PITE 3830 Ground-Fault Locator

User Manual

P-100929-V1.3

SSER



▲ Safety Information

For your protection, please read this safety information completely before operating the locator. Carefully observe all warnings, precautions and instructions.

WARNING: Servicing described in this manual is to be done only by qualified personnel. To avoid electrical shock or equipment damage, do not service the instrument unless you are qualified and with PITE's instruction.

	Safety testing has been done on this instrument thoroughly before shipment. However, mishandling during use could result in injury or other bad consequences, as well as damage to the instrument. Make sure that you understand the instructions and precautions in the manual before use. We disclaim any responsibility for accidents or injuries not resulted directly from instrument defects.
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Safety Symbols

4

Description of symbols used in this manual.

WARNING	Indicates correct operation to prevent a significant hazard that could result in serious injury or other bad consequences to users or instrument.
NOTE	Indicates advisory items related to performance or correct operation of the instrument.

▲ Operating Precautions

To avoid electrical shock or fire, read these precautions first before using the locator:

- Except as explained in this manual, do not attempt to service this equipment yourself.
- Do not operate the locator around explosive gas or vapor.
- Use only PITE's testing leads and other accessories with the locator.
- Before use, inspect the locator, testing leads and other accessories for mechanical damage and replace when necessary. Pay special attention to the insulation surrounding the connectors.
- Remove all clamps, testing leads and accessories that are not in use.
- Do not apply the instrument in other purpose not described in this user manual
- Ensure the equipment is provided with adequate ventilation.
- Proper installation is essential to the correct functioning of your analyzing software CD. If you have any questions about installation, please contact your supplier for assistance.
- This manual describes the general installation and use of the testing system. If your system has features or accessories not addressed in this manual, please contact your supplier.

PITE

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1. ABOUT PITE 3830

1.1 Main Unit & Signal Receiver

Main unit contains: carrying case, LCD screen, 6 buttons, 1 USB socket, 2 sockets for insulation test, 2 sockets for grounding test, 1 socket for main unit charging and 1 main unit power switch. Sample picture of Main Unit is as below:





325Hz signal receiver has frequency options for Selected Hz and Full Hz. They are applied in different environments.

Selected Hz means only one frequency (325Hz) is used during ground fault location. Full Hz indicates that the signal receiver may use different frequencies available to pinpoint ground fault. In this case, signal will be comparatively stronger than that of selected Hz. However it (Full Hz) may be interfered by surrounding circumstances if there are other equipments running with different frequencies. In these



complicated circumstances, Full Hz may not be as accurate as Selected Hz.

Details about testing signal indicator

Fig. 1.1.3 shows the meaning of signal indicator. This is one way to check the ground fault. We will introduce in **3.3 Ground-Fault Location** in details.

As the signal receiver is switched on, the power indicator (in green) is on.

When battery is full charged, the second grid is dim. As the battery is low, the light will be on (in green). You are suggested to charge it timely to ensure its performance.

When signal is detected in the circuit, signal indicators will be on in the consequence of green, orange and red from the 3rd grid to the 7th. Signal light of the 4th grid is strong than the 3rd, and so forth like Fig 1.1.4.

NOTE: Due to signal interference at the beginning, the receiver may be in full signal right after it is switched on. Wait for a few seconds, the signal will be normal.



1.2 Accessories

All the following accessories are contained in the carrying case. After receiving the unit from your supplier, please make sure you have the following items:

Description	Number	Note
PITE 3830 Main unit (with carrying case)	1	
Signal receiver	1	Has two options: 325Hz and 2.5Hz
8.4V battery	1	
Battery charger	1	For Signal receiver
Power adaptor	1	For PITE 3830 main unit
Earphone	1	
2.5 M testing lead	2	1 red and 1 black
Testing alligator	2	1 red and 1 black
User manual	1	For testing and data analyzing
Software CD	1	
USB drive	1	
	PITE 3830 Main unit (with carrying case)Signal receiver8.4V batteryBattery chargerPower adaptorEarphone2.5 M testing leadTesting alligatorUser manualSoftware CD	PITE 3830 Main unit (with carrying case)1Signal receiver18.4V battery1Battery charger1Power adaptor1Earphone12.5 M testing lead2Testing alligator2User manual1Software CD1

1.3 Function

1) Ground fault location

It tests the insulation status of device in DC system. When busbar insulation has breakage in certain point, its resistance will reduce to be lower than required. It may even cause power break-off which is costly to repair. Fast location and elimination of insulation fault will be significant for electricians and



technicians.

