

PCMT 2600 Conflict Monitor Tester

Installation Guide

August 2004 v1.3



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1. PCMT-2600 Overview & System Requirements

The PCMT-2600 is an automated conflict monitor tester that utilizes a personal computer to setup and control the testing process. The software that comes with the PCMT-2600 runs under the Microsoft Windows operating systems listed below:

System Requirements

Supported Operating Systems include:

- Windows 2000 & Windows XP Professional

Minimum Hardware Requirements:

- Pentium 133 processor or equivalent
- 32 MB RAM
- Video Display with 800 X 600 resolution in 256 colors 8X CD ROM
- One RS232 serial port
- HTML Internet Browser (to read Help files)

The PCMT-2600 is designed to test the functions of conflict monitor units used in modern traffic signal control cabinets. This guide is written for an audience of Traffic Signal Technicians, and with the assumption that the reader is familiar with the basic operation and features of the conflict monitor (or MMU) that is to be tested. For instruction and support in the use of the operating system, please refer to the resources provided by the computer supplier.

2. Installing the PCMT-2600 Software

The PCMT-2600 software is installed using the ATSI Software CD included with every tester. The latest software revision is always available from ATSI's web site on the download page without charge.

Follow these steps to install the PCMT-2600 software:

1. Insert the ATSI Software CD into the CD ROM drive.
2. The CD should start an autorun program that brings up a dialog box. Click on the button labeled "**PCMT-2600**" to begin the installation.
3. The installation wizard will present several dialog boxes during the installation. Click on the appropriate boxes and type the information asked for to continue with the installation process.
4. At the end of the installation process, there will be a button to click labeled **Finish**.
5. The PCMT-2600 software may now be started and used.

Once the software is installed, simply double-click on the PCMT-2600 icon on your desktop to start the application.

You will also need to install the Acrobat® Reader® 6.0 software in order to view the test reports generated by the PCMT 2600.

From the same screen where you installed the PCMT software, there is an Acrobat Reader button you can click to install the Reader software. This free software is also available to download at www.adobe.com.

3. Quick Starting Guide

Almost everyone who receives a new piece of equipment wants to get a quick start into using the new system. This Quick Starting Guide makes several assumptions about the user's knowledge of their monitors and their knowledge of typical Windows applications. If you are having trouble with the Quick Starting instructions, refer to the other resources listed in the next section of this Guide, or contact ATSI

First, unpack the PCMT-2600 tester and verify the contents against the packing slip. In general, you should have:

- PCMT-2600 tester
- Tester-to-PC serial cable
- PCMT-2600 Software CD
- PCMT-2600 Installation Guide
- Tester-to-monitor cable(s), as ordered with the tester
- Optional carrying case (if ordered)

Second, load the PCMT-2600 software into the computer to be used with the tester. Refer to the previous sections of this Installation Guide for system requirements and software installation procedures. The PCMT software license allows the owner to load the software on more than one PC.

Third, connect the DB9 cable between the serial port on the PC and the serial port on the tester. Select a conflict monitor to test, attach the appropriate cable between the monitor and the tester's A, B, C, and D connectors.

Fourth, start the PCMT-2600 software on your PC. The application should present you with the main dialog with four main tabs across the top of the window: *Test Setup*, *Certification*, *Diagnostics*, *Firmware Update*, and *About*. At this point you should turn the power on to the tester.

Fifth, select the appropriate standard (NEMA TS1, 210 w/o Reds, etc.) for the monitor you have cabled to the tester, fill in rest of the fields located in the Monitor Setup form. Then click the Certification Test tab, and make the selections needed to begin the test you want to run. Now Click the Start Certification Test button and the test begins.

This may not be enough information for you to begin testing, and it certainly does not explain the many features and tests available with the PCMT-2600. The next section lists all the various sources of information on the PCMT-2600, where you can get more detail, and instruction on the use of the tester.

4. Information Resources for the PCMT-2600

There are multiple sources of reference and training material to help you get the most out of your PCMT-2600 tester.

- **PCMT-2600 Installation Guide** (this document)
- **PCMT-2600 Software Help**

The PCMT-2600 software has built in Help files which may be called up during any point in the Setup or Operation of the tester. Starting with the contents page, you can find the subject you need help with.

- **ATSI Web Site (www.atsi-tester.com)**
Visit the ATSI website to find out more information about how to use the PCMT-2600.

- **Software and Firmware Updates at www.atsi-tester.com/products/pcmt-2600**
Visit the ATSI website to download the latest software and firmware for your tester.
Click on the Downloads button and select PCMT-2600 to get to the correct page.

