

B. DATA FILE STRUCTURES

B.1. General structure of the SV 102 file

Each file containing data from the **SV 102** instrument consists of several groups of words. In the case of the **SV 102** (the internal file system rev. **1.05.3**), there are different types of files containing:

- the results stored in the file in the instrument's logger (cf. App. B.2)
- the measurement results from the **Sound Level Meter** mode and **DOSE METER** (cf. App. B.3)
- the setup data (cf. App. B.4)
- the results from **1/1 OCTAVE** analysis (cf. App. B.6)

Each file has the following elements:

- a file header (cf. Tab. B.1.1)
- the unit and internal software specification (cf. Tab. B.1.2)
- the user's text (a header) stored together with the measurement data (cf. Tab. B.1.3)
- the parameters and global settings, common for all profiles (cf. Tab. B.1.4)
- parameters for measurement trigger (cf. Tab. B.1.5)
- the parameters for logger trigger (cf. Tab. B.1.6)
- the external I/O settings for left channel (cf. Tab. B.1.7)
- the external I/O settings for right channel (cf. Tab. B.1.7)
- the special settings for profiles (cf. Tab. B.1.8)
- the marker for the end of the file (cf. Tab. B.1.20)

The other elements of the file structure are not obligatory for each file type stated above. They depend on the file type (**SLM**, **DOSE METER**, **1/1 OCTAVE**, file from the logger) and on the setting of the **SAVE STAT.** (*path: MENU / FILE / SAVE OPTIONS / SAVE STAT.*). These elements are as follows:

- the main results (cf. Tab. B.1.10_SML or B.1.10_DM)
- statistical levels (cf. Tab. B.1.11)
- the header of the statistical analysis (cf. Tab. B.1.12)
- the results of the statistical analysis (cf. Tab. B.1.13)
- the settings of the instrument saved in the setup file (cf. Tab. B.1.14)
- the header of the file from the logger (cf. Tab. B.1.15)
- the data stored during the measurements in the file of the logger (cf. Tab. B.1.16)
- the results coming from **1/1 OCTAVE** analysis (cf. Tab. B.1.17)

Below, all file structure groups are described separately in Tab. B.1.1 – Tab. B.1.20. The format used in the columns, named **Comment** with the square parenthesis ([xx, yy]), means the contents of the word with; **xx** is the most significant byte (MSB) and **yy** the lowest significant byte (LSB) of the word. The format 0xnnnn means that the nnnn is four-digit number in hexadecimal form.

Table B.1.1. File header

Word number	Name	Comment
0	0xnn01	[01, nn=header's length]
1..4	FileName	name of the file or logger (8 characters)
5	Reserved	reserved
6	CurrentDate	file creation date (cf. App. B.5)
7	CurrentTime	file creation time (cf. App. B.5)
8..11	AssBufFileName	name of the associated logger or file (8 bytes)
...

Table B.1.2. Unit and software specification

Word number	Name	Comment
0	0xnn02	[02, nn=specification's length]
1	UnitNumber	unit number
2	UnitType	type of the unit: 102
3	SoftwareVersion	software version: 104
4	SoftwareIssueDate	software issue date
5	DeviceMode	mode of the instrument: 1 - Sound Meter Mode
6	ChannelMode	channels: 0 - SINGLE CHANNEL , 1 - DUAL CHANNEL
7	UnitSubtype	subtype of the unit: 1 - SV 102
8	FileSysVersion	file system version
9	LevelMetVersion	level meter version: 104
10	SoftwareSubversion	dose meter software subversion: 2
...

Table B.1.3. USER's text

Word number	Name	Comment
0	0xnn03	[03, nn=specification's length]
1...	title text	the user's text (two characters in a word) finished with one or two null bytes

Table B.1.4. Parameters and global settings

Word number	Name	Comment
0	0xnn04	[04, nn=block's length]
1	MeasureStartDate	measurement start date (cf. App. B.5)
2	MeasureStartTime	measurement start time (cf. App. B.5)
3	DeviceFunction	device function: 1 - SLM 2 - SLM & 1/1 OCTAVE analyser 3 - DOSE & 1/1 OCTAVE analyser 4 - DOSE METER
4	MeasureInput	measurement input type: 2 - Microphone
5	Range	measurement range: 2 - SINGLE
6	UnitFlags	calibration flags
7	RepCycle	repetition cycle: 0 - infinity nnnn - number of repetitions $\in (1 \div 1000)$
8	NofChan	number of channels (2)
9	NofProf	number of profiles (3)
10	StartDelay	start delay time
11..12	IntTimeSec	integration time specified in seconds
13	Reserved	reserved