By using PITE 3830 Ground-Fault Locator, you could fast pinpoint the breakage. System composition: main unit of Ground –fault Locator and a signal receiver (clamp-shaped)

Basic theory:

In the breakage of busbar, there is loose of electricity to the ground and thus generate a faulty "grounding". When testing leads of PITE 3830 are connected to the ground and busbar, there will be a return circuit (see Fig 2.2.2 in **2.2.2 Connection for Grounding Location).**

Signal generator (main unit) will send a low-frequency voltage signal of $0.1Hz \sim 1000Hz$ between the testing target and grounding malfunctioned circuit. The breaking point will generate leaking current. As the grounding receiver (signal receiver) moves in the circuit, different points in the circuit will have different reaction in the indication of sound warning and light flashing. Based on the sound volume in the signal receiver, it will pinpoint the grounding fault. For detailed operation, please refer to **3.3 Ground-Fault Location**.

2) Insulation test

It tests and records voltage and insulation status for tested target.

3) Data management function

With the management software, you could check detailed wave, have good follow-up for insulation status, find insulation defection in time and predict insulation life span of equipments.

1.4 Feature

- Insulation tester and ground fault locator, two function in one
- Test and record insulation status of facilities
- No disconnection of the electrical installation when ground fault location is operated
- Fast locations for ground fault even when cables are buried unearth
- Signal-generator with adjustable frequency and voltage, convenient for testing
- Reflects aging status of facilities for further reparation
- Powerful management software on PC for trouble analyzing
- Reduced maintenance and repair costs

1.5 Application

- 1). Communication: communication and any other electric equipments and circuits
- 2). Electric utility: insulation testing and malfunction pinpoint for DC system and negative rail
- 3). Others: electric equipments and circuit in aviation, metallurgy, auto and household appliance.

1.6 Technical Parameter

Measuring range	V: 0.00-1000V Insulation R: 20kΩ-500MΩ (250V) 50kΩ-1000MΩ (500V) 100 kΩ-2000MΩ (1000V)		
Min resolution	Voltage: 0.1V Insulation R: 0.01 MΩ		
Accuracy	Voltage: 1%rdg±8dgt		
-	Insulation R: 0.5 MΩ-100 MΩ 5%rdg±6dgt		
	> 100 MΩ: 10%rdg±6dgt		
Output signal	voltage: 0-1000V±10% Frequency: 1-1000Hz		
Power consumption	≥4 hours(continuous operation)		
Memory	32k×8bit Non Volatile SRAM		



Displaying screen	128×64 pixels LCD		
Communication	USB interface	Battery	Li-ion
Dimension	340×250×140mm	Weight	3.0KG
Humidity	80%R.H	Temperature	-5℃-40℃
Receiver			
Testing accuracy	≤0.25MΩ	Power voltage	DC 8.4V
Sensor aperture	59mm	Jaw opening	66mm

1.7 Abbreviation definition

Below is the definition of abbreviation used in PITE 3830 menu:

Abbreviation	Definition	Abbreviation	Definition
Auxili	auxiliary	insul	insulation
calib	calibration	param	parameter
cont	continuous	pls	please
disc	discontinuous	R	resistance
Excita	excitation	sgn	signal
gnd	ground	v C	voltage
1	current	Volt	voltage

2. WIRE CONNECTION

2.1 Preparation

An Antice the targeted insulation resistance is in the testing range. To avoid explosion, please do not operate the device near inflammable and explosive materials.

2.2 Main Unit connection

One end of the testing lead is connected with the alligator and the other with "**Insulation**" socket or "**Grounding**" socket in PITE 3830 main unit. For insulation test (including voltage test and insulation testing), the testing leads are connected with insulation test socket. For grounding fault location, connect the leads with grounding socket in main unit. Make sure the colors should be in accordance with each other, red socket with red lead and black with black.





Fig 2.2

2.2.1 Connection for Insulation Test

For insulation test (including tests for voltage and insulation), one end of testing lead is connected with alligator and the other end with "**Insulation**" socket in main unit. Alligators are clipped on the testing target before main unit is on for measurement.

