

SWA Power On  
 File: IA-FCP-011.xls  
 Author: daniel lakey




**Procedure Summary**

**Objectives**

Nominal SWA Power On

**Summary of Constraints**

n/a

**Spacecraft Configuration**

**Start of Procedure**

SWA Off

**End of Procedure**

SWA On

**Reference File(s)**

**Input Command Sequences**

ADM705A

**Output Command Sequences**

AIAF011A

**Referenced Displays**

<b>ANDs</b>	<b>GRDs</b>	<b>SLDs</b>
DSMA0004		(None)

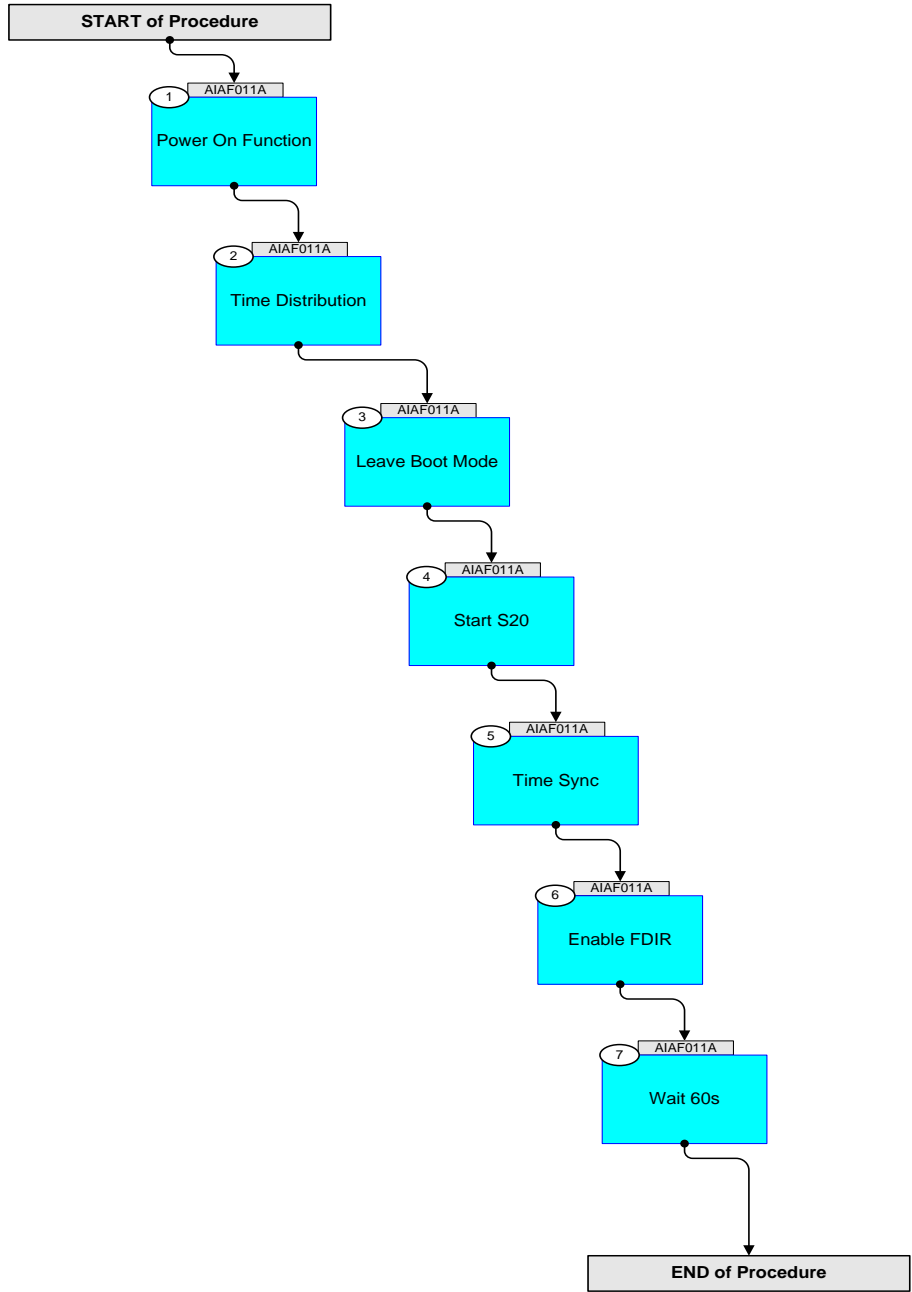
**Configuration Control Information**

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
21/02/2018		1	Updates from Feb 2018	dlakey	M7
12/03/2018	0.2				M7
27/04/2018		2	Updates following comments from SWA 25/04/2018	dlakey	M7
12/06/2018		3	Added redundant switch-on and cross strapped procedures, and SpW interface selection	dlakey	M7
18/06/2018	0.3				M7
17/09/2018		3.01	Moved to PFM DB	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				
	<b>AIAF011A</b>	<b>SWA Power On</b> SeqFlags [ Crit/Plan/Stdalone/Sched ] : NSYN TimeTag type : B		
1		<b>Power On Function</b>  <i>Next step(s):</i> -> 2		
		Enable Nominal SpW Link		
		<b>Verify Telemetry</b> <b>NSMD0084</b> Payload 7 Link Status = Nom Red Disab		AND=DSMA0004
	+00.00.00	<b>Execute Telecommand</b> <b>ZSM00298</b> SSMM Sel PL SpW IF OP mode TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PSM00302</b> SpW I/F E/D = Enabled <b>PSM00303</b> SpW I/S = Nominal <b>PSM00304</b> P/L ID = SWA		
		<b>Verify Telemetry</b> <b>NSMD0084</b> Payload 7 Link Status = NomEnab RedDis		AND=DSMA0004
		Power on SWA		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCSD11D2</b> SWA PowerUp Function TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCSB0036</b> Unit to power up/down. = UNIT_A		
