

MMO SVT Individual Command Check
 File: JX-SVT-004.xls
 Author: a.dietz-bc



Procedure Summary

Objectives

The purpose of this procedure is to execute MMO commands that are not used in the other SVT or flight procedures.

Summary of Constraints

MMO to be in correct mode for sequences

Spacecraft Configuration

Start of Procedure

AJXV004A: MMO in Init Mode
 AJXV004B: MMO in Standby Mode

End of Procedure

AJXV004A: MMO in Init Mode
 AJXV004B: MMO in Standby Mode

Reference File(s)

Input Command Sequences

Output Command Sequences

AJXV004A
 AJXV004B

Referenced Displays

ANDs **GRDs** **SLDs**
 DJXA0001
 DJXA0002
 DJXA0003

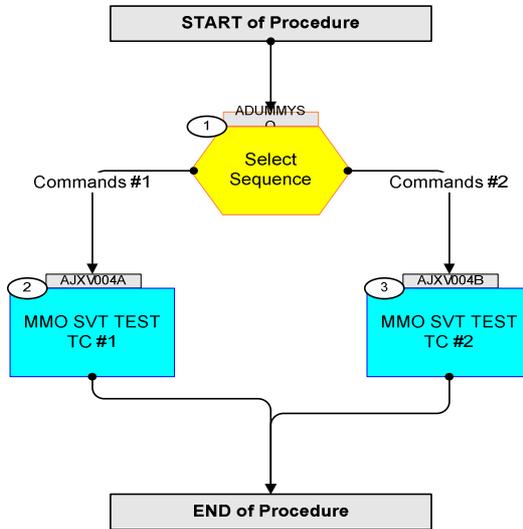
Configuration Control Information

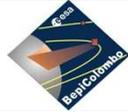
DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
11/04/2017		1	Created	a.dietz-bc	
11/04/2017		2	Change of selection field to dummy sequence.	a.dietz-bc	
13/04/2017		2.01	Update after JAXA comments	a.dietz-bc	

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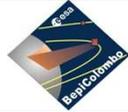


Procedure Flowchart Overview



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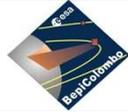
Step	Label/Time	Activity/Remarks/Branch	CK	Display
Beginning of Procedure				
Beginning of Sequence				
	ADUMMYSQ	Select Sequence TimeTag type : B		
1		Select Sequence <i>Next step(s):</i> -> 2 Commands #1 -> 3 Commands #2		
End of Sequence				
Beginning of Sequence				
	AJXV004A	MMO SVT TEST TC #1 TimeTag type : B		
2		MMO SVT TEST TC #1 <i>Next step(s):</i> -> END		
		Check that the MMO is in Cruise Initial mode.		
		Verify Telemetry NPWD1601 MMO_CNV_A_ON_ST = On		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry NRUD4002 MMO_CNV_A_RLY_ST-A = Main		AND=DJXA0001 PKT=YCD0Z068
		OR		
		Verify Telemetry NPWD1602 MMO_CNV_B_ON_ST = On		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry NRUD3002 MMO_CNV_B_RLY_ST-A = Main		AND=DJXA0001 PKT=YCD0Z068
		Check that the operational heater control is not yet started.		
		Verify Telemetry NJXD0022 TCS_MODE_ST = STBY		AND=DJXA0002 PKT=YCL0Z001

