

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

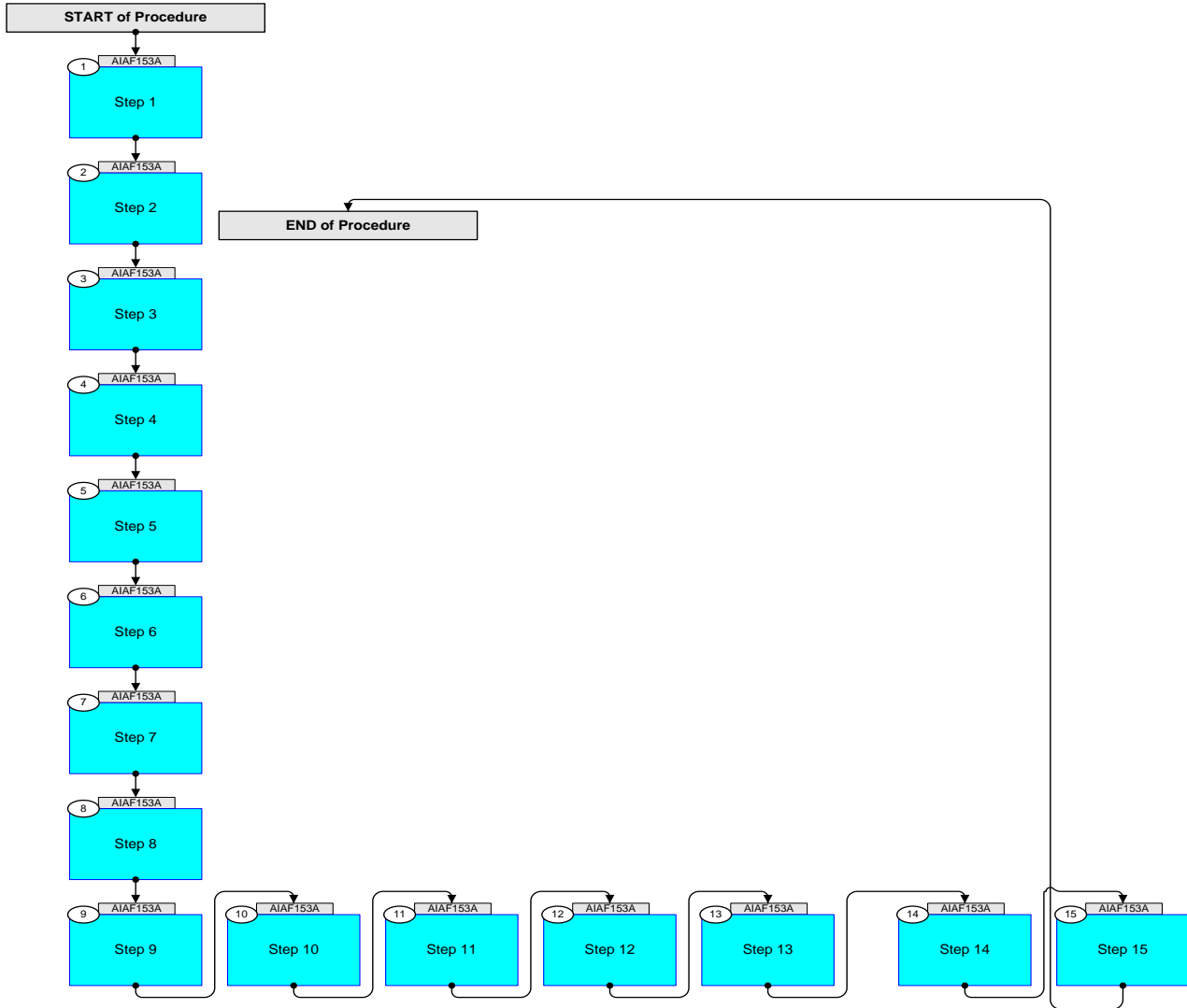
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### Procedure Flowchart Overview



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
<b>Beginning of Procedure</b>				
Beginning of Sequence				
	AIAV153A	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		<p><b>Step 4</b></p> <p><i>Next step(s):</i> -&gt; 5</p>		
		Send no-operation command		
	+00.00.01	<p>Send SWA_TC_HIS_NOP ZIA58915 SWA_TC_HIS_NOP TC Control Flags: GBM IL DSE --Y NC ---</p>		
5		<p><b>Step 5</b></p> <p><i>Next step(s):</i> -&gt; 6</p>		
		Infinite memory dump of 16 bytes at address 0		
	+00.01.10	<p>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 &lt;dec&gt; PIA60329 LENGTH = 16 &lt;dec&gt; PIA60342 REPEAT = FFFFFFFF &lt;hex&gt;</p>		
		Stop repeating memory dump		
	+00.01.10	<p>Send SWA_TC_HIS_MEM_DWELL_DIS ZIA58905 SWA_TC_HIS_MEM_DWELL_DIS TC Control Flags: GBM IL DSE --Y NC ---</p>		
6		<p><b>Step 6</b></p> <p><i>Next step(s):</i> -&gt; 7</p>		
		Read DSCB FPGA Revision		

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	+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		

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

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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		

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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		



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	+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		<b>Step 15</b>  <i>Next step(s):</i> -> END		
		Reset HIS		
	+00.01.10	<b>Send SWA_TC_HIS_RESET</b> <b>ZIA58916 SWA_TC_HIS_RESET</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PIA59010 ENTITY = HIS</b> (Def)		
		End of HIS part of SVT test		
<b>AIAV153A</b>		End of Sequence		
<b>End of Procedure</b>				