

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey	 
---	--

Procedure Summary

Objectives

SVT-1 SWA DPU

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

End of Procedure

Reference File(s)

Input Command Sequences

Output Command Sequences
AIAV150A

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
14/02/2019		2	Updated to V2	dlakey	M7

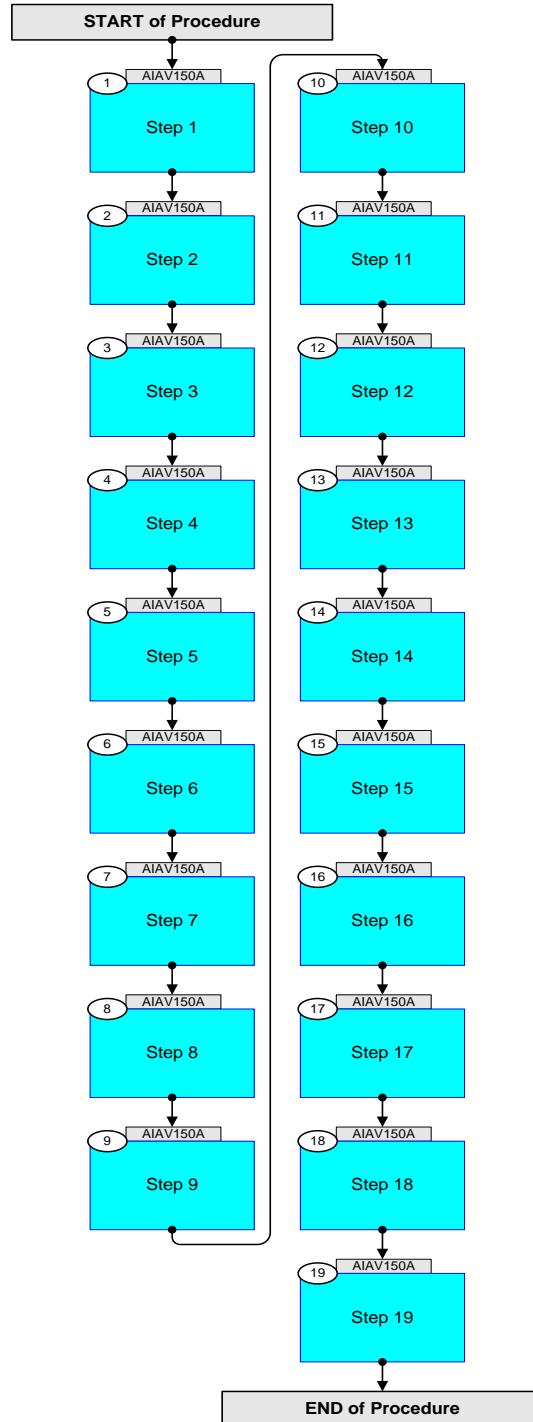
SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Procedure Flowchart Overview



SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Step	Label/Time	Activity/Remarks/Branch	CK	Display
Beginning of Procedure				
Beginning of Sequence				
	AIAV150A	AIAF150A		
TimeTag type : B				
1		<p>Step 1</p> <p><i>Next step(s):</i> -> 2</p>		
		Enable Sensor commanding (it is already enabled by default so nothing should change)		
	+00.00.00	<p>Send SWA_TC_DPU_SENSOR_CONTROL ZIA58004 SWA_TC_DPU_SENSOR_CONTROL</p> <p>TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters : PIA60852 SPARE = 0 <dec> PIA60853 EN_EAS2 = 0 <dec> PIA60854 EN_EAS1 = 0 <dec> PIA60855 EN_PAS = 0 <dec></p>		
2		<p>Step 2</p> <p><i>Next step(s):</i> -> 3</p>		
		Check DPU RAM memory		
	+00.00.30	<p>Send SWA_TC_MEM_CHECK ZIA58055 SWA_TC_MEM_CHECK</p> <p>TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters : PIA58056 MEMORY_ID = DPU_RAM (Def) PIA60330 START ADDRESS = 0x40700000 <hex> PIA60329 LENGTH = 4 <dec></p>		
		Check for reception of YIA58165 (TM(6,10), SWA_TM_MEM_CHK_RAM)		

SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Step	Label/Time	Activity/Remarks/Branch	CK	Display
3		<p>Step 3</p> <p><i>Next step(s) :</i> -> 4</p>		
		Enable 'DumpAborted' report		
	+00.00.30	<p>Send SWA_TC_EVENT_EN ZIA58058 SWA_TC_EVENT_EN TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60453 NUMBER_OF_EVENTS = 1 <dec> PIA58072 EVENT_ID = dumpAborted</p>		
		Dump a large area of memory		
	+00.00.29	<p>Send SWA_TC_MEM_DUMP ZIA58054 SWA_TC_MEM_DUMP TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA58056 MEMORY_ID = DPU_RAM (Def) PIA60330 START ADDRESS = 0x40000000 <hex> PIA60329 LENGTH = 10000 <dec></p>		
		1 second later, abort the dump		
	+00.00.01	<p>Send SWA_TC_MEM_DUMP_ABORT ZIA58056 SWA_TC_MEM_DUMP_ABORT TC Control Flags: GBM IL DSE --Y NC ---</p>		
		Check for reception of YIA58416 (TM(5,2), ID 43516 (SWA_E_DUMP_ABORTED))		
		Disable 'DumpAborted' report		

SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EVENT_DS ZIA58059 SWA_TC_EVENT_DS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60453 NUMBER_OF_EVENTS = 1 <dec> PIA58072 EVENT_ID = dumpAborted		
4		Step 4 Next step(s): -> 5		
		Disable error event handler for EAS1 off event		
	+00.00.30	Send SWA_TC_DIS_ERREV_HANDLER ZIA58068 SWA_TC_DIS_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvt		
		Reset error count for EAS1 off event		
	+00.00.30	Send SWA_TC_RESET_ERRHAND_CNT ZIA58069 SWA_TC_RESET_ERRHAND_CNT TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvt		
		Enable error event handler for EAS1 off event		
	+00.00.30	Send SWA_TC_EN_ERREV_HANDLER ZIA58067 SWA_TC_EN_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvt		

SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Disable error event handler for EAS1 off event		
	+00.00.30	Send SWA_TC_DIS_ERREV_HANDLER ZIA58068 SWA_TC_DIS_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvtnt		
5		Step 5 Next step(s): -> 6		
		Dump the boot report		
	+00.00.30	Send SWA_TC_DPU_BOOT_REP_DUMP ZIA58704 SWA_TC_DPU_BOOT_REP_DUMP TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58902 (TM(200,252), SWA_TM_FSW_STARTUP_REPORT)		
6		Step 6 Next step(s): -> 7		
		Dump the Error Log		
	+00.00.30	Send SWA_TC_DPU_ERR_LOG ZIA58705 SWA_TC_DPU_ERR_LOG TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA59019 ACTION = DUMP		
		Check for reception of YIA58903 (TM(200,253), SWA_TM_ERROR_LOG_REPORT)		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey		
---	--	---

Step	Label/Time	Activity/Remarks/Branch	CK	Display
7		<p style="text-align: center;">Step 7</p> <p><i>Next step(s):</i> -> 8</p>		
		Disable IIC test (it is disabled by default so nothing should change)		
	+00.00.30	<pre> Send SWA_TC_ENABLE_IIC_TEST ZIA58709 SWA_TC_ENABLE_IIC_TEST TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60744 ENABLE_FLAG = OFF </pre>		
8		<p style="text-align: center;">Step 8</p> <p><i>Next step(s):</i> -> 9</p>		
		To test Clear Config Params TC, need to first uplink some config params:		
	+00.00.30	<pre> Send SWA_TC_DPU_MODIFY_CONF_PARS ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60133 NUM_OF_PARS = 1 <dec> PIA60136 PAR_ID = 0x5000 <hex> PIA60135 PAR_DESC_SIZE = 12 <dec> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x09 <hex> PIA60134 PAR_DESC = 0xC1 <hex> PIA60134 PAR_DESC = 0x3A <hex> PIA60134 PAR_DESC = 0xE1 <hex> PIA60134 PAR_DESC = 0x40 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x01 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex> </pre>		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey	 
---	--

