

SWA EAS Gain Test File: IA-FCP-090.xls Author: daniel lakey	 
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**Procedure Summary**

**Objectives**

SWA EAS Gain Test

**Summary of Constraints**

n/a

**Spacecraft Configuration**

**Start of Procedure**

**End of Procedure**

**Reference File(s)**

**Input Command Sequences**

**Output Command Sequences**  
AIAF090A

**Referenced Displays**

**ANDs      GRDs      SLDs**

**Configuration Control Information**

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
08/05/2020		1	SOL_FCR-310 - SWA Procedure Overhaul	dlakey	M7
16/07/2020		2	SOL_FCR-429 - [SWA] Fix AIAF090A timing & add IA-FCP-132 & IA-FCP-133	dlakey	M7

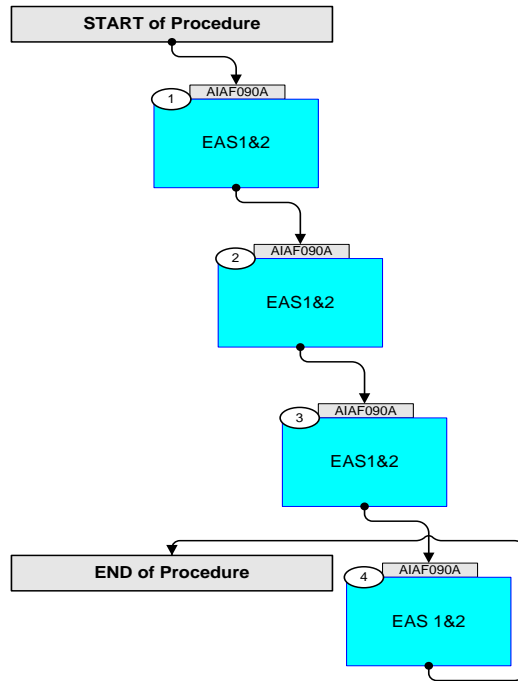
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## Procedure Flowchart Overview



