SWA SVT-1 HIS
File: IA-SVT-153.xls
Author: daniel lakey

Procedure Summary

Objectives

SWA SVT-1 HIS

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

Type Pre-condition Here

End of Procedure

Type Post-condition Here

Reference File(s)

Input Command Sequences

Output Command Sequences

AIAV153A

Referenced Displays

ANDs **GRDs** **SLDs**

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
02/11/2018		0.01	Initial check-in	dlakey	M7
02/11/2018		0.01	Renamed to SVT range	dlakey	M7
02/11/2018		1	Updated absolute -> relative times	dlakey	M7

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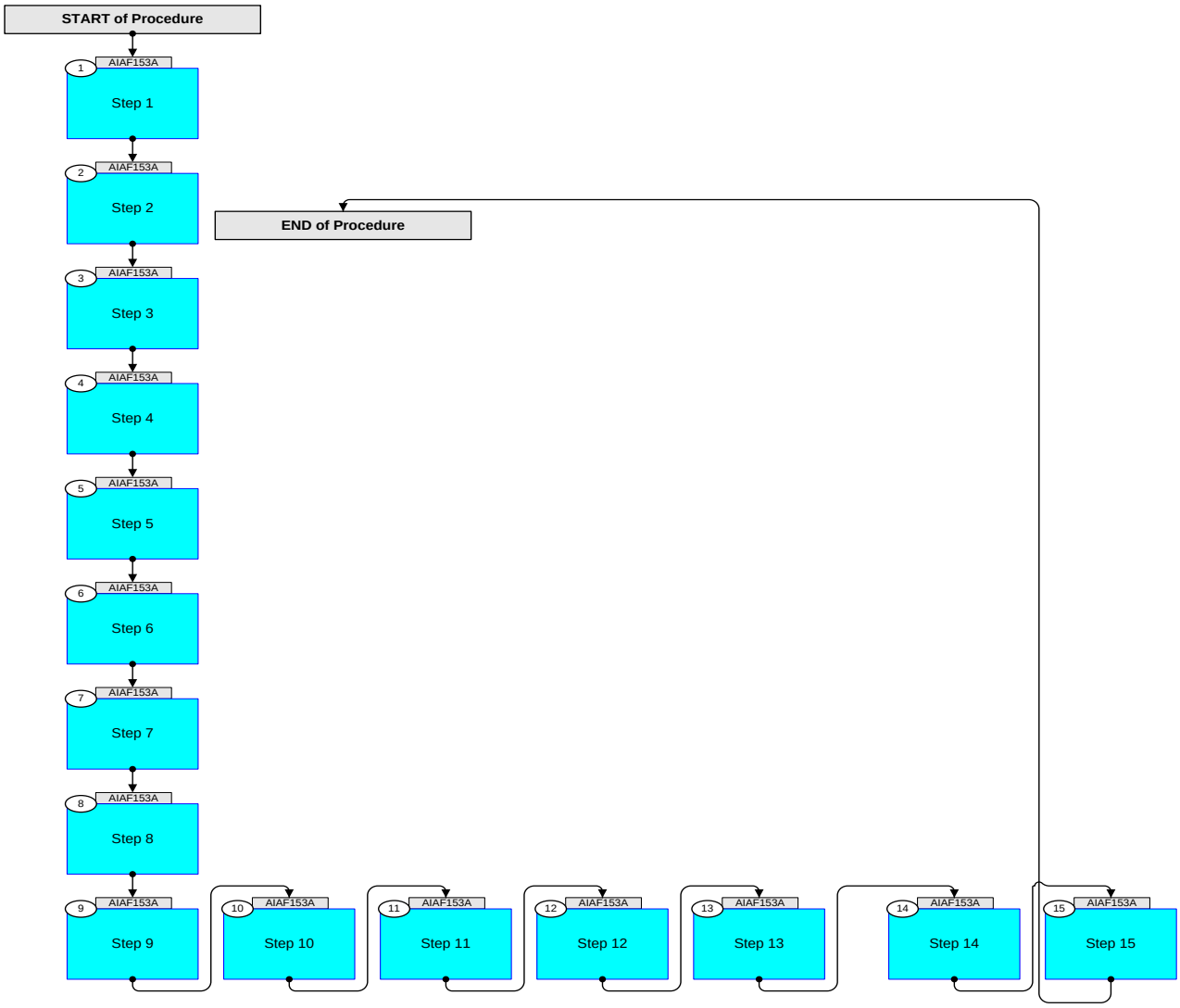
Procedure Flowchart Overview



Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Beginning of Procedure		
	AIAV153A	Beginning of Sequence **SWA SVT-1 HIS** TimeTag type : B		
1		**Step 1** ***Next step(s):*** -> **2**		
		Commands for HIS part of the SVT-1 test		
2		**Step 2** ***Next step(s):*** -> **3**		
		Enable command echoing		
	+00.00.00	**Send SWA_TC_HIS_EVR** **ZIA58927 SWA_TC_HIS_EVR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59000** STATE **= ENABLE** (Def) **PIA60359** EID **= 43827 <dec>**		
3		**Step 3** ***Next step(s):*** -> **4**		
		Set main housekeeping to one minute interval		
	+00.00.01	**Send SWA_TC_HIS_HK_INT** **ZIA58931 SWA_TC_HIS_HK_INT** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59056** SID **= HK_TREP** (Def) **PIA60361** INTERVAL **= 60 <dec>**		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
4		**Step 4** ***Next step(s):*** -> **5**		
		Send no-operation command		
	+00.00.01	**Send SWA_TC_HIS_NOP** **ZIA58915 SWA_TC_HIS_NOP** TC Control Flags: GBM IL DSE **--Y NC ---**		
5		**Step 5** ***Next step(s):*** -> **6**		
		Infinite memory dump of 16 bytes at address 0		
	+00.01.10	**Send SWA_TC_HIS_MEM_DWELL_EN** **ZIA58904 SWA_TC_HIS_MEM_DWELL_EN** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59003** MEMID **= ABSOLUTE** (Def) **PIA60350** ADDRESS **= 0 <dec>** **PIA60329** LENGTH **= 16 <dec>** **PIA60342** REPEAT **= FFFFFFFF <hex>**		
		Stop repeating memory dump		
	+00.01.10	**Send SWA_TC_HIS_MEM_DWELL_DIS** **ZIA58905 SWA_TC_HIS_MEM_DWELL_DIS** TC Control Flags: GBM IL DSE **--Y NC ---**		
6		**Step 6** ***Next step(s):*** -> **7**		
		Read DSCB FPGA Revision		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.01.10	**Send SWA_TC_HIS_DSCB_READ** **ZIA58933 SWA_TC_HIS_DSCB_READ** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60350** ADDRESS **= 2C <hex>**		
7		**Step 7** ***Next step(s):*** -> **8**		
		Set START_B DAC to raw 1024		
	+00.01.10	**Send SWA_TC_HIS_DAC_SET** **ZIA58908 SWA_TC_HIS_DAC_SET** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59050** DAC **= START_B** **PIA60354** TARGET **= 1024 <dec>** **PIA60353** STEP **= 4095 <dec>** **PIA60345** DWELL **= 1 <dec>** **PIA59054** RANGE **= NONE** (Def)		
		Step START_B DAC up by 10 raw counts		
	+00.01.10	**Send SWA_TC_HIS_DAC_REL** **ZIA58909 SWA_TC_HIS_DAC_REL** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59050** DAC **= START_B** **PIA60355** OFFSET **= 10 <dec>** **PIA60353** STEP **= 20 <dec>** **PIA60345** DWELL **= 1 <dec>**		
8		**Step 8** ***Next step(s):*** -> **9**		
		Enable IRAP HV supply		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.01.10	**Send SWA_TC_HIS_HV_PWR** **ZIA58907 SWA_TC_HIS_HV_PWR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59000** STATE **= ENABLE** (Def) **PIA59006** SUPPLY **= IRAP** (Def)		
		Disable IRAP HV supply		
	+00.01.10	**Send SWA_TC_HIS_HV_PWR** **ZIA58907 SWA_TC_HIS_HV_PWR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59000** STATE **= DISABLE** **PIA59006** SUPPLY **= IRAP** (Def)		
9		**Step 9** ***Next step(s):*** -> **10**		
		Disable AC link (power off detector section)		
	+00.01.10	**Send SWA_TC_HIS_AC_LINK** **ZIA58928 SWA_TC_HIS_AC_LINK** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59000** STATE **= DISABLE**		
		Enable AC link (power on detector section)		
	+00.01.10	**Send SWA_TC_HIS_AC_LINK** **ZIA58928 SWA_TC_HIS_AC_LINK** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59000** STATE **= ENABLE** (Def)		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