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_DPU_CLEAR_CONF_PARS ZIA58710 SWA_TC_DPU_CLEAR_CONF_PARS TC Control Flags: GBM IL DSE --Y NC ---		
9		Step 9 Next step(s): -> 10		
		Report Macro for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_REP_MACRO ZIA58712 SWA_TC_DPU_REP_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60152 MACRO_ID = 0x0011 <hex>		
		Check for reception of YIA58901 (TM(200,251), SWA_TM_MACRO_REPORT)		
		Modify Macro for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_MOD_MACRO ZIA58711 SWA_TC_DPU_MOD_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60146 MACRO_ID = 0x0011 <hex> PIA60149 NUM_OF_STEPS = 2 <dec> PIA60150 POSITION = 0x0005 <hex> PIA60410 ACTION_ID = 0x31 <hex> PIA60409 ACK_REQ = 0x00 <hex> PIA60151 TIME_OFFSET = 0x0000 <hex> PIA60147 MAJ_OFF = 0x0000 <hex> PIA60148 MIN_OFF = 0x0000 <hex> PIA60139 ABS_TIME = 0x0000 <hex>		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey		
---	--	---

Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60140 ADD_INFO_0 = 0x01 <hex> PIA60142 ADD_INFO_1 = 0x00 <hex> PIA60143 ADD_INFO_2 = 0x26 <hex> PIA60144 ADD_INFO_3 = 0x00 <hex> PIA60145 ADD_INFO_4 = 0x00 <hex> PIA60141 ADD_INFO_5 = 0xCC <hex> PIA60150 POSITION = 0x0006 <hex> PIA60410 ACTION_ID = 0x31 <hex> PIA60409 ACK_REQ = 0x00 <hex> PIA60151 TIME_OFFSET = 0x0000 <hex> PIA60147 MAJ_OFF = 0x0000 <hex> PIA60148 MIN_OFF = 0x0000 <hex> PIA60139 ABS_TIME = 0x0000 <hex> PIA60140 ADD_INFO_0 = 0x01 <hex> PIA60142 ADD_INFO_1 = 0x00 <hex> PIA60143 ADD_INFO_2 = 0x26 <hex> PIA60144 ADD_INFO_3 = 0x01 <hex> PIA60145 ADD_INFO_4 = 0x0F <hex> PIA60141 ADD_INFO_5 = 0x32 <hex>		
		Discard macro modification for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_DISC_MACRO ZIA58715 SWA_TC_DPU_DISC_MACRO TC Control Flags: GBM IL DSE --Y NC ---		
10		Step 10 Next step(s): -> 11		
		Disable PAS current monitor		
	+00.00.30	Send SWA_TC_PARS_MON_DIS ZIA58064 SWA_TC_PARS_MON_DIS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60452 NUM_OF_MON_ID = 1 <dec> PIA60449 MON_ID = PASPOWER_MI		
11		Step 11 Next step(s): -> 12		

SWA SVT-1 DPU
File: IA-SVT-150.xls
Author: daniel lakey



solar orbiter



Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Configure PAS current monitor for 300mA current limit		
	+00.00.10	<pre>Send SWA_TC_MON_ITEM_CONF ZIA58065 SWA_TC_MON_ITEM_CONF TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60452 NUM_OF_MON_ID = 1 <dec> PIA60449 MON_ID = PASPOWER_MI PIA60450 MON_STATUS = 1 <hex> PIA60061 PAR_TYPE = PAR_WORD (Def) PIA60435 FILTER = 2 <hex> PIA60335 PAR_ID = PASPOWER PIA60332 FIRST_VALIDITY_PAR_ID = DPUHKVAL PIA60336 SECOND_VALIDITY_PAR_ID = PasVal PIA60334 LOW_THRESHOLD = 0 <hex> PIA60333 HIGH_THRESHOLD = 294 <hex> PIA60132 LOW_EVENT_ID = NoEvent PIA60131 HIGH_EVENT_ID = PasDetOffEmrOFF</pre>		
12		<p>Step 12</p> <p><i>Next step(s):</i> -> 13</p>		
		Enable PAS current monitor		
	+00.00.10	<pre>Send SWA_TC_PARS_MON_EN ZIA58063 SWA_TC_PARS_MON_EN TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60452 NUM_OF_MON_ID = 1 <dec> PIA60449 MON_ID = PASPOWER_MI</pre>		
13		<p>Step 13</p> <p><i>Next step(s):</i> -> 14</p>		
		Dump monitoring parameters		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey	 
---	--

