

OWNERS MANUAL

OHM-STAT™ CT-8900 COMBO-TESTER KIT OPERATION GUIDE

EQUIPMENT REQUIRED

1. Windows operating system (Windows NT, 2000, 3.1, Windows 95 or 98).
2. An operable serial communication (comm) port on computer/laptop. HID/CASI-RUSCO™ proximity readers require an additional serial comm port.
3. 486 microprocessor or higher. Larger hard drives (2 meg) will store more employee data.
4. A LAN network-able system, or dedicated LAN line, is needed for networking multiple testers. (Static Solutions, Inc. is not responsible for the installation or maintenance of the network after the software is installed.)
5. To use e-mail feature, users will need a MAPI e-mail system.

EQUIPMENT PROVIDED

1 – CT-8900 meter unit	1 – FP-8755HD-Foot Plate
1 – AC power adapter	1 – FS-8900 Foot Stand
1 – 9 volt battery-alkaline	1 – RS-232 Cord
2 – Software disks with instructions	Hook/Loop strips(For use with meter)
White wire hooks screw, two one plate	Found on bottom of foot stand - one nuts, two washers and

OPTIONAL EQUIPMENT

1. PS2 connector for laptop connection
2. Barcode scanner (BC-8950)
3. Magnetic stripe reader (MS-8950)
4. HID™ Proximity Reader (HR-8000HID)-with two plug power supply adapter
5. Casi-Rusco™ Reader (CRR- 800CR)- with two plug power supply adapter
6. Low profile footplate (FP-8755LP)

BEFORE YOU BEGIN

1. Make sure that a sample identification card has been sent to Static Solutions, Inc. for proper programming of reader.
2. If user will not be using the software function of the CT-8900 meter, it is advised to purchase the CT-8700 no- computer interface meter instead of the CT-8900.
3. Install the meter in view of the computer monitor, so testers can view test results.
4. Take a deep breath, and know that with the innovative product line of Static Solutions there is instant peace of mind.

METER ASSEMBLY INSTRUCTIONS

1. For HID/CASI-RUSCO™ proximity users, two nine pin serial ports are required on your computer. One for the CT-8900 meter and one for the HID/CASI-RUSCO™ proximity reader. The supplied RS-232 cords must be used. If there is a 25 pin DB25P on the computer a DB25P to DB9P serial port adapter can be purchased from an electronic store like Radio Shack™.



Illustration 1

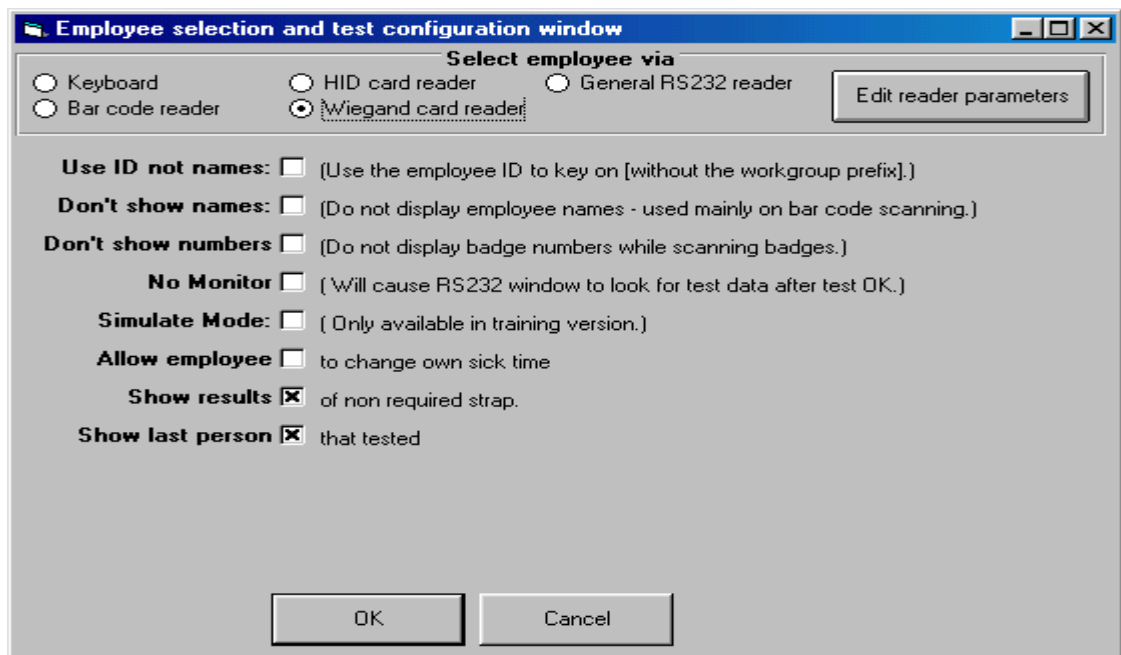
2. Fasten the foot stand to the foot plate. Remove the nuts, washers and square metal piece from the bottom of the foot stand. Place the foot stand on top of the foot plate. Insert into the correct (large) hole. Insert the small bolt through the top of the foot plate. Turn assembly over and place the square plate under the plate onto the two bolts. Place the washers and nuts over the corresponding bolts and tighten with pliers or wrench.
3. Position the HID/CASI-RUSCO™ reader (if purchased) on the right side of the top of the foot stand, where indicated by label. Place the RS-232 wire attached to the back of the HID reader down through the rectangle hole. Then attach the CT-8900 meter on the left side on top of the foot stand, where indicated by label. Place the meter so the top of the meter is flush with the top of the foot stand and is touching the HID reader on the right side.
4. Attach the two plug power supply cord (see Illustration 1 – A) to both the CT-8900 meter and to the HID/CASI-RUSCO™ reader (if purchased). The male plug is attached to back of the HID™ reader, through the small round hole besides the reader. The female plug is attached to the CT-8900 meter up through the hole of the stand into the front of the meter. Attach the RS-232 loose cable (see Illustration 1 - B) to the front of the Ohm-Stat™ CT-8900 meter. Use hook/loop strips and attach the CT-8900 meter and the HID/CASI-RUSCO™ proximity reader to the stand.
5. Attach the white wire clamps to the post in order to pull the loose cords toward the back of the foot stand. Insert the cords into the clamp.
6. Do not use the enclosed alkaline battery if the power supply is used, instead, replace the alkaline battery with a charged re-chargeable battery. If the power supply is not going to be used, do not connect it to the meter and **only** use the supplied alkaline battery (or a charged re-chargeable battery).
7. Insert the other ends of the RS-232 cords into the computer.
8. Plug the foot plate lead (see Illustration 1 – C) completely into the tester socket "Heel Plate".
9. Plug in the power supply.
10. Remove the protective film from both the metal piece on meter and also from plates on the foot plate.
11. Turn on the computer. (Turning on the computer before the hardware is installed will not allow the Windows operating system to properly run.)