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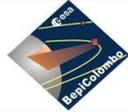
Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry NJXD0024 PCD_DRU_PSU_A_ON_OF = OFF		AND=DJXA0002 PKT=YCL0Z001
		Verify Telemetry NJXD0025 PCD_DRU_PSU_B_ON_OF = OFF		AND=DJXA0002 PKT=YCL0Z001
		Send command to power ON DRU-A and check reaction in MMO telemetry.		
	+00.00.00	Execute Telecommand ZJX00018 MMO DH_DRU_A_ON_B_OFF TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0024 PCD_DRU_PSU_A_ON_OF = ON		AND=DJXA0002 PKT=YCL0Z001
		Switch off DRU-A by sending command to stop operational heater control. Verify in TM that DRU-A is OFF again. DRU-B shall remain OFF.		
	+00.00.05	Execute Telecommand ZJX00017 MMO DH_OP_HTR_CTRL_STOP TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0024 PCD_DRU_PSU_A_ON_OF = OFF		AND=DJXA0002 PKT=YCL0Z001
		Send command to power ON DRU-B and check reaction in MMO telemetry.		
	+00.00.05	Execute Telecommand ZJX00019 MMO DH_DRU_B_ON_A_OFF TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0025 PCD_DRU_PSU_B_ON_OF = ON		AND=DJXA0002 PKT=YCL0Z001
		Switch off DRU-B by sending command to stop operational heater control. Verify in TM that DRU-B is OFF again. DRU-A shall remain OFF.		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.05	Execute Telecommand ZJX00017 MMO DH_OP_HTR_CTRL_STOP TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0025 PCD_DRU_PSU_B_ON_OF = OFF		AND=DJXA0002 PKT=YCL0Z001
		Send command to switch battery to external. Note, as battery is nominally connected to external, the MMO spacecraft configuration will not change with this TC.		
		Verify Telemetry NJXD0023 PCD_BAT_INT_EXT = external		AND=DJXA0002 PKT=YCL0Z001
	+00.00.05	Execute Telecommand ZJX00010 MMO DH_BAT_EXT TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0023 PCD_BAT_INT_EXT = external		AND=DJXA0002 PKT=YCL0Z001
		The execution of the command can be verified by TC counter and command ID in the MMO telemetry.		
AJXV004A		End of Sequence		
AJXV004B		Beginning of Sequence		
		MMO SVT TEST TC #2		
		TimeTag type : B		
3		MMO SVT TEST TC #2 Next step(s): -> END		
		Check that the MMO is in standby mode.		
		Verify Telemetry NPWD1601 MMO_CNV_A_ON_ST = On		AND=DJXA0001 PKT=YCD0Z066

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry NRUD4002 MMO_CNV_A_RLY_ST-A = Main		AND=DJXA0001 PKT=YCD0Z068
		OR		
		Verify Telemetry NPWD1602 MMO_CNV_B_ON_ST = On		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry NRUD3002 MMO_CNV_B_RLY_ST-A = Main		AND=DJXA0001 PKT=YCD0Z068
		Check that the operational heater control is not yet started.		
		Verify Telemetry NJXD0022 TCS_MODE_ST = NMNL		AND=DJXA0002 PKT=YCL0Z001
		Verify Telemetry NJXD0024 PCD_DRU_PSU_A_ON_OF = ON		AND=DJXA0002 PKT=YCL0Z001
		OR		
		Verify Telemetry NJXD0025 PCD_DRU_PSU_B_ON_OF = ON		AND=DJXA0002 PKT=YCL0Z001
		Send Separation Status and verify result in telemetry.		
	+00.00.00	Execute Telecommand ZJX00001 MMO Separation Status Check request TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0002 Separation Status = Ready for sep		AND=DJXA0003 PKT=YCL0Z002
		In addition, this can be also checked in the MMO Separation Sts Acq / MMO Msg SA25 data word NCLD0212 = "Fail for sep" = 64023 dec = 0xFA17.		
		Disable the MMO Post Separation Sequence and verify result in telemetry.		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.05	Execute Telecommand ZJX00003 MMO Post Separation Sequence disable TC Control Flags: GBM IL DSE --Y -- ---		
		Verify Telemetry NJXD0002 Separation Status = Fail for sep		AND=DJXA0003 PKT=YCL0Z002
		The execution of the command can be verified by TC counter and command ID in the MMO telemetry.		
AJXV004B		End of Sequence		
End of Procedure				