

SV 100A 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/s^2 (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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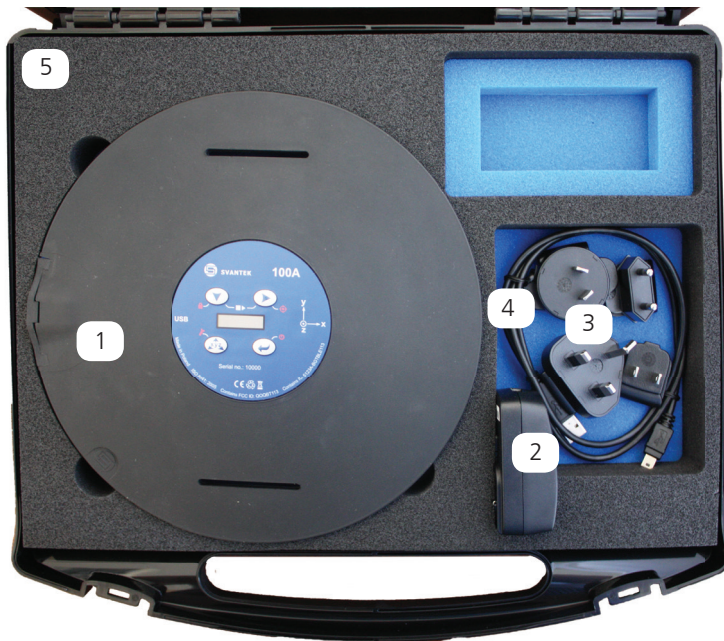
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List of contents included in the SV 100A box:

Hardware 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 accessories:

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 3OCT	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 meter	ISO / IEC 17025 calibration certificate
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Configuration with Supervisor software

Configuration set-up

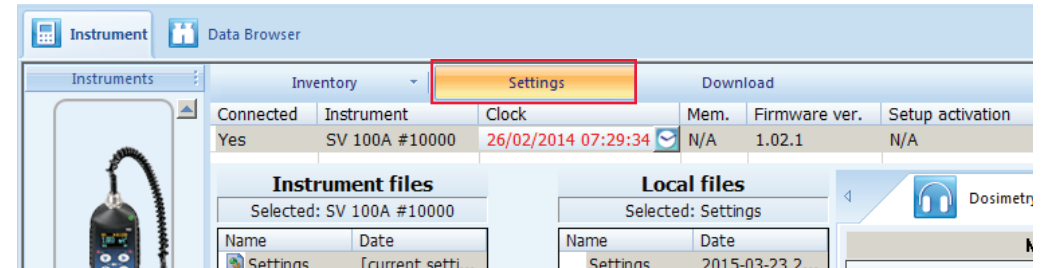
1) To switch the power on hold the <ENTER> button for a couple of seconds.



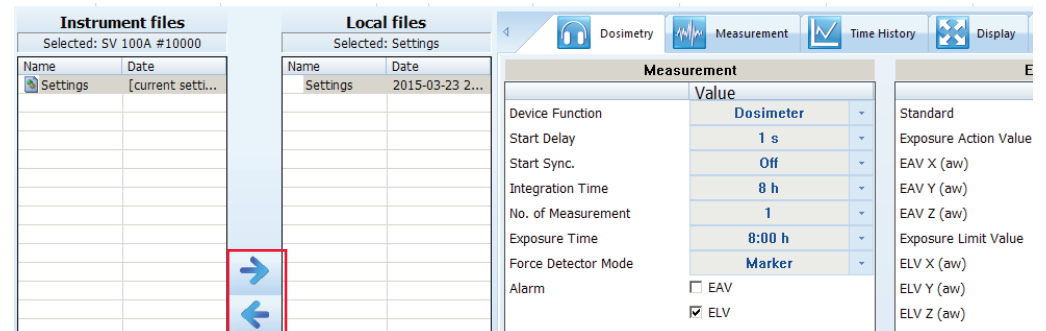
2) Connect the USB cable to PC. Make sure the Supervisor software and USB drivers are previously installed on the PC.

3) Open the Supervisor software and go to the Instrument tab.