SOFTWARE INSTALLATION GUIDE

1. Insert the installation disk labeled 1 of 2 into your floppy drive.
2. Close all open programs including anti-virus programs.
3. From the start menu, select "RUN" and type: ' A:\setup' and press enter. Follow instructions.
4. If the following message is displayed, "A file being copied is older than the file currently on your system. It is recommended that you keep your existing file. Do you want to keep this file? ", select Yes. If the user is reinstalling this software due to a computer error after already having input data, do not copy over the log.txt or names.txt files.
5. To create an icon on your desktop as a shortcut, select the first ESDTest icon (ESDTest.exe) in the ESD Test folder on the hard drive to use as an icon to copy. The second ESDTest icon shown is just an icon. To create an icon on a desktop, locate the ESD Test folder on the hard drive. Open it and right click on the first ESDTest icon. Select create shortcut and drag the new shortcut icon onto your desktop.
6. At this time you may install the bar code or magnetic stripe scanner. (if purchased)
 - a) Unplug the keyboard from the computer.
 - b) Plug the keyboard cord into the female connection on the end of the Bar code scanner cord interface. If the keyboard has a PS2 connector, not a 5-pin din, the user will need a PS-205 adapter.
 - c) Plug the Bar code / magnetic stripe scanner cord interface into the keyboard cord receptacle on the computer.
 - d) If the reader does not properly function, change the RS-232 cables to opposite serial ports.

TESTING USING CASI-RUSCO™ OR HID™ READERS

1. Attach the HID™, Motorola (General RS-232) or CASI RUSCO™ (Wiegand) reader to the computer using a RS-232 serial comm. port. Attach the two plug power supply. Test the card to see if the unit reads green and emits a 'buzz' sound. You might have to add a second serial, RS-232 port board to the computer to accept the CASI -RUSCO or HID reader.
2. Open the 'Employee selection Configuration' screen and press the appropriate box for HID, or CASI-RUSCO (Wiegand) in addition to the character and bit information. (See figure below.)



TESTING

Daily testing of wrist straps and footwear is mandatory to ensure the grounding devices function properly and to minimize charge generation on the human body, which may cause damage to integrated circuits. Footwear and wrist straps are the primary techniques used to drain and minimize electrical charges from the body. Too fast a drain will cause sparking, field generation, and failures. Low electrical paths can cause an electrical shock. High electrical resistant paths can cause integrated circuit damage. A full line of grounding devices are manufactured by Static Solutions, Inc.

To adapt to ISO-9000 certification the results should be recorded in a computer database or printed to hard copy.

WRIST STRAPS

The Ohm-Stat™ CT-8900 Combo-Tester Kit will verify that there is a safe and continuous electrical path between the user, wrist strap, and the ground cord meeting set specifications.