- **ATSI Telephone Technical Support**
Your purchase of the PCMT-2600 includes Lifetime Telephone Technical Support. If you cannot find the answers to your questions through any of the other resources listed here, please contact ATSI by phone or email.

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Limited Warranty and Liability Limitation

The Portable Conflict Monitor Tester (“Tester”) is warranted, to the purchaser of record (“Purchaser”), to be free of defects in materials and assembly for a period of two years from the date the product is shipped from the manufacturer. Within this period, in the event of a defect, malfunction, or other failure of the product, except that which is caused by any misuse, caused by damage to the product while in the custody of the Purchaser, or caused by the Purchaser’s computer or conflict monitor, Athens Technical Specialists, Inc., (“ATSI”) will remedy the defect or cause of failure without charge to the Purchaser. Purchaser’s sole remedy is restoration of Tester operation. ATSI accepts no liability for incidental or related expenses. Under no circumstances will ATSI’s liability exceed the contract price for items claimed to be defective.

In the event of a problem within these limitations, Purchaser should contact ATSI at the address given on the cover of this manual to discuss and localize the problem and determine whether it is necessary to return some part of the Tester. It is seldom necessary to return all components of the Tester in the case of a problem. If it is necessary to return some part of the Tester, Purchaser will package such part(s) securely and pay for shipping to ATSI, and ATSI will pay for shipping back to the Purchaser following repair.

The Tester is of sufficient complexity that it is not considered a user-serviceable device, other than for minor items like fuse replacement: Evidence of unauthorized modification to the Tester within the warranty period will invalidate the manufacturer’s warranty.

The Tester is used to test devices operating from the AC power lines. As a consequence, potentially-harmful voltages appear at many circuit nodes within the Tester and the conflict monitor being tested. ATSI accepts no liability for injury to any personnel operating or affected by the Tester, nor for damage to any equipment used in conjunction with, or tested by, the Tester.

Some types of conflict monitor failures can inject abnormal or damaging voltages back into the Tester in the course of normal testing. The Tester is designed to eliminate, so far as possible, damage to the Tester itself which may arise out of such conditions; however, ATSI cannot and does not warrant or guarantee against failures of this origin. If inspection show that Tester failure within the warranty period arises out this cause, Purchaser will be notified that repairs will be chargeable.

ATSI disclaims any warranty of fitness for any particular purposes with respect to the product being sold. ATSI further disclaims any implied warranties with respect to the product being sold. ATSI has made no affirmation of fact and has made no promise relating to the product being sold, and no description of the product being sold that has become any basis of the bargain made or that has created or amounted to an express warranty that the product would conform to any affirmation or promise or description.

ATSI's liability is limited to the above guarantees of repair. ATSI accepts no liability for injury or damages, direct, indirect, or consequential, to any or all parties or lost-time damages due to inoperation of the Tester. ATSI assumes no responsibility for proper use, application, or handling of the Tester. No part of the Tester operating manual or other documentation shall be construed as acceptance of liability in any form.

**DISCLAIMER WITH RESPECT TO RECTIFIED
TEST VOLTAGES PRODUCED BY THE TESTER**

Pursuant to NEMA specification TS1, Part 6.11, this Tester produces positive and negative half-wave signals having true RMS (heating equivalent) voltages in conformity with the NEMA-specified test values. However, the NEMA test procedures, given in TS 1, Part 2.2.9, Signal Conflict Measuring Tests, (1983), defines means of measuring half-wave voltages which will not necessarily yield true RMS values, depending on the design and calibration of the voltmeter used in measuring. The ATSI Tester provides mathematically-defensible "true-RMS" test voltages which are independent of voltmeter designs and calibrations.

As a consequence of this ambiguity some Conflict Monitor designs may fail half-wave voltage tests provided by the Tester, but may technically still be within the letter of the specifications. Evidence of this problem will be multiple failures during the CONFLICT / VOLTAGE Tests. This problem has been observed only in monitors designed prior to about 1986. This type of problem has not been observed in more recent designs.

In consideration of the above explanation, ATSI cannot and does not guarantee that the Tester will pass as error-free all Conflict Monitors which can be demonstrated to satisfy NEMA specifications defined in FHWA-IP-78-16. On the other hand, monitors which pass all tests provided by the Tester can be reasonably judged to have satisfied the corresponding specifications.

This disclaimer no way substitutes for, supercedes, or supplements the ATSI warranty and liability limitation provided with the Tester.

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