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About This Manual

This manual tells you how to install and set up the various components of TSI's Particle Image Velocimetry (PIV) system. These sets of instructions are custom-designed to match the particular models and components specified in your order and available at your site.

Audience and Scope

This manual is written specifically for the person who is installing a PIV system. Although to install the system you do not need to know the principles of PIV, you should be familiar with lasers, oscilloscopes, power meters and computers, and Microsoft® Windows.™

The manual provides information on how to install and set up a PIV system. It gives instructions for unpacking, connecting, and aligning the various components of the system. Once the system is properly installed, use the operations manual for detailed information on each PIV system component.

Organization

The installation procedures described in this manual are divided into different sections. Each section describes a specific component of the PIV system; sections are arranged in the order in which the system installation should proceed.

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At the end of each section you are told what to do next. An illustration shows you what your system should look like after completing that particular section. The following is a quick look at the contents of the major sections of this manual:

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|--------------------------|---|
| About This Manual | Describes the audience and scope of this manual and the document conventions used. Tells you how the information is organized and lists the names and part numbers of other TSI documents you may find useful. |
| Laser Safety | Gives laser safety information. The laser used for taking PIV images is very powerful. You must follow laser safety procedures or you could get hurt. Unsafe laser safety practices could cause permanent eye damage. |
| System Overview | Gives a quick overview of the various components of the PIV system and their role in the system. |
| Analysis | <p>Gives information about how to install the PIV software, and the optional hardware such as the frame grabber and slide scanner in your computer.</p> <p>If you purchased a complete system with the computer from TSI you can skip this section.</p> |

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| Synchronizer | Gives information on how to connect the Synchronizer to the computer and how to test the RS-232 connections. |
| Laser | Describes how to set up the laser, the mounts, and install and align the laser on the breadboard. |
| Image Capture | Describes how to install the image capture components of the PIV system. |
| Image Shifter | Describes how to connect, if used, the image shifting components of the PIV system. |
| Appendix A. Voltages and Fuses | Describes how to check and change voltages and fuses. |

Related Manuals

The PIV System Operations Manual gives you operational information on each component in your system.

Conventions

The following conventions are used in this manual:

<Enter> The “Return” or “Enter” key on your keyboard.

<xx> An alphanumeric key on your keyboard. For example, <F4> means press the function “F4” on the keyboard.

examples Examples of what you see on the screen and the text you type in (shown in Courier, a font that closely resembles a computer font).

italics

- ❑ Variable information in computer responses, commands, and options that you must supply and type.
- ❑ Titles of other TSI documents referenced.

boldface Specific names or titles, such as panel nomenclature or software menu options.

UPPERCASE Names of programs, files, or commands.

Getting Help

To obtain assistance with this hardware, or to report damaged or missing parts, please contact:

TSI Incorporated
500 Cardigan Road
Shoreview, Minnesota 55126
USA

Fax: (651) 490-3824
E-mail Address: fluid@tsi.com
Telephone: 1-800-874-2811 (USA) or
(651) 490-2811

Submitting Comments

TSI values your comments and suggestions on this manual. Please use the comment sheet, on the last page of this manual, to send us your opinion on the manual's usability, to suggest specific improvements, or to report any technical errors.

If the comment sheet has already been used, mail or fax your comments on another sheet of paper to:

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