4) Select Settings

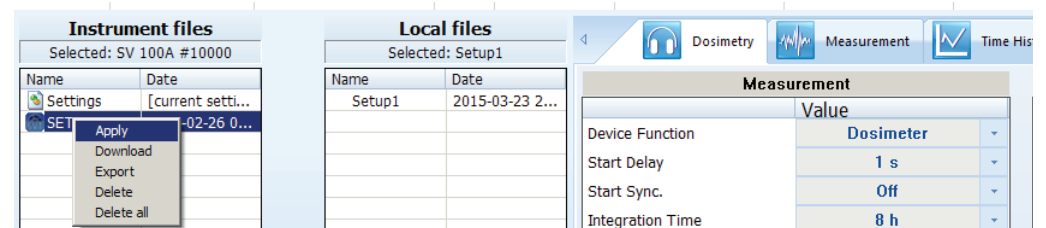


5) Download current Settings from Instrument files to Local Files using right arrow and edit SV100A settings using panels on the right hand side



6) Save settings file under new name

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



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

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.

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Calibration
By Measurement
System Check
    
```

```

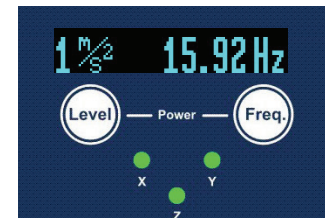
System Check
Check axis X
Check axis Y
    
```

```

Check axis Z
Level 1.000 m/s²
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.



The SV 100A Assistant Application

Installation of Assistant application

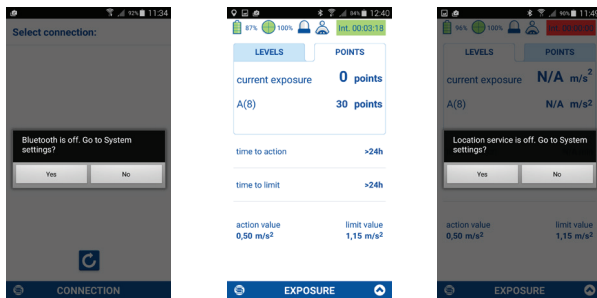
1) Login to svantek.com website and download Assistant from the Support page to your smartphone / tablet with Android system.

Assistant
v. 1.0.9
Application for Android 4.3
devices with Bluetooth ver. 4.0
(LE)
Format: APK



2) Install Assistant on your Android smartphone.

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

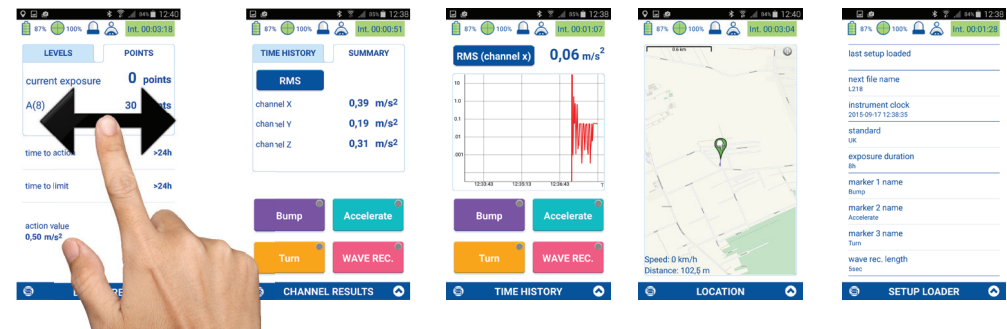


4) The Assistant will detect the SV100A automatically.

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



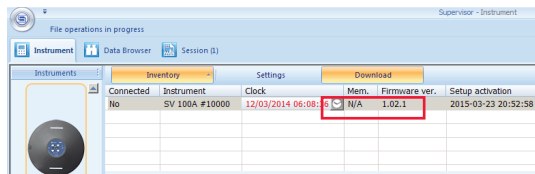
6) Swipe the screen to the left or right to switch between display modes.



