

USER MANUAL

MultiPro 2000

PN: 560-110 (110 VAC)

PN: 560-220 (220 VAC)



**Advanced Electrical Safety Analyzer
&
Multi-Parameter Simulator**



110 Toledo Street, Farmingdale, NY 11735

www.NetechCorp.us



Dear User,

We appreciate your purchase of Netech's New and enhanced Model of MultiPro 2000, Electrical Safety Analyzer. For over a quarter of a century Netech is dedicated to provide our customers with high quality, value added products.

Properly used, the MultiPro 2000 delivers more performance and accuracy than any other Electrical Safety Analyzer in its price range. This manual has been designed as a tool to help you get the most from your MultiPro 2000. We suggest that you carefully read this manual so that you will be able to properly use and maintain this product. We welcome any comments you may have that could help us improve the MultiPro 2000 and this manual.

Netech is recognized as an innovator and manufacturer of advanced affordable instruments. When you buy our products we guarantee absolute satisfaction. Your business is important to us and we are dedicated to provide you with the best service possible.

We are pleased you selected the MultiPro 2000 to meet your needs. We hope you will consider us again when you have a requirement for accurate, reliable, versatile, and yet affordable instruments.

Please visit our website www.Netechcorp.us for the latest product updates and user manuals.

Sincerely,
President

Copyright

Copyright © 2015 by Netech Corporation. All rights reserved. No part of this publication may be reproduced or transmitted in any form other than for the purchaser's personal use without written permission from Netech Corporation.

Quality Assurance

Netech Corporation is ISO 9001-2008 Certified. This instrument was thoroughly tested and inspected according to Netech's ISO QS standards and test procedures, and was found to meet those specifications when it was shipped from the factory. Calibration measurements are traceable to National Institute of Standards and Technology. A calibration certificate is included with the unit.

Technical Support



For technical support questions either email techsupport@netechcorp.us or [fill](#) in the information for fast response.

Trade Marks

Netech and MultiPro 2000 are the trade mark of Netech Corporation. Any trade mark reference used in the manual are only for editorial purpose and the benefit of the respective trademark owner, with no intention of improperly using that trade mark.

Manufacturing Location

Netech Corporation, Farmingdale, NY 11735

Symbol	Description
	Risk of Danger. Important Safety Information
	Risk of Electric Shock
CE	Conforms to European Union Directive



WARNING

Unauthorized user modifications or improper use beyond the scope and purpose of the unit as published in this manual may result in shock hazard and injury. Netech will not be liable for any injury sustained due to the modifications or improper use.



Safety Considerations

- Read all safety information prior to use.
- Do not apply more than the rated input voltage.
- Do not connect a device that exceeds the rated current.
- Do not use the unit around explosive environments.
- Do not use the unit if it is damaged.
- Use proper safety precautions

Intended Use

The MultiPro 2000 is intended to be used by a trained Biomedical Technician who performs preventive maintenance and repair of medical equipments.

It is intended to be used in an environment outside of the patient care area and not to be used to test units while connected to patients.

Table of Contents

General Description	6
Introduction.....	6
Preparation for Use.....	8
Instrument Familiarization.....	8
Menu Functions and Operation.....	10
Main Menu.....	10
Getting Started	13
Menu Descriptions.....	13
Measurements.....	17
Earth Leakage:	17
Case Leakage: Using External Leads.....	19
External Leakage: Point to Point Measurement	20
Leads Leakage:.....	21
Power Cord Ground Resistance.....	24
Simulator Function:	25
Save and Print Test Results	27
Saving test results in the internal memory.....	27
Software setup.....	28
ProComPrint Version 1.0 Features.....	29
Uploading Test Results.....	32
Specifications.....	33
Maintenance:.....	35
Product Return Instruction	35
Netech Products and Services	37
Replacement Parts and Accessories	38
WARRANTY	39

General Description

Introduction

The Multi-Pro 2000 (PN: 560) is a full featured, compact portable analyzer designed for the testing of the electrical safety of medical devices. The analyzer tests to US standards (ANSI/AAMI ES1, NFPA 99) or international standards IEC60601-1 by user selectable patient loads.

It is compact, lightweight and user friendly unlike any other safety analyzer in the market. The Analyzer is a measurement device as well as a waveform simulator. The Analyzer is capable of saving over 5000 test records and can be uploaded to a PC for printing and record keeping using the software shipped with the unit. Optional stand alone “Equipment Maintenance Software” is also available for the PC s.

