





SV100A Vibration **Dosimeter**

User Guide





ISO 2631-1 and EU Directive 2002/44/EC

The SV 100A measures the A(8) vibration exposure and the overall vibration total value (VECTOR) in accordance with ISO 2631-1 and EU Directive 2002/44/EC. The A(8) result is given in m/s² (RMS), m/s^{1.75} (VDV) and points. The SV 100A monitors the time left to limits and activates the alarm when the limits are reached.

The force sensors in the SV 100A automatically detect the presence of a user or vehicle driver which enables real daily exposure calculations for the period of time when the user is in contact with the vibrating surface.

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List of contents included in the SV 100A box:

Hardware	accessories:
riaruware	accessories.

	Description	pcs.
1.	SV 100A vibration dosimeter including 8GB memory	1
2.	SA 54 charger / power supply	1
3.	Set of mains adapters to SA 54	1
4.	SC 56 USB cable	1
5.	SA 145 carrying case	1
6.	Calibration certificate	1
7.	CD with user manual	1
8.	License for Assistant (application available at svantek.com)	1



Please check the list against the contents. If any of the listed items are missing, please contact your local Svantek distributor or send an e-mail to office@svantek.com within 3 days of receiving the parcel.

List of optional extras not included in the SV 100A box

	Hardware acces	sories:
Part name	Description	Applications
SA 136	Calibration adapter	Periodical verification at laboratory
SV 111	Vibration calibrator	Instrument check before and after series of measurements

Software options that can be activated by code (with no need to return the meter to factory):

Part name	Description	Applications
SF 100A OCT	1/1 octave analysis	Verification of vibration sources Research and development
SF 100A 30CT	1/1 & 1/3 octave analysis	Verification of vibration sources Research and development
SF 100A WAV	Time domain signal recording during measurement - continuous or triggered	Analysis of vibration signal Post-processing Research and development
SF 100A Wf	Motion sickness filter	Measurement of low frequencies causing motion sickness in accordance to ISO 2631-1

Accredited calibration

(requires sending the instrument to SVANTEK authorised laboratory) SV_CV_WB Accredited calibration for vibration ISO / IEC 17025 calibration certificate meter

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Configuration with Supervisor software

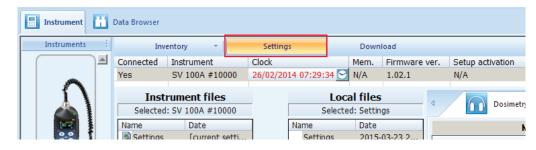
Configuration set-up

1) To switch the power on hold the <ENTER> button for a couple of seconds.



- 2) Connect the USB cable to PC. Make sure the Supervisor software and USB drivers are previously installed on the PC.
- 3) Open the Supervisor software and go to the Instrument tab.

4) Select Settings



5) Download current Settings from Instrument files to Local Files using right arrow and edit SV100A settings using panels on the right hand side

	ment files			c al files ed: Settings	4 Dosimetry	Measurement	Time	History D	Display
Name	Date		Name	Date	Mea	surement			F
🕙 Settings	[current setti		Settings	2015-03-23 2		Value	_		
					Device Function	Dosimeter	-	Standard	
					Start Delay	1 s	+	Exposure Actio	on Value
					Start Sync.	Off	+	EAV X (aw)	
					Integration Time	8 h	+	EAV Y (aw)	
					No. of Measurement	1	-	EAV Z (aw)	
					Exposure Time	8:00 h	-	Exposure Limit	it Value
		->	1		Force Detector Mode	Marker	-	ELV X (aw)	
		~			Alarm	EAV		ELV Y (aw)	
		6				ELV		ELV Z (aw)	

6) Save settings file under new name

7) Upload the file to the Instrument Files using left arrow and select Apply

	ment files V 100A #10000			al files ed: Setup1	٩		Dosimetry	11	Measurement		Time H
Name	Date	Nan	ne	Date			Me	asurer	nent		
Settings	[current setti		Setup1	2015-03-23 2				Vi	alue		
SET Apply					De	evice Functio	n		Dosimete	r	-
Down					St	art Delay			1 s		-
Delet					St	art Sync.			Off		-
Delet	e all				In	tegration Ti	me		8 h		-

8) Disconnect the USB cable. Instrument is ready to measure.

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In-situ check with SV 111

Set up of SV 111

1) Open the SV 111 calibrator lid and take out the SA111 adapter Mount the SV 100A on the SA111.

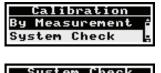


2) Mount the SV 100A on the SA111 (x axis vertical).