When using the meter for wrist strap testing or monitoring, the following is suggested:

1. If NOT using the software, position the switch located on the front of the meter to the wrist strap position. If using the software, the computer will recognize what you are testing without using the switch. Non required footwear or wrist straps will test but the non required reading will not be used to determine a pass/fail reading.
2. Attach the wrist strap to the ground cord attached. Be sure the strap is in snug contact with the wrist. Dry skin, hair or foreign contaminants may cause failures for in-specification, well functioning wrist straps. ESD hand lotions will improve skin contact with wrist straps.
3. Insert the end of the ground cord into the appropriate banana jack located on the front of the Combo-Tester meter. The US female jack is on the left side and the CECC European plug is on right side.
4. Depress and hold the metal test plate until an LED illuminates. Software users should ignore tester LED's and watch the computer monitor. The software will test both the wrist straps and foot grounders simultaneously and display the results of both the resistances and pass/fail in one step.
5. If the green "OK" LED illuminates, the wrist strap is functioning within the resistance specification range and therefore may be used to handle static sensitive devices. If the monitor screen turns green, the test was also a "pass."
6. If either the red "Too High" or red "Too Low" LED illuminates and the buzzer activates or the computer screen turns red, the worker must adjust and re-test the wrist strap cord immediately. To test a faulty cord, leave the cord plugged into the meter and detach the wrist cord from the strap. Press the wrist strap metal snap-end of the cord against the stainless steel test plate avoiding skin contact. If the cord tests "FAIL" replace the cord.
7. Replace a low battery immediately in order to assure accurate readings.

FOOTWEAR

Testing shoes or heel/toe grounders require the unique dual stainless steel foot plate.

1. Plug the footplate lead **all the way** into the tester socket "Heel Plate."
2. Position the switch in the front of the meter to the dual heel foot plate position (only required if not using the software.)
3. Stand on the footplate making sure that each foot is aligned in the left and right stainless steel pad.
4. Depress and hold the metal test plate switch until an LED light illuminates or monitor screen displays readings.
5. If the green "OK" LED lights or the monitor displays green, then the footgrounders are functioning within the specifications.
6. If either of the "FAIL LOW" or "FAIL HIGH" red LED's illuminate along with the activation of the buzzer for either foot, or the display turns red, the user should check their shoe or heel/toe

grounders and re-test. If both feet fail only one foot will display “FAIL” on the tester. When that foot is corrected the other foot will display “fail” until it is corrected.

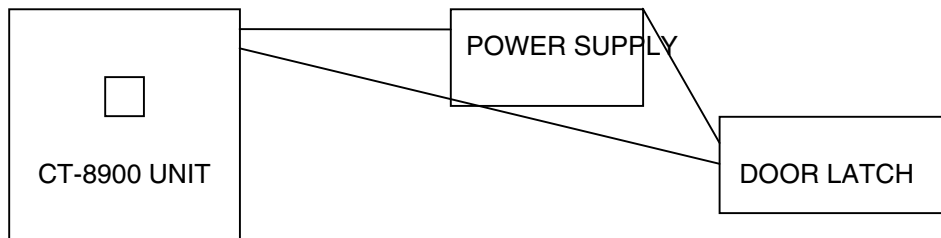
The ESD foot-grounding device may be out of specification for the following reasons: poor skin-tab contact, dirt contamination, etc. The failed grounding device should be checked using a 10 volt-100 volt ohm-meter such as the Static Solutions ohm-Stat™ RT-1000 megohmmeter in order to locate the failure mode, which may indicate faulty products in inventory.

CALIBRATION VERIFICATION

The CT-8900 meter is calibrated to NIST traceable standards. The meter self calibrates itself with each use by comparing the surface mounted 1-megohm resistor value against the unknown value. After one year of use, the meter can be sent to Static Solutions, Inc. to be re-calibrated and be issued a new NIST traceable certificate. Please check with you local distributor for the cost of this service.

DOOR RELAY WIRING AND SPECIFICATIONS

Units that specify a door opening relay will be equipped with two pigtail wires found on the right side of the unit. There are two male bayonet type plugs attached to these wires. There are two unwired female jacks attached to these male plugs which can be attached to the open/close schematics on the door/bell circuit board (connected to the door mechanism). The relay in the CT-8900 is a single throw, single pole normally open relay. When the user passes a test, the relay is activated and closed for 3 seconds or until the next person uses the tester. The relay is rated 2 amps a 120 volts. Please refer to the schematics of a footplate door opening mechanism. Substitute the two wire connection of the footplate or hand switch for the two wire door wires.



Proper wiring of door relay device

TESTER ADJUSTMENTS

The CT-8900 can be adjusted to various electrical resistance specifications by opening the meter case and pressing the dip switches corresponding to the desired test ranges. The parameters can also be set in the software under 'Set up', 'User Information', and entering desired information in 'Strap Parameters'. (See below)

The screenshot shows a software window titled "Modify Names" with a close button (X) in the top right corner. The window is divided into several sections:

- User Information:** Contains fields for "Last Name:" (AAAnyone), "First Name:" (Else), "Grp:" (empty), "ID:" (??), "Badge:" (??), and "Line:" (1).
- Strap Parameters:** Contains fields for "Wrist Low Megs:" (-1), "Wrist Hi Megs:" (-1), "Foot Low Megs:" (-1), "Foot Hi Megs:" (-1), "Wrist Strap?" (checked), and "Foot straps?" (checked).
- Leave Status:** Contains a "Status =" field with buttons for "OK", "Holiday", "Personal", "Vacation", "4 hours", "Disabled", "Misc Abs", "Training", "eXpired", "Sick", "No report", "Unplanned", and "not tested". It also has "Leave date from:" (9/12/00) and "through date:" (9/12/00) fields, and "Update" and "Yearly summary" buttons.
- Certification:** Contains "Type" (1) and "Expiration Date" (4/7/00) fields.

