
# SV 100A Vibration Dosimeter

## User Guide

SVANTEK

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

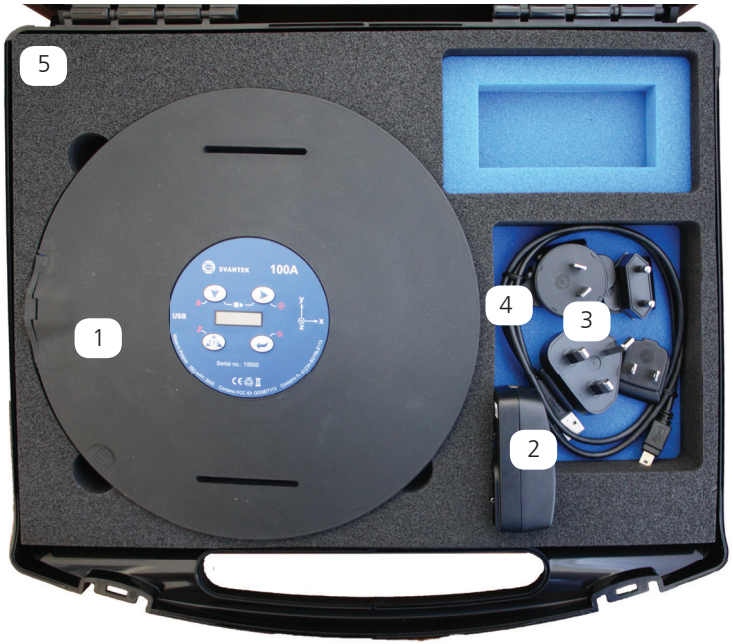
The SV 100A measures the A(8) vibration exposure and the overall vibration total value (VECTOR) in accordance with ISO 2631-1 and EU Directive 2002/44/EC. The A(8) result is given in $m/s^2$ (RMS), $m/s^{1.75}$ (VDV) and points. The SV 100A monitors the time left to limits and activates the alarm when 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.


## List of Contents

## 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<br>Research and development |
| SF 100A 3OCT | 1/1 & 1/3 octave analysis | Verification of vibration sources<br>Research and development |
| SF 100A WAV | Time domain signal recording during measurement - continuous or triggered | Analysis of vibration signal<br>Post-processing<br>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 |

# Configuration with Supervisor software

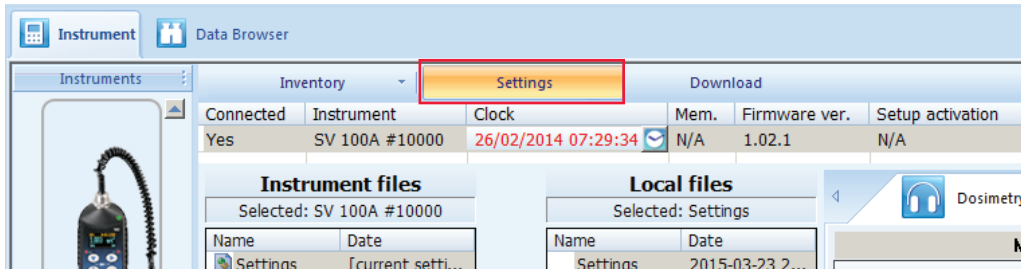
## Configuration set-up

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

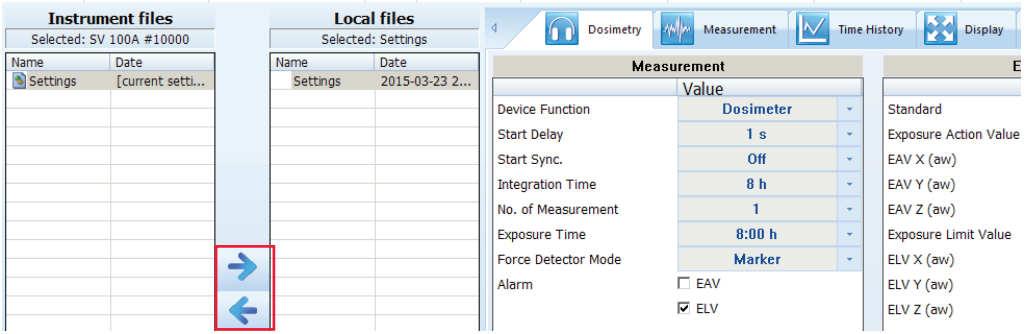

2) Connect the USB cable to PC. Make sure the Supervisor software and USB drivers are previously installed on the PC.

