

**HERSCHEL
FLIGHT OPERATIONS PLAN**

VOLUME 7

Contingency Flight Control Procedures

TT&C CRP's

PT-HMOC-OPS-FOP-6001-OPS-OAH

Issue 3.1

05/09/11



DOCUMENT APPROVAL

The Approval Page for all Volumes of the FOP can be found in Volume 1.



DISTRIBUTION LIST

The Distribution List for all Volumes of the FOP can be found in Volume 1.

CHANGE SUMMARY

Date	FOP Issue	Version	Modification Description	Author	SPR Ref
01/08/2008		1	Created	mvoegele-hp	
04/08/2008		2	Updated for Issue 1.0	mvoegele-hp	
05/08/2008	1.0	3	Changed title	mvoegele-hp	
02/02/2009	2.0	4	Updated change control history for Issue 2.0	mvoegele-hp	
06/03/2009	2.1	5	Updated change control history for Issue 2.1	mvoegele-hp	
26/03/2009	2.2	6	Updated change control history for Issue 2.2	mvoegele-hp	
23/04/2009	2.3	7	Updated change control history for Issue 2.3	mvoegele-hp	
06/05/2009	2.4	8	Updated change history for Issue 2.4	mvoegele-hp	
08/10/2009	2.5	9	Updated change control history for Issue 2.5	dbleakle-hp	
13/04/2010	3.0	10	Updated change control history for issue 3.0	mvoegele-hp	
05/09/2011	3.1	11	Updated change control history for issue 3.1	mvoegele-hp	

CHANGE RECORD SHEET











































Change No.	Type of Change	Date of Issue	Section Affected
1	1.0	06/08/08	All
			Updated:
			Added: H_CRP_TTC_ENCR, H_CRP_TTC_MANG, H_CRP_TTC_SWR, H_CRP_TTC_SWRB, H_CRP_TTC_SWXF, H_CRP_TTC_T100, H_CRP_TTC_T101, H_CRP_TTC_T10R, H_CRP_TTC_T10X, H_CRP_TTC_T1CM, H_CRP_TTC_T1HR, H_CRP_TTC_T1L1, H_CRP_TTC_T1L2, H_CRP_TTC_T1MR, H_CRP_TTC_T1RM, H_CRP_TTC_T200, H_CRP_TTC_T201, H_CRP_TTC_T20R, H_CRP_TTC_T20X, H_CRP_TTC_T2CM, H_CRP_TTC_T2HR, H_CRP_TTC_T2L1, H_CRP_TTC_T2L2, H_CRP_TTC_T2MR, H_CRP_TTC_T2RM, H_CRP_TTC_TTCR, H_CRP_TTC_TU0X, H_CRP_TTC_TUL1, H_CRP_TTC_TUL2
Deleted:			
2	2.0	02/02/09	All – Complete re-print for Issue 2.0
			Updated: H_CRP_TTC_ENCR, H_CRP_TTC_MANG, H_CRP_TTC_SWR, H_CRP_TTC_SWRB, H_CRP_TTC_SWXF, H_CRP_TTC_T100, H_CRP_TTC_T101, H_CRP_TTC_T10R, H_CRP_TTC_T10X, H_CRP_TTC_T1CM, H_CRP_TTC_T1HR, H_CRP_TTC_T1L1, H_CRP_TTC_T1L2, H_CRP_TTC_T1MR, H_CRP_TTC_T1RM, H_CRP_TTC_T200, H_CRP_TTC_T201, H_CRP_TTC_T20R, H_CRP_TTC_T20X, H_CRP_TTC_T2CM, H_CRP_TTC_T2HR, H_CRP_TTC_T2L1, H_CRP_TTC_T2L2, H_CRP_TTC_T2MR, H_CRP_TTC_T2RM, H_CRP_TTC_TTCR, H_CRP_TTC_TU0X, H_CRP_TTC_TUL1, H_CRP_TTC_TUL2
			Added: H_CRP_TTC_60R, H_CRP_TTC_60RB, H_CRP_TTC_T1LR, H_CRP_TTC_T2LR, H_CRP_TTC_T2N, H_CRP_TTC_TLR, H_CRP_TTC_TMES, H_CRP_TTC_TU01
Deleted:			
3	2.1	06/03/09	All – Complete re-print for Issue 2.1
			Updated: H_CRP_TTC_T1LR, H_CRP_TTC_T2LR
			Added: H_CRP_TTC_FDIR
Deleted:			
4	2.2	26/03/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.
			Updated: H_CRP_TTC_60R, H_CRP_TTC_60RB, H_CRP_TTC_FDIR, H_CRP_TTC_SWR, H_CRP_TTC_SWRB, H_CRP_TTC_T101, H_CRP_TTC_T10R, H_CRP_TTC_T1L1, H_CRP_TTC_T1L2, H_CRP_TTC_T1LR, H_CRP_TTC_T1MR, H_CRP_TTC_T201, H_CRP_TTC_T20R, H_CRP_TTC_T2L1,

