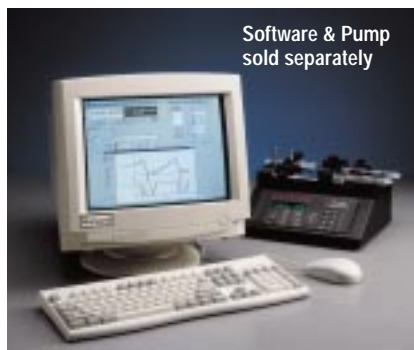


Symphony - The Windows™ Pump Manager



- Windows™ based software
- Remotely control and program your pump from your PC
- Graphically displays what your pump is doing
- Daisy-chain multiple pumps
- Printable log of all pumping events



Symphony is designed to work with Harvard Apparatus syringe pumps. Both the PHD 2000 programmable series of syringe pumps and the model '44' programmable syringe pump will work with Symphony.

Easy to Use

Symphony is an easy to use, Windows™ based application. You change pump parameters using common Windows™ controls like pull-down menus, direct numeric entry, on-off buttons and 'spin' controls.

Interactive Pump Control Window

The interactive pump control window allows you to set, on-the-fly, all pump parameters including:

- Syringe type and diameter
- Flow rates
- Pumping modes (pump, volume, program and auto-fill)

Single or Multiple Pump Control

Multiple pumps can be controlled by Symphony. Create the protocol for the first pump and then connect other pumps directly to that pump. This creates a daisy chain which allows the software to drive all pumps in the chain. Note that the protocol is identical for each pump in the chain.

Information at a Glance

The main window displays all of the pumping parameters for the individual pump in an easy to read format. Information such as volume delivered, direction of flow, pumping mode, syringe used, and flow rates, are clearly displayed. Even the communications port identity and status is displayed. The researcher needs only to glance at this window to know what the pump is doing.

Reliable Communication with No Guess Work

On the interactive pump control window, there is a pump status box. A light will blink green if communication is normal and red if you have a communication error. At a glance you will know if the software is communicating with your pump. There is no guess work.

From the interactive pump control window you gain access to all other Symphony windows through pull down menus or icon buttons.

Pump Program Window

The program window allows you to create, review, edit, save, recall and download programs. Using standard Windows™ software icons and menus, programming your pump is as simple as clicking a mouse. Once created, a program can be downloaded to any pump in the communications chain and it can be saved and recalled for later use. Note that programming only works with a PHD 2000 Programmable Pump or Pump '44'. It will not work with a PHD 2000 Infusion Only or PHD 2000 Infusion/Withdraw syringe pumps.

Pump Graph Window

This window displays an easy to read graph that resembles a continuously running strip chart recorder. This allows you to monitor infuse and refill rates and volume dispensed. Infusion values are displayed in blue and refill values in red. The vertical axis scale (range) and horizontal axis, chart speed (period), are selectable.

Log Sheet

Symphony creates a log sheet that tracks the activity of your pumps. Later, the information can be reviewed using a Windows™ text editor or word processor program. The log update period is user selectable. Files are stored in *.vpl file format and can be printed and saved as needed.

System Requirements (minimum)

| | |
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| Hardware | Intel compatible 486/33 computer with 8 MB RAM, hard disk drive with 2 MB available space, 3.5 inch floppy disk drive, mouse |
| Software | Windows™ 3.1, Windows™ 95 or Windows™ 98 |

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