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.10	Send SWA_TC_MON_ITEM_REP ZIA58066 SWA_TC_MON_ITEM_REP TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58166 (TM(200,249) - SWA_TM_MON_CONF_REPORT)		
14		Step 14 Next step(s): -> 15		
		Put DPU into SAFE mode (takes one minute)		
	+00.00.30	Send SWA_TC_DPU_SAFE ZIA58725 SWA_TC_DPU_SAFE TC Control Flags: GBM IL DSE --Y NC ---		
		30s later halt macro execution		
	+00.00.30	Send SWA_TC_DPU_MACRO_STOP ZIA58736 SWA_TC_DPU_MACRO_STOP TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60745 SD = STOP (Def) PIA60746 SE2 = NO_STOP PIA60747 SE1 = NO_STOP PIA60748 SP = NO_STOP PIA60749 SH = NO_STOP		
		Check for reception of YIA58914 (TM(5,1), SWA_E_DPU_MACRO_ALT)		
15		Step 15 Next step(s): -> 16		
		DPU to STANDBY mode		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey		
---	--	---

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_DPU_STDBY ZIA58702 SWA_TC_DPU_STDBY TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58446 (TM(5,1), ID 43546 (SWA_E_DPU_STDBY_STATE))		
16		Step 16 Next step(s): -> 17		
		DPU to OPERATIONAL mode		
	+00.00.30	Send SWA_TC_DPU_OPS ZIA58703 SWA_TC_DPU_OPER TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58445 (TM(5,1), ID 43545 (SWA_E_DPU_OPS_STATE))		
17		Step 17 Next step(s): -> 18		
		Copy PAS tables into scratch		
	+00.00.30	Send SWA_TC_DPU_INIT_SDP_CONFIG ZIA58737 SWA_TC_DPU_INIT_SDP_CONFIG TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60750 CE = INIT (Def) PIA60751 CP = NO_INIT		

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey		
---	--	---

Step	Label/Time	Activity/Remarks/Branch	CK	Display
18		<p style="text-align: center;">Step 18</p> <p><i>Next step(s):</i> -> 19</p>		
		Load MRAM2 version of DPU FSW (patchable)		
	+00.00.30	<p>Send SWA_TC_SELECT_FSW_COPY_TO_LOAD</p> <p>ZIA58738 SWA_TC_SELECT_FSW_COPY_TO_LOAD</p> <p>TC Control Flags:</p> <p style="padding-left: 20px;">GBM IL DSE</p> <p style="padding-left: 20px;">--Y NC ---</p> <p>Command Parameters :</p> <p>PIA60752 FSW2L = PATCHABLE</p>		
		Load MRAM1 version of DPU FSW (normal)		
	+00.00.30	<p>Send SWA_TC_SELECT_FSW_COPY_TO_LOAD</p> <p>ZIA58738 SWA_TC_SELECT_FSW_COPY_TO_LOAD</p> <p>TC Control Flags:</p> <p style="padding-left: 20px;">GBM IL DSE</p> <p style="padding-left: 20px;">--Y NC ---</p> <p>Command Parameters :</p> <p>PIA60752 FSW2L = NOMINAL (Def)</p>		
19		<p style="text-align: center;">Step 19</p> <p><i>Next step(s):</i> -> END</p>		
		Modify PAS time offset w.r.t. RPW for snapshot		
	+00.00.30	<p>Send SWA_TC_DPU_TIME_OFFSET</p> <p>ZIA58938 SWA_TC_DPU_TIME_OFFSET</p> <p>TC Control Flags:</p> <p style="padding-left: 20px;">GBM IL DSE</p> <p style="padding-left: 20px;">--Y NC ---</p> <p>Command Parameters :</p> <p>PIA60741 OFFSET = 0x2 <hex></p>		
AIAV150A		End of Sequence		
End of Procedure				