14	LeqInt	detector's type in the LEQ function: 0 - LINEAR , 1 - EXPONENT .
15	SpectrumFilter	SLM & 1/1 OCTAVE and DOSE & 1/1 OCTAVE analysis filter: 0 - Z , 2 - A , 3 - C in other cases: reserved
16	SpectrumBuff	SLM & 1/1 OCTAVE and DOSE & 1/1 OCTAVE logger: sum of the following flags: 1 - logger with PEAK values 8 - logger with RMS values in other cases: reserved
17	ExposureTime	exposure time: 1..480 (min)
18	CriterionLevel	criterion level (only DOSE METER and DOSE & 1/1 OCTAVE): 80, 84, 85, 90 (*10 dB)
19	ThresholdLevel	threshold level (only DOSE METER and DOSE & 1/1 OCTAVE): 0, 70, 75, 80, 85, 90 (*10 dB)
20	ExchangeRate	exchange rate (only DOSE METER and DOSE & 1/1 OCTAVE): 2, 3, 4, 5
21	CalibrType	last calibration type in LEFT CHANNEL : 0 - none, 1 - BY MEASUREMENT
22	CalibrType	last calibration type in RIGHT CHANNEL : 0 - none, 1 - BY MEASUREMENT
23	CalibrDate	last calibration date in LEFT CHANNEL (cf. App. B.5)
24	CalibrDate	last calibration date in RIGHT CHANNEL (cf. App. B.5)
25	CalibrTime	last calibration time in LEFT CHANNEL (cf. App. B.5)
26	CalibrTime	last calibration time in RIGHT CHANNEL (cf. App. B.5)
27	Reserved	reserved
28	Reserved	reserved
29	Reserved	reserved
30	Reserved	reserved
31	MicComp	compensating filter for microphones: 0 - switched off, 1- switched on
32..47	Reserved	reserved
...

Table B.1.5. MEASURE TRIGGER parameters

Word number	Name	Comment
0	0xnn2B	[2B, nn=block's length]
1	TriggerMode	trigger mode: 0 - OFF , 1 - SLOPE+ , 2 - SLOPE- , 3 - LEVEL+ , 4 - LEVEL- , 6 - GRAD+

2	TriggerSource	source of the triggering signal: 0 - RMS(1) the RMS result from the first profile in the case of TriggerMode= SLOPE+ or SLOPE- : 1 - Extended IO
3	TriggerLev	level of triggering: 24 ÷ 136 dB (*10)
4	TriggerGrad	gradient of triggering: 1 dB/ms ÷ 100 dB/ms
5	TriggerPre	reserved
6	TriggerPost	reserved
...

Table B.1.6. LOGGER TRIGGER parameters

Word number	Name	Comment
0	0xnn2C	[2C, nn=block's length]
1	TriggerMode	trigger mode: 0 - OFF , 3 - LEVEL+ , 4 - LEVEL-
2	TriggerSource	source of the triggering signal: 0 - RMS(1) the RMS result from the 1 st profile in left channel
3	TriggerLev	level of triggering: 24 ÷ 136 dB (*10)
4	TriggerGrad	reserved
5	TriggerPre	number of the records taken into account before the fulfilment of the triggering condition ∈ (1 ÷ 50)
6	TriggerPost	number of the records taken into account after the fulfilment of the triggering condition ∈ (1 ÷ 200)
...

Table B.1.7. EXTENDED I/O parameters

Word number	Name	Comment
0	0xnn2E	[2E, nn=block's length]
1	Channel	channel: 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
2	Mode	mode: 0 - ANALOG OUT , 1 - DIGITAL IN , 2 - DIGITAL OUT
3	Function	in the case of ANALOG OUT : reserved in the case of DIGITAL IN : 0 - EXTERNAL TRIGGER in the case of DIGITAL OUT : 0 - TRIG. PULSE , 1 - ALARM PULSE
4	ActiveLevel	in the case of DIGITAL OUT and ALARM PULSE : 0 - LOW , 1 - HIGH in other cases reserved

5	Source	in the case of DIGITAL OUT and ALARM PULSE : 0 - PEAK(1) , 1 - SPL(1) , 2 - LEQ(1) in other cases reserved
6	AlarmLevel	in the case of DIGITAL OUT and ALARM PULSE : 30 ÷ 140 dB (*10) in other cases reserved
7	AO_Direct	reserved
8	AO_DA	reserved
9	AO_Source	reserved
10	Polarisation	in the case of DIGITAL OUT and TRIG. PULSE : 0 - POSITIVE , 1 - NEGATIVE in other cases reserved
...

Table B.1.8. Special settings for profiles

Word number	Name	Comment
0	0xnn05	[05, nn=block's length]
1	0x0607	[used_profile, profile's mask]
2	0xmm06	[06, mm=sub-block's length]
3	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
4	DetectorP[1]	detector type in the 1 st profile: 0 - IMP. , 1 - FAST , 2 - SLOW
5	FilterP[1]	filter type in the 1 st profile: 0 - Z , 2 - A , 3 - C
6	BufferP[1]	logger contents in the 1 st profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
7	CalibrFactor[1]	calibration factor (*10 dB) in the 1 st profile
8	ProfileFlags[1]	flags in the 1 st profile
9	0xmm06	[06, mm=sub-block's length]
10	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
11	DetectorP[2]	detector type in the 2 nd profile: 0 - IMP. , 1 - FAST , 2 - SLOW