10		**Step 10** ***Next step(s):*** -> **11**		
		Enable writing to MRAM		
	+00.01.10	**Send SWA_TC_HIS_MRAM_WR** **ZIA58900 SWA_TC_HIS_MRAM_WR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA58999** WRITE_EN **= ENABLE** (Def)		
		Pattern-fill 16 bytes of MRAM		
	+00.01.10	**Send SWA_TC_HIS_MEM_PAT** **ZIA58902 SWA_TC_HIS_MEM_PAT** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59004** MEMID **= ABSOLUTE** (Def) **PIA60350** ADDRESS **= 10160000 <hex>** **PIA60329** LENGTH **= 16 <dec>** **PIA60352** VALUE **= 7 <dec>** **PIA60346** CHANGE **= -1 <dec>** **PIA59045** INVERT **= STANDARD** (Def) **PIA59046** OPERATION **= COMPLETE**		
		Copy MRAM to SRAM		
	+00.01.10	**Send SWA_TC_HIS_MEM_COPY** **ZIA58901 SWA_TC_HIS_MEM_COPY** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59002** SRC_MEMID **= MRAM** **PIA60349** SRC_ADDR **= 160000 <hex>** **PIA59001** DEST_MEMID **= SRAM** **PIA60348** DST_ADDR **= 80000 <hex>** **PIA60329** LENGTH **= 16 <dec>**		
		Verify copy from MRAM to SRAM		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.01.10	**Send SWA_TC_HIS_MEM_PAT** **ZIA58902 SWA_TC_HIS_MEM_PAT** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59004** MEMID **= ABSOLUTE** (Def) **PIA60350** ADDRESS **= 40080000 <hex>** **PIA60329** LENGTH **= 16 <dec>** **PIA60352** VALUE **= 7 <dec>** **PIA60346** CHANGE **= -1 <dec>** **PIA59045** INVERT **= STANDARD** (Def) **PIA59046** OPERATION **= VERIFY_ONLY**		
		Disable writing to MRAM		
	+00.01.10	**Send SWA_TC_HIS_MRAM_WR** **ZIA58900 SWA_TC_HIS_MRAM_WR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA58999** WRITE_EN **= DISABLE**		
11		**Step 11** ***Next step(s):*** -> **12**		
		Nominal (1-hour) slow ramp down		
	+00.01.10	**Send SWA_TC_HIS_SAFE_NOMINAL** **ZIA58941 SWA_TC_HIS_SAFE_NOMINAL** TC Control Flags: GBM IL DSE **--Y NC ---**		
12		**Step 12** ***Next step(s):*** -> **13**		
		Trigger a yellow limit trip on an unpopulated thermistor		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.01.10	**Send SWA_TC_HIS_SAFETY_SET** **ZIA58939 SWA_TC_HIS_SAFETY_SET** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60763** MONITOR **= OP_THERM_1** **PIA60764** YELLOW_MIN **= 4095 <dec>** **PIA60765** YELLOW_MAX **= 0 <dec>** **PIA60766** YELLOW_PERSISTENCE **= 65535 <dec>** **PIA60767** YELLOW_MACRO **= 65535 <dec>** **PIA60768** RED_MIN **= 65535 <dec>** **PIA60769** RED_MAX **= 65535 <dec>** **PIA60770** RED_PERSISTENCE **= 65535 <dec>** **PIA60771** RED_MACRO **= 65535 <dec>**		
13		**Step 13** ***Next step(s):*** -> **14**		
		Fast safe - ten minute ramp down		
	+00.01.10	**Send SWA_TC_HIS_SAFE_EMERGENCY** **ZIA58940 SWA_TC_HIS_SAFE_EMERGENCY** TC Control Flags: GBM IL DSE **--Y NC ---**		
14		**Step 14** ***Next step(s):*** -> **15**		
		Clean analogue monitor strip status		
	+00.01.10	**Send SWA_TC_HIS_CLEAR** **ZIA58918 SWA_TC_HIS_CLEAR** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59016** ENTITY_CLR **= SAFETY_CDH**		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
15		**Step 15** ***Next step(s):*** -> **END**		
		Reset HIS		
	+00.01.10	**Send SWA_TC_HIS_RESET** **ZIA58916 SWA_TC_HIS_RESET** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA59010** ENTITY **= HIS** (Def)		
		End of HIS part of SVT test		
	AIAV153A	End of Sequence		
End of Procedure				