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
<b>Beginning of Procedure</b>				
		Beginning of Sequence		
	<b>AIAF090A</b>	<b>SWA EAS Gain Test</b> SeqFlags [ Crit/Plan/Stdalone/Sched ] : NSYN Forced Subschedule : SWA (109) TimeTag type : B  <u>Formal Parameter List</u> {FP} <b>XF090A01</b> DefVal = 00 (PAR_DESC) <hex> {FP} <b>XF090A02</b> DefVal = 0A (PAR_DESC) <hex> {FP} <b>XF090A03</b> DefVal = 94 (PAR_DESC) <hex> {FP} <b>XF090A04</b> DefVal = 00 (PAR_DESC) <hex> {FP} <b>XF090A05</b> DefVal = 0A (PAR_DESC) <hex> {FP} <b>XF090A06</b> DefVal = 94 (PAR_DESC) <hex> {FP} <b>XF090A07</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A08</b> DefVal = AC2 (FINAL_MCP) <hex>  {FP} <b>XF090A09</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A10</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A11</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A12</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A13</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A14</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A15</b> DefVal = SWEEP_MACRO (CTRL) {FP} <b>XF090A16</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A17</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A18</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A19</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A20</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A21</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A22</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A23</b> DefVal = 8 (DEFNUM) <hex>  {FP} <b>XF090A24</b> DefVal = FIXED_MACRO (CTRL) {FP} <b>XF090A25</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A26</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A27</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A28</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A29</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A30</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A31</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A32</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A33</b> DefVal = SWEEP_MACRO (CTRL) {FP} <b>XF090A34</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A35</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A36</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A37</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A38</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		{FP} <b>XF090A39</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A40</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A41</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A42</b> DefVal = FIXED_MACRO (CTRL) {FP} <b>XF090A43</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A44</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A45</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A46</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A47</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A48</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A49</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A50</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A51</b> DefVal = FIXED_MACRO (CTRL) {FP} <b>XF090A52</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A53</b> DefVal = AC2 (FINAL_MCP) <hex>		
		{FP} <b>XF090A54</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A55</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A56</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A57</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A58</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A59</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A60</b> DefVal = SWEEP_MACRO (CTRL) {FP} <b>XF090A61</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A62</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A63</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A64</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A65</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A66</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A67</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A68</b> DefVal = 8 (DEFNUM) <hex>		
		{FP} <b>XF090A69</b> DefVal = FIXED_MACRO (CTRL) {FP} <b>XF090A70</b> DefVal = 869 (STARTING_MCP) <hex> {FP} <b>XF090A71</b> DefVal = AC2 (FINAL_MCP) <hex> {FP} <b>XF090A72</b> DefVal = 1E (STEP_MCP) <hex> {FP} <b>XF090A73</b> DefVal = A (FIRST_RAMP_TIME) <hex> {FP} <b>XF090A74</b> DefVal = 1 (INTERMEDIATE_RAMP_TIME) <hex> {FP} <b>XF090A75</b> DefVal = 15 (ACQ_TIME) <dec> {FP} <b>XF090A76</b> DefVal = 0D (HEMBIN) <hex> {FP} <b>XF090A77</b> DefVal = 8 (DEFNUM) <hex> {FP} <b>XF090A78</b> DefVal = SWEEP_MACRO (CTRL)		
1		<p style="text-align: center;"><b>EAS1&amp;2</b></p> <p><b>Next step(s):</b> -&gt; 2</p>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Set the EAS1 default MCP value to operational		
	+00.00.00	<b>Execute Telecommand</b> <b>ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PIA60133 NUM_OF_PARS = 1 &lt;hex&gt;</b> <b>PIA60136 PAR_ID = 100B &lt;hex&gt;</b> <b>PIA60135 PAR_DESC_SIZE = 6 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 7F &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = FF &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = XF090A01</b> <b>PIA60134 PAR_DESC = XF090A02</b> <b>PIA60134 PAR_DESC = XF090A03</b>		
		Set the EAS2 default MCP value to operational		
	+00.00.01	<b>Execute Telecommand</b> <b>ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PIA60133 NUM_OF_PARS = 1 &lt;hex&gt;</b> <b>PIA60136 PAR_ID = 200B &lt;hex&gt;</b> <b>PIA60135 PAR_DESC_SIZE = 6 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 7F &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = FF &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = XF090A04</b> <b>PIA60134 PAR_DESC = XF090A05</b> <b>PIA60134 PAR_DESC = XF090A06</b>		
		Accept the changes		
	+00.00.01	<b>Execute Telecommand</b> <b>ZIA58708 SWA_TC_DPU_ACCEPT_CONF_PARS</b> TC Control Flags: GBM IL DSE --Y NC ---		
		Run EAS1 Engineering Mode 3		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	Send SWA_TC_EAS1_ENG3_MODE ZIA58789 SWA_TC_EAS1_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A07 PIA60100 FINAL_MCP = XF090A08 PIA60102 STEP_MCP = XF090A09 PIA60437 FIRST_RAMP_TIME = XF090A10 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A11 PIA60165 ACQ_TIME = XF090A12 PIA60760 HEMBIN = XF090A13 PIA60761 DEFNUM = XF090A14 PIA60762 CTRL = XF090A15		
		Run EAS2 Engineering Mode 3		
	+00.00.01	Send SWA_TC_EAS2_ENG3_MODE ZIA58837 SWA_TC_EAS2_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A16 PIA60100 FINAL_MCP = XF090A17 PIA60102 STEP_MCP = XF090A18 PIA60437 FIRST_RAMP_TIME = XF090A19 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A20 PIA60165 ACQ_TIME = XF090A21 PIA60760 HEMBIN = XF090A22 PIA60761 DEFNUM = XF090A23 PIA60762 CTRL = XF090A24		
2		EAS1&2  Next step(s): -> 3		
		Run EAS1 Engineering Mode 3		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.07.00	Send SWA_TC_EAS1_ENG3_MODE ZIA58789 SWA_TC_EAS1_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A25 PIA60100 FINAL_MCP = XF090A26 PIA60102 STEP_MCP = XF090A27 PIA60437 FIRST_RAMP_TIME = XF090A28 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A29 PIA60165 ACQ_TIME = XF090A30 PIA60760 HEMBIN = XF090A31 PIA60761 DEFNUM = XF090A32 PIA60762 CTRL = XF090A33		
		Run EAS2 Engineering Mode 3		
	+00.00.01	Send SWA_TC_EAS2_ENG3_MODE ZIA58837 SWA_TC_EAS2_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A34 PIA60100 FINAL_MCP = XF090A35 PIA60102 STEP_MCP = XF090A36 PIA60437 FIRST_RAMP_TIME = XF090A37 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A38 PIA60165 ACQ_TIME = XF090A39 PIA60760 HEMBIN = XF090A40 PIA60761 DEFNUM = XF090A41 PIA60762 CTRL = XF090A42		
3		EAS1&2  Next step(s): -> 4		
		Run EAS1 Engineering Mode 3		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.07.00	Send SWA_TC_EAS1_ENG3_MODE ZIA58789 SWA_TC_EAS1_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A43 PIA60100 FINAL_MCP = XF090A44 PIA60102 STEP_MCP = XF090A45 PIA60437 FIRST_RAMP_TIME = XF090A46 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A47 PIA60165 ACQ_TIME = XF090A48 PIA60760 HEMBIN = XF090A49 PIA60761 DEFNUM = XF090A50 PIA60762 CTRL = XF090A51		
		Run EAS2 Engineering Mode 3		
	+00.00.01	Send SWA_TC_EAS2_ENG3_MODE ZIA58837 SWA_TC_EAS2_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A52 PIA60100 FINAL_MCP = XF090A53 PIA60102 STEP_MCP = XF090A54 PIA60437 FIRST_RAMP_TIME = XF090A55 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A56 PIA60165 ACQ_TIME = XF090A57 PIA60760 HEMBIN = XF090A58 PIA60761 DEFNUM = XF090A59 PIA60762 CTRL = XF090A60		
4		EAS 1&2  Next step(s): -> END		
		Run EAS1 Engineering Mode 3		