The Analyzer is designed to be used for the quick and easy measurement of the following functions.

- Line Voltage.
- Equipment current
- Polarity Check of the inlet AC power.
- Chassis (Enclosure) Leakage.
- Ground wire (Earth) leakage.
- Point to point leakage.
- Ground Wire Resistance.
- Patient leads leakage.
- Patient Isolation leakage test.

- Save and print test results.

The following waveform simulation functions are available.

- ECG – Normal Sinus Rhythm (NSR).
- Performance – SIN, SQUARE, TRIANGLE, PULSE.
- User selectable Amplitude and rate.

The waveform output is through the 10 color coded ECG snap posts marked RL, LL, RA, LA, V1, V2, V3, V4, V5, and V6. All 12 ECG configurations are out put through the 10 outputs.

Preparation for Use

The Analyzer is shipped with power cord, 2 Test leads, Kelvin Cable, Serial to USB interface cable and user manual and Print Software CD in a hard carrying case. Also included is our calibration certificate along with Calibration Data sheet. Please inspect the unit for any visible shipping damages.

Before getting started it is important to get familiar with the control and the operation of the unit.

Instrument Familiarization

Display:

The Multi-Pro 2000 incorporates a vacuum fluorescent display. The display ensures high readability even under the lowest ambient light conditions.

Keypad:

The keypad utilizes soft touch tactile keypads, providing a fluid resistant barrier to the internal circuitry. When a key is pressed a beeping sound will be heard to indicate that the key is activated.

The following are the description of the key functions.

- F1, F2, F3, F4, F5, and F6:- These are interactive keys associated with the menu selections.
- “ESC”:- Pressing “ESC” key will get back to the previous menu.

- “MENU”:- Pressing “MENU” key will bring back to the “MAIN MENU”
- “READ”: “READ” key is associated with the measurement functions as well as to save the displayed test data in to the storage memory.
- “CASE LEAKAGE”:- Case Leakage Measurement Function Key. Pressing the key will display the “CASE LEAKAGE” Menu with the prompt “Select Polarity” to enable further measurement options.
- “LEADS LEAKAGE”:- Leads Leakage Function Key. Pressing the key enables the “LEADS LEAKAGE” Menu selections.
- “RESISTANCE MEASUREMENT”:- Resistance Measurement key enables the power cord ground wire resistance measurement menu with the prompt to connect the Kelvin Cable to the chassis or the earth ground point of the unit under test (DUT).
- “SIMULATOR”: Simulator Key enables the Simulator menu selections. Further waveform selections are available with F1, F2, F3, F4 and F5 keys.

Power Switch:

The main power switch is located on the right side panel of the Multi-Pro. This switch turns the power on/off to the Multi-Pro 2000.

Test Outlet:

The test receptacle used in the Multi-Pro is a Hospital Grade 20 Amp (NEMA-5-20R). It will accept all standard line cords as well as horizontally oriented neutral prongs on 20 Amp line cords.

Various International power outlet configurations are available. Check with factory for the specific Country.

Power to the test receptacle is in the off mode. Manual selection of **normal** or **reverse** polarity must be selected using the keypad to energize the test receptacle during leakage measurement functions.

Menu Functions and Operation

The operation of the MultiPro 2000 is Menu driven. It is simple and easy to use following the interactive Menus with soft keys (F1,F2, F3, F4, F5, F6) and dedicated key functions such as “Simulator” “Case Leakage”, Leads Leakage”, Resistance Measurement”.

Main Menu

Following are the abbreviation and description of each “Main Menu” functions.

- “INT”- *Internal measurements.*

Additional menu selections in this category are:-

“VOL”- Input Voltage,

“CUR”- Device current

“POL”- Polarity check of the AC input.

Refer to “Measurement Section for details.

- **“EXT”** - External Measurement.
This option is useful for measuring the leakage current of Hard Wired Units, Non AC Powered (Battery Operated) or any devices.
- **“ID”**- For entering a unique (4 Digit) reference ID of the instrument under test.
- **“TIME”** - Setting real time clock.
- **“PRN”** – Printing the test results and Header.
- **“CFG”** – Configuration. *(This function is only available for software upgrade and other factory settings)*

In addition to the “MAIN MENU” function, dedicated keys are provided for each of the main functions. They are described as follows:-

- **“CASE Leakage”** – Case Leakage current Measurement.
- **“LEADS Leakage”** Leads Leakage current measurement.
- **“RESISTANCE Measurement”**- Ground conductor resistance Measurement.
- **“SIMULATOR”** – Waveform Simulation selection.
- **“ESC”** – ESC key takes back to the previous Menu.
- **“MENU”** – Takes back to the Main Menu.