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

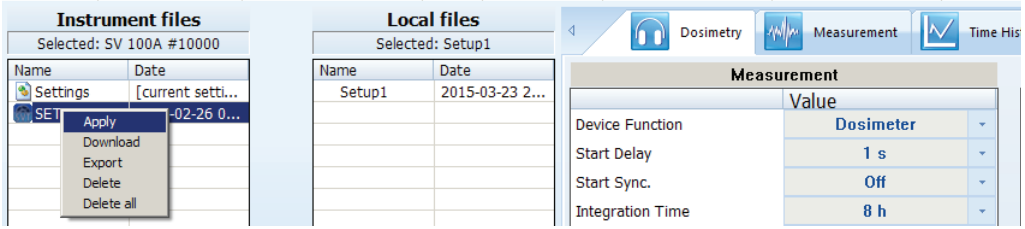
4) Select Settings




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



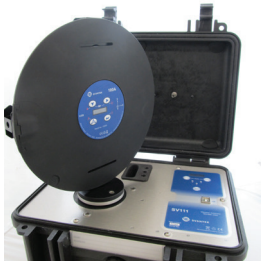

8) Disconnect the USB cable. Instrument is ready to measure.

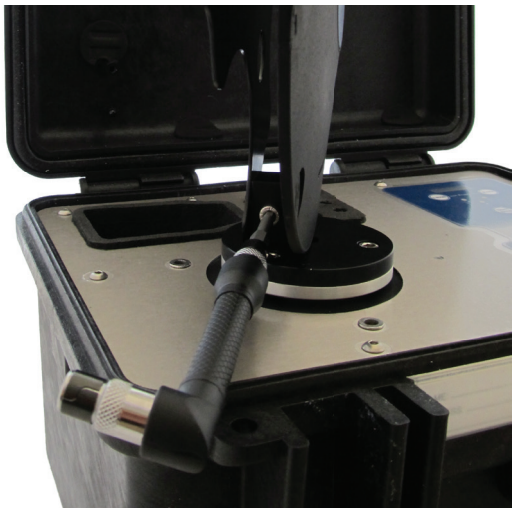
# In-situ check with SV 111

## 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.

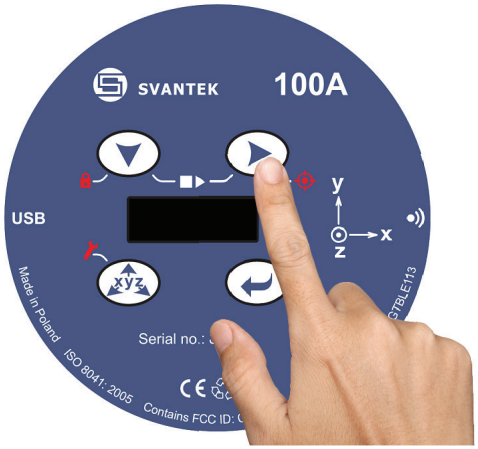
2) Mount the SV 100A on the SA111 (x axis vertical).



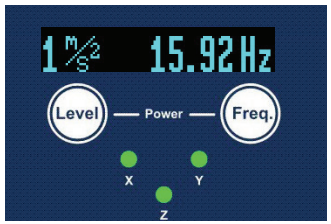


4) Enable Calibration menu in SV 100A by holding Right Arrow button.
   Select the axis.




5) Start the calibrator using level of 1 m/s$^2$ 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.

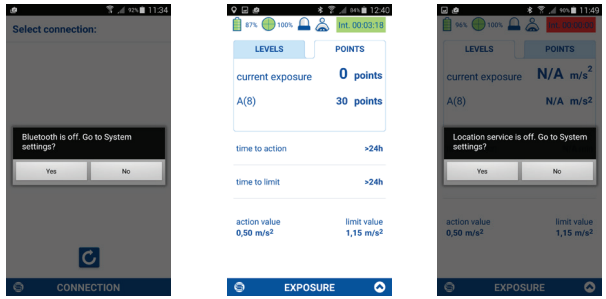
# The SV 100A Assistant Application

## Installation of Assistant application

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


2) Install Assistant on your Android smarphone.

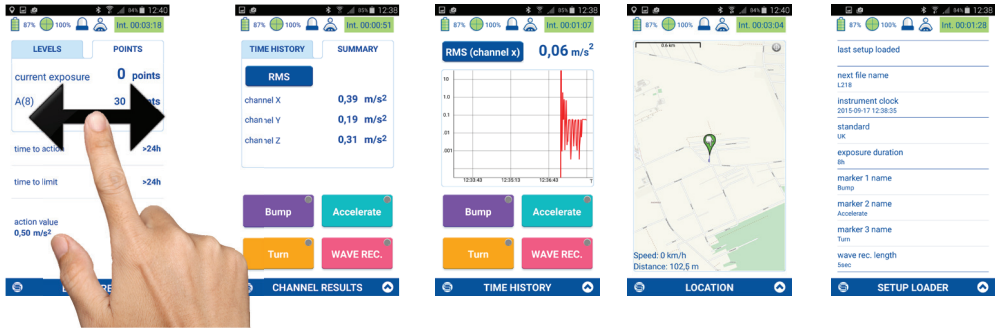
3) Start the application. The Assistant will ask you to enable Bluetooth and Localization services on your smartphone / tablet.