At the bottom of the window are five buttons: "Append", "Insert", "Modify", "Delete", and "Cancel".

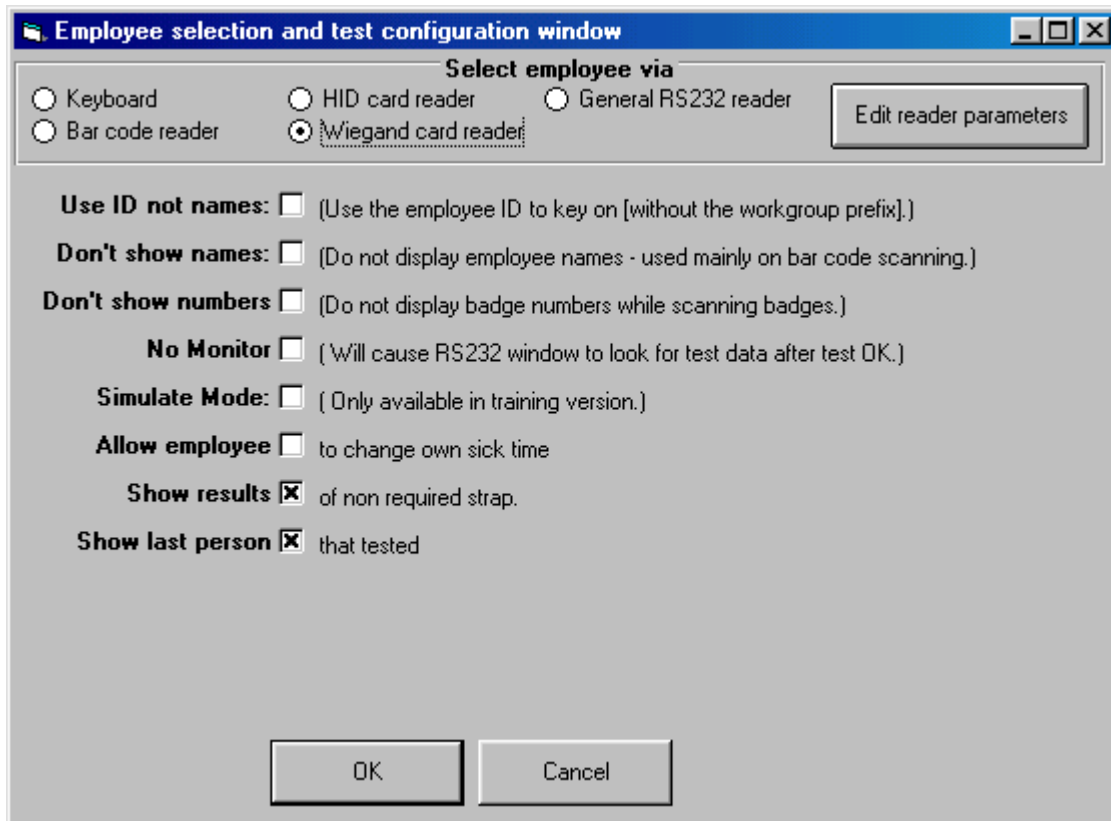
The resistance ranges depend on what test standard, i.e. (EOS-CECC) the user follows. The user must know what resistance range values are acceptable for their floors, shoes, and heel/toe grounders and according to either EOS or European standards. The meter is preset to the settings at Static Solutions (see below marked, "Limit Switch Setting" in **bold** type). Attempt to keep the default (meter) specifications the same as the computer. The system can be programmed to use the default (inside meter) by using a default setting of -1. The system can also be programmed to use all the same settings different from the default settings.

LIMIT SWITCH SETTINGS

Foot Low	Switch 1	Wrist Low	Switch 2
.5M	OFF	.5M	OFF
.75M	ON	.75M	ON(USandIEC)
Foot High	Sw3	Sw4	Sw5
2M	OFF	OFF	OFF
5M	ON	OFF	
10M	OFF	ON	OFF
25M	ON	ON	OFF
35M	OFF	OFF	ON(IEC-CECC)
50M	ON	OFF	ON
75M	OFF	ON	ON
100M	ON	ON	ON (US)
Wrist High	Sw5	Sw6	Sw8
2M	OFF	OFF	OFF
5M	ON	OFF	OFF
10M	OFF	ON	OFF(US)
25M	ON	ON	OFF
35M	OFF	OFF	ON(IEC-CECC)
50M	ON	OFF	ON
100M	ON	ON	ON