The power to the outlet of the unit under test is controlled by the “OUTLET POWER” key functions.

- **“NORMAL POLARITY”** – Set polarity to Normal.

- **“OFF”** – *Enables the Power the outlet to turn off.*
- **“REVERSE POLARITY”** – *Set the outlet to reverse.*

Getting Started

Connect the Analyzer to a grounded three prong outlet. The Analyzer is intended for use with single phase ground power. It is not intended for dual phase power configurations.

Turn the Analyzer on using the rocker switch on the side panel. The Analyzer will perform a series of self tests and momentarily display the model name and the software version followed by the “MAIN MENU” as shown below.

Menu Descriptions



Before connecting the DUT (Device Under Test), it is important to get familiar with the operation of the unit and observe the safety precautions.

The following is the screen shot of the “Main Menu” on power up as shown (**Screen Shot 1**).



“INT” :- Internal Measurement

Line Voltage Measurement

From the “MAIN MENU” select “INT” by pressing F1

Key. The display will change to the “INTERNAL MEASUREMENT” Menu Press F1 Key (“VOL”) and the line voltage will be displayed.

Press “ESC” to go back to the previous Menu (“INTERNAL MEASUREMENT” Menu).

(“CUR”):- Device Current Measurement.

This function measure the current consumed by the DUT. To measure the current, press F2 (“CUR”) from the “INTERNAL MEASUREMENT” Menu. Press “READ” to read the device current.

If the out let is off, normal polarity will be activated and the unit (DUT) will turn on.

Press “ESC” to go back to the previous Menu (“INTERNAL MEASUREMENT” Menu).

(“POL”) Polarity Check of the Inlet Power.

From the “INTERNAL MEASUREMENT” Menu select “POL” by pressing F3. The polarity of the incoming AC power will be checked by measuring the voltage between HOT and Neutral, HOT and Earth ground as well as and Neutral and Earth ground. While checking polarity the display will indicate “Checking.....” for a brief period and the polarity will then be displayed as “Normal Polarity” or “Reverse Polarity” depending on the result.

If an “Error” message appears either the outlet the

Multi-Pro is attached to or the power cord for the Multi-Pro may be defective. Press “ESC” to return to the previous menu or press “MENU” to return to the main menu.

EXR”:- External (Leakage) Measurement

It is also referred to as point to point Leakage.

This function measures Leakage current between two points on the DUT (Device under Test)

“ID”:- Device Identification Input Function.

MultiPro 2000 is capable of storing over 5000 test results in the Non- volatile memory and can be uploaded to a PC, to save or print the records.

The “**Save**” option is available in all the measurement Menu (refer to Measurement Section).

This function is intended for the user for entering a unique 4 digit number for the Device under Test (DUT). This will enable the test data to be stored under this unique ID number. Here is how to enter the Device ID.

From the “MAIN MENU” select “ID” using key F3. The display will change to “Equipment ID: 0000 as shown **Screen Shot 2** below. If a Device ID is already entered it will show in the menu.

To change the ID, press F6 (yes). Press F1, F2, F3 F4 keys to enter a unique ID for the unit under test.

- If an ID is already entered for the unit under test press F4 (NO).



Note:-

When testing multiple units it is important to change the ID as the test records are saved under this ID number.

“TIME”:- Time re setting Function.

Pressing F4 from the “MAIN MENU” activates the “Change Time” menu. To change the time use the appropriate keys associated with the menu.

Measurements

Earth Leakage:

Earth leakage is compliant to IEC 60601 and ANS/AAMI ES1 standard. The default compliant standard is set to AAMI ES1. The Compliant standard can be changed by pressing F1 to toggle between (AAMI “ES1” or “IEC” 60601). This will be saved to the memory until it is changed again.

There are four Leakage measurement options.

- Normal Polarity
- Reverse Polarity
- Open Neutral
- OFF. Select the desired polarity.

The Earth leakage measurement is through the internal ground conductor and the external test lead is not required. To measure the current flowing in the protective Earth circuit, press the key marked “Case Leakage”. The display will indicate “CASE LEAKAGE” and “Select Polarity” and “ES1” /IEC (AAMI ES1) or “IEC” 60601) selection.