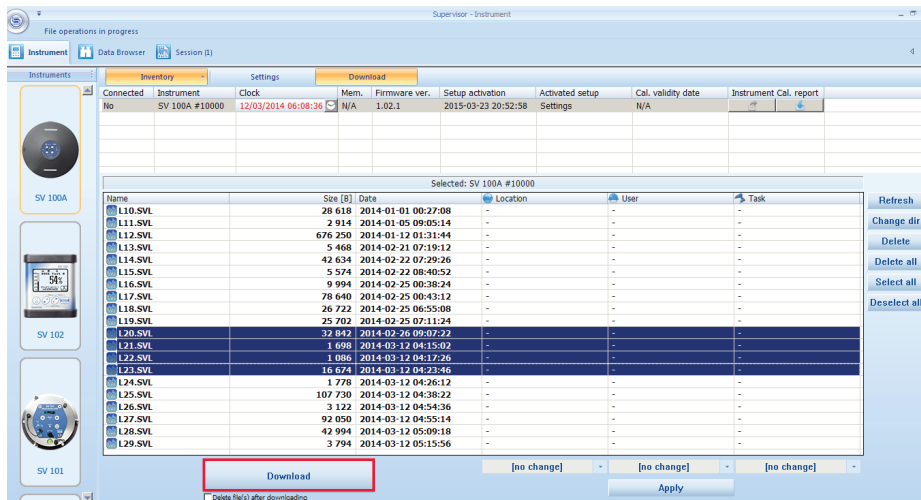
Data files download

Downloading with Supervisor

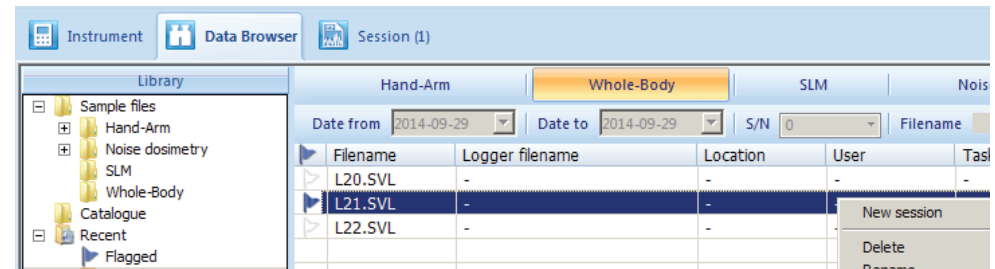
1) Connect the SV100A to PC and open Supervisor software. Click the Download button located next to Settings and Inventory.



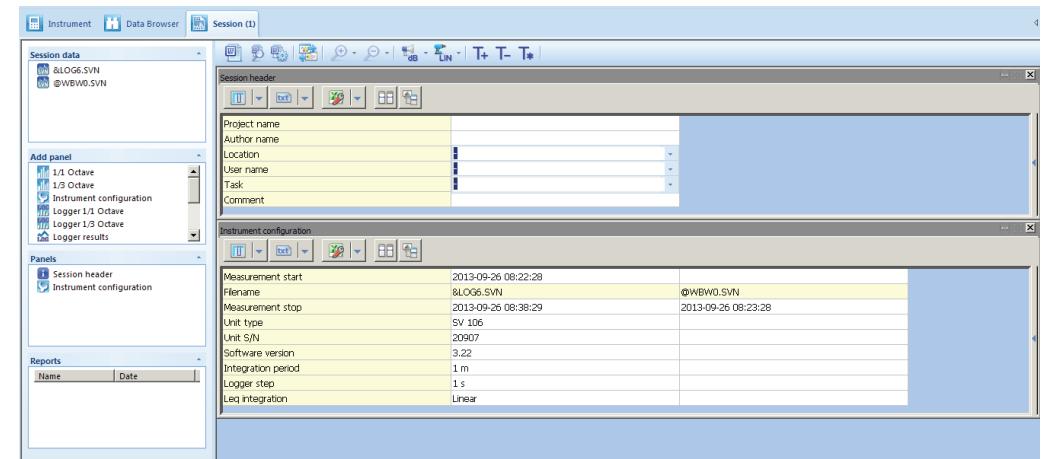
2) Select files you wish to download and click the Download button located in the bottom section.



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



4) To open file simply double click on it.



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
Interfaces	USB 2.0 client, Bluetooth
Keyboard	4 push buttons
Power Supply	Ni-MH rechargeable cells _____ operation time > 24 hours ¹ USB interface _____ 500 mA HUB
Environmental Conditions	Temperature _____ from -10 °C to 50 °C Humidity _____ up 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.



Proudly distributed by:

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