COMPUTER SET-UP

1. Under 'Setup' select 'General Configuration'. Enter the Company Name. Do not use commas or periods.
2. Enter the correct comm serial port number that the RS-232 cable is connected. The default is 1.
3. Select the printer 'Font Name' item from the 'Setup' menu, and select a fixed font width font such as Courier, Courier New, Terminal, System or Fixed. Print a report by selecting the 'Reports Menu' and clicking on 'Print Monthly'. The user should pick a month with 31 days in order to check the proper type width. The printer setup should be in the Landscape mode. Check the printout. Adjust the 'Printer Font Size' item of the 'Setup' menu to expand or contract the lines to fit the page. Select size 7.5 font.
4. A keyboard, magnetic stripe, bar code scanner, Motorola ASR-605 or HID/CASI-RUSCO™ proximity reader may now be set-up. Click the appropriate button (Wiegand is the CASI-RUSCO button) General RS-232 is the Motorola ASR-605 button) and go to the edit reader parameters screen. With the Motorola system a RS-232 interface must be used. This is manufactured by Keyscan (see www.keyscan.ca) Check the help file for Keyboard wedge and barcode reader parameters. If using a CAS-RUSCO, Motorola or HID™ proximity reader, user should make sure the Comm port is not the same as the Comm port selected on the previous screen. Read the help file for information on the bar code, magnetic stripe or RS232 proximity card reader parameters depending on what card format is being used.
5. If a bar code reader is reading employee ID codes rather than namecodes, check the 'Use ID not names box' under 'General Configuration', 'Employee Selection'. If using a HID/CASI-RUSCO™ proximity reader, check the 'Use ID not names' box.



6. If it is desired to hide the names during bar scan/mag/prox stripe entry, check the 'Don't Show Names' box under 'General Configuration', 'Employee Selection'.
7. Check "No Monitor" if no monitor will be used. In this mode, the wrist strap/heel grounder position switch must be used.
8. Under the 'Setup Menu' select "Change All Limits". This screen is used to set the parameters for the wrist and foot straps. The wriststrap and heelgrounder defaults may also be selected. Any resistance values from 0.10 megohms to 99.99 megohms for the maximum and minimum alarm conditions may be entered. *A special 1000 megohm model PROM is also available. However, it is recommended that you enter the alarm conditions at which the tester internal dip switches are set. These may be determined later by running a test and reading the set point conditions in the 'Received' window. The "Wrist Used" and "Foot Used" criteria in the user 'Setup' menu are overridden by the rocker switch setting on the tester.
By using -1 in all fields, the parameter settings will automatically match the dip switch settings inside the meter. For example, the wrist low would be .75 because dip switch 2 is turned on. If the user puts dip switch 2 to the off position, -1 would then be .50 megs. (See limit switch settings chart).
9. A password protection can be activated in order to access the setup parameters and the data. . Select 'Change Password' under 'Setup' and type in the new password. If using a password, it will only be asked for once. If a password was previously entered and is no longer required, select 'Change Password' and leave the field blank when selecting a new one.
10. The program will also allow automatic addition of new badges. This may be enabled in the 'Unknown ID Configuration' menu under the 'Setup'. Mark the "Allow Unrecognized Employee ID's to be Added" box to use this feature.
11. Enter the desired user information. Select 'Setup' from the main menu and user information. Up to 4500 employee names and information may be added. There are 9 sample users already in the software which may be deleted after the user studies them as examples. The names can be manually entered with a data base software such as Access™.

12. There are five **command buttons** at the bottom of the user information screen: **Append, Insert, Modify, Delete Cancel**.

When the 'User Information' is selected, the first employee will automatically pop up. It can be typed over with the new user's information. This feature allows the default settings to be used repeatedly. Once new user information is typed over the default settings, the user should press 'APPEND'. This will create a new number for that user at the bottom of the list.

If you would like to insert a new employee at a certain point in the list, select the name you want the user to come before in the list. Type over the information with the new user's information. When finished, press INSERT. This will put the new user ahead of the person you selected.

Anytime information is changed for a user, use the **MODIFY** command when finished to save all changes.

To move between users in the general configuration screen, use the side toolbar under the word list. This will advance to the next or previous user.

Newer software improvements include automatic supervisor notification, password resumption after a period of time, hidden of bar code/mag stripe, proximity card characters. Etc.

OPERATOR INSTRUCTIONS

1. Click a name in the main selection window to begin a test. If no mouse is installed, press the arrow keys to move the cursor and press Enter. If you have a barcode/magnetic stripe scanner or an HID/CASI-RUSCO™ proximity reader, swipe the card.
2. The 'User Information' window should appear and the 'Press Button' window should pop up. Press and hold the tester button until the PRESS BUTTON window disappears and the test measurements are displayed on the main window. All the results and any error messages should be displayed (if software is enabled all readings will instantaneously be recorded in the database).
3. Click the 'Cancel button' (or press Enter key) to return to the 'Name Selection' menu. This will be automatic (10 second delay) when using cards and by checking off the 'USE ID' and 'DON'T SHOW NAMES' under 'General Configuration'.

REPORT GENERATION:

There are five types of employee reports that can be generated from the CT-8900 software: DAILY, MONTHLY, ENTIRE LOG, EXCEPTIONS and CERTIFICATION EXPIRATION. Each of these reports will interpret information collected from employee testing. A monthly report can be generated, displayed, or printed at any time by pulling down the Reports menu. The information presented includes. Person, ID number, department number, date, time, value in ohms of the test. The file REPORT.TXT may be imported into other applications (see below).

The log file LG.TXT may be viewed by selecting the 'View Log Item' in the 'Report Menu'. This file is a comma separated value (.CSV) text file and may be imported directly into any spreadsheet or data base program.

