

## **SMEI Instrument Commanding Specification**

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CMD ID	CMD MNEMONIC	Parameter#	Bits	Data Type	Min	Max	Default	Units	Description
	Keep to 10 characters				(Hex)	(Hex)	(Hex)		
	Fill in characters 0-9 only								
	SM_0123456789								
00	SM_ENBL_SAFE	00	0-15	Hex	1480	1480	1480		SMEI Sub-Address 4
00	SM_ENBL_SAFE	01	0-7	Hex			0		Command Identifier
00	SM_ENBL_SAFE	01	8-15	Hex	0	FF			Sequence Identifier
00	SM_ENBL_SAFE	02	0-15	Hex	0	FFFF			CRC
00	SM_ENBL_SAFE	03-32	0-15	Hex	0	0	0		Spare (0)
01	SM_GOTO_SAFE	00		Hex	1480	1480	1480		SMEI Sub-Address 4
01	SM_GOTO_SAFE	01	0-7	Hex			1		Command Identifier
01	SM_GOTO_SAFE	01	8-15	Hex	0	FF			Sequence Identifier
01	SM_GOTO_SAFE	02		Hex	0	FFFF			CRC
01	SM_GOTO_SAFE	03-32		Hex	0	0	0		Spare (0)
02	SM_ENBL_PTCH	00		Hex	1480	1480	1480		SMEI Sub-Address 4
02	SM_ENBL_PTCH	01	0-7	Hex			2		Command Identifier
02	SM_ENBL_PTCH	01	8-15	Hex	0	FF			Sequence Identifier
02	SM_ENBL_PTCH	02		Hex	0	FFFF			CRC
02	SM_ENBL_PTCH	03-32		Hex	0	0	0		Spare (0)
03	SM_GOTO_PTCH	00		Hex	1480	1480	1480		SMEI Sub-Address 4
03	SM_GOTO_PTCH	01	0-7	Hex			3		Command Identifier
03	SM_GOTO_PTCH	01	8-15	Hex	0	FF			Sequence Identifier
03	SM_GOTO_PTCH	02		Hex	0	FFFF			CRC
03	SM_GOTO_PTCH	03-32		Hex	0	0	0		Spare (0)
05	SM_GOTO_CONF	00		Hex	1480	1480	1480		SMEI Sub-Address 4
05	SM_GOTO_CONF	01	0-7	Hex			5		Command Identifier
05	SM_GOTO_CONF	01	8-15	Hex	0	FF			Sequence Identifier
05	SM_GOTO_CONF	02		Hex	0	FFFF			CRC
05	SM_GOTO_CONF	03-32		Hex	0	0	0		Spare (0)





51	SM_1_PWR_ON	00		Hex	1480	1480	1480		SMEI Sub-Address 4
51	SM_1_PWR_ON	01	0-7	Hex			51		Command Identifier
51	SM_1_PWR_ON	01	8-15	Hex	0	FF			Sequence Identifier
51	SM_1_PWR_ON	02		Hex	0	FFFF			CRC
51	SM_1_PWR_ON	03-32		Hex	0	0	0		Spare (0)
52	SM_1_ICE_OFF	00		Hex	1480	1480	1480		SMEI Sub-Address 4
52	SM_1_ICE_OFF	01	0-7	Hex			52		Command Identifier
52	SM_1_ICE_OFF	01	8-15	Hex	0	FF			Sequence Identifier
52	SM_1_ICE_OFF	02		Hex	0	FFFF			CRC
52	SM_1_ICE_OFF	03-32		Hex	0	0	0		Spare (0)
53	SM_1_ICE_ON	00		Hex	1480	1480	1480		SMEI Sub-Address 4
53	SM_1_ICE_ON	01	0-7	Hex			53		Command Identifier
53	SM_1_ICE_ON	01	8-15	Hex	0	FF			Sequence Identifier
53	SM_1_ICE_ON	02		Hex	0	FFFF			CRC
53	SM_1_ICE_ON	03		Hex	0	FF			Target Temperature
53	SM_1_ICE_ON	04		Hex	0	FFFF		Minutes	Duration
53	SM_1_ICE_ON	05-32		Hex	0	0	0		Spare (0)
54	SM_1_HOP_EN	00		Hex	1480	1480	1480		SMEI Sub-Address 4
54	SM_1_HOP_EN	01	0-7	Hex			54		Command Identifier
54	SM_1_HOP_EN	01	8-15	Hex	0	FF			Sequence Identifier
54	SM_1_HOP_EN	02		Hex	0	FFFF			CRC
54	SM_1_HOP_EN	03-32		Hex	0	0	0		Spare (0)
55	SM_1_HOP_TEST	00		Hex	1480	1480	1480		SMEI Sub-Address 4
55	SM_1_HOP_TEST	01	0-7	Hex			55		Command Identifier
55	SM_1_HOP_TEST	01	8-15	Hex	0	FF			Sequence Identifier
55	SM_1_HOP_TEST	02		Hex	0	FFFF			CRC
55	SM_1_HOP_TEST	03-32		Hex	0	0	0		Spare (0)