4) The Assistant will detect the SV100A automatically.

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

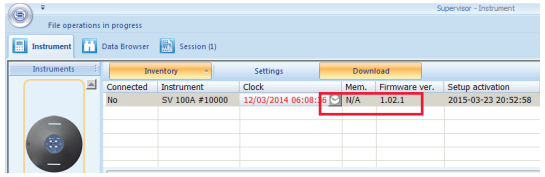

6) Swipe the screen to the left or right to switch between display modes.



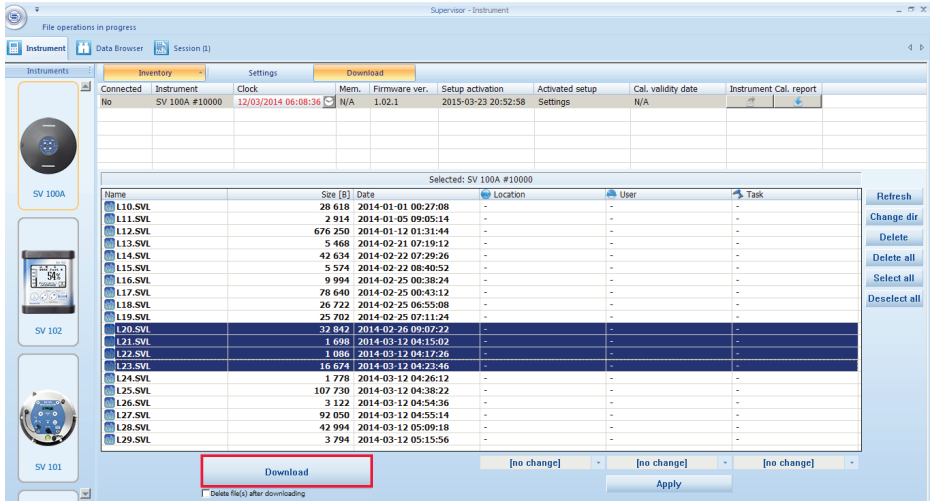
# Data files download

## Downloading with Supervisor

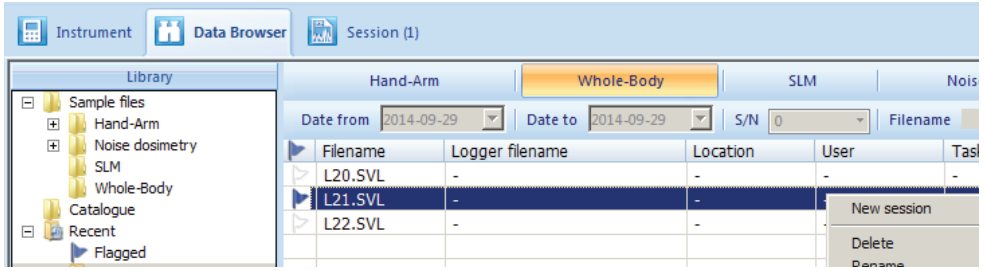
1) Connect the SV100A to PC and open Supervisor software. Click the Download button located next to Settings and Inventory.



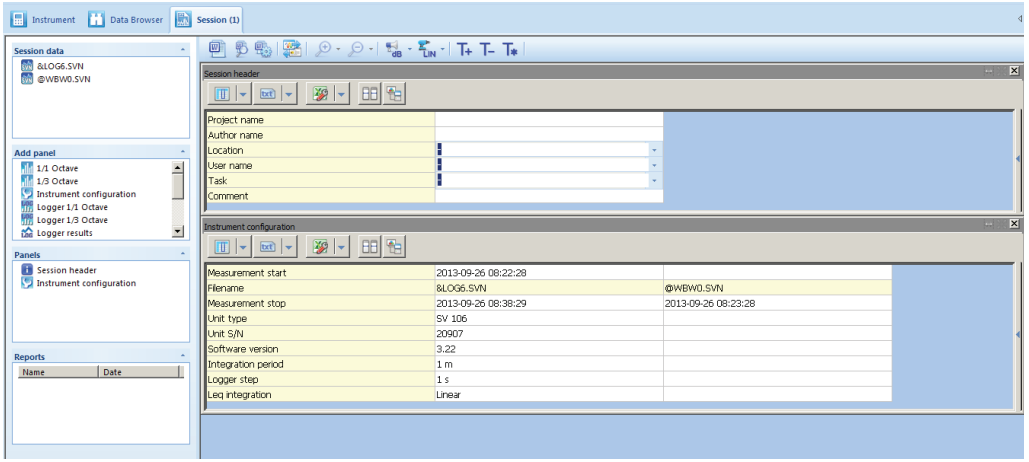

2) Select files you wish to download and click the Download button located in the bottom section.




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<br>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)<br>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 |

[1] dependent 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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