12	FilterP[2]	filter type in the 2 nd profile: 0 - Z , 2 - A , 3 - C
13	BufferP[2]	logger contents in the 2 nd profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
14	CalibrFactor[2]	calibration factor (*10 dB) in the 2 nd profile
15	ProfileFlags[2]	flags in the 2 nd profile
16	0xmm06	[06, mm=sub-block's length]
17	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
18	DetectorP[3]	detector type in the 3 rd profile: 0 - IMP. , 1 - FAST , 2 - SLOW
19	FilterP[3]	filter type in the 3 rd profile: 0 - Z , 2 - A , 3 - C
20	BufferP[3]	logger contents in the 3 rd profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
21	CalibrFactor[3]	calibration factor (*10 dB) in the 3 rd profile
22	ProfileFlags[3]	flags in the 3 rd profile
23	0xmm06	[06, mm=sub-block's length]
24	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
25	DetectorP[1]	detector type in the 1 st profile: 0 - IMP. , 1 - FAST , 2 - SLOW
26	FilterP[1]	filter type in the 1 st profile: 0 - Z , 2 - A , 3 - C
27	BufferP[1]	logger contents in the 1 st profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
28	CalibrFactor[1]	calibration factor (*10 dB) in the 1 st profile
29	ProfileFlags[1]	flags in the 1 st profile

30	0xmm06	[06, mm=sub-block's length]
31	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
32	DetectorP[2]	detector type in the 2 nd profile: 0 - IMP. , 1 - FAST , 2 - SLOW
33	FilterP[2]	filter type in the 2 nd profile: 0 - Z , 2 - A , 3 - C
34	BufferP[2]	logger contents in the 2 nd profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
35	CalibrFactor[2]	calibration factor (*10 dB) in the 2 nd profile
36	ProfileFlags[2]	flags in the 2 nd profile
37	0xmm06	[06, mm=sub-block's length]
38	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
39	DetectorP[3]	detector type in the 3 rd profile: 0 - IMP. , 1 - FAST , 2 - SLOW
40	FilterP[3]	filter type in the 3 rd profile: 0 - Z , 2 - A , 3 - C
41	BufferP[3]	logger contents in the 3 rd profile defined as a sum of: 0 - none, 1 - PEAK , 2 - MAX , 4 - MIN , 8 - RMS
42	CalibrFactor[3]	calibration factor (*10 dB) in the 3 rd profile
43	ProfileFlags[3]	flags in the 3 rd profile
...

Table B.1.10_SLM. Main results in SLM and SLM & 1/1 OCTAVE analyser mode

Word number	Name	Comment
0	0xnn07	[07, nn=block's length]
1	0x0607	[used_profile, profile's mask]
2	0xmm08	[08, mm=sub-block's length]
3	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL

4..5	MeasureTime	time of the measurement
6	Result[1][1]	PEAK value in the 1 st profile
7	Result[1][2]	reserved
8	Result[1][3]	maximal value (MAX) in the 1 st profile
9	Result[1][4]	minimal value (MIN) in the 1 st profile
10	Result[1][5]	SPL value in the 1 st profile
11	Result[1][6]	LEQ value in the 1 st profile
12	Result[1][7]	Lden value in the 1 st profile
13	Result[1][8]	Ltm3 value in the 1 st profile
14	Result[1][9]	Ltm5 value in the 1 st profile
15	Result[1][10]	reserved
16	Result[1][11]	reserved
17	UnderRes[1]	under-range value in the 1 st profile
18	0xmm08	[08, mm=sub-block's length]
19	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
20..21	OVL	overload time
22	Result[2][1]	PEAK value in the 2 nd profile
23	Result[2][2]	reserved
24	Result[2][3]	maximal value (MAX) in the 2 nd profile
25	Result[2][4]	minimal value (MIN) in the 2 nd profile
26	Result[2][5]	SPL value in the 2 nd profile
27	Result[2][6]	LEQ value in the 2 nd profile
28	Result[2][7]	Lden value in the 2 nd profile
29	Result[2][8]	Ltm3 value in the 2 nd profile
30	Result[2][9]	Ltm5 value in the 2 nd profile
31	Result[2][10]	reserved
32	Result[2][11]	reserved
33	UnderRes[2]	under-range value in the 2 nd profile
34	0xmm08	[08, mm=sub-block's length]
35	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
36..37	Reserved	reserved
38	Result[3][1]	PEAK value in the 3 rd profile
39	Result[3][2]	reserved
40	Result[3][3]	maximal value (MAX) in the 3 rd profile
41	Result[3][4]	minimal value (MIN) in the 3 rd profile
42	Result[3][5]	SPL value in the 3 rd profile
43	Result[3][6]	LEQ value in the 3 rd profile
44	Result[3][7]	Lden value in the 3 rd profile
45	Result[3][8]	Ltm3 value in the 3 rd profile
46	Result[3][9]	Ltm5 value in the 3 rd profile
47	Result[3][10]	reserved
48	Result[3][11]	reserved
49	UnderRes[3]	under-range value in the 3 rd profile