2.2.2 Connection for Grounding Location

In the function of ground fault location, main unit plays the role as signal generator. And grounding receiver is the signal receiver. For its connection, please change the testing leads to the "**Grounding**" socket in main unit. The testing alligators are the output ends of signal generator. They are connected with busbar and ground. There are two different ways of connection based on which busbar has breakage:

- 1). Red testing alligator is connected with positive busbar. Black alligator is connected with ground. In this case, positive busbar has breakage.
- 2). Red testing alligator is connected with ground. And black alligator is connected with negative busbar. In this case, negative busbar has breakage.

Wiring and operation flowchart for ground fault location is as below. We will describe this in details in **3.3 Ground-Fault Location**.

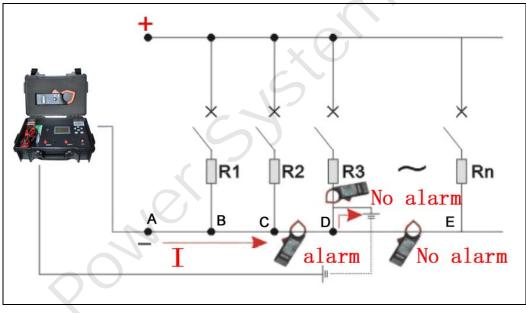


Fig. 2.2.2

2.2.3 Other Connection

USB socket on the main unit panel is for connecting USB drive for data transfer and system update. PITE 3830 contains rechargeable battery inside. For its changing, connect the battery charger (adaptor) with the socket at the side of main unit case (see Fig 1.1.1).

2.3 Get Started

After connection is well done, switch on the main unit. If LCD screen is well displayed, then you could start your testing by following this manual as below.



3. MAIN OPERATION

Arrow keys " \uparrow ", " \downarrow ", " \leftarrow " and " \rightarrow "are used to move up and down, generally for selection or number changes. **OK** is for data saving or operation confirmation. **ESC** is for going back to upper menu or canceling current operation.

3.1 Power On

After power is switched on, screen will display as below:

PITE 3830 Ground-Fault Locator VER: 3.16



After about 1 second, screen will display the main menu automatically as below. Function of PITE 3830 includes Insulation test, Ground-fault location, Data management and System management.

Main Menu		
Insul	Gnd-fault	
Data	System	
2009-10-24	16:24:28	
Fig.3.1.2		

3.2 Insulation Measurement

Make sure all testing leads and sockets are well connected. And select "**Insul**" in main menu. This function contains two items, voltage testing and insulation measurement. Screen will be display as below:

Insulation Test		
Test Volt		
Test Insul		
2009-10-24	16:24:28	

Fig.3.2

3.2.1 Voltage Testing

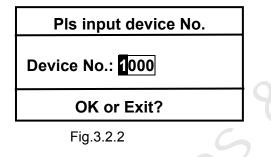
It will test the voltage between positive and negative binding posts. After the connection is done, select "**Test Volt**" in the above menu and press **OK** to start the measurement of voltage. Below is the example of testing result. Please make sure that the binding posts are correctly connected. Udc indicates the effective value of DC voltage.

Test volt		
Vdc= 10V		
Vac= 0V		
<esc> Exit</esc>		

Fig. 3.2.1

3.2.2 Insulation Measurement

Select **"Test Insul"** in insulation measurement menu. You will be required to input device number as below. Use arrow keys for the setting of device number. This numbers are self-defined which could be reviewed in the sector of data management.



Press **OK** to confirm the device number setting. You will then find 4 options for tested voltage: 100V, 500V, 250V and 1000V. These voltage levels are used in standard configuration of PITE 3830, other voltage types could be made in specific units.

Pls select Volt		
100V	500V	
250V	1000V	
OK or Exit?		



Select the relative voltage for your circuit and press **OK** for confirmation. Positive and negative Insulated binding posts will output the voltage as selected. Wait for a little while; you will see the following screen. Resistance value indicates the testing result.

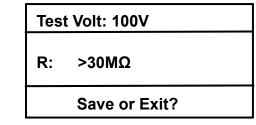


Fig.3.2.2.2

NOTE: Voltage injection is related to voltage-withstand of your testing target. Voltage input is always 2 to 3 times of nominal voltage. For example, if nominal voltage of testing target is 48V, you could select 100V in above option. If nominal voltage is 110V, you could select 220V. The higher voltage you select, the higher accuracy you may get. However, at the same time, you may get testing target punctuated if selected voltage is too high.