				H_CRP_TTC_T2LR, H_CRP_TTC_TLR, H_CRP_TTC_TTCR, H_CRP_TTC_TU01, H_CRP_TTC_TUL2
			Added:	H_CRP_TTC_RTER
			Deleted:	
5	2.3	23/04/09	All – Complete re-print for Issue 2.3	
			Updated:	H_CRP_TTC_FDIR, H_CRP_TTC_RTER, H_CRP_TTC_SWXF, H_CRP_TTC_T100, H_CRP_TTC_T1L2, H_CRP_TTC_T1LR, H_CRP_TTC_T1MR, H_CRP_TTC_T200, H_CRP_TTC_T2L2, H_CRP_TTC_T2MR, H_CRP_TTC_T2N, H_CRP_TTC_TLR, H_CRP_TTC_TUL2
			Added:	H_CRP_TTC_T1N
			Deleted:	
6	2.4	06/05/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_CRP_TTC_FDIR, H_CRP_TTC_SWXF, H_CRP_TTC_TLR
			Added:	
			Deleted:	
7	2.5	07/10/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_CRP_TTC_60R, H_CRP_TTC_FDIR, H_CRP_TTC_RTER, H_CRP_TTC_T101, H_CRP_TTC_T10R, H_CRP_TTC_T1LR, H_CRP_TTC_T201, H_CRP_TTC_T20R, H_CRP_TTC_T2LR, H_CRP_TTC_TLR, H_CRP_TTC_TTCR, H_CRP_TTC_TU01
			Added:	H_CRP_TTC_T2MX
			Deleted:	
8	3.0	13/04/10	Complete re-print	
			Updated:	
			Added:	H_CRP_TTC_T1HC
			Deleted:	
9	3.1	05/09/11	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_CRP_TTC_T201
			Added:	
			Deleted:	



Introduction

2.4 TT&C Flight Control Procedures

	H_CRP_TTC_60R	Configuration check after Ground timeout procedure	3	25/09/2009
	H_CRP_TTC_60RB	Alignment of TTC configuration	4	15/03/2009
	H_CRP_TTC_ENCR	Reset TM Encoder	3	15/12/2008
	H_CRP_TTC_FDIR	Trigger TTC FDIR Level 1 Recovery	6	25/09/2009
	H_CRP_TTC_MANG	Start/Stop TTC Management function	3	06/11/2008
	H_CRP_TTC_RTERR	Recovery after XPND RT Error Flags on 1553 S/C bus	3	25/09/2009
	H_CRP_TTC_SWR	Configuration check after RFDN SWs failure	3	20/03/2009
	H_CRP_TTC_SWRB	Roll back after RFDN SWs failure	3	20/03/2009
	H_CRP_TTC_SWXF	Antenna switching via Mission Specific commands	4	04/05/2009
	H_CRP_TTC_T100	Switch OFF Tx1 and TWTA1	3	17/04/2009
	H_CRP_TTC_T101	Switch ON Tx1 and TWTA1	5	25/09/2009
	H_CRP_TTC_T10R	Switch to chain 1 after XPND1 or TWTA1 failure	5	25/09/2009
	H_CRP_TTC_T10X	Configure Tx1	2	06/11/2008
	H_CRP_TTC_T1CM	Transponder 1 Coherent Mode Activation/Deactivation	2	16/12/2008
	H_CRP_TTC_T1HC	TTC chain 1 health check	1	19/11/2009
	H_CRP_TTC_T1HR	Tx1 and TM encoder in use configuration for HR	2	16/12/2008
	H_CRP_TTC_T1L1	Tx1 and TM encoder in use configuration for LR1	2	14/03/2009
	H_CRP_TTC_T1L2	Tx1 and TM encoder in use configuration for LR2	4	07/04/2009
	H_CRP_TTC_T1LR	Switch to chain 1 after a TTC-S out of limit	9	25/09/2009
	H_CRP_TTC_T1MR	Tx1 and TM encoder in use configuration for MR	3	07/04/2009
	H_CRP_TTC_T1N	Configure TTC chain 1 Nominal after XPND2 or TWTA2 failure	1	20/04/2009
	H_CRP_TTC_T1RM	Transponder 1 Ranging Activation/Deactivation	2	16/12/2008
	H_CRP_TTC_T200	Switch OFF TX2 and TWTA2	3	17/04/2009
	H_CRP_TTC_T201	Switch ON TX2 and TWTA2	6	03/08/2011
	H_CRP_TTC_T20R	Switch to chain 2 after XPND2 or TWTA2 failure	5	25/09/2009
	H_CRP_TTC_T20X	Configure TX2	2	06/11/2008
	H_CRP_TTC_T2CM	Transponder 2 Coherent Mode Activation/Deactivation	2	16/12/2008
	H_CRP_TTC_T2HR	Tx2 and TM encoder in use configuration for HR	2	16/12/2008
	H_CRP_TTC_T2L1	Tx2 and TM encoder in use configuration for LR1	2	14/03/2009
	H_CRP_TTC_T2L2	Tx2 and TM encoder in use configuration for LR2	4	07/04/2009
	H_CRP_TTC_T2LR	Switch to chain 2 after a TTC-S out of limit	12	25/09/2009
	H_CRP_TTC_T2MR	Tx2 and TM encoder in use configuration for MR	3	07/04/2009
	H_CRP_TTC_T2MX	Configure TX2 for MR	1	15/09/2009
	H_CRP_TTC_T2N	Configure TTC chain 2 Nominal after XPND1 or TWTA1 failure	3	20/04/2009
	H_CRP_TTC_T2RM	Transponder 2 Ranging Activation/Deactivation	2	16/12/2008
	H_CRP_TTC_TLR	Recovery after a TTC-S out of limit	5	13/07/2009
	H_CRP_TTC_TMES	Switch TM Enc Subsampling ON/OFF	1	16/09/2008
	H_CRP_TTC_TTCR	Configuration check after XPNDs or TWTAs failure	3	25/09/2009
	H_CRP_TTC_TU01	Switch ON Tx and TWTA in use contingency	6	25/09/2009
	H_CRP_TTC_TU0X	Configure Tx in use	2	06/11/2008
	H_CRP_TTC_TUL1	Tx and TM encoder in use configuration for LR1	2	03/12/2008
	H_CRP_TTC_TUL2	Tx and TM encoder in use configuration for LR2	4	07/04/2009