AUTOMATIC E-MAILED REPORTS

A unique feature of the CT-8900 meter allows users to enable the automatic generation of a report to be sent directly to a supervisor. Go to the "Report" section and click off the auto General email section.

1. Fill out the main text window with times, reports, and e-mail address which reports will be sent. Separate the fields with spaces, not tabs.

- 2 . An example of how the main text box should be filled out is as follows:

Days	Time	Report	WorkGroup	EmailAddress
Last Executed				
MoTuWe	00:00	LogSort	CIA	joe@staticsolutions.com
MoThSa	15:06	Monthly	All	bill@staticsolutions.com

- 3 . Any line beginning with a semicolon will be ignored as a comment

- 4 . Possible entries for Days are:

MoTuWeThFrSaSu- one of more of

La -last day of the month

Fi -first day of the month

- 5 . Possible entries for Time are:

01:23 (hour in 24 hr format: minute)

- 6 . Possible entries for Report are:

LogSort (lo)

Exception (Ex)

Certification (Ce)

Daily (Da)

Monthly (Mo)

- 7 . Possible entries for Workgroup are:

All- will use all workgroups

Any predefined workgroup names established by user

- 8 . Possible entries for e-mail address

All legitimate e-mail addresses

- 9 . Possible entries for Last Executed:

The program will fill this in when the report is run. Delete the entry or leave it blank to run the report today.

- 10 . The program requires that a MAPI e-mail program be installed such as Microsoft Outlook, or

Outlook Express. The e-mail messages will be placed in the Outlook outbox. Setup Outlook to automatically sen e-mail in the outbox every 10 minutes.

LOGSORT NOTES

- 1 . The LogSort should only be run from the server computer.
- 2 . Selecting the LogSort as a report will create a backup and combine the test station log.txt files.
- 3 . Errors will be ignored. To view errors, run the Logsort.exe program directly from Explorer.

NETWORKING THE CT-8900 TESTER

The average network installation will have 1-5 test station computers, and a server. The server may also be used as a test station. All execution files (ESDTest.exe) and data files (Log.txt, Names.txt,ESDTest.ini) are stored locally on the test station computer so that a network or server failure will not affect the test station operation. Each workstation can operate independently of the server.

The test station contains a copy of the master names.txt files, so that a user can be tested at any test station. If the user information is changed on the server master copy, all test stations will automatically read the new information whenever the new copy is downloaded to them.

The main log file is called Log.txt which stores one line of data every time a user tests. When it is desired to collect and analyze the remote test station data, the server reads the remote test station log.txt files, stored them on the server, appends them to a remote history files called 'loghist.txt' and analyzes the data.

The remote test stations automatically update the time clocks from the server when they are connected to the server.

1. Each day, the data from all the test stations should be gathered to produce an 'exception report'. Double click on 'Combine and Reset Log Files' desktop icon on the server, or run it automatically from the task scheduler. This will run the LogSort.exe program to:
 - a. rotate the backup logbak1.txt file to logbak2.txt
 - b. rotate the log.txt file to logbak1.txt
 - c. append (and sort-if needed) the test station Log.txt files to the server Log.txt file.
 - d. append each users Log.txt file to its own LogHist.txt file.
 - e. delete each users Log.txt file.
2. Run the daily exception report from the server computer ESDTest program (refer to Help.txt)
3. The LogSort.exe will combine the data from four workstations I:, J:, K:, and L:. For other drives or network computers, place the complete file path on a line in the NetList.txt file. To ignore errors run the logsort.exe program with the '/i command' line option. To close the final window automatically, add the /c option.

The Netlist.txt file will look like this:

```
\\teststation1\EsdTest  
\\teststation2\EsdTest  
\\teststation3\EsdTest
```

Some operating systems will look like this:

```
\\teststation1\c:\EsdTest  
\\teststation2\c:\EsdTest  
\\teststation3\c:\EsdTest
```

4. If the Log.txt, LogBak1, and LogBak2.txt files grow too large, then:
 - a. delete the LogBak1.txt file and the LogBak2.txt file
 - b. backup the Log.txt file to an external disk or tape drive (if desired)
 - c. either delete the Log.txt file, or use a text editor to remove the old unwanted data
5. The LogSort.exe program is executed by calling it directly. If desired, it can be modified by calling it from AddLogs.bat. If the LogBak1.txt and LogBak2.txt files grow too fast, edit the AddLogs.bat program to stop them from being created.
6. The Log.txt file should be reset periodically to prevent it from growing so large that it slows down report processing. Click "setup" and select "Reset Log File". It will ask for a backup file name. Large companies should back up the log.txt file to a monthly backup file (for example Log0601 for June 2001). For small companies a back up should be done once every year.
7. If employees are permitted to enter their names if a badge is not recognized, then the individual tests station names.txt files may be consolidated into a masternames.txt file. Run the name.exe file and specify the test station computer path in the netlist.txt file. The Name.exe file may be run automatically from the Windows Task Scheduler.