50	0xmm08	[08, mm=sub-block's length]
51	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
52..53	MeasureTime	time of the measurement
54	Result[1][1]	PEAK value in the 1 st profile
55	Result[1][2]	reserved
56	Result[1][3]	maximal value (MAX) in the 1 st profile
57	Result[1][4]	minimal value (MIN) in the 1 st profile
58	Result[1][5]	SPL value in the 1 st profile
59	Result[1][6]	LEQ value in the 1 st profile
60	Result[1][7]	Lden value in the 1 st profile
61	Result[1][8]	Ltm3 value in the 1 st profile
62	Result[1][9]	Ltm5 value in the 1 st profile
63	Result[1][10]	reserved
64	Result[1][11]	reserved
65	UnderRes[1]	under-range value in the 1 st profile
66	0xmm08	[08, mm=sub-block's length]
67	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
68..69	OVL	overload time
70	Result[2][1]	PEAK value in the 2 nd profile
71	Result[2][2]	reserved
72	Result[2][3]	maximal value (MAX) in the 2 nd profile
73	Result[2][4]	minimal value (MIN) in the 2 nd profile
74	Result[2][5]	SPL value in the 2 nd profile
75	Result[2][6]	LEQ value in the 2 nd profile
76	Result[2][7]	Lden value in the 2 nd profile
77	Result[2][8]	Ltm3 value in the 2 nd profile
78	Result[2][9]	Ltm5 value in the 2 nd profile
79	Result[2][10]	reserved
80	Result[2][11]	reserved
81	UnderRes[2]	under-range value in the 2 nd profile
82	0xmm08	[08, mm=sub-block's length]
83	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
84..85	Reserved	reserved
86	Result[3][1]	PEAK value in the 3 rd profile
87	Result[3][2]	reserved
88	Result[3][3]	maximal value (MAX) in the 3 rd profile
89	Result[3][4]	minimal value (MIN) in the 3 rd profile
90	Result[3][5]	SPL value in the 3 rd profile
91	Result[3][6]	LEQ value in the 3 rd profile
92	Result[3][7]	Lden value in the 3 rd profile
93	Result[3][8]	Ltm3 value in the 3 rd profile
94	Result[3][9]	Ltm5 value in the 3 rd profile
95	Result[3][10]	reserved
96	Result[3][11]	reserved
97	UnderRes[3]	under-range value in the 3 rd profile
...

Table B.1.10_DM. Main results in DOSE METER and DOSE & 1/1 OCTAVE analyser mode

Word number	Name	Comment
0	0xnn07	[07, nn=block's length]
1	0x0607	[used_profile, profile's mask]
2	0xmm08	[08, mm=sub-block's length]
3	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
4..5	MeasureTime	time of the measurement
6	Result[1][1]	PEAK value in the 1 st profile
7	Result[1][2]	reserved
8	Result[1][3]	maximal value (MAX) in the 1 st profile
9	Result[1][4]	minimal value (MIN) in the 1 st profile
10	Result[1][5]	SPL value in the 1 st profile
11	Result[1][6]	LEQ value in the 1 st profile
12	Result[1][7]	Lden value in the 1 st profile
13	Result[1][8]	Ltm3 value in the 1 st profile
14	Result[1][9]	Ltm5 value in the 1 st profile
15	Result[1][10]	LAV value in the 1 st profile
16	Result[1][11]	TLAV value in the 1 st profile
17	UnderRes[1]	under-range value in the 1 st profile
18	0xmm08	[08, mm=sub-block's length]
19	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
20..21	OVL	overload time
22	Result[2][1]	PEAK value in the 2 nd profile
23	Result[2][2]	reserved
24	Result[2][3]	maximal value (MAX) in the 2 nd profile
25	Result[2][4]	minimal value (MIN) in the 2 nd profile
26	Result[2][5]	SPL value in the 2 nd profile
27	Result[2][6]	LEQ value in the 2 nd profile
28	Result[2][7]	Lden value in the 2 nd profile
29	Result[2][8]	Ltm3 value in the 2 nd profile
30	Result[2][9]	Ltm5 value in the 2 nd profile
31	Result[2][10]	LAV value in the 2 nd profile
32	Result[2][11]	TLAV value in the 2 nd profile
33	UnderRes[2]	under-range value in the 2 nd profile
34	0xmm08	[08, mm=sub-block's length]
35	Channel[0]	channel (left): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
36..37	PCTC	PCTC value in the left channel
38	Result[3][1]	PEAK value in the 3 rd profile
39	Result[3][2]	reserved
40	Result[3][3]	maximal value (MAX) in the 3 rd profile
41	Result[3][4]	minimal value (MIN) in the 3 rd profile
42	Result[3][5]	SPL value in the 3 rd profile