Select the desire polarity and press “READ”. The display will indicate the leakage as well as the polarity selected as shown in Screen Shot 3. Press F1 (“SAVE”) to save the results.



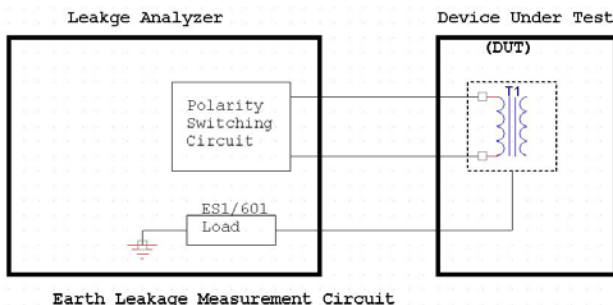
To save the result press F1 (“SAVE”). This will save the test data in the memory under Device ID.

To measure leakage for open neutral conditions first select first select “NORMAL POLARITY” followed by F6 to open the neutral.

The auto-range feature of the MultiPro will select the appropriate range automatically. For reading in excess of 100 micro amps, the decimal point will not be displayed.

The user can switch between Reverse and normal Polarity at any time to verify readings or, to determine if any service action performed on the device under test affects the readings.

The following block diagram shows the electrical connections between The Safety Analyzer and the device under test.



Case Leakage: Using External Leads

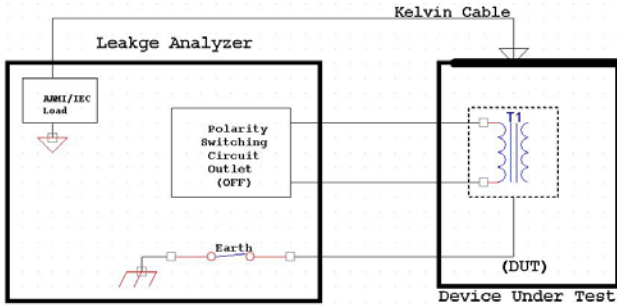
Case /Enclosure leakage measurement is similar to Earth Leakage measurement except the leakage current is measured through the external test Lead.

To measure the case leakage/Enclosure leakage, attach the external Kelvin cable to the case (conductive surface) of the (DUT) device under test. Select the desired polarity and press “READ”.

The display will indicate the leakage as shown in the Screen Shot 4. Press F1 (“SAVE”) to save the results.

Case leakage measurements can be made for various line conditions, power on, off, normal or reverse polarity, closed or open ground, Closed or open neutral.

The following block diagram shows the electrical connections between The Safety Analyzer and the device under test.



Case (Enclosure) Leakage Block Diagram

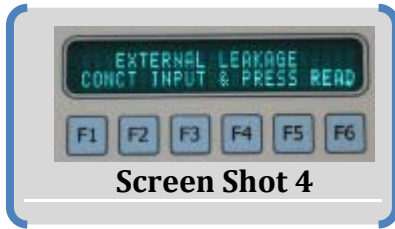
External Leakage: Point to Point Measurement

It is also referred to as point to point Leakage.

This function can be used to measure Leakage current flowing from any conductive surface of the DUT and Earth ground.

From the “MAIN MENU” select “XTR” (F3 Key). “EXTERNAL LEKAGE” Menu will be displayed with the prompt to connect the Input Cable (**Screen Shot 4**). The external input Jacks are on the left panel marked “INPUT”. To measure the leakage between two points, connect one lead to one point (Earth Ground) of the DUT and the other lead to another conductive point on the DUT and press “READ”.

Press F1 (“SAVE”) to save the results.



Leads Leakage:

This function is only applicable to devices such as ECG (EKG) monitors or DUTs with direct patient connections.

The following two modes of measurement function available as shown in Screen Shot 5.

- “GND” – Measures current flowing through the leads to ground. In this option leakages of individual leads or all leads can be selected.
- “ISO” – Measures current that flows to an isolated AC voltage applied to the leads and the earth ground.



Leads to Ground leakage:

Press F1 “GND” and select the desired leads from the next menu. Press “READ” and the leakage current will be displayed. Press F1 (“SAVE”) to save the results.

Press “ESC” to go back to the previous menu.


The block diagram on the following page represents the electrical connection.