Test Station Setup

1. It is necessary to use any Pentium type PC 166 Mhz or greater with a 10/100base T RJ-45 type network card, 16MB or higher of ram, 1G disk or greater, and a spare serial port (9 pin preferred).
2. Connect all station and server to a central 10/100baseT RJ-45 type ethernet hub using a star (parallel) arrangement with RJ-45 TPE (twisted pair ethernet) or category 5 type cables.
3. Name the test station (like Test Station1) but do not designate a password.
4. Install ESDTest Software (see above).
5. Right click on the Network Neighborhood icon, select 'Properties', check that Client for Microsoft Networks, network card driver software and NetBEUI is present.
6. Click 'File Sharing' (access to all files). Do this ONLY on test stations.
7. In Primary Network Logon select 'Client for Microsoft Networks', click the Identification tab
8. Type a computer name (like TestStation1)
9. Type the workgroup name (like StaticSolutions). Do not use spaces.
10. Type a description (like ESDTestStation)
11. Click OK
12. Do not the computer to restart

13. Change the logon password in Setting, Control Panel, Passwords to 'no passwords'
14. Copy the ESDTest shortcut and past it to the prgram toolbar start-up menu
15. Restart the computer
16. Through Explorer, right click on the 'c:ESDTest' directory, select 'sharing' and then select 'all files'.
17. Give it a unique name (like ESDTest1).
18. Do not set up a password on the Server station.

SERVER SETUP

1. Give the server name like 'Server1' and a password.
2. Install the ESDTest software (see above)
3. Right click on the Network Neighborhood icon
4. Select properties, check that Client for Microsoft, network card driver software, and NetBeui is present..
5. Do not click file sharing. (only on test stations)
6. In primary NetWork Logon select Client for Microsoft Networks and click the Identification tab.
7. Type a unique name (like Server1)
8. type the workgroup name (like StaticSolution)-do NOT use spaces
9. type the description Main Sever and click OK.
10. Do not allow the computer to restart.
11. To change the logon password, go to Setting, Control Panel, and edit.
12. In explorer right click on the AddLog.bat program:
 - create a shortcut
 - drag it to the desktop
 - rename it to 'Combine and Reset Log Files'
 - copy it
 - paste it to the program toolbar
13. In explorer, right click on the CopNames.bat prgram
 - create a shortcut
 - drag it to the desktop
 - rename it from 'CopyName.txt' to 'TestStations'
 - copy it
 - paste it to the program toolbar
14. Restart the computer
15. The 4 test stations should be visible in Explorer NetWork Neighborhood.
 - In explorer select Map Network drive
 - select Reconnect at Logon
 - select drive I
 - use the pathname \\testStation1\ESDTest1

SYNCHRONIZING TEST STATION TIME

To maintain the most accurate test results, it is imperative that all networked computer have the same time set.

1. If a shortcut file (name NET.PF and place it in the /ESDTest directory) is made to NET.EXE (with the 'close on exit' window checked in the Properties menu), the program with execute a NET TIME \\SERVER1 /SET /YES command to update the time to the server's time.

2. If the server has a different name, create a batch file called SYNCH>BAT (with the 'close on exit' box checked in the Properties menu) with a line of code:
NET TIME \\XYZ /SET /YES *XYZ is the server name
3. If the SYNCH.BAT file already exists in the directory, but the program leaves a small 'Finished' box on the toolbar when it is called, click the Properties box on the Synch.bat file item in Explorer and click the 'Close on Exit' box.
4. The SYNCH.BAT file is included in the installation disk. If no network is used or the time synchronization is not desired, delete or rename the SYNCH.BAT file.

ESDTest FILE ADMINISTRATION

1. To access the master file from a remote manager's computer, set up a short cut with the working directory to be that of a server.
2. Install and configure the computer hardware (see above)
3. Set up the network (see above)
4. Test Stations are now parallel with the server.
5. Operate
6. At the end of shift, the supervisor presses the 'LOG SORT' icon on the server monitor.
7. The supervisor clicks 'Reports', 'Exception' and enters the date and supervisor code.
8. The supervisor checks that the report printout to see if any employees have failed or did not test.
9. The supervisor can modify the sick leave/vacation status, generate monthly reports, delete any employees that are no longer working at the firm, and can reset the log.txt file to create a back up.

IMPORTING FILES TO EXCEL:

1. To import monthly report files REPORT.TXT into Excel 5.0:
 - a. Run Excel
 - b. Open REPORT.TXT file
2. To import the file LOG.TXT into Excel 5.0:
 - a. Run Excel
 - b. Open LOG.TXT file
 - c. Text Import Wizard should appear. Choose Delimited
 - d. Click on Next
 - e. Choose Comma
 - f. Click on Finish

For older versions of Excel copy LOG.TXT file to LOG.CSV and open file.
See the help file for more aid in importing instructions.

IMPORTING FILES TO MICROSOFT ACCESS:

The Names.txt and Log.txt files are .csv (comma separated values) delimited files. The exception.csv and report.csv are also .csv files. Users can easily import these into Access using the File import method.

To import or link a delimited or fixed-width text file: NOTE: Users can link a table only in a Microsoft Access database, not a Microsoft Access project. IMPORTANT: Before a user import or link data from a delimited text file or fixed-width text file, make sure that the file has the same type of data in each field and the same fields in every row.