1.1		<b>Verify Telemetry</b>		
		Confirm SWA RSA Telemetry		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		(if RIU-A is in use)		
		<b>Verify Telemetry</b> NRUD2007 RSA_1_1_9 SWA A = On		(None)
		<b>Verify Telemetry</b> NRUD2067 RSA_2_1_9 SWA B = Off		(None)
		(if RIU-B is in use)		
		<b>Verify Telemetry</b> NRUT2007 RSA_1_1_9 SWA A (RIU B) = On		(None)
		<b>Verify Telemetry</b> NRUT2067 RSA_2_1_9 SWA B (RIU B) = Off		(None)
		Check SWA A and B LCL status		
		(if PCDU-A is in use)		
		<b>Verify Telemetry</b> NPWD0077 A_LCL4_16 SWA-A ST = ON		(None)
		<b>Verify Telemetry</b> NPWD0038 A_LCL2_17 SWA-B PWR ST = OFF		(None)
		(if PCDU-B is in use)		
		<b>Verify Telemetry</b> NPWT0077 B_LCL4_16 SWA-A ST = ON		(None)
		<b>Verify Telemetry</b> NPWT0038 B_LCL2_17 SWA-B PWR ST = OFF		(None)
		Check SCV Telemetry		
		<b>Verify Telemetry</b> NCSD3K72 SWA A SCV Status.scvPwr = ON		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		<b>Verify Telemetry</b> NCSD3K73 SWA A SCV Status.scvTm = ON		(None)
		<b>Verify Telemetry</b> NCSD3K82 SWA B SCV Status.scvPwr = OFF		(None)
		<b>Verify Telemetry</b> NCSD3K83 SWA B SCV Status.scvTm = OFF		(None)
2		<b>Time Distribution</b>  Next step(s): -> 4		
	+00.00.20	<b>Execute Telecommand</b> ZCD00982 Start Time Synchronisation to User TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCD09821 Process ID of the User w = SWA_0 PCD09822 Period of time in second = 0 <dec>		
3		<b>Enable SpW Link Monitor</b>		
		Enable the Platform monitoring of the SpW Link  (Following DM-FCP-705)  This contains 9 TCs at 1TC/s : duration = 9s		
	ET=+00.00.01 UT=+00.00.01	<b>Execute Sequence</b> ADMF705A Man HB Mon SWA A v03 Sequence Grouping = -   Subsch ID : 254		