Leads Isolation leakage:

Caution: 

In this test an isolated AC voltage equal to or 10% higher is applied to the leads and earth ground. The voltage is current limited but it is lethal. DO not touch the exposed metal parts of the ECG post or the analyzers reference ground.

To measure the isolation leakage current, select “ISO” (F3) and press “READ”. The leakage current will be displayed as shown.

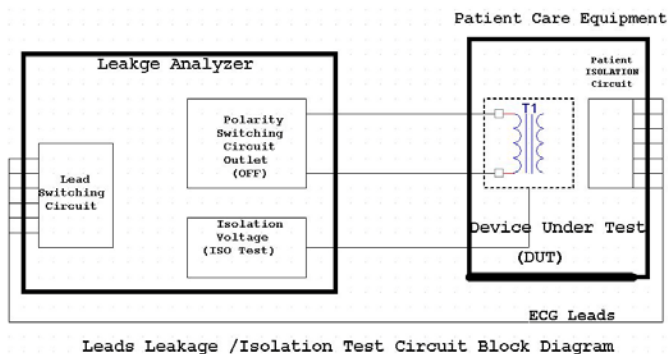
 **CAUTION:** *In Isolation leakage test, the Analyzer injects, current limited isolated AC voltage between the earth ground and the patient leads of the DUT (patient monitoring device). Although the voltage is current limited it is lethal.*

Patient Safety Precaution: 

SINCE THE TEST METHOD INJECTS POTENTIALLY HAZARDOUS CURRENT LEVELS INTO THE ELECTROCARDIOGRAPH AND THE RELATED POWER SYSTEM, DO NOT CONDUCT TESTS IN AN OCCUPIED PATIENT LOCATION OR WHILE THE PATIENT IS CONNECTED TO A RELATED POWER SYSTEM BRANCH CIRCUIT.

This test verifies that the isolation system on the device under test is operating properly.

The following block diagram shows the electrical connections between The Safety Analyzer and the device under test.


CAUTION: 

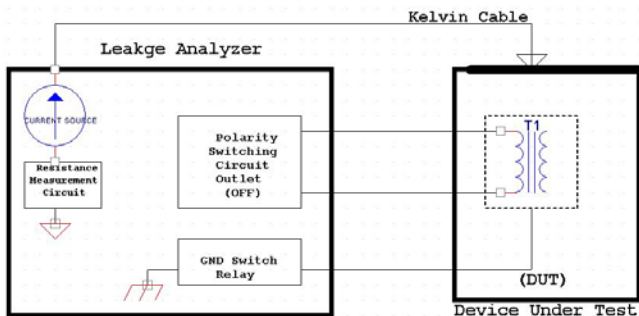
THE EKG ISOLATION VOLTAGE IS EQUAL OR APPROXIMATELY 10% HIGHER THAN THE AC MAINS AND ALTHOUGH IT IS CURRENT LIMITED TO 1 mA, IT IS POTENTIALLY LETHAL.

Power Cord Ground Resistance

To measure line cord ground resistance for the device under test, depress the switch labeled “RESISTANCE Measurement”. The display will read “POWER CORD RESISTANCE/Connect Klvn Cable”. Once Kelvin cable is attached to a suitable ground on the device under test, press the “READ” switch on the front panel the unit will determine the resistance in 3 seconds.

Ground resistance will be displayed in whole numbers “XX mOhms/Cord Resistance”. An open ground condition will result in the “Check Ground!!!” error message.

The following block diagram shows the electrical connections between The Safety Analyzer and the device under test



Ground Wire Resistance Measurement Block Diagram

Simulator Function:

The Simulator function menu is activated by the “Simulator” key. The following is the screen shot of the Simulator Menu (**Screen Shot 6**). The following simulator selections are the available.

- NSR – Normal Sinus Rhythm.
 - **Rates:** Rates from 30 to 300 BPM.
 - **Amplitudes:** 0.1 to 4.5 mV.
- Performance Waveform.
 - SINE, TRIANGLE, SQUARE, PULSE
 - **Rates:** 0.1 to 60 Hz
 - **Amplitudes:** 0.1 to 4.5 mV.



Connect the ECG leads to the respective ECG Snap posts. If the DUT is off, press the Normal Polarity to turn on the unit.

Select the desired waveform using F1, F2, F3, F4 or F5, from the Simulator Menu.

To change the rate, press F1 and select the desired Rate using F1 to F6 keys. The rate selected will be saved in the memory until it is changed again. Press “ESC” to go back to the previous Menu.

