

SWA Power On HIS
 File: IA-FCP-017.xls
 Author: daniel lakey



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Procedure Summary

Objectives

Power On SWA HIS

Summary of Constraints

This will briefly remove power to the Relay Box LCL, which power the decontamination heaters. The RB must be unpowered when moving the relays.

After DPU being in OPS mode, the following minimum delays before switching on the different SWA sensors LCLs shall be respected:
 - HIS: 45 min

Spacecraft Configuration

Start of Procedure

End of Procedure

Reference File(s)

Input Command Sequences

Output Command Sequences

AIAF017A

Referenced Displays

ANDs GRDs SLDs
 (None)

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
22/02/2018		0.01	SWA Feb inputs, part 2	dlakey	M7
12/03/2018	0.2				M7
24/04/2018		0.02	Added constraints on power up/down timing	dlakey	M7
27/04/2018		1	Updates following comments from SWA 25/04/2018	dlakey	M7

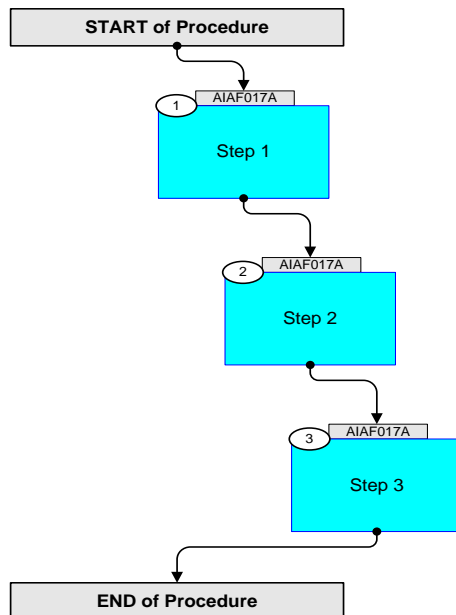
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Procedure Flowchart Overview



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
Beginning of Procedure				
Beginning of Sequence				
AIAF017A		AIAF017A SeqFlags [Crit/Plan/Stdalone/Sched] : NSYN TimeTag type : B		
1		Step 1 Next step(s) : -> 2		
		DPU must be in DIAG or OPS state		
		Verify Telemetry NIAD2100 DPU_MODE = DIAG = OPS		(None) PKT=YIA58211
2		Step 2 Next step(s) : -> 3		
		Send DPU command to power on HIS		
	+00.00.00	Send SWA_TC_HIS_ON ZIA58729 SWA_TC_HIS_ON TC Control Flags: GBM IL DSE --Y NC ---		
		Wait 1 second for the DPU to enable HIS SpaceWire		
		Send DPU command to power on HIS		
	+00.00.01	Send SWA_TC_HIS_ON ZIA58729 SWA_TC_HIS_ON TC Control Flags: GBM IL DSE --Y NC ---		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Wait 1 second for the DPU to enable HIS SpaceWire		
3		Step 3 Next step(s): -> END		
		Relay Box LCL must be off before switching		
	+00.00.01	Execute Telecommand ZCS2Z09W Decont. HIS A LCL Off TC Control Flags: GBM IL DSE --Y NC ---		
	+00.00.01	Execute Telecommand ZCS2Z09Y Decont. HIS B LCL Off TC Control Flags: GBM IL DSE --Y NC ---		
		Verify LCL & SSS status		
		Verify Telemetry NPWD0050 A_LCL3_09 Decon_HTR1 ST = OFF		(None)
		Verify Telemetry NPWT0050 B_LCL3_09 Decon_HTR1 ST = OFF		(None)
		Verify Relay Status		
		Note; these are only available in HPTM . Changes requested for availability in CSW 2.2.3_P2		
		Verify Telemetry NBCD0033 SWA-HIS Return_1 = Pos 2		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry NBCD0043 SWA-HIS Return_2 = Pos 1		(None)
		Verify Telemetry NBCD0034 SWA-HIS Nominal = Off		(None)
		Switch On Relays		
		Set the following configuration: SWA-HIS Return_1 = RB1_5_ON SWA-HIS Return_2 = RB2_5_ON SWA-HIS Nominal = RB1_6_ON		
	+00.00.01	Execute Telecommand ZCS2Z09C RIU SHP RB1_HIS_Rt1_P1 TC Control Flags: GBM IL DSE --Y NC ---		
	+00.00.01	Execute Telecommand ZCS2Z09E RIU SHP RB2_HIS_Rt2_P1 TC Control Flags: GBM IL DSE --Y NC ---		
	+00.00.01	Execute Telecommand ZCS2Z09G RIU SHP RB1_HIS_Nom_ON TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Relay Status		
		Note; these are only available in HPTM. Changes requested for availability in CSW 2.2.3_P2		
		Verify Telemetry NBCD0033 SWA-HIS Return_1 = Pos 1		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry NBCD0043 SWA-HIS Return_2 = Pos 1		(None)
		Verify Telemetry NBCD0034 SWA-HIS Nominal = On		(None)
		Power Relay Box LCL		
	+00.00.01	Execute Telecommand ZCS2Z09V Decont. HIS A LCL On TC Control Flags: GBM IL DSE --Y NC ---		
		Verify LCL & SSS status		
		Verify Telemetry NPWD0050 A_LCL3_09 Decon_HTR1 ST = ON		(None)
		Wait 90 seconds for HIS to boot		
		Verify Packet Reception YIA58601 SWA_E_HIS_BOOT_COMPLETE TM(5,1), APID 1591 (99/7) PI1=43801 PI2=0		
4		Step 4		
		Enable DPU HIS heartbeat monitor		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.01.30	Execute Telecommand ZIA58063 SWA_TC_PARS_MON_EN TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60452 NUM_OF_MON_ID = 1 <hex> PIA60449 MON_ID = HISHEARTB_MI		
AIAF017A		End of Sequence		
End of Procedure				