4) Enable Calibration menu in SV 100A by holding Right Arrow button. Select the axis.





UNCOR	axis	۷
Level 1.	000 r	1/52
Factor	0.14	dB



5) Start the calibrator using level of 1 m/s² at 16 Hz and wait until all 3 LEDs are green.



- 6) Press Enter on SV 100A to start the check procedure.
- 7) Repeat the procedure in all 3 axes.



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The SV 100A Assistant Application

Installation of Assistant application

1) Login to svantek.com website and download Assistant from the Support page to your smartphone / tablet with Android system.

Assistant		
v. 1.0.9		Concerning and
Application for Android 4.3	James 1	
devices with Bluetooth ver. 4.0		1 DEC
(LE)		
Format: APK		

2) Install Assistant on your Android smarphone.

3) Start the application. The Assistant will ask you to enable Bluetooth and Localization services on your smartphone / tablet.

	LEVELS	POINTS	LEVELS	POINTS
	current exposure	0 points	current exposure	N/A m/s ²
	A(8)	30 points	A(8)	N/A m/s ²
Bluetooth is off. Go to System settings?	time to action	>24h	Location service is o settings?	ff. Go to System
Yes No	time to limit	>24h	Yes	No
	action value 0.50 m/s ²	limit value 1.15 m/s ²	action value 0.50 m/s ²	limit value 1,15 m/s ²

4) The Assistant will detect the SV100A automatically.

5) Enable Start / Stop / Pause menu by clicking on the bottom bar.



6) Swipe the screen to the left or right to switch between display modes.

LEVELS POI	NTS	TIME HISTORY	SUMMARY	RMS (channel x)	0,06 m/s ²	0.6 km	last setup loaded
current exposure 0	points	RMS		10		8.	next file name L218
A(8) 30	ets	channel X	0,39 m/s ²	1.0		A N	instrument clock 2015-09-17 12:38:35
		channel Y channel Z	0,19 m/s ² 0,31 m/s ²	.01		9	standard uк
ime to action	>24h			.001	n. kit	Y	exposure duration 8h
ime to limit	>24h			1233.43 1238.13	123643 T	A	marker 1 name Bump
ction value		Bump	Accelerate	Bump	Accelerate	7.1	marker 2 name Accelerate
,50 m/s ²	-		0		0		marker 3 name ^{Turn}
	A VIEW DAVID	Turn	WAVE REC.	Turn	WAVE REC.	Speed: 0 km/h Distance: 102,5 m	wave rec. length



Data files download

Downloading with Supervisor

1) Connect the SV100A to PC and open Supervisor software. Click the Download button located next to Settings and Inventory.

File operation	s in progress					Superviso	- Instrument
🔜 Instrument	Data Browser	Session (1)					
Instruments	Inv	entory *	Settings		lownload		
	Connected	Instrument	Clock	Me	m. Firmware	ver. Setup	activation
	No	SV 100A #10000	12/03/2014 06:08:	6 🕑 N/.	A 1.02.1	2015-	03-23 20:52:58
						1	

2) Select files you wish to download and click the Download button located in the bottom section.

Instruments	1	In	ventory •	Settings	Do	ownload							
		Connected	Instrument	Clock	Men	n. Firmware ver.	Setup ac	tivation	Activated setup	Cal. validity date	Instrum	ent Cal. report	
		No	SV 100A #10000	12/03/2014 06:08:36	N/A	1.02.1	2015-03-	23 20:52:58	Settings	N/A	ŝ	٠	
-													
- /													
-						S	elected: SV	100A #10000					
SV 100A		Name			e [B]			Location		🐣 User	🤧 Tasi	¢	Refres
		L10.SV				2014-01-01 00:27		-		•	-		
		L11.SV				2014-01-05 09:05		-		-	-		Change
		L12.SV				2014-01-12 01:31 2014-02-21 07:19		-		-	-		Delet
and the second second		L13.5V				2014-02-22 07:29				-			Delete
Er der reis a		L15.SV				2014-02-22 08:40		-					Delete
54%		L16.SV	L	9	994	2014-02-25 00:38	:24	-		-	-		Select
0000		SL17.SV				2014-02-25 00:43		-		+	-		Deselect
and the second		L18.5V				2014-02-25 06:55		-		-	-		Descice
		L19.SV				2014-02-25 07:11		-			-		_
SV 102		L20.SV				2014-02-26 09:07 2014-03-12 04:15		-					
		L21.SV				2014-03-12 04:15		1.					
		L22.SV				2014-03-12 04:23		+					
		L24.SV				2014-03-12 04:26		•			-		_
-		L25.SV		107	730	2014-03-12 04:38	:22	-		-	-		
0		126.SV		3	122	2014-03-12 04:54	:36	-		÷	-		
1. 10		L27.SV				2014-03-12 04:55		÷		·	-		
205		L28.SV				2014-03-12 05:09		-		-	-		
		129.SV	L	3	794	2014-03-12 05:15	:56	-		-	-		

3) Once the file is downloaded it will be automatically shown in the Data Browser.

