SCENT PALETTE

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Application Note 238:   SDS100 Scent Palette Software Setup

Scent Palette Controller CD

You should have received a CD with the following items:

- Scent Palette application note: this document, presented as an application note.
- Scent Palette demo software (scentdemov2a.exe)
- Vizard Lite software (Vizard.exe)
- *Folder*: Python source code and application notes
  - *Sending signals from Vizard to AcqKnowledge via the parallel port*
  - *Sending signals from Vizard to AcqKnowledge via a Measurement computing card*
  - *BASIC_scent_palette.py*
  - *sntpalpy.dll*
  - *sntpal.dll*
- *Folder*: Manual control
  - *BASIC_scent_palette.exe*
  - *ScentPaletteSharp.exe*
  - *sntpal.dll*
  - *sntpalpy.dll*

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Setup

- The software works on Windows XP SP3 and above.
- *.NET framework must be installed.*
- The following files are needed: *Manual control software: ScentPaletteSharp.exe* and *BASIC_scent_palette.exe*
  Libraries: sntpal.dll and sntpalpy.dll

Test the unit

1. Confirm that the Unit is connected to the computer.
2. Insert the SDSSFT-1 CD and then open the "scentv2a" folder and double-click "scentdemov2a.exe."
3. Make a note of the Scent Palette serial number—required later if using Vizard Lite to control the SDS100.

Manually control the Scent Palette

Use ScentPaletteSharp.exe or BASIC_scent_palette.exe for basic manual control of the Scent Palette. These executables provide no means of synchronization with the physiological recording—just a simple control of the Scent Palette.

Script the Scent Palette control via the Vizard Lite software
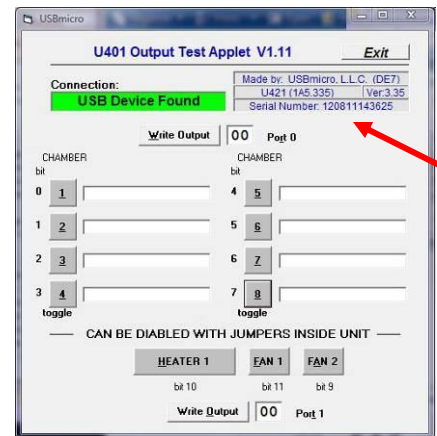
IMPORTANT! Once the Vizard Lite activation code is entered, installation will be locked to that PC and you will not be able to move Vizard Lite to different computers.

If a computer may not ultimately be the one used to control the Scent Palette, install the Vizard Lite software as trial/demo, which will work for 90 days, and then you can register it with the activation code on another computer (it will lock to the computer at that time). Also, additional licenses can be purchased from BIOPAC.

1. Install the Vizard Lite software from the CD.
2. Enter the "Activation code for Vizard Lite" provided on the CD envelope to activate your Vizard Lite license.
3. To set the Vizard software to script control of the Scent Palette, open the example file BASIC_scent_palette.py in Vizard Lite.
4. Edit the script to use the Scent Palette serial number (identified above in Test step 3). The serial number is required in two places to allow Vizard software to communicate with the Scent Palette (see image next page).
5. When the script is running, fans will be on and pressing 0-7 on your keyboard will open the corresponding chamber and close all other chambers.

To send digital signals from the computer running Vizard Lite to Acq*Knowledge*:

- You will need an STP100C module with the appropriate interface cable.
- See these application notes and source code examples:
  - *Sending signals from Vizard to AcqKnowledge via the parallel port*
  - *Sending signals from Vizard to AcqKnowledge via a Measurement computing card*

Use the Vizard Development software for stimulus presentation.

Vizard Lite has a branded logo displayed on-screen but the full Vizard software, Vizard Development version, will allow you to create elaborate visual and sound presentation protocols while controlling the Scent Palette. You would be able to present, for example, pictures and sounds paired with the scent presentation without having the logo displayed. Furthermore, the Vizard Development software is used for virtual reality research and has numerous additional capabilities and is well-integrated with the physiological equipment. Please contact BIOPAC for more info.

Using the Scent Palette with SuperLab, E-Prime, etc.

Currently, there is no interface provided for SuperLab, E-Prime, or similar presentation software. The Scent Palette uses USB adapter U421 (from USBmicro); if SuperLab, E-Prime, etc. provide support for this driver then it will be possible to use those software programs to control the Scent Palette. Meanwhile, Vizard Lite is the only interface option unless you want to write your own custom software.

Writing your own custom software to communicate with the Scent Palette.

The SDS100 includes examples on how to write custom software to control the scent palette in both Python and Visual Basic; BIOPAC does not provide engineering support outside of those two development languages.

To code for low level access to interface with the USB adapter U421 (included internally within the SDS100) from a different programming language, refer to the USBMicro development documentation:

- http://www.usbmicro.com/documentation/programming-overview/

Sending signals from Vizard to Acq*Knowledge* in order to have Scent Palette events synchronized with and saved with the physiological data.

See the section on using Vizard Lite to control the Scent Palette.

Controlling the Scent Palette based on the levels of physiological signals.

It is possible to send physiological signals from Acq*Knowledge* to Vizard in real time and deliver scents depending on the physiological signals. The VRLINK module is required for this functionality. Please contact BIOPAC for more info.