The default values of the rate and amplitude of the waveform is displayed as shown in **Screen Shot 7**. The amplitude and rate selection can be done from this Menu. Amplitude selection can be achieved by using F1 to F6 keys, "<" ">" indicates the additional selections available. The selected amplitude will be saved until it



Save and Print Test Results

Test results can be stored into the memory under the user specific “ID” and available to be uploaded to a PC using the serial to USB cable.

Set the device ID (Main Menu), if not set already. Once the measurement is done press save by pressing F1.

Saving test results in the internal memory

To save the test result Press F1 from the measurement menu as shown Screen Shot 8



After saving the test results of the DUT's under test, it can be uploaded to the PC. All the test results for the DUT under test is saved under the corresponding ID number entered in the non volatile memory.

To continue testing of another DUT, make sure to change the ID number. Otherwise the new test results will be saved to the previous Equipment ID.

Software setup

The test results saved in the internal memory of the MultiPro 200 can be uploaded to a PC using the basic software “ProComPrint” Version 1.0 from the (CD) supplied with the unit.

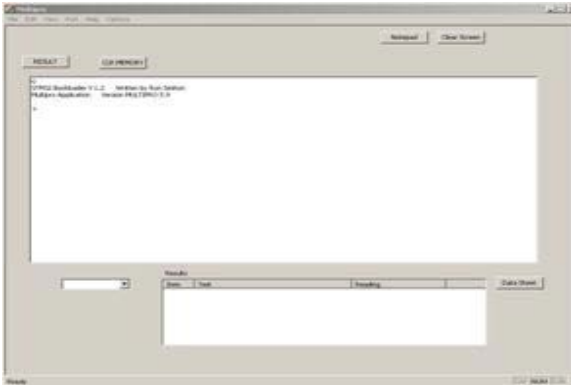
The software is compatible with Windows XP and Windows 7.

Run the “ProComPrintSetup” from the CD by double clicking on the **ProComPrintSetup.exe**. Follow the on screen instructions. When the installation is complete a window appears as shown below.



The ProComPrint Version 1.0 is a basic version of the advanced ProComPrint. Uploading the test results and printing and saving data from MultiPro 2000 to a PC is easier than ever.

The default com port is setup to COM1. Make sure to set the correct COM port for the PC. Once the COM Port is configured, turn MultiPro ON and the software will establish communication with the MultiPro. If the communication is successful a header showing the ProComPrint version shows at the top as shown below.



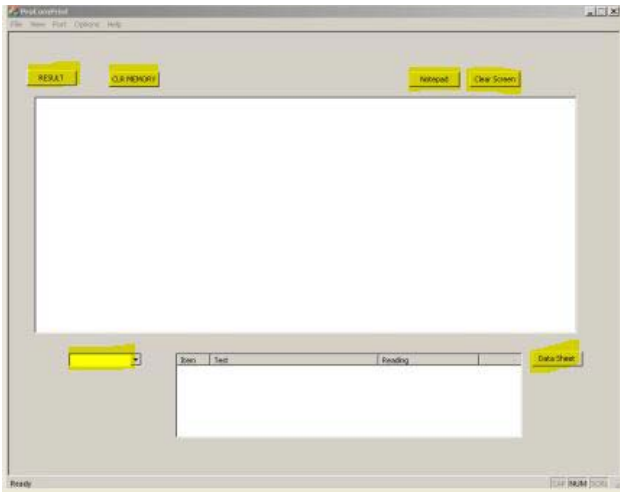
ProComPrint Version 1.0 Features

The ProComPrint Ver. 1.0 included with the unit is a basic version of the optional, customizable, database version. This will enable the user to quickly connect the MultiPro 2000 to the PC and download, the test results and print.


Following are some of the basic features of the software.

- Standard Pull Down Menu (File, Edit, Port, Help, Options). Only the relevant menus are enabled in the basic ProComPrint Version 1.0 version
- In addition to pull down menu there are six individual selections as highlighted in the

screen shot shown below.



The following are the descriptions of the highlighted functions.