Output voltage of 100V maximally can measure insulation resistance of $30M\Omega$, 250V maximally $100M\Omega$, 500V maximally $200M\Omega$ and 1000V maximally measures $2000 M\Omega$. Please select the proper output voltage.

If the tested resistance is too low but the output voltage selected is higher than 250V, dielectric may be punctured. Then you will see warning screen as below:

Insulation Puncture!

Fig. 3.2.2.3

After the measurement, press **OK** and you will find 6 options of loop to save the testing result. Use arrow keys to select the relative one and press **OK**. Testing results could be reviewed in the menu of data management. To cancel the test, press **ESC** and return to the upper menu.

Pls select circuit		
□ Main	□ Light	
□ Auxili	□ Excita	
□ Main/Auxss	□ 1H	
	. 0,	
XV		



3.3 Ground-Fault Location

Connect the red and black testing leads with the grounding sockets in the main unit panel as described in **2.2.2 Connection for Grounding Location**.

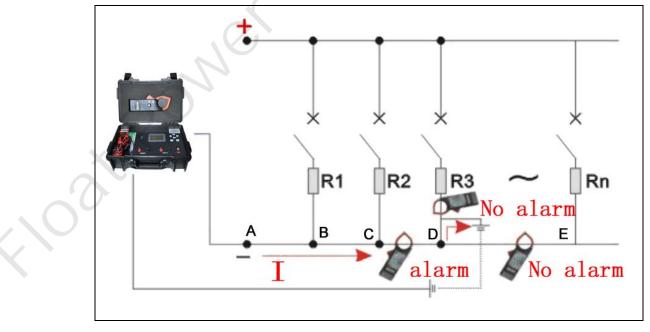


Fig 3.3

After connections for testing leads and clips are done, select "Gnd-fault" in main menu to go to the



following step for parameter setting of output signal.

Param Setting		
Output Hz: <mark>325</mark> Hz Output V: 50 V		
OK or Exit?		

Fig.3.3.1

Default signal is 325Hz and 50V. This is the parameter of PITE's signal receiver. If it's 325Hz, then select 325Hz. Voltage could be nearly the same like nominal voltage. If nominal voltage is 48V, you could select 50V.

Press arrow keys of " \leftarrow " and " \rightarrow " to change the parameters if necessary. And press **OK** to enter screen of grounding signal output like below:

Gnd sng output	Gnd sng output
Output Hz: 325 Hz Cont V: 56 V □□□	Output Hz: 325Hz Disc V: 56 V □□□
I: 42.23mAR=1.3KΩ	I: 42.23mAR=1.3KΩ

Fig. 3.3.2

You could press arrow keys of " \leftarrow " and " \rightarrow " to switch between different displaying models, discontinued and continued (Fig.3.3.2). These two models could only be found when frequency is higher than 2.5Hz.

Then switch on the signal receiver. The receiver may indicate signal with red light and green light on the right side flashing. This is caused by ambient signal interference. Just wait for a few seconds until these lights are off like the following figures.





And adjust the signal input button (signal receiver) clockwise to adjust its sensitivity. It is more sensitive at the end than the beginning.

Open the receiver jaw, clamp around the busbar and move along the busbar (see Fig. 3.3 and Fig.3.3.4) from A to B, C, D and E.

Two ways of signal indication:

- Before the point of breakage, you will hear the sound warning from the signal receiver which is close to the busbar. The sound will be either continuous or discontinuous based on above selection. Take Fig 3.3 for example, if there is sound warning before Point D and no sound warning after Point D, then there should be circuit breakage around Point D.
- You could also see the signal difference on the signal indicator of receiver. After point of breakage, signal is weak or no obvious signal at all. However, before the breakage, signal is flashing on the receiver. This could be inspected even with the receiver is near the busbar with the jaw closed (Fig. 3.3.5).





Fig. 3.3.4

Fig. 3.3.5

Fig. 3.3.6

NOTE:

- 1. You could either put the busbar across the clamp or put the clamp near the busbar (Fig. 3.3.6). In this case, distance between busbar and clamp should be within 50cm. This is usually applied when the busbar is buried underground and you know where it might be.
- 2. There is always sound warning between PITE 3830 and the point of breakage (e.g.: all the way before Point D in Fig 3.3). After the point of breakage, there is no sound warning.
- 3. You may need to adjust the signal input button for sensitivity several times during the process. This helps you narrow down and pinpoint the breakage.