5B	SM_1_DYN_CONF	00		Hex	1480	1480	1480		SMEI Sub-Address 4
5B	SM_1_DYN_CONF	01	0-7	Hex			5B		Command Identifier
5B	SM_1_DYN_CONF	01	8-15	Hex	0	FF			Sequence Identifier
5B	SM_1_DYN_CONF	02		Hex	0	FFFF			CRC
5B	SM_1_DYN_CONF	03		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	04		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	05		Hex	0	FFFF			See Obs Mode H/K Word 4
5B	SM_1_DYN_CONF	06		Hex	0	FFFF			See Obs Mode H/K Word 5
5B	SM_1_DYN_CONF	07		Hex	0	FFFF			See Obs Mode H/K Word 6
5B	SM_1_DYN_CONF	08		Hex	0	FFFF			See Obs Mode H/K Word 7
5B	SM_1_DYN_CONF	09		Hex	0	FFFF			See Obs Mode H/K Word 8
5B	SM_1_DYN_CONF	10		Hex	0	FFFF			See Obs Mode H/K Word 9
5B	SM_1_DYN_CONF	11		Hex	0	FFFF			See Obs Mode H/K Word 10
5B	SM_1_DYN_CONF	12		Hex	0	FFFF			See Obs Mode H/K Word 11
5B	SM_1_DYN_CONF	13		Hex	0	FFFF			See Obs Mode H/K Word 12
5B	SM_1_DYN_CONF	14		Hex	0	FFFF			See Obs Mode H/K Word 13
5B	SM_1_DYN_CONF	15		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	16		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	17		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	18		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	19		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	20		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	21		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	22		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	23		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	24		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	25		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	26		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	27		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	28		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	29		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	30		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	31		Hex	0	0			Spare (0)
5B	SM_1_DYN_CONF	32		Hex	0	0			Spare (0)







6B	SM_2_DYN_CONF	00		Hex	1480	1480	1480		SMEI Sub-Address 4
6B	SM_2_DYN_CONF	01	0-7	Hex			6B		Command Identifier
6B	SM_2_DYN_CONF	01	8-15	Hex	0	FF			Sequence Identifier
6B	SM_2_DYN_CONF	02		Hex	0	FFFF			CRC
6B	SM_2_DYN_CONF	03		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	04		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	05		Hex	0	FFFF			See Obs Mode H/K Word 4
6B	SM_2_DYN_CONF	06		Hex	0	FFFF			See Obs Mode H/K Word 5
6B	SM_2_DYN_CONF	07		Hex	0	FFFF			See Obs Mode H/K Word 6
6B	SM_2_DYN_CONF	08		Hex	0	FFFF			See Obs Mode H/K Word 7
6B	SM_2_DYN_CONF	09		Hex	0	FFFF			See Obs Mode H/K Word 8
6B	SM_2_DYN_CONF	10		Hex	0	FFFF			See Obs Mode H/K Word 9
6B	SM_2_DYN_CONF	11		Hex	0	FFFF			See Obs Mode H/K Word 10
6B	SM_2_DYN_CONF	12		Hex	0	FFFF			See Obs Mode H/K Word 11
6B	SM_2_DYN_CONF	13		Hex	0	FFFF			See Obs Mode H/K Word 12
6B	SM_2_DYN_CONF	14		Hex	0	FFFF			See Obs Mode H/K Word 13
6B	SM_2_DYN_CONF	15		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	16		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	17		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	18		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	19		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	20		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	21		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	22		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	23		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	24		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	25		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	26		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	27		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	28		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	29		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	30		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	31		Hex	0	0			Spare (0)
6B	SM_2_DYN_CONF	32		Hex	0	0			Spare (0)