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4		<p><b>Leave Boot Mode</b></p> <p><i>Next step(s):</i> -&gt; 5</p>		
		<p>35 seconds after starting Time Sync, leave Boot Mode:</p> <p>35 - &lt;ADMF705A duration&gt; := time tag = 26s</p>		
	+00.00.26	<p><b>Send SWA_TC_LEAVE_BOOT_MODE</b>  <b>ZIA58735 SWA_TC_LEAVE_BOOT_MODE</b>                      TC Control Flags:                      GBM IL DSE                      --Y NC ---</p>		
5		<p><b>Start S20</b></p> <p><i>Next step(s):</i> -&gt; 6</p>		
		<p>8 seconds later, enable S20 with a frequency of 8Hz</p>		
	+00.00.08	<p><b>Execute Telecommand</b>  <b>ZCD01401 Start Information Distribution for User</b>                      TC Control Flags:                      GBM IL DSE                      --Y NC ---                      Command Parameters :  <b>PCD14011</b> Destination instrument I = SWA_SPW_ADDR  <b>PCD14012</b> Information distribution = 1 &lt;dec&gt;</p>		
6		<p><b>Time Sync</b></p> <p><i>Next step(s):</i> -&gt; 7</p>		
	+00.00.01	<p><b>Execute Telecommand</b>  <b>ZCD00982 Start Time Synchronisation to User</b>                      TC Control Flags:                      GBM IL DSE                      --Y NC ---                      Command Parameters :  <b>PCD09821</b> Process ID of the User w = SWA_0  <b>PCD09822</b> Period of time in second = 0 &lt;dec&gt;</p>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
7		Enable SWA FDIR  Next step(s): -> 9		
8		Enable SWA FDIR		
		Confirm each FMON is Disabled and Protected		
	+00.00.01	Execute Telecommand ZCL08E0A Report Current FMON Status List TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception YCL08E0B Current Functional Monitoring Status List Report TM(142,11), APID 195 (12/3) PI1=0 PI2=0		
		FMON_SWA1		
		NCD8E093 Functional MONitoring ID = 21 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		FMON_SWA2		
		NCD8E093 Functional MONitoring ID = 22 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		FMON_SWA3		
		<b>NCD8E093</b> Functional MONitoring ID = 23 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		FMON_SWA4		
		<b>NCD8E093</b> Functional MONitoring ID = 24 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		Confirm related SMON are Disabled		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL00C08 Report Current Monitoring List</b> TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception <b>YCL00C09 Monitoring List Report</b> TM(12,9), APID 195 (12/3) PI1=0 PI2=0		
		SMON_SWA1		
		<b>NCD0C094</b> OBCHP_Mon_ID = 21 <dec>		(None)
		<b>NCD0C099</b> Monitoring status = DISABLED		(None)
		SMON_SWA2		
		<b>NCD0C094</b> OBCHP_Mon_ID = 22 <dec>		(None)
		<b>NCD0C099</b> Monitoring status = DISABLED		(None)



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		SMON_SWA3		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>23</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA4		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>24</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA5		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>25</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA6		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>26</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA7		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>27</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA8		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>28</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA9		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>29</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)
		SMON_SWA10		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>30</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>DISABLED</b>		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Unprotect FMON		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL08E0D Unprotect Func Mon Parameters</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCD8E061</b> Number of FMON IDs to be = 4 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 21 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 22 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 23 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 24 <dec>		
		Enable SMON		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL00C01 Enable Monitoring of Parameters</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCD0C011</b> Number of Monitorings to = 10 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 21 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 22 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 23 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 24 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 25 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 26 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 27 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 28 <dec>  <b>PCD0C012</b> (Parameter) Monitoring I = 29 <dec> <b>PCD0C012</b> (Parameter) Monitoring I = 30 <dec>		
		Enable FMON		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL08E01 Enable Functional Monitoring</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCD8E011</b> Number of FMON IDs to be = 4 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 21 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 22 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 23 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 24 <dec>		
		Protect FMON		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL08E0C Protect Func Mon Parameters</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCD8E061</b> Number of FMON IDs to be = 4 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 21 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 22 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 23 <dec> <b>PCD8E012</b> FMON IDentifier to be pr = 24 <dec>		
		Confirm FMON is Enabled and Protected		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL08E0A Report Current FMON Status List</b> TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception <b>YCL08E0B Current Functional Monitoring Status List Report</b> TM(142,11), APID 195 (12/3) PI1=0 PI2=0		
		FMON_SWA1		
		<b>NCD8E093</b> Functional MONitoring ID = 21 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		FMON_SWA2		
		<b>NCD8E093</b> Functional MONitoring ID = 22 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		FMON_SWA3		
		<b>NCD8E093</b> Functional MONitoring ID = 23 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		FMON_SWA4		
		<b>NCD8E093</b> Functional MONitoring ID = 24 <dec>		(None) PKT=YCL08E0B
		<b>NCD8E094</b> FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		<b>NCD8E095</b> FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		Confirm related SMON are Enabled		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCL00C08 Report Current Monitoring List</b> TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception <b>YCL00C09 Monitoring List Report</b> TM(12,9), APID 195 (12/3) PI1=0 PI2=0		
		SMON_SWA1		
		<b>NCD0C094</b> OBCHP_Mon_ID = 21 <dec>		(None)
		<b>NCD0C099</b> Monitoring status = ENABLED		(None)
		SMON_SWA2		
		<b>NCD0C094</b> OBCHP_Mon_ID = 22 <dec>		(None)
		<b>NCD0C099</b> Monitoring status = ENABLED		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		SMON_SWA3		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>23</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA4		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>24</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA5		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>25</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA6		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>26</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA7		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>27</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA8		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>28</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA9		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>29</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)
		SMON_SWA10		
		<b>NCD0C094</b> OBCHP_Mon_ID = <b>30</b> <dec>		(None)
		<b>NCD0C099</b> Monitoring status = <b>ENABLED</b>		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
9		Wait 60s  Next step(s): -> END		
		Wait at least 60s before powering off		
<b>AIAF011A</b>		End of Sequence		
<b>End of Procedure</b>				