

SPIRE\_SMEC\_ON RED Mode Trans  
 File: H\_COP\_SPI\_MSNR.xls  
 Author: L.Lucas-hp



## Procedure Summary

### Objectives

This is a mode transition procedure. The purpose of this procedure is to switch the SMEC ON (RED)

Based on procedure:  
 Name:SMEC\_ON  
 Version number:4  
 Generated:27/03/2009

### Summary of Constraints

n/a

### Spacecraft Configuration

#### Start of Procedure

Sub-Mode = BSM\_INIT

#### End of Procedure

Sub-Mode = SMEC\_ON

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

HCSMSNR

### Referenced Displays

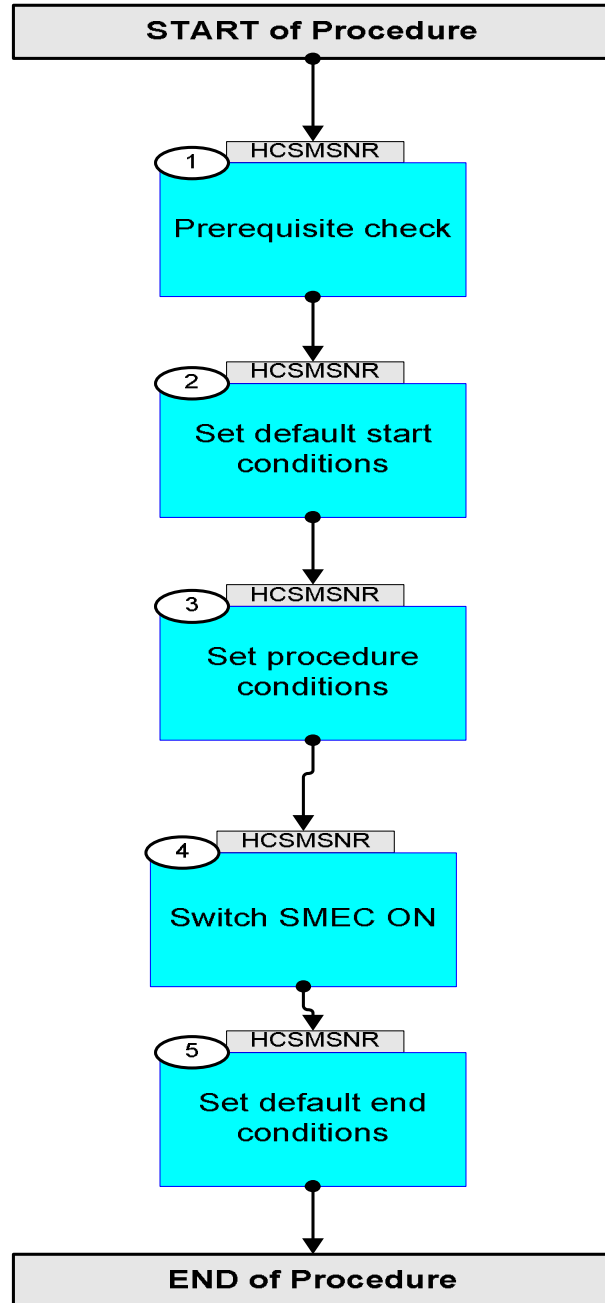
<b>ANDs</b>	<b>GRDs</b>	<b>SLDs</b>
SA_6_559		(None)
ZAZ90999		

### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
19/04/09		1	Created	L.Lucas-hp	
21/04/09	2.3	1.01	Validation : TExt Updates	L.Lucas-hp	
04/05/09	2.4	2	Remove ET	L.Lucas-hp	



### Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
<i>TC Seq. Name : HCSMSNR (Mode trans SMEC_ON R)</i>  <i>TimeTag Type: Y</i> <i>Sub Schedule ID:</i>  <input type="checkbox"/>				
1		<i>Prerequisite check</i>		Next Step: 2
1.1		<i>HSC/ICC input</i>		<input type="checkbox"/>
		Verify that the HSC has supplied a valid OBSID value:  <b>OBS_ID = 0xnnnn nnnn</b>		
1.2		<i>Verify TM</i>		<input type="checkbox"/>
		Verify Telemetry <b>SMECENC PWR                      SMS0W515</b>	<b>= 0 &lt;hex&gt;</b>	AND=SA_6_559
		Verify Telemetry <b>SMECLVDTPWR                    SMS1W515</b>	<b>= OFF</b>	(None)
2		<i>Set default start conditions</i>		Next Step: 3
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  <b>SET_OBS_STEP</b>  <i>Command Parameter(s) :</i> <b>OBSERVATION_STEP                      SP03N500</b>  <i>Subsch. ID : 370</i> <i>Det. descr. : SET OBSERVATION STEP</i>	<b>SC003500</b>  <b>0 &lt;hex&gt;</b>	
	ET=+ UT=+00.00.01	SET_BBID  <b>SET_BBID</b>  <i>Command Parameter(s) :</i> <b>BUILDING_BLOCK_ID                      SP01N500</b>  <i>Subsch. ID : 370</i> <i>Det. descr. : SET BUILDING BLOCK IDENTIFIER</i>	<b>SC001500</b>  <b>80010001 &lt;hex&gt;</b>	
		Verify Telemetry <b>BBFULLTYPE                      SM2LN500</b>	<b>= ClearObs</b>	AND=ZAZ90999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID  SET_OBSID  Command Parameter(s) : OBSERVATION_ID SP00N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500  00000000 <hex>	
		Verify Telemetry  OBSID SM10N500	= 00000000 <hex>	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80020001 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry <b>BBFULLTYPE</b> <b>SM2LN500</b>	= StartObs	AND=ZAZ90999
3		<i>Set procedure conditions</i>		Next Step: 4
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS <b>RESET_DRCU_COUNTERS</b>  Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter <b>TRESET</b> <b>SM01T500</b>	same as THSK	AND=ZAZ90999
		<b>THSK</b> <b>SM00T500</b>	any	AND=ZAZ90999
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP <b>SET_OBS_STEP</b>  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID <b>SET_OBSID</b>  Command Parameter(s) : <b>OBSERVATION_ID</b> <b>SP00N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500  OBS_ID	
		Verify Telemetry <b>OBSID</b> <b>SM10N500</b>	OBS_ID	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP <b>SET_OBS_STEP</b>  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID <b>SET_BBID</b>  Command Parameter(s) : <b>BUILDING_BLOCK_ID</b> <b>SP01N500</b>  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry <b>BBFULLTYPE</b> <b>SM2LN500</b>	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP <b>SET_OBS_STEP</b> Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b> TC Control Flags : <b>GBM IL DSE</b> <b>--Y -- ---</b> Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID <b>SET_BBID</b> Command Parameter(s) : <b>BUILDING_BLOCK_ID</b> <b>SP01N500</b> Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500 82010001 <hex>	
		Verify Telemetry <b>BBFULLTYPE</b> <b>SM2LN500</b>	= Switch_On_FTS	AND=ZAZ90999
4		Switch SMEC ON		Next Step: 5
	ET=+ UT=+00.00.02	SET_OBS_MODE <b>SET_OBS_MODE</b> Command Parameter(s) : <b>OBSERVING_MODE</b> <b>SP02N500</b> TC Control Flags : <b>GBM IL DSE</b> <b>--Y -- ---</b> Subsch. ID : 370 Det. descr. : SET OBSERVING MODE	SC002500 204 <hex>	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND <b>SEND_DRCU_COMMAND</b> Command Parameter(s) : <b>DRCUCOMMAND</b> <b>SPD4N505</b> <b>OVERRIDE</b> <b>SPD9N505</b> TC Control Flags : <b>GBM IL DSE</b> <b>--- -- ---</b> Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 90541901 <hex> 0 <hex> (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  90400003 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.06	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  90586978 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.00	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  905a9c40 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  90410001 <hex> 0 <hex> (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  905f2386 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  905e1f5e <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  904d0000 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91d4006b <hex> 0 <hex> (Def)	



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91d90058 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91da006f <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91db0057 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91dc006e <hex> 0 <hex> (Def)	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91dd0069 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND  SEND_DRCU_COMMAND  Command Parameter(s) : DRCUCOMMAND                   SPD4N505 OVERRIDE                   SPD9N505  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505  91de0065 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP               SP03N500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.00	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID               SP01N500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	
4.1		TM Checks		<input type="checkbox"/>
		Verify Telemetry  SMECENC PWR                   SMS0W515	= 1 <hex>	AND=SA_6_559
		Verify Telemetry  SMECLVDTPWR                   SMS1W515	= 1 <hex>	AND=SA_6_559

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry <b>MODE</b> <b>SM00M500</b>	= SMEC_ON	AND=SA_6_559
5		<i>Set default end conditions</i>		Next Step: END
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  <b>SET_OBS_STEP</b>  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  <b>0 &lt;hex&gt;</b>	
	ET=+ UT=+00.00.01	SET_BBID  <b>SET_BBID</b>  Command Parameter(s) : <b>BUILDING_BLOCK_ID</b> <b>SP01N500</b>  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  <b>80000000 &lt;hex&gt;</b>	
		Verify Telemetry <b>BBFULLTYPE</b> <b>SM2LN500</b>	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  <b>SET_OBS_STEP</b>  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  <b>0 &lt;hex&gt;</b>	
	ET=+ UT=+00.00.01	SET_BBID  <b>SET_BBID</b>  Command Parameter(s) : <b>BUILDING_BLOCK_ID</b> <b>SP01N500</b>  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  <b>80030001 &lt;hex&gt;</b>	
		Verify Telemetry <b>BBFULLTYPE</b> <b>SM2LN500</b>	= EndObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  <b>SET_OBS_STEP</b>  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  <b>1 &lt;hex&gt;</b>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	ET=+ UT=+00.00.01	SET_OBSID  Command Parameter(s) : OBSERVATION_ID  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID  SP00N500  00000000 <hex>	SC000500	
		Verify Telemetry  OBSID  SM10N500	= 00000000 <hex>	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80000000 <hex>	SC001500	
		Verify Telemetry  BBFULLTYPE  SM2LN500	= Null	AND=ZAZ90999	
<b>End of Procedure</b>					