43	Result[3][6]	LEQ value in the 3 rd profile
44	Result[3][7]	Lden value in the 3 rd profile
45	Result[3][8]	Ltm3 value in the 3 rd profile
46	Result[3][9]	Ltm5 value in the 3 rd profile
47	Result[3][10]	LAV value in the 3 rd profile
48	Result[3][11]	TLAV value in the 3 rd profile
49	UnderRes[3]	under-range value in the 3 rd profile
50	0xmm08	[08, mm=sub-block's length]
51	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
52..53	MeasureTime	time of the measurement
54	Result[1][1]	PEAK value in the 1 st profile
55	Result[1][2]	reserved
56	Result[1][3]	maximal value (MAX) in the 1 st profile
57	Result[1][4]	minimal value (MIN) in the 1 st profile
58	Result[1][5]	SPL value in the 1 st profile
59	Result[1][6]	LEQ value in the 1 st profile
60	Result[1][7]	Lden value in the 1 st profile
61	Result[1][8]	Ltm3 value in the 1 st profile
62	Result[1][9]	Ltm5 value in the 1 st profile
63	Result[1][10]	LAV value in the 1 st profile
64	Result[1][11]	TLAV value in the 1 st profile
65	UnderRes[1]	under-range value in the 1 st profile
66	0xmm08	[08, mm=sub-block's length]
67	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
68..69	OVL	overload time
70	Result[2][1]	PEAK value in the 2 nd profile
71	Result[2][2]	reserved
72	Result[2][3]	maximal value (MAX) in the 2 nd profile
73	Result[2][4]	minimal value (MIN) in the 2 nd profile
74	Result[2][5]	SPL value in the 2 nd profile
75	Result[2][6]	LEQ value in the 2 nd profile
76	Result[2][7]	Lden value in the 2 nd profile
77	Result[2][8]	Ltm3 value in the 2 nd profile
78	Result[2][9]	Ltm5 value in the 2 nd profile
79	Result[2][10]	LAV value in the 2 nd profile
80	Result[2][11]	TLAV value in the 2 nd profile
81	UnderRes[2]	under-range value in the 2 nd profile
82	0xmm08	[08, mm=sub-block's length]
83	Channel[1]	channel (right): 0 - LEFT CHANNEL , 1 - RIGHT CHANNEL
84..85	PCTC	PCTC value in the right channel
86	Result[3][1]	PEAK value in the 3 rd profile
87	Result[3][2]	reserved
88	Result[3][3]	maximal value (MAX) in the 3 rd profile

89	Result[3][4]	minimal value (MIN) in the 3 rd profile
90	Result[3][5]	SPL value in the 3 rd profile
91	Result[3][6]	LEQ value in the 3 rd profile
92	Result[3][7]	Lden value in the 3 rd profile
93	Result[3][8]	Ltm3 value in the 3 rd profile
94	Result[3][9]	Ltm5 value in the 3 rd profile
95	Result[3][10]	LAV value in the 3 rd profile
96	Result[3][11]	TLAV value in the 3 rd profile
97	UnderRes[3]	under-range value in the 3 rd profile
...

Table B.1.11. Statistical levels

Word number	Name	Comment
0	0xnn17	[17, nn=block's length]
1	0xpprr	[pp=used_profile, rr=profile's mask]
2	N_stat_level	number of statistical levels = N
3+i*(pp+1)	nn[i]	number of the Lnn statistics; i=0..N-1
3+i*(pp+1)+p	Lnn [i,p]	value of the Lnn statistics for profile p (p=1..pp) in order: 1 - left channel, 1 st profile, 2 - left channel, 2 nd profile, 3 - left channel, 3 rd profile, 4 - right channel, 1 st profile, 5 - right channel, 2 nd profile, 6 - right channel, 3 rd profile,
...

Table B.1.12. Header of the statistical analysis (the presence depends on the SAVE STAT.)

Word number	Name	Comment
0	0xnn09	[09, nn=block's length]
1	0x0607	[used_profile, profile's mask]
2	0xmm0A	[0A, mm=sub-block's length]
3	NofClasses[0][1]	number of classes in the first profile, left channel (120)
4	BottomClass[0][1]	bottom class boundary (*10 dB) in the first profile, left channel
5	ClassWidth[0][1]	class width (*10 dB) in the first profile, left channel
6	0xmm0A	[0A, mm=sub-block's length]
7	NofClasses[0][2]	number of classes in the second profile, left channel (120)
8	BottomClass[0][2]	bottom class boundary (*10 dB) in the second profile, left channel
9	ClassWidth[0][2]	class width (*10 dB) in the second profile, left channel
10	0xmm0A	[0A, mm=sub-block's length]
11	NofClasses[0][3]	number of classes in the third profile, left channel (120)
12	BottomClass[0][3]	bottom class boundary (*10 dB) in the third profile, left channel
13	ClassWidth[0][3]	class width (*10 dB) in the third profile, left channel

14	0xmm0A	[0A, mm=sub-block's length]
15	NofClasses[1][1]	number of classes in the first profile, right channel (120)
16	BottomClass[1][1]	bottom class boundary (*10 dB) in the first profile, right channel
17	ClassWidth[1][1]	class width (*10 dB) in the first profile, right channel
18	0xmm0A	[0A, mm=sub-block's length]
19	NofClasses[1][2]	number of classes in the second profile, right channel (120)
20	BottomClass[1][2]	bottom class boundary (*10 dB) in the second profile, right channel
21	ClassWidth[1][2]	class width (*10 dB) in the second profile, right channel
22	0xmm0A	[0A, mm=sub-block's length]
23	NofClasses[1][3]	number of classes in the third profile, right channel (120)
24	BottomClass[1][3]	bottom class boundary (*10 dB) in the third profile, right channel
25	ClassWidth[1][3]	class width (*10 dB) in the third profile, right channel
...

