

SEPT Test Sequences for IMPACT FM1 EMC Test

After switch-on of the power rails (low voltages and bias) for SEPT, the following test sequences shall be used to initialise the instruments, configure them in various modes, run, and prepare for power off.

Note:

- The command sequences are to be issued twice, i.e. separately for SEPT-E and -NS. There are separate look-up tables for SEPT-E and -NS.
- The noisy mode table is derived from the quiet mode by decreasing the threshold parameters by 2.
- The test sequences are defined in “SEPT Operation Control and Data Processing requirements” Version 3.0, May 2003.

FM1 SEPT-E and -NS

Sequence	Task	Definition	Duration [min]	Comments
1	Initialisation	Table 15 page 40	1	
2	Telescope power-on	Table 16 pages 40-41	1	
3	Nominal configuration	Table 17 page 41	1	Parameters from look-up table for quiet mode
4	Nominal mode for LPT prior to test start	Table 9 pages 19-21	8 (minimum)	functional check-out
5	Nominal configuration	Table 17	1	Parameters from look-up table for noisy mode
6	Nominal mode for CE, RE	Table 9 pages 19-21	8 (minimum)	high count rate mode for EMI emission
7	Nominal configuration	Table 17 page 41	1	Parameters from look-up table for quiet mode
8	Nominal mode for LPT after CE, RE	Table 9 pages 19-21	8 (minimum)	functional check-out
9	Nominal mode for CS, RS	Table 9 pages 19-21	8 (minimum)	most sensitive mode for EMI susceptibility
10	Nominal mode for LPT after end of test	Table 9 pages 19-21	8 (minimum)	functional check-out
11	Telescope power-off	Table 26 page 47	1	

Parameter	Size (bits)	SEPT-E	SEPT-NS
G_PDFE0	5	0	0
G_PDFE1	5	0	0
G_PDFE2	5	0	0
G_PDFE3	5	0	0
ML_PDFE0	8	11	11
ML_PDFE1	8	11	11
ML_PDFE2	8	5	13
ML_PDFE3	8	11	11
CL_PDFE0	8	11	13
CL_PDFE1	8	13	13
CL_PDFE2	8	9	13
CL_PDFE3	8	13	13

Look-up table **Quiet mode**

Parameter	Size (bits)	SEPT-E	SEPT-NS
G_PDFE0	5	0	0
G_PDFE1	5	0	0
G_PDFE2	5	0	0
G_PDFE3	5	0	0
ML_PDFE0	8	9	9
ML_PDFE1	8	9	9
ML_PDFE2	8	3	11
ML_PDFE3	8	9	9
CL_PDFE0	8	9	11
CL_PDFE1	8	11	11
CL_PDFE2	8	7	11
CL_PDFE3	8	11	11

Look-up table **Noisy mode**