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.07.00	Send SWA_TC_EAS1_ENG3_MODE ZIA58789 SWA_TC_EAS1_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A61 PIA60100 FINAL_MCP = XF090A62 PIA60102 STEP_MCP = XF090A63 PIA60437 FIRST_RAMP_TIME = XF090A64 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A65 PIA60165 ACQ_TIME = XF090A66 PIA60760 HEMBIN = XF090A67 PIA60761 DEFNUM = XF090A68 PIA60762 CTRL = XF090A69		
		Run EAS2 Engineering Mode 3		
	+00.00.01	Send SWA_TC_EAS2_ENG3_MODE ZIA58837 SWA_TC_EAS2_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = XF090A70 PIA60100 FINAL_MCP = XF090A71 PIA60102 STEP_MCP = XF090A72 PIA60437 FIRST_RAMP_TIME = XF090A73 PIA60444 INTERMEDIATE_RAMP_TIME = XF090A74 PIA60165 ACQ_TIME = XF090A75 PIA60760 HEMBIN = XF090A76 PIA60761 DEFNUM = XF090A77 PIA60762 CTRL = XF090A78		
		Set the EAS1 default MCP value back to zero		
	+00.07.00	Execute Telecommand ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60133 NUM_OF_PARS = 1 <hex> PIA60136 PAR_ID = 100B <hex> PIA60135 PAR_DESC_SIZE = 6 <hex> PIA60134 PAR_DESC = 00 <hex> PIA60134 PAR_DESC = 7F <hex> PIA60134 PAR_DESC = FF <hex> PIA60134 PAR_DESC = 00 <hex> PIA60134 PAR_DESC = 00 <hex> PIA60134 PAR_DESC = 00 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Set the EAS2 default MCP value back to zero		
	+00.00.01	Execute Telecommand <b>ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PIA60133 NUM_OF_PARS = 1 &lt;hex&gt;</b> <b>PIA60136 PAR_ID = 200B &lt;hex&gt;</b> <b>PIA60135 PAR_DESC_SIZE = 6 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 7F &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = FF &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b> <b>PIA60134 PAR_DESC = 00 &lt;hex&gt;</b>		
		Accept the changes		
	+00.00.01	Execute Telecommand <b>ZIA58708 SWA_TC_DPU_ACCEPT_CONF_PARS</b> TC Control Flags: GBM IL DSE --Y NC ---		
<b>AIAF090A</b>		End of Sequence		
<b>End of Procedure</b>				