Testing Tips:

- 1. To have clear sound warning, you could connect the earphone with the signal receiver and wear it.
- 2. To eliminate the faulty grounding, you could choose not to move the signal receiver from the beginning of the busbar to the end. Take Fig 3.3 for example, you could narrow down by checking Point A and then Point E. If there is sound warning in Point E, then continue to check points after Point E. If there is no sound warning in Point E, then check other points between Point A and Point E.
- 3. If there is more than one point that has breakage, please find them one by one.

3.4 Data Management

Select "**Data**" in main menu to enter the following screen. It contains 3 options for operation: Data query ("**View**"), data delete ("**Delete**") and transfer to USB drive ("**To USB**")

Data manage			
View	Delete		
To USB			

Fig.3.4

3.4.1 Data Query

Select "**View**" in the above menu to enter the following screen. You have two ways to view the testing data, either by condition or sequence.

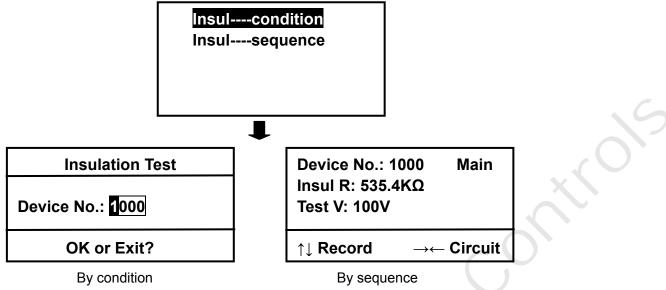


Fig. 3.4.1

If by sequence, press arrow keys of " \uparrow " and " \downarrow " to view different records. And press " \leftarrow " and " \rightarrow " to view different loops.

3.4.2 Delete Data

Select the option "Delete" in data management menu, you will see warning screen as below:

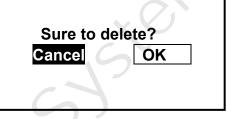


Fig. 3.4.2

Press **OK** to confirm the deleting or **ESC** to go back.

NOTE: Please keep the testing data properly. Once the data is deleted, it could not be recovered.

3.4.3 Transfer to USB Drive

Make sure the USB drive is well connected with the main unit panel, and select "**To USB**" in data management screen. You will see the following screen for data saving.

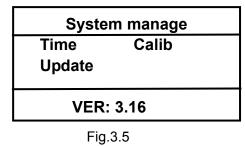
Fig.3.4.3

After data is successfully saved in USB drive, remove it directly from the main unit. Data is saved with the format "PITE3830.BAT" in the USB drive. This data could be analyzed on computer with PITE's data management software. For concrete instruction, please refer to **4. ANALYZING SOFTWARE**.



3.5 System Management

Return to main menu and select "Data" for system management. There contains 3 functions here: time setting, calibration and system update.



3.5.1 Time Setting

Use arrow keys " \leftarrow " and " \rightarrow "to move left and right. Use " \uparrow " and " \downarrow " to change the numbers. After the setting, press **OK** to save the change.



Fig. 3.5.2

3.5.2 Calibration

WARN: Calibration is accuracy sensitive. It requires professional technique. All data has been calibrated properly before this device is delivered to our customers. Please do not calibrate it unless necessary. If you really need it, please contact PITE for assistance.

Here is one example for calibrating voltage.

Firstly select **"Calib"** in the menu of system management and input the password "8888". The following screen will be displayed. It includes calibration for external voltage, grounding and resistance.

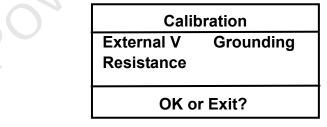


Fig.3.5.3

Please follow the screen instruction for calibration.

In voltage calibration, positive probe of standard voltage meter should be connected with insulation testing socket "+", and negative probe with "-". Please save the parameters only when the parameters are stabilized, otherwise incorrect parameters will be saved and thus affect the measuring accuracy.

3.5.3 System Update

Operating program of PITE 3830 could be updated via USB drive. Please see below for the instruction



of update:

1). Copy the latest program named "**PROGDATA.BIN**" to the root directory of USB drive and insert the USB drive into PITE 3830 main unit.

2.) Enter "System" in main menu, select "Update" and input password "8888".

3). Press **OK** and hold for 6 seconds and you will see "**Programming...**".

4). After the program is successfully updated, screen will automatically return to the main menu.

