

DRCU_START DRCU Start
 File: H_COP_SPI_DRCN.xls
 Author: L.Lucas-hp



Procedure Summary

Objectives

The purpose of this procedure is to Power up the Nom DRCU
 (Note this also involves CDMU commands as the LCLs must be
 switched on)
 Based on Procedure:
 Name:DRCU_START
 Version number:6
 Generated:27/03/2009

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

Mode: DPU_ON

End of Procedure

Sub-Mode: DRCU_ON

Reference File(s)

Input Command Sequences

Output Command Sequences

HCSDRCN

Referenced Displays

ANDs	GRDs	SLDs
SA_1_559		
SA_7_559		
ZAZ95999		
ZAZ90999		
SA_6_559		

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
22/12/08		1	Created	L.Lucas-hp	
14/01/09		1.01	Validation : Update AND	L.Lucas-hp	
20/01/09		2	AND Update	L.Lucas-hp	
21/01/09		3	Updated to include necessary CDMU commands to LCLs (inc TFL_TM FDIR dis and enable) required	L.Lucas-hp	
21/01/09		3.01	Validation : Text Update for TM Check	L.Lucas-hp	

Status : Version 6 - Unchanged
 Last Checkin: 04/05/09

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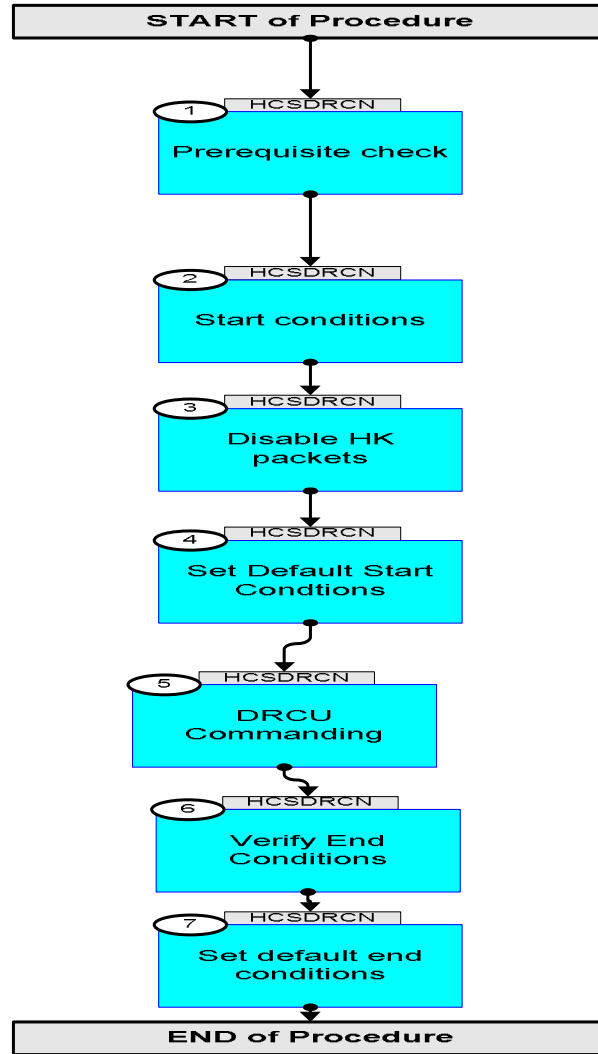


27/01/09	2	4	Remove ETs for ease of Loading to manual stack	L.Lucas-hp	
23/03/09		4.01	Validation : Title Updates	L.Lucas-hp	
25/03/09	2.2	4.02	Validation : Text Update, Specify that this procedure is for PRIME	L.Lucas-hp	
19/04/09		5	Review in light of new general DRCU procedure H_COP_SPI_MDRS, ot switch on either P or R (new and improved)	L.Lucas-hp	
21/04/09	2.3	5.01	Validation : TExt Updates	L.Lucas-hp	
04/05/09	2.4	6	Remove ET	L.Lucas-hp	

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Procedure Flowchart Overview



