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## **TPS Software For Use With WP Series Instruments**

Thank you for choosing a TPS WP series instrument. The versatility of the WP series increases considerably when fitted with the RS232 computer interface port option.

This software package allows you to take advantage of the many features that are available with computer interfacing.

The best way to get to know all of the commands of this software package is to try them out. We suggest that you take the time to try all of the commands detailed in this instruction leaflet before you try it with genuine data. To use some of the commands of the software, it is necessary to have some readings stored in your WP unit's memory. Use the "Notepad" function to store about 10 readings into the meter's memory before going on to try out the software.

Whenever the instructions in this leaflet ask you to type a command into the computer, the command is written in bold text. It must be typed EXACTLY as shown, and it is understood that you will press the "Enter" key after typing in the command. This avoids repeated use of the phrase "then press Enter".

If you have any problems or questions, please don't hesitate to contact us...

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## **Computer requirements**

IBM™ (or compatible) computer, with at least 1 x RS232 interface port, designated as "COM1" and, if applicable, "COM2".

Plug one end of the cable supplied into the "COM1" serial port of the computer and the other end into the charger socket of the WP unit.

If "COM1" is unavailable, "COM2" may be used. The System configuration must be changed to select "COM2". The configuration program is run automatically the first time you use the software, but can be subsequently altered with command 9.

### **MAKE A BACKUP COPY OF THE DISK.**

See your DOS manual on how to copy all of the information from the TPS floppy disk to another floppy disk. The command you would use would be either COPY or DISKCOPY.

(Optional) Copy software to a New Directory on a Fixed Disk.

To avoid having to find the working copy of the TPS software whenever you wish to use it, it may be more convenient to copy the software to a fixed disk, if this is available on your computer. The instructions below describe how to make a new directory called "TPS" on a fixed disk designated "C" and then copy the information from the floppy disk to this directory.

- a) Log on to the fixed disk (eg: Type **C:**).
- b) Make a new directory called "TPS" on the fixed disk (Type **MD TPS**).
- c) Copy all of the information from the floppy disk to the TPSWP directory of the fixed disk (eg: Type **COPY A:\*. \* C:\TPS**).
- d) To run the program from the fixed disk in future, you will first need to log on to the TPS directory of the fixed disk (eg: at the "C:\>" prompt, type **CD\TPS**), then type **TPSWP** to run the software.

## **Start-up**

- a) Turn the WP unit ON. Plug in the serial cable using COM1 or COM2 and plug into the charger socket on the WP meter. Turn ON the computer.
- b) Log onto the TPSWP directory on your fixed disk (or A: if running from the floppy disk). At the prompt, type **TPSWP**.
- c) The **FIRST TIME** you run the program, you will be asked to check the System Configuration.
  - 1) First, you are asked to select baud rate. This is the speed with which the computer and the WP unit communicate. If you are using a short cable, type **9600**. If a longer cable is being used and you experience communication errors (see troubleshooting section) you may need to type **1200** or even **300**.  
**IMPORTANT:** Ensure that the baud rate is identical to the baud rate that has already been set in the WP unit.
  - 2) Second, you are asked to select which Communication Port you wish to use. Type in **COM1** or **COM2**, to correspond to the port into which the WP unit is plugged.

This configuration can be changed any time later on by using command 9.

- d) The complete Main Menu will now be displayed. Failure to do so could mean a communication problem exists. Check Baud Rate on the WP unit and that it is plugged into the correct port.

You **MUST** use the TPS cable.

Try again.

## **Commands available.**

### **0 --- Exit to DOS**

This allows you to leave the program, and return to the DOS prompt.

### **1 --- Display Data**

This makes the computer sample the data from the meter at intervals that you can specify. The WP unit must remain ON continuously between readings. After selecting command 1 from the menu, you are asked to enter the interval for sampling readings. You can select any interval from a reading every 1 second to a reading every 600 seconds.

For example, try entering **2** to display the data every 2 seconds. The screen now shows the actual data that is displayed on the WP unit every 2 seconds. You can see the countdown to the next reading in the bottom right hand corner.

Note also that each reading is numbered, starting at number 1. If you leave this function and come back to it later without starting or stopping disk storage mode (command 7), then the file will automatically continue the numbering sequence after the last reading.

If you are using the Display Data command with a Display Rate of greater than 250 seconds then turn off the Battery Saver Function on the WP unit to prevent the WP unit turning OFF between readings.

Always use the battery charger if the WP unit is to be left ON for extended periods.

### **2 --- Display Logged Data**

This displays the data that is currently stored in the WP unit's memory.

### **3 --- Display Status**

This displays the model name of the instrument that is currently connected to the computer. It also shows the number of readings that are currently stored in the memory.

### **4 --- Display GLP Data**

Displays the Good Laboratory Practices (GLP) data stored in the instrument's memory. GLP information includes the instrument model name, firmware version, serial number, and the calibration data from the last successful calibration.

### **5 --- Erase Log**

This remotely erases the logged memory of the meter. The WP unit's memory is not restorable after erasing, so proceed with caution when you have collected genuine data.

### **6 --- Printer Mode**

If you have a number of readings that you wish to take and transmit to the computer, then you can use the "Printer Mode" command. Type 6 to select printer mode. The computer now waits for you to manually transmit readings FROM THE WP UNIT.