NOTE:

1). If there is no display of "**Programming...**", system is not updated. Please make sure there is a file named "**PROGDATA.BIN**" in the USB drive. Sometimes, you need to format the USB drive first and then copy the file to the root directory of USB drive.

2). In case of problem (power off or USB drive is loose) during the system update, please turn off the main unit, press the key \mathbf{OK} for a while (not release) and at the same time restart the main unit. Then you will also enter update mode.

4. ANALYZING SOFTWARE

This is the data management software for PITE 3830 Ground Fault Locator (hereinafter Locator). With this software, you could backup, save and recover the testing data by using the database. Measuring data could be transferred to a personal computer via USB drive for data analyzing. Before data analyzing, the following analyzing software should be installed in the PC.

4.1 Software Installation

1) Start up your PC

2) Close all application running on the computer (recommended).

3) Insert the CD for Analyzing Software into CD-ROM drive of PC.

4) Once the computer detects the CD-R, find the Locator Data Management System—Ground Fault Locator.exe, and then double click the file named "Ground Fault Locator" to start the installation. Installation screens will be showed as below.

😼 PITE 3830 Ground-Fault Locator Setup
Telcome Welcome to the installer for FITE 3830 Ground-Fault Locator 3.03
Welcome Welcome to the installer for FITE 3830 Ground-Fault Locator 3.03. It is strongly recommended that you exit all Windows programs before continuing with this installation. If you have any other programs running, please click Cancel, close the programs, and run this setup again. Otherwise, click Next to continue.
< Back Next > Cancel

Fig 4.1.1 Click **Next** to go to the following screen:



😼 PITE 3830 Ground-Fault Locator Setup 🛛 🔀		
License Agreement PITE Please read the following license agreement carefully.		
LICENSE AGREEMENT IMPORTANT - READ CAREFULLY: This license agreement is a legal agreement between you (either an individual or a single entity) and PITE TECH. INC. (FITE) for the PITE product identified above, which includes computer software and associated media, and may include printed materials and online or electronic documentation ("SOFTWARE PRODUCT" or "SOFTWARE"). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this license agreement. If you do not agree to the terms of this license Agreement, please do not activate the SOFTWARE and promptly return the unused SOFTWARE to the place from which you obtained it. SOFTWARE PRODUCT LICENSE		
\bigcirc I agree to the terms of this license agreement \odot I do not agree to the terms of this license agreement		
 <u>Back</u> <u>Mext</u> > <u>Cancel</u>		

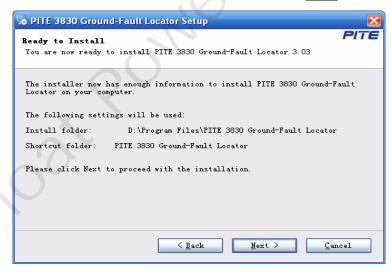
Fig 4.1.2

Select "I agree to the terms of this license agreement" and click **Next** to go to the following step:



Fig 4.1.3

Change the installation path if necessary. Click Next and you will come to this step:





Click **Next** and then **Finish** as screen below to complete the installation:



😼 PITE 3830 Ground-Fault Locator Setup	
Installation Finished The installation has completed successfully.	PITE
Installation Successful The FITE 3830 Ground-Fault Locator 3.03 installation is complete. Thank you for choosing FITE 3830 Ground-Fault Locator! Flease click Finish to exit this installer.	
< <u>B</u> ack <u>F</u>inish	Cancel

Fig 4.1.5

After installation is done, you will see the icon TE 3830 Gro...I on the desktop. If you could not see it on desktop, find it in "**Start**" menu. Follow the screen instructions to install the program. After installation,

you will find PITE 3830 program icon TE 3830 Gro...I on the PC desktop.

4.2 Software Operation

This Data Management System is applied to PITE 3830 Ground Fault Locator. You could save, delete or print testing and analyzing data as per your need.

Four hot keys under the toolbar are for shortcut operation with definition as below:

 5° : Received Data. Click the button and then the window of Read File will pop up.

초: Update Program.

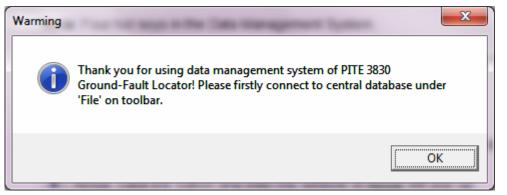
Ensul Test. Click the button and then the window of Insul Test will pop up.

