Set default OBSID/BBID		Next Step: END
	ET=+ UT=+00.00.01	HIFI_Set_OBS_ID HIFI_Set_OBS_ID Command Parameter(s) : HIFI_BB_ID HP001197 HIFI_OBS_ID HP000197 Subsch. ID : 70 Det. descr. : Set Observation-ID and Building-Block-ID	HC014289 0 <hex> (Def) 0 <hex> (Def)	
		Verify Telemetry BB_ID_per_hk HM004190	= 0 <hex>	AND=ZAZ9C999
		Verify Telemetry OBS_ID_per_hk HM003190	= 0 <hex>	AND=ZAZ9C999
End of Procedure				