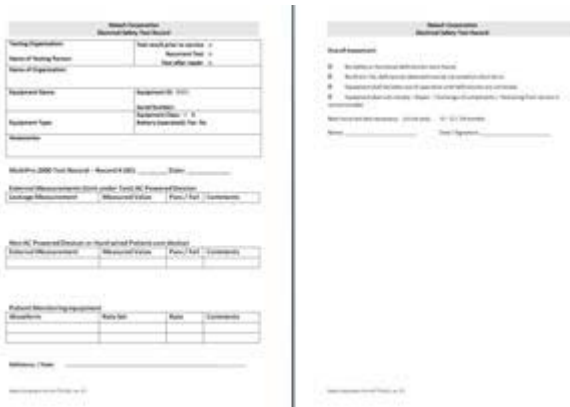
- **“Result”**: – This will down load all the saved test results from the MultiPro memory into the top screen.
- **“Select Equipment ID”**:-If multiple units are being tested, the results of the individual units can be down loaded by selecting the Equipment ID using the “v” arrow.
- **“CLR MEMORY”** :-  This will clear all the saved records from the MultiPro Memory.
- **“Notepad”**: - The down loaded test results can be opened in the notepad for filling necessary Device information and save in the PC and print.
- **“Clear Screen”**:- This will clear the screen.

- **“Data Sheet”**:- A sample “Word” template (as shown below) is included in the “ProComPrint Ver 1.0.

Note:

Sample Data Sheet can be opened and printed only if a licensed copy of the word is installed in the PC.

The test results that are saved will be automatically filled in the appropriate fields as shown below.



Uploading Test Results

The test results can be uploaded to the PC from the MultiPro.

To upload all the test results, select “PRN” (F5) from the “MAIN MENU”. The “Print MENU” will be as shown below (Screen Shot 9).



The following are the Print menu options:-

“HEAD” – Select F1 for uploading a blank header with user editable fields.

“RESULT”- Select F3 for uploading all saved test results.

“CLR” – Select F6 for clearing all the records saved in the memory.

The test records that are uploaded to the PC can be saved in to a text file. As mentioned earlier, the file can be opened on notepad and fill in all relevant DUT information and saved to the PC for printing and record keeping.

Specifications

Specifications are subject to change without notice

Leakage Current:

All Current measurement loads are user selectable to AAMI ES1 or IEC60601-1 Load. The meter readings correspond to the RMS value of the current measured.

Measurement Mode: True RMS

Test Load: AAMI ES1 or IEC 60601

Range: Auto range: 0 to 99.9, 100 to 2000 μ A.

Accuracy:

DC to 100 Hz: $\pm 1\%$ of the reading + 2 μ A.

100 Hz to 1 kHz: $\pm 2\%$ of the reading + 3 μ A.

1 kHz to 1 MHz: $\pm 10\%$ of the reading + 10 μ A.

Current Range:

0 – 99.9, 100 - 2000 Micro-Amps.

Power Cord Ground Resistance:

Measurement Mode: Two Wire

Test Current: 100 mA DC.

Range: 0 to 99 and 100 to 2400 MilliOhms.

Accuracy: $\pm 2\%$ of the reading ± 2 MilliOhms.

Mains Line Voltage Measurement:

Range: 90 Volt to 255 V rms.

Accuracy: $\pm 2\%$ of reading +2 V

Device Current:

Range: 0.1 A(RMS) AC to 20 A C RMS.

Accuracy: $\pm 2\%$ of reading +0.1 A

Physical Dimensions:

Size: 10.25" X 6.25" X 2.5"

Weight: 4 lbs.

Temperature:

Operating range: 15°C - 35°C (59°F -95°F)

Storage Temperature: 0°C - 50°C (32°F -122°F)

Power:

110 Volt Units (PN: 560-110): 90 V AC to 130 V, 50 Hz to 60 Hz, 20 A maximum.

220 Volt Units (PN: 560-220): 180 VAC to 260 V AC to 130 V, 50 Hz to 60 Hz, 16 A Maximum.

Simulator:**NSR:** (Normal Sinus)

Rate: 30, 60, 70, 80, 90, 100, 120, 150, 180, 210, 240, 270 and 300 BPM.

Accuracy: $\pm 1\%$ (+ /-1 BPM).

Amplitude: user selectable from 0.1 to 4.5mV.

Accuracy: $\pm 2\%$ (+0.05mV), peak to peak.

Performance: (SINE, SQUARE, TRIANGLE, PULSE)

Amplitude: Same as NSR.

Accuracy: $\pm 5\%$ of the reading (+ 0.1mV).

Rates: 0.1 to 0.5 Hz, 1 to 9 Hz, in 1 Hz

Increments, 10 to 60 Hz in 5 Hz increments.