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------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																																	
Beginning of Procedure																																					
<i>TC Seq. Name :HCSDCRN (DPU & DRCU Switch On)</i> <i>TimeTag Type: Y</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>																																					
1		Prerequisite check		Next Step: 2																																	
1.1		HSC/ICC input		<input type="checkbox"/>																																	
		Verify that the HSC has supplied a valid OBSID value: OBS_ID = 0xnnnn nnnn																																			
1.2		TM checks		<input type="checkbox"/>																																	
		Verify Telemetry <div style="text-align: right;"> MODE SM00M500 = DPU_ON </div>		AND=SA_1_559																																	
2		Start conditions		Next Step: 3																																	
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands																																			
		Verify Telemetry <div style="text-align: right;"> MODE SM00M500 = DPU_ON </div>		AND=SA_7_559																																	
2.1		Disable the TFL_TM FDIR		<input type="checkbox"/>																																	
	ET=+ UT=+00.00.00	Execute Telecommand <div style="text-align: center;"> ConfiguresDBFDIR </div> Command Parameter(s) : <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; text-align: right;">RTA</td> <td style="width: 30%;">DH011161</td> <td style="width: 40%;">SPIRE A</td> </tr> <tr> <td style="text-align: right;">M0</td> <td>DH030161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M1</td> <td>DH031161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M2</td> <td>DH032161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M3</td> <td>DH033161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M4</td> <td>DH034161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M5</td> <td>DH035161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M6</td> <td>DH036161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">M7</td> <td>DH037161</td> <td>Ignore Flag</td> </tr> <tr> <td style="text-align: right;">F0</td> <td>DH018161</td> <td>ON</td> </tr> <tr> <td style="text-align: right;">F1</td> <td>DH019161</td> <td>Alive</td> </tr> </table>	RTA	DH011161	SPIRE A	M0	DH030161	Ignore Flag	M1	DH031161	Ignore Flag	M2	DH032161	Ignore Flag	M3	DH033161	Ignore Flag	M4	DH034161	Ignore Flag	M5	DH035161	Ignore Flag	M6	DH036161	Ignore Flag	M7	DH037161	Ignore Flag	F0	DH018161	ON	F1	DH019161	Alive	DC005161	
RTA	DH011161	SPIRE A																																			
M0	DH030161	Ignore Flag																																			
M1	DH031161	Ignore Flag																																			
M2	DH032161	Ignore Flag																																			
M3	DH033161	Ignore Flag																																			
M4	DH034161	Ignore Flag																																			
M5	DH035161	Ignore Flag																																			
M6	DH036161	Ignore Flag																																			
M7	DH037161	Ignore Flag																																			
F0	DH018161	ON																																			
F1	DH019161	Alive																																			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		F2 DH020161 F3 DH021161 F4 DH022161 F5 DH023161 F6 DH024161 F7 DH025161 M12 DH051161 M_C DH043161 M8 DH038161 M9 DH039161 M10 DH040161 M11 DH041161 F12 DH050161 CNT DH042161 F8 DH026161 F9 DH027161 F10 DH028161 F11 DH029161 TC Control Flags : Subsch. ID : 10 Det. descr. : Configure SDB FDIR GBM IL DSE --Y -- ---	Well TC Well TM Valid Non-vital NOMINAL ON Update status Ignore CNT Ignore Flag Ignore Flag Ignore Flag Ignore Flag Ignore Flag DISABLED LoopCnt1 Bus A Healthy Healthy ENABLED	
3		Disable HK packets		Next Step: 4
	ET=+ UT=+00.00.00	CLEAR_HK_REPORT Command Parameter(s) : PKTID_CLEARHK SPR6N500 TC Control Flags : Subsch. ID : 370 Det. descr. : CLEAR HOUSEKEEPING PARAMETER REPORT DEFINITION GBM IL DSE --Y -- ---	CLEAR_HK_REPORT SCR01500 300 <hex>	
	ET=+ UT=+00.00.00	CLEAR_HK_REPORT Command Parameter(s) : PKTID_CLEARHK SPR6N500 TC Control Flags : Subsch. ID : 370 Det. descr. : CLEAR HOUSEKEEPING PARAMETER REPORT DEFINITION GBM IL DSE --- -- ---	CLEAR_HK_REPORT SCR01500 301 <hex>	
		TMCHECK Ensure that TM is not being generated. Check Packet history (3,25)		
3.1		Power the DRCU		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Upon LCL switch ON, two TM(5,1) packets [No_SCU_Response_Clear, No_DCU_Response_Clear] are expected as the units are not switched on.		
	ET=+ UT=+00.00.00	Execute Telecommand SwOn_SpireHSFCU_N_L51 Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) SPIRE HSFCU Nom - switch LCL_51 on	DC51D170	
		Verify: FCU LCL status SpirHsfN_L51_1S WM42C565	= ON	AND=ZAZ95999
		Verify: FCU LCL current (+/- 0.5A) SpireHsfN_L51_I WM408565	= 0.4 A	AND=ZAZ95999
3.2		Enable New HK Reports		<input type="checkbox"/>
		Execute remaining commands in sequence if DRCU is successfully switched on		
	ET=+ UT=+00.00.01	DEFINE_NEW_HK_REPORT DEFINE_NEW_HK_REPORT Command Parameter(s) : HKPCKTID_DEFINENEWHK SPR0N500 HKSID_DEFINENEWHK SPR1N500 HKINTERVAL_DEFINENEWHK SPR2N500 HKREPEAT_DEFINENEWHK SPR3N500 TABLEID_DEFINENEWHK SPR4N500 TC Control Flags : GBM IL DSE ---Y --- Subsch. ID : 370 Det. descr. : DEFINE NEW HOUSEKEEPING PARAMETER REPORT	SCR00500 300 <hex> 300 <hex> 7D0 <hex> 1 <hex> 0 <hex>	
	ET=+ UT=+00.00.00	DEFINE_NEW_HK_REPORT DEFINE_NEW_HK_REPORT Command Parameter(s) : HKPCKTID_DEFINENEWHK SPR0N500 HKSID_DEFINENEWHK SPR1N500 HKINTERVAL_DEFINENEWHK SPR2N500 HKREPEAT_DEFINENEWHK SPR3N500 TABLEID_DEFINENEWHK SPR4N500 TC Control Flags : GBM IL DSE --- --- --- Subsch. ID : 370 Det. descr. : DEFINE NEW HOUSEKEEPING PARAMETER REPORT	SCR00500 301 <hex> 301 <hex> 3e8 <hex> 1 <hex> 1 <hex>	
		Verify the TM is being generated. Check Packet History: Critical 3,25, 1280 (Critical_HK_Parameter_Report) Nominal HK 3,25, 1282 (Nominal_HK_Parameter_Report)		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
3.3		Re-enable the TFL_TM FDIR		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand ConfigureSDBFDIR Command Parameter(s) : RTA DH011161 SPIRE A M0 DH030161 Ignore Flag M1 DH031161 Ignore Flag M2 DH032161 Ignore Flag M3 DH033161 Ignore Flag M4 DH034161 Ignore Flag M5 DH035161 Ignore Flag M6 DH036161 Ignore Flag M7 DH037161 Ignore Flag F0 DH018161 ON F1 DH019161 Alive F2 DH020161 Well TC F3 DH021161 Well TM F4 DH022161 Valid F5 DH023161 Non-vital F6 DH024161 NOMINAL F7 DH025161 ON M12 DH051161 Update status M_C DH043161 Ignore CNT M8 DH038161 Ignore Flag M9 DH039161 Ignore Flag M10 DH040161 Ignore Flag M11 DH041161 Ignore Flag F12 DH050161 ENABLED CNT DH042161 LoopCnt1 F8 DH026161 Bus A F9 DH027161 Healthy F10 DH028161 Healthy F11 DH029161 ENABLED TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Configure SDB FDIR	DC005161	
4		Set Default Start Conditions		Next Step: 5
	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>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	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 80010001 <hex>	SC001500	
		Verify Telemetry BBFULLTYPE	SM2LN500	= ClearObs	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 1 <hex>	SC003500	
	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