To transmit readings from the WP unit, press the "F3" key. (Note that the Logging Period must be set to zero)

This function is useful, for example, if you have a number beakers that you wish to measure and only want the computer to log each reading when you are ready.

The "Printer Mode" function also demonstrates the ability of the meter to transmit readings from the meter directly to an RS232 printer. The RS232 printer can be plugged directly into the WP unit and readings printed out one at a time by pressing the "F3" key on the meter.

## 7 --- Disk Storage Mode

To this point, all of the commands detailed above have been used only to display data. The "Disk Storage Mode" command allows you to permanently store the displayed readings into a disk file.

After selecting this command, the computer asks you to type in the file name that you wish to use. You do not need to enter a DOS extension, as the software automatically adds ".DAT". The file name you enter can be any combination of up to 8 letters and numbers.

When trying this for the first time, we suggest you type **TEST** and press enter.

Now that the computer is in Disk Storage Mode, use commands 1, 2, 4 or 6 to store data to a disk filename you entered. When you are in Disk Storage Mode, three stars "\*\*\*\*" will be shown beside the menu commands that store data to disk.

Also, command 7 is now labeled "Stop Disk Storage". When you have entered all of the data you want into the file, you must select "Stop Disk Storage" to make it permanent, and to avoid further data being added to the file.

If, when entering "Disk Storage Mode", you type in a file name that already exists, the message "File Exists" flashes on the screen. The software then gives you the following commands...

- |                         |   |
|-------------------------|---|
| 0 --- Quit              | Quits entirely, without entering "Disk Storage Mode".   |
| 1 --- Append File       | Allows you to add more data to the end of the current file, without deleting any data that it already contains. |
| 2 --- OverWrite File    | Deletes all information currently in the file, and replaces it with the data you are about to download.         |
| 3 --- Re-Enter Filename | Takes you one step back and allows you to type in an alternative file name.                                     |

Tips for programmers and advanced users: Data is stored in sequential ASCII format as shown on the screen. Each line is terminated with <cr><lf>, (ASCII 13 & 10) This file can be printed and typed when at DOS, using the PRINT and TYPE commands.

## 8 --- File Utilities

This command accesses the File Utilities menu, which has the following commands :

- |                            |   |
|----------------------------|---|
| 0 --- Exit File Utilities  | Return to Main Menu.  |
| 1 --- Type Disk Data File  | This command is used to display the readings in any data file. For example, type TEST to display the data in the "TEST.DAT" file.   |
| 2 --- Print Disk Data File | This command is used to Print the readings in any Data file. A printer must be plugged into parallel printer port LPT1. Type TEST to print the data in the "TEST.DAT" file. |
| 3 --- Directory            | Display the entire contents of the current directory.   |

## 9 --- Configure System

This command allows you to select the baud rate and Communication Port. The WP unit should be plugged in as a test of the port is attempted at the end of configuration.

- a) First, you are asked to select baud rate. This is the speed with which the computer and the WP unit communicate. If you are using a short cable, type **9600**. If a longer cable is being used and you experience communication errors (see troubleshooting section) you may need to select **1200** or even **300**.

**IMPORTANT:** Ensure that the baud rate is identical to the baud rate that has already been set in the WP unit.

- b) Second, you are asked to select which Communication Port you wish to use. Type in **COM1** or **COM2**, to correspond to the port into which the WP unit is plugged.

## Troubleshooting

| Symptom                          | Remedy  |
|----------------------------------|---|
| Program Stops, "Locks Up".       | Hold down the IBM 'Ctrl' key and press the 'Break' key, then type RUN. Program should restart.<br>Ensure the System Configuration is correct (command 9).<br>Use only the TPS supplied cable.<br>If you wish to extend the cable ensure that the links in the 25 pin plug are fitted, ( 4-5-8 and 6-20 ).<br>The program will "Lock Up", without these links fitted.                                  |
| Program Stops, Error displayed.  | Note the Error Number and Line Number in case problem re-occurs.<br>Contact TPS if problem persists.  |
| Program displays error number 57 | Error number 57 is a communication error and is often the result of incorrect configuration. Ensure the System Configuration is correct, using command 9 from the main menu. Remember, the baud rate <b>MUST</b> be the same on the WP unit as what you enter using command 9.<br>Press "Enter" to re-start program.<br><b>Note: DO NOT</b> turn the WP unit ON or OFF manually when running program. |

## DOS Version

This software has been written using MSDOS Version 3.3 . It can be used on systems with Version 3.3 or higher.

## **File Information**

The following files are supplied on the distribution disk.

1. TPSWP.BAS      The logger program stored in protected format to prevent tampering.
2. TPSWP.ASC      The logger program stored as an ASCII format file. This file may be listed and altered.

If you wish to modify the logger program to suit special requirements, please rename file TPSWP.BAS to TPSWP.OLD and rename file TPSWP.ASC to TPSWP.BAS. The file TPSWP.BAS can now be modified using BASIC.

3. BASIC.EXE      The version of basic to use with TPSWP.BAS.
4. TPSWP.BAT      The batch file that runs TPSWP.
5. TPSWP.TXT      This manual as a Text file.