Table B.1.13. Results of the statistical analysis

Word number	Name	Comment
0	0x010B	[0B, prof_mask#1]
1	SubblockLength	2 * number of classes in the first profile, left channel + 2
2..3	Histogram[0][1][1]	the first counter in the first profile, left channel
4..5	Histogram[0][1][2]	the second counter in the first profile, left channel
...
0	0x020B	[0B, prof_mask#2]
1	SubblockLength	2 * number of classes in the second profile, left channel + 2
2..3	Histogram[0][2][1]	the first counter in the second profile, left channel
4..5	Histogram[0][2][2]	the second counter in the second profile, left channel
...
0	0x040B	[0B, prof_mask#3]
1	SubblockLength	2 * number of classes in the third profile, left channel + 2
2..3	Histogram[0][3][1]	the first counter in the third profile, left channel
4..5	Histogram[0][3][2]	the second counter in the third profile, left channel
...
0	0x080B	[0B, prof_mask#4]
1	SubblockLength	2 * number of classes in the first profile, right channel + 2
2..3	Histogram[1][1][1]	the first counter in the first profile, right channel
4..5	Histogram[1][1][2]	the second counter in the first profile, right channel
...
0	0x100B	[0B, prof_mask#5]
1	SubblockLength	2 * number of classes in the second profile, right channel + 2
2..3	Histogram[1][2][1]	the first counter in the second profile, right channel
4..5	Histogram[1][2][2]	the second counter in the second profile, right channel
...
0	0x200B	[0B, prof_mask#6]
1	SubblockLength	2 * number of classes in the third profile, right channel + 2
2..3	Histogram[1][3][1]	the first counter in the third profile, right channel
4..5	Histogram[1][3][2]	the second counter in the third profile, right channel
...

Table B.1.14. SETUP file

Word number	Name	Comment
0	0x0020	[20, 00=block's length in the second word]
1	BlockLength	length of the block
2..BlockLength-1	SetupData	saved setup values

Table B.1.15. Header of the file from the logger

Word number	Name	Comment
0	0xnn0F	[0F, nn=header's length]
1	BuffTSec	logger time step - full seconds part
2	BuffTMillicsec	logger time step - milliseconds part
3	LowestFreq	the lowest 1/1 OCTAVE frequency (*100 Hz)
4	NOctTer	number of 1/1 OCTAVE results per channel
5	NOctTerTot	number of TOTAL values per channel
6..7	BuffLength	logger length (bytes)
8..9	RecsInBuff	number of records in the logger
10..11	RecsInObserv	number of records in the observation period equal to: number of records in the logger + number of records not saved
...



Note: The current logger time step in seconds can be obtained from the formulae:
 $T = \text{BuffTSec} + \text{BuffTMillicsec} / 1000$

Table B.1.16. Contents of the file from the logger

Word number	Name	Comment
0..(BuffLength/2-1)		result#1, result#2, ... result#(BuffLength/2-1)

Table B.1.17. 1/1 OCTAVE analysis results

Word number	Name	Comment
0	0xnn0E, 0xnn26, 0xnn27	[block_id, nn=block_length] 0xnn 0E - averaged spectrum results, 0xnn 26 - min. spectrum results, 0xnn 27 - max. spectrum results 0xnn 30 - peak spectrum results
1	0x0203	[used_channel, channel's mask]
2	LowestFreq	the lowest 1/1 OCTAVE frequency (*100 Hz): 3150
3	NOct	number of 1/1 OCTAVE values: 10
4	NOctTot	number of TOTAL values: 3

5...17	Octave[0][i]	1/1 octave[i] value (*10 dB); i=1..NOct+NoctTot (1..13) in left channel
18...30	Octave[1][i]	1/1 octave[i] value (*10 dB); i=1..NOct+NoctTot (1..13) in right channel
...

Table B.1.20. File-end-marker

Word number	Name	Comment
0	0xFFFF	file end marker

B.2. Structure of the file containing results from logger's file

File header - cf. Tab. B.1.1.

Unit and software specification - cf. Tab. B.1.2.

USER'S text - cf. Tab. B.1.3.

Parameters and global settings - cf. Tab. B.1.4.

MEASUREMENT TRIGGER settings - cf. Tab. B.1.5.

LOGGER TRIGGER settings - cf. Tab. B.1.6.