7B	SM_3_DYN_CONF	00		Hex	1480	1480	1480		SMEI Sub-Address 4
7B	SM_3_DYN_CONF	01	0-7	Hex			7B		Command Identifier
7B	SM_3_DYN_CONF	01	8-15	Hex	0	FF			Sequence Identifier
7B	SM_3_DYN_CONF	02		Hex	0	FFFF			CRC
7B	SM_3_DYN_CONF	03		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	04		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	05		Hex	0	FFFF			See Obs Mode H/K Word 4
7B	SM_3_DYN_CONF	06		Hex	0	FFFF			See Obs Mode H/K Word 5
7B	SM_3_DYN_CONF	07		Hex	0	FFFF			See Obs Mode H/K Word 6
7B	SM_3_DYN_CONF	08		Hex	0	FFFF			See Obs Mode H/K Word 7
7B	SM_3_DYN_CONF	09		Hex	0	FFFF			See Obs Mode H/K Word 8
7B	SM_3_DYN_CONF	10		Hex	0	FFFF			See Obs Mode H/K Word 9
7B	SM_3_DYN_CONF	11		Hex	0	FFFF			See Obs Mode H/K Word 10
7B	SM_3_DYN_CONF	12		Hex	0	FFFF			See Obs Mode H/K Word 11
7B	SM_3_DYN_CONF	13		Hex	0	FFFF			See Obs Mode H/K Word 12
7B	SM_3_DYN_CONF	14		Hex	0	FFFF			See Obs Mode H/K Word 13
7B	SM_3_DYN_CONF	15		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	16		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	17		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	18		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	19		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	20		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	21		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	22		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	23		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	24		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	25		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	26		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	27		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	28		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	29		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	30		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	31		Hex	0	0			Spare (0)
7B	SM_3_DYN_CONF	32		Hex	0	0			Spare (0)



CMD ID	CMD MNEMONIC	Parameter#	Bits	Data Type	Min	Max	Default	Units	Description
	Keep to 10 characters								
	Fill in characters 0-9 only								
	SM_0123456789								
0E	SM_EMERG_SAFE	00	0-15	Hex	14A0	14A0	14A0		SMEI Sub-Address 5
0E	SM_EMERG_SAFE	01	0-7	Hex	0E	0E	0E		Command Identifier
0E	SM_EMERG_SAFE	01	8-15	Hex	FF	FF	FF		Sequence Identifier
0E	SM_EMERG_SAFE	02	0-15	Hex	0	FFFF	3859		CRC
0E	SM_EMERG_SAFE	03	0-15	Hex	C369	C369	C369		Verification Code
0E	SM_EMERG_SAFE	04-32	0-15	Hex	0	0	0		Spare (0)

CMD ID	CMD MNEMONIC	Parameter#	Bits	Data Type	Min	Max	Default	Units	Description
	Keep to 10 characters								
	Fill in characters 0-9 only								
	SM_0123456789								
*	SM_SC_ATT	00	0-15	Hex	14C0	14C0	14C0		SMEI Sub-Address 6
	SM_SC_ATT	01	0-15	Hex					Packet Identifiers
	SM_SC_ATT	02	0-15	Hex	0	FFFF			CRC
	SM_SC_ATT	03	0-15	Hex	0	FFFF		Seconds	UTC Seconds (MSW)
	SM_SC_ATT	04	0-15	Hex	0	FFFF		Seconds	UTC Seconds (LSW)
	SM_SC_ATT	05	0-15	Hex	0	FFFF			UTC Subseconds
	SM_SC_ATT	06-32	0-15	Hex	0	FFFF			Attitude Data (ICD Figure C6.3)

\* Not really a SMEI command. Here for completeness