Open a database, or switch to the Database window for the open database.

To import data, on the file menu, point to Get External Data, and then click Import. To link data, on the File menu, point to Get External Data, and then click Link Tables. In the Import (or Link) dialog box, in the Files of Type box, select Text Files (*.txt, *.csv, *.tab, *.asc). Click the arrow to the right of the Look In box, select the drive and folder where the file is located, and then double-click its icon. IMPORTANT: if you link to a file on a local area network, make sure that you use a universal naming convention (UNC) path, instead of relying on the drive letter of a mapped network drive in Windows Explorer. A drive letter can vary on a computer, or it may not always be defined; whereas, a UNC path is a reliable and consistent way for Microsoft Access to locate the data source that contains the linked table.

Follow the directions in the Import Text Wizard dialog boxes. Click Advanced to create or use an import/export specification.

Although you usually create a new table in Microsoft Access for the data, you can append the data to an existing table as long as the first row of your text file contains matching field names. If importing a text file takes an unexpectedly long time, it might be because many errors are occurring. To cancel importing, press CNTRL+BREAK. In a fixed-width text file, you can ignore fields at the end of a record that contain no data. In addition, the last field with data in the record can be less than the maximum width.

IMPORTING FILES FROM MICROSOFT ACCESS:

In the database window, click the name of the table, query, view or stored procedure you want to export, and then on the File menu, click Export. In the Save As Type box, click Text Files (*.txt, *.csv, *.tab, *.asc). Click the arrow to the right of the Save In box and select the drive or folder to export to. In the File Name box, enter the file name

(Names.csv), and then click Save All. Microsoft Access starts the Export Text Wizard. Follow the directions in the dialog boxes. Click Advanced to create or use an

import/export specification. Save this as a .csv file (Comma Separated Values File), use commas to separate the fields. When done, rename the file to Names.txt.

The following are the field names:

Field 1 – Last name, Field 2 – First name, Field 3 – Group/ID/Badge, Field 4 – Wrist min, Field 5 – Wrist max, Field 6 – Foot min, Field 7 – Foot max, Field 8 – Wrist enabled (-1 = yes, 0 no), Field 9 – Foot enabled, Field 10 – Leave status, Field 11 – Start date, Field 12 – Stop date, Field 13 – Certification type, Field 14 – Certification expiration, Field 15 – string of 365 attendance characters.

For additional information see the help files in Microsoft Access.

SPECIFICATIONS:

Testing Range: 10^4 - 10^8 ohms.

High Range: 2M, 5M, 10M, 25M, 35M, 50M, 75 M, 100M ohms. (1000M special PROM available)

Low Range: 500k, 750k ohms.

Display: Red, yellow and green LED buzzer

Accuracy: +/- .5%

Weight: 1.0 lb. (454 grams)

Battery type/Life: 10,000 hours with 9-volt alkaline battery with yellow battery warning.

Only use recharged rechargeable battery if power supply is used.

Continuous with external 9-12 VDC power supply.

Environment: 32°F to 100°F (0°C to 38°C); 15% to 95% RH.

TROUBLESHOOTING

“My barcode/mag stripe scanner does not read”

1. Increase or decrease the speed of the swipe in both directions
2. Turn the card around, offering the readable side
3. Check that the code offered is within the design parameters (Code 39)
4. Check cable connections, remove and re-insert

“I want my system to read a card that is not in the system. Does the card have to be installed manually?”

No. Check off “Unknown ID configuration. This will ask if the card should be added. Check yes and add the name of the card.

“If a failed tested is repeated and passes and the report says the person failed what is wrong ?”

The test station times are not synchronized.

“How do I hook up the two pig tail wires which are on the “special” meter to open doors.”

The standby circuit and “fail” circuit is closed. When the results are passed the two leads will read open because of the activation of the relay. And allow the passage of a maximum of 120 volts at 500milliamps.

“How do I change the regional settings ?”

Make sure the regional settings is mm/dd/yyyy and not mm/dd/yy. To change click start, settings, control panel, regions, dates, short date setting= mm/dd/yyyy.

“When the reports are printed slow what should be done ?”

The log.txt file should be reset periodically to prevent it from growing so huge that it slows down the report processing. Click on “setup” and then select the “Reset Log File” item. It will ask for a backup file (for example Log0699.txt for June 1999) For small companies this should be done at least once a year on January 1st. Every January 1st, the LogHist.txt on the test station computers should also be deleted. You may also want to check with Windows Explorer to see if there are any other huge files with recent dates.

“What can be done if a password is forgotten ?”

Open the EsdTest.ini file with a word processor program. You will see the password on one of the lines marked Password.

“How big a system is needed on the computer?”

Suppose you have 2500 people in a company and they test three times a day for 280 days. Each file has approximately 80 characters. Therefore you need 168 megabytes or under 2 Gigs hard drive capacity. If one down loads each month a smaller hard drive will be required.

“What can be done if the readings for the foot wear are low?”

Check the foot plate wire. Insert the wire completely into the meter.

More troubleshooting tips available through Static Solutions customer service Meter Department. Special systems can be ordered from Static Solutions which will open doors, print labels, or have an upper limit of 1000 megohms.