

VICI VALVE SEQUENCER V1 MANUAL

INTRODUCTION

Vici valve sequencer (VVS) was designed to steer and automate 8-port C25 Vici Valves, for instance in connection with a PTR-MS volatile profiling system. The program makes it possible to either manually control the valve or program complex time-sequences. Sequences are automatically registered in a log-file for further use with analytical data.

HOW TO GET STARTED

Run the Matlab Component Runtime Installer from the corresponding folder. Copy the folder “Vici Valve Sequencer v1” on your harddrive (free choice of directory).

Connect your Vici Valve to the serial port and turn it on (for details see Vici Valve manual). Run ViciValveSequencer_v1.exe. Upon first startup, the program extracts necessary files and creates subdirectories into the folder, which may take some time. These subdirectories are vital for the program. Do not delete or modify them.

After startup, the program asks you to specify a work directory. This directory is used as the default directory to store log-files and can be changed using the preferences dialog (see below). The program also stores backup-logs of all actions into a folder called “Session log” within the program directory.

VICI VALVE SETUP- PREFERENCES

By pressing the preferences button on the lower right, a new window pops up. It is used to specify serial communication parameters and program options. The default values for BaudRate, Parity, Data& Stop bits as well as Flow control are already configured to be used with your Vici Valve. Do not change them unless you know what you’re doing. Enter the appropriate serial port name into the Serial port field. Serial ports are normally denoted as COM1 and COM2 (refer to the system settings of your operating system for details).

The neutral position defines the position the valve returns to after the end of a sequence. Delay correction is a time factor that can be used to synchronize VVS with other programs (i.e. measuring software) that do not use system time as a reference. The field “work directory” lets you change the default directory for your log files.

To confirm preference changes, press “OK”. Pressing “Default” restores the original values in the serial communication panel.

MANUAL CONTROL- PUSH THE BUTTON

You can steer the connected Vici Valve using the eight buttons in the Positions Panel on the lower left of the main window. You can only specify one position at a time. All manual position changes are recorded and stored in the session-log file. The position of

the valve is displayed in the Status-Window. Please note that the manual control is disabled as long as an automated sequence is running.

AUTOMATED CONTROL- SEQUENCE PROGRAMMING

The Sequence Loop panel allows to program time-dependent sequences of valve positions. Sequences are entered into the “Sequence” dialog field using the following format:

$$P1 T1;P2 T2;...;Pn Tn$$

P = Absolute valve position (1-8)
T = Time interval in seconds (>0-inf.) spent on position P
; = Delimiter used to separate PT pairs. No closing delimiter is allowed

Example:

$$1 3;2 5;7 300$$

In this example, the valve holds position 1 for 3 seconds, the position 2 for 5 seconds and position 7 for 300 seconds.

You can store sequences by selecting the sequence, copying it (Ctrl-C) and pasting it into a spreadsheet of any word processor (Ctrl-V). You can equally paste sequences written ore stored with a word processor into the “Sequence” dialog field.

The “Repetitions” dialog fields specifies the number of loops the program makes using sequence information. If you enter the value 2 using the above sequence for example, the program will run the sequence twice.

To start a sequence, press start. The program then asks you to specify the name and directory for the log file. Time and position of the valve during execution of a sequence loop are registered and stored in this file in text format. Press “OK” and the sequence launches immediately.

You can abort sequences at any point in time by pressing “Stop” and confirming your choice by pressing “OK” in the following pop up window. All the times and positions of the valve prior to aborting will be stored in the log file.

TROUBLESHOOTING& KNOWN ERRORS

When I try to start a sequence, the message “already running” in the “Status” dialog box is displayed, although there’s clearly no sequence running.

Exit& restart the program.

CREDITS

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