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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 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>	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartObs	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 80010001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= ClearObs	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 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>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		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>	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartObs	AND=ZAZ90999
4.1		Reset DRCU Counters		<input type="checkbox"/>
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS RESET_DRCU_COUNTERS Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter TRESET SM01T500	same as THSK	AND=SA_1_559
		THSK SM00T500	any	AND=SA_1_559

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SC000500 OBS_ID	
		Verify Telemetry OBSID SM10N500	OBS_ID	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	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 8C010001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= DRCU_ON	AND=SA_6_559
5		DRCU Commanding		Next Step: 6
	ET=+ UT=+00.00.02	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 370 Det. descr. : SET OBSERVING MODE	SC002500 1 <hex>	
		Verify Telemetry MODE SM00M500	= DRCU_START	AND=SA_6_559
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 84120000 <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 84130000 <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 84050000 <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 84060000 <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 84070000 <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 84080000 <hex> 0 <hex> (Def)	

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	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 84090000 <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 840a0000 <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 840b0000 <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 840c0000 <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 840d0000 <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 840e0000 <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 840f0000 <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 84100000 <hex> 0 <hex> (Def)	

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	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 84140000 <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 84370000 <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 84340000 <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 84350000 <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 84360000 <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 84110000 <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 84330000 <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 84010000 <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 84020000 <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 84030000 <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 84040000 <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 84310000 <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 84320000 <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 843000ff <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 840000ff <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 84190095 <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 84180006 <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 8439007a <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 84380001 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SET_OBS_MODE SET_OBS_MODE Command Parameter(s) : OBSERVING_MODE SP02N500 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SET OBSERVING MODE	SC002500 100 <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 SP01N500 80000000 <hex>	
6		Verify End Conditions		Next Step: 7
		Verify Telemetry is incrementing at 1 second intervals TM2N SMT1N500		AND=SA_7_559
		Verify Telemetry is refreshing at 1 second interval THSK SM00T500		AND=SA_6_559
		Now check the following DCU and SCU Board voltages are within limits		
		Verify Telemetry is ~5V BIASP5V SMB6V510		AND=SA_7_559
		Verify Telemetry is ~9V BIASP9V SMB7V510		AND=SA_7_559
		Verify Telemetry is ~9V BIASM9V SMB8V510		AND=SA_7_559
		Verify Telemetry is ~5V SCUP5V SM_0V520		AND=SA_7_559
		Verify Telemetry is ~9V SCUP5V SM_0V520		AND=SA_7_559
		Verify Telemetry is ~9V SCUM9V SM_2V520		AND=SA_7_559
		Verify Telemetry is set to MODE SM00M500	= DRCU_ON	AND=SA_6_559
7		Set default end conditions		Next Step: END
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		

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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 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 80030001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= EndObs	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 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>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		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
End of Procedure				