Library Hand-Arm Whole-Body Sum Sample files Hand-Arm Date from 2014-09-29 Y Date to 2014-09-29 Y S/N Noise dosimetry SLM Filename Logger filename Location SLM L20.SVL - - Catalogue L22.SVL - - L22.SVL - - -		
Image: Hand-Arm Date from 2014-09-29 ✓ Date to 2014-09-29 ✓ S/N 0 Image: Mole-Body SLM Image: Mole-Body Image: Location Image:	М	No
SLM L20.SVL	✓ Filena	ime
Whole-Body - - Catalogue 22,5VL - -	User	Ta
Catalogue	-	-
5 - 122 SVI	New session	,
▶ Flagged	Delete	

4) To open file simply double click on it.

Session data	🔄 🖳 🖗 🕵 🕵 🗩 - 🔎 -	- 🖏 - 📶 - T+ T+ T+			
&LOG6.SVN @WBW0.SVN	Session header	1 1			
		8 1			
	Project name				
	Author name				
Add panel	 Location 		·		
1/1 Octave	User name Task		*		
1/3 Octave	Tusk		*		
Logger 1/1 Octave	Comment				
In Logger 1/3 Octave	Instrument configuration				
🏫 Logger results		a 💌			
Panels		8 19			
Session header	Measurement start	2013-09-26 08:22:28			
S Instrument configuration	Flename	8LOG6.SVN	@WBW0.SVN		
	Measurement stop	2013-09-26 08:38:29	2013-09-26 08:23:28		
	Unit type	SV 106			
	Unit S/N	20907			
Reports	Software version	3.22			
Name Date	Integration period	1 m			
	Logger step	1 \$			
	Leq integration	Linear			

5) The detailed information on the operations within the Session panel are described in the SV100A User Manual and Supervisor Software Manual.



Should your SVANTEK professional measurement equipment need to be returned for repair or for calibration, please contact the service office at the following number or contact via the SVANTEK's website.

Service Office: +48 (22) 51-88-320 or +48 (22) 51-88-322. Office hours are 9:00 a.m. to 5:00 p.m. Central European Time. -E-mail at office@svantek.com -Internet at www.svantek.com -Address:

SVANTEK Sp. z o.o. Strzygłowska 81 04-872 Warszawa, Poland





SV 100A Technical Specification

Application	Whole-body				
Standards	ISO 8041:2005, ISO 2631-1:1997				
Meter Mode	aw (RMS), awmax (RMS MAX), VDV, MaxVDV,_awv (VECTOR), A(8) Daily Exposure, A(8) Daily Exposure,				
	ELV Time (TIME LEFT TO LIMIT), ELV Time (TIME LEFT TO LIMIT), EAV Time (TIME LEFT TO ACTION)				
	EAV Time (TIME LEFT TO ACTION); MTVV, Max, Peak, Peak-Peak				
Filters	Wd, Wk, Wm, Wb (ISO 2631) and corresponding Band Limiting filters				
	Wf for motion sickness filter measurements according to ISO 2631-1 (option)				
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak_detection, resolution 0.1 dB				
Measurement Range	0.01 ms ⁻² RMS ÷ 157 ms ⁻² PEAK				
Frequency Range	0.1 Hz ÷ 180 Hz				
Data Logger	Time-history data including meter mode results and spectra				
Time-Domain Recording	Simultaneous 3-channel time-domain signal recording (option)				
Analyser	1/1 octave real-time analysis (option)				
	1/3 octave real-time analysis (option)				
Accelerometer	Built-in tri-axial MEMS based				
Display	OLED 128 x 32 pixels				
Memory	8 GB				
	USB 2.0 client, Bluetooth				
Keyboard	4 push buttons				
Power Supply					
	Ni-MH rechargeable cellsoperation time > 24 hours ¹				
	USB interface500 mA HUB				
Environmental Conditions					
	Temperaturefrom -10 °C to 50 °C				
	Humidityup to 90 % RH, non-condensed				
Dimensions	Ø 235mm x 12 mm				
Weight	0.5 kg				

¹dependent on instrument operation configuration

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.

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