EXTended I/O settings for left channel - cf. Tab. B.1.7.

EXTended I/O settings for right channel - cf. Tab. B.1.7.

Special settings for profiles - cf. Tab. B.1.8.

Header of the file from the logger - cf. Tab. B.1.15.

Contents of the file from the logger - cf. Tab. B.1.16. and the description in B.2.1.

File-end-marker - cf. Tab. B.1.20.

B.2.1. The contents of the files in the logger

The records with the results and the records with the state of the markers as well as the records with the breaks in the results registration are saved in the files in the logger.

B.2.1.1. Record with the results

The contents of the record with the results depends on the selected measurement function and the value set in the **LOGGER** position of the **PROFILE x** and **SPECTRUM** windows. The following elements can be present (in the given sequence):

- (1) results of the measurement from the first profile, left channel if the corresponding **LOGGER** position was active (*paths: INPUT / LEFT CHANNEL / PROFILE 1 / LOGGER PEAK; INPUT / PROFILE 1 / LOGGER MAX; INPUT / PROFILE 1 / LOGGER MIN; INPUT / PROFILE 1 / LOGGER RMS*); up to four words are written:

<result1> - **PEAK** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)

<result2> - **MAX** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)

<result3> - **MIN** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)

<result4> - **RMS** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)

- (2) results of the measurement from the second profile, left channel if the corresponding **LOGGER** position was active (*paths: INPUT / LEFT CHANNEL / PROFILE 2 / LOGGER PEAK; INPUT /*

PROFILE 2 / LOGGER MAX; INPUT / PROFILE 2 / LOGGER MIN; INPUT / PROFILE 2 / LOGGER RMS); up to four words are written:

- <result1> - **PEAK** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result2> - **MAX** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result3> - **MIN** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result4> - **RMS** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)

(3) results of the measurement from the third profile, left channel if the corresponding **LOGGER** position was active (*paths: INPUT / LEFT CHANNEL / PROFILE 3 / LOGGER PEAK; INPUT / PROFILE 3 / LOGGER MAX; INPUT / PROFILE 3 / LOGGER MIN; INPUT / PROFILE 3 / LOGGER RMS*); up to four words are written:

- <result1> - **PEAK** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result2> - **MAX** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result3> - **MIN** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result4> - **RMS** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)

(2) results of the measurement from the first profile, right channel if the corresponding **LOGGER** position was active (*paths: INPUT / RIGHT CHANNEL / PROFILE 1 / LOGGER PEAK; INPUT / PROFILE 1 / LOGGER MAX; INPUT / PROFILE 1 / LOGGER MIN; INPUT / PROFILE 1 / LOGGER RMS*); up to four words are written:

Only for **DUAL CHANNEL** mode.

- <result1> - **PEAK** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)
- <result2> - **MAX** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)
- <result3> - **MIN** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)
- <result4> - **RMS** result, depending on the value of BufferP[1] (cf. Tab. B.1.8)

(3) results of the measurement from the second profile, right channel if the corresponding **LOGGER** position was active (*paths: INPUT / RIGHT CHANNEL / PROFILE 2 / LOGGER PEAK; INPUT / PROFILE 2 / LOGGER MAX; INPUT / PROFILE 2 / LOGGER MIN; INPUT / PROFILE 2 / LOGGER RMS*); up to four words are written:

Only for **DUAL CHANNEL** mode.

- <result1> - **PEAK** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result2> - **MAX** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result3> - **MIN** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)
- <result4> - **RMS** result, depending on the value of BufferP[2] (cf. Tab. B.1.8)

(3) results of the measurement from the third profile, right channel if the corresponding **LOGGER** position was active (*paths: INPUT / RIGHT CHANNEL / PROFILE 3 / LOGGER PEAK; INPUT / PROFILE 3 / LOGGER MAX; INPUT / PROFILE 3 / LOGGER MIN; INPUT / PROFILE 3 / LOGGER RMS*); up to four words are written:

Only for **DUAL CHANNEL** mode.

- <result1> - **PEAK** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result2> - **MAX** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result3> - **MIN** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)
- <result4> - **RMS** result, depending on the value of BufferP[3] (cf. Tab. B.1.8)

(4) results of **1/1 OCTAVE** analysis from left channel if **1/1 OCTAVE** analysis was selected as the measurement function and the **LOGGER** position of the **SPECTRUM** window was activated (*path: INPUT / SPECTRUM / LOGGER PEAK: [$\sqrt{\quad}$] and INPUT / SPECTRUM / LOGGER RMS: [$\sqrt{\quad}$]*); the sequence of words is written:

<flags> <Octave Peak[1]> <Octave Peak [2]> ... <Octave Peak [Noct+NOctTot]> <Octave Rms[1]>
 <Octave Rms [2]> ... <Octave Rms [NOct+NOctTot]>
 where:

flags = 1- the overload detected, 0 - the overload not detected

Octave Peak[i] - the result of **1/1 OCTAVE** Peak analysis (*10 dB); i = 1..NOct+NOctTot (1..12)

Octave Rms[i] - the result of **1/1 OCTAVE** Rms analysis (*10 dB); i = 1..NOct+NOctTot (1..12)

(4) results of **1/1 OCTAVE** analysis from right channel if **1/1 OCTAVE** analysis was selected as the measurement function and the **LOGGER** position of the **SPECTRUM** window was activated (*path: INPUT / SPECTRUM / LOGGER PEAK: [N] and INPUT / SPECTRUM / LOGGER RMS: [N]*); the sequence of words is written:

Only for **DUAL CHANNEL** mode.