Accuracy: $\pm 5\%$

Maintenance:

The MULTI-PRO 2000 requires only minimum maintenance. In order to ensure the accuracy, it is recommended that the unit be checked periodically. Factory re-calibration is required on an annual basis, to ensure the accuracy and performance of the unit.

Second year Warranty is void if the unit is not returned to the factory for the annual recalibration.

Netech recalibration charges are very low compared to the industry standard. Any firmware or software update will be done during annual recalibration at no additional cost.

Field calibration is not recommended as it will void the warranty.

Clean the keypad with liquid eyeglass cleaner. Do not use abrasives, solvents, or ammonia. Use light pressure to prevent window from being pressed out of position.

Product Return Instruction

Damaged in Transit:

All shipments are carefully examined by NETECH and carefully packaged for shipment. They are insured in the

customer's name with the carrier. On receipt, if the shipping container appears to have been damaged during shipment, the instrument should be thoroughly inspected. The delivering carrier's paper should be signed noting the apparent damage. If the instrument is damaged beyond use, a new order should be placed with NETECH while awaiting reimbursement from the carrier for the damage instruments.

Malfunction:

Please follow these steps for repair or re-calibration of your NETECH instrument:

1. Obtain an RMA (Return Merchandise Authorization) by calling Netech Customer Service 1-631-531-0100 or follow the [link](#) and fill in the information.
2. Once you receive the RMA, securely package your instruments in the original shipping box or a strong box surrounded by at least two inches of suitable shock absorbing material. Include the copy of the RMA with your packing slip.
3. Mark the outside of the shipping box with the supplied RMA number.
4. Forward the instrument prepared to Netech



Netech Products and Services

In addition to electrical Safety Analyzers, Netech manufactures a wide variety of Biomedical test equipment including; Patient Simulators, Pacemaker analyzer, Defibrillator analyzer, Pressure/vacuum meters, SpO2 analyzers, Infusion device analyzers etc. All Netech Products are manufactured at its factory in Farmingdale, New York, USA.

Netech support its products longer than any other manufacturer in this field.

All Netech Products are manufactured in the USA. We are proud to serve the global biomedical community with innovative high quality products at a below market price.

We thank you for the opportunity to serve your biomedical test equipment needs.

Proud to be of your service since 1987

Please call 1-800-547-6557 (631-531-0100) for our

Product catalog or visit our Website

www.NetechCorp.US

[Down Load latest Product brochure](#)



Replacement Parts and Accessories

Part Number	Description
560-110	MultiPro 2000 Safety Analyzer-110 V
560-220	MultiPro 2000 Safety Analyzer-220 V
560-503	Test Lead set of two
560-HRD-CASE	Hard Carrying case
560-553	Kelvin Test Cable
560-552	AC Power cord

WARRANTY

Netech warrants this instrument to the original purchaser, as purchased from a Netech distributor or dealer, will conform to the written specification as of the date of its manufacture, for a period of two years from the date of purchase. The second year warranty is contingent upon returning the unit to the factory for the annual recalibration at the end of the first year warranty. Netech warrants this instrument against defects in materials and workmanship. If it fails to conform to these warranties, Netech will repair or replace the unit and/or its components within a reasonable period of time if the MULTI-PRO 2000 is returned, shipping prepaid, to Netech's facility at Farmingdale, NY, USA within the warranty period as expressed above.

These warranties are made upon the expressed condition that:

- 1. The purchaser promptly notifies Netech in writing of any non-conformity with the above warranty including a detailed explanation of the alleged deficiencies.*
- 2. The MULTI-PRO 2000 is returned to Netech at the buyer's expenses only after obtaining the proper [RMA](#) authorization from Netech.*
- 3. Netech will not be liable for any incidental or consequential damages.*
- 4. In the opinion of Netech upon inspection, the MULTI-PRO 2000 has not been misused, altered, or damaged due to the abnormal handling and/or operation.*
- 5. Repairs to the MULTI-PRO 2000 and/or its components have not been made by anyone other than Netech or one of its authorized repair agents.*
- 6. The MULTI-PRO 2000 has not been modified, altered, or changed in any manner by anyone other than Netech or one of its authorized repair agents.*
- 7. All shipping and handling charges will be billed to the purchaser.*

THIS WARRANTY EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND / OR FITNESS FOR A PARTICULAR PURPOSE. NETECH IS NOT LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES FROM ANY MISUSE OF THE INSTRUMENT.