<flags> <Octave Peak[1]> <Octave Peak [2]> ... <Octave Peak [NOct+NOctTot]> <Octave Rms[1]>
<Octave Rms [2]> ... <Octave Rms [NOct+NOctTot]>

where:

flags = 1- the overload detected, 0 - the overload not detected

Octave Peak[i] - the result of **1/1 OCTAVE** Peak analysis (*10 dB); i = 1..NOct+NOctTot (1..12)

Octave Rms[i] - the result of **1/1 OCTAVE** Rms analysis (*10 dB); i = 1..NOct+NOctTot (1..12)

B.2.1.2. Record with the state of the markers

The record with the state of the markers consists of one word:

<0x8nnn>

in which 12 bits nnn denote the state of the markers:

b11 = state of #12 marker

b10 = state of #11 marker

...

b1 = state of #2 marker

b0 = state of #1 marker

B.2.1.3. Record with the breaks in the results registration

The record with the breaks in the results registration consists of four words:

<0xB0ii> <0xB1jj> <0xB2kk> <0xB3nn>

in which ii, jj, kk, nn bytes denote 4-bytes counter of left or skipped records: nnkkjjii (ii is the least significant byte, nn – the most significant byte).

B.3. Structure of the file with the results from the SLM and DOSE METER modes

File header - cf. Tab. B.1.1.

Unit and software specification - cf. Tab. B.1.2.

USER'S text - cf. Tab. B.1.3.

Parameters and global settings - cf. Tab. B.1.4.

MEASUREMENT TRIGGER settings - cf. Tab. B.1.5.

LOGGER TRIGGER settings - cf. Tab. B.1.6.

EXTended I/O settings for left channel - cf. Tab. B.1.7.

EXTended I/O settings for right channel - cf. Tab. B.1.7.

Special settings for profiles - cf. Tab. B.1.8.

Main results - cf. Tab. B.1.10_SLM or B.10_DM.

Statistical levels - cf. Tab. B.1.11.

Header of the statistical analysis (the presence depends on the **SAVE STAT.**) - cf. Tab. B.1.12.

Results of the statistical analysis (the presence depends on the **SAVE STAT.**) - cf. Tab. B.1.13.

File-end-marker - cf. Tab. B.1.17.

B.4. Structure of the SETUP file

File header - cf. Tab. B.1.1.
Unit and software specification - cf. Tab. B.1.2.
SETUP file - cf. Tab. B.1.14
File-end-marker - cf. Tab. B.1.17.

B.5. Date and time

Following function written in C explain how the date and time are coded:

```
void ExtractDateTime(int date, int time, int dt[])
{
    int sec,year;

    sec = ((0xffff&time)<<1); /* time<<1; */
    dt[0] = sec%60; /* sec */
    dt[1] = (sec/60)%60; /* min */
    dt[2] = sec/3600; /* hour */

    dt[3] = date&0x1F; /* day */
    dt[4] = (date>>5)&0x0F; /* month */
    year = (date>>9) & 0x07F;
    dt[5] = year+2000; /* year */
}
```

B.6. Structure of the file with 1/1 OCTAVE analysis results

File header - cf. Tab. B.1.1.
Unit and software specification - cf. Tab. B.1.2.
USER'S text - cf. Tab. B.1.3.
Parameters and global settings - cf. Tab. B.1.4.
MEASUREMENT TRIGGER settings - cf. Tab. B.1.5.
LOGGER TRIGGER settings - cf. Tab. B.1.6.
EXTended I/O settings for left channel - cf. Tab. B.1.7.
EXTended I/O settings for right channel - cf. Tab. B.1.7.
Special settings for profiles - cf. Tab. B.1.8.
Main results - cf. Tab. B.1.10_SLM or Tab. B.1.10_DM.
Statistical levels - cf. Tab. B.1.11.
1/1 OCTAVE analysis results - cf. Tab. B.1.17.
1/1 OCTAVE analysis MIN-results (the presence depends on the **MIN SPECT.**) - cf. Tab. B.1.17.
1/1 OCTAVE analysis MAX-results (the presence depends on the **MAX SPECT.**) - cf. Tab. B.1.17.
Header of the statistical analysis (the presence depends on the **SAVE STAT.**) - cf. Tab. B.1.12.
Results of the statistical analysis (the presence depends on the **SAVE STAT.**) - cf. Tab. B.1.13.
File-end-marker - cf. Tab. B.1.20.