P: About. Click the button and then the window of About will pop up.

To start the analyzing software, please go step by step as below:

1. Double click the icon on the desktop. A Window will pop up to remind you connect to central database under 'File' on toolbar first. This database will be used to save the data when this analyzing software is used.







Click OK to start.

The Data Management window will pop up as below:

🔚 Go	und-Fault Loca	tor Data I	Management System (spe.for Power	r) 💶 🗖 🔀
File(E)	DataAnalysis(<u>D</u>)	Admin(<u>A</u>)	Help(<u>H</u>)	
<u>s</u> ü .	🔶 🔗 🙎			
	Total Times	13	Group Device Test Data	
	Test Times	68	Times	
	First Test	12-0	01-2006	
	Last Test	08-0	05-2007	
Welcor	ne to Use Ground-I	Fault Locate	r Data Management Sy Today is 16-07-201	_ درد _ 0
			Fig. 4.0 h	

Fig 4.2.b

NOTE: Some functions are not active until the database is connected.

2. Click "File" and then "Connect Center Database" as below for database setting.

🛅 Gou	und-Fault Loca	tor Data i	Management System (s
File(<u>F</u>)	DataAnalysis(<u>D</u>)	Admin(<u>A</u>)	Help(<u>H</u>)
Read	d File		6
Conr	nect Center Databa	ise	
Exit	Total Times Test Times First Test Last Test		Group Device Test Data Times DateMonthYear DateMonthYear
-(Last Test		Late-informe-1 cal



Select either way below to orient a path for the database. Only after database is connected can you carry other function like data analyzing.



}

fl Ce	nter Database Guide	X
	 Create a new central database Use current path for database 	
	Current : c:\program files\PITE 3830 Ground-Fault Locator\3830.mdb Back Next Finish Cancel	

Fig 4.2.d

You will see details of connect center database in 4.2.1-2).

4.2.1 File Processing

It includes three functions of "Read File", "Connect Center Database" and "Exit"

💼 Go	und-Fault Loca	tor Data N	lanageme	nt System (spe.for Power)
$File(\underline{F})$	DataAnalysis(<u>D</u>)	Admin(<u>A</u>)	Help(<u>H</u>)		
Rea	d File				
Con	nect Center Databa	ase			
Exit	iotai ilmes	-14	Group Dev	vice Test Data	XV
	Test Times	77	Times		6
	First Test	12-0	1-2006		
	Last Test	16-0	7-2010		
				C	\mathcal{D}

Fig 4.2.1.1

1) Read File

It uses to read the measuring data you stored in the USB drive.

Click "File" and then "Read File", and you will go to the following screen. See the screen as below:

₹ Read File Data	X
Please Select	the Data File
读效描文件	
Choose file	Close

Fig 4.2.1.2

Then click the **Choose file** button, you will see the screen as below:



/*

● ● ● 数据		▼ * y	Search 数据	1
Organize 🔻 🛛 New fold	er		•	
🔆 Favorites	Name		Date modified	Туре
Desktop	PITE3830.DAT		4/15/2008 11:17 AM	DAT File
Downloads	PITE3830a.DAT		4/15/2008 11:17 AM	DAT File
Libraries Documents Favorites Music				
Pictures Videos				
🍓 Homegroup	•			
C 1	ame:	•	Data File(*.Dat)	•

Fig 4.2.1.3

Select the Data and the data will be saved automatically.

2) Connect Center Database

The operation is the same as above. See the 4.2-1

Click "File" and then "Connect Center Database". See the following screen:

📷 Gor	und-Fault Loca	tor Data i	Management System (sp
File(<u>F</u>)	DataAnalysis(<u>D</u>)	Admin(<u>A</u>)	Help(<u>H</u>)
Read	d File	1	
Conr	nect Center Databa	ase	
Exit			0
	1 otal 1 imes	0	Group Device Test Data
	Test Times	0	Times
	First Test]	DateMonthYear
	Last Test]	DateMonthYear

Fig 4.2.1.4

Then enter into the window of Center Database Guide. See the screen as below:

💕 Cen	ter Database Guide 🛛 🔀					
	 Create a new central database 					
	C Use current path for database					
	Current : c:\program files\PITE 3830 Ground-Fault Locator\3830.mdb					
	Back Next Finish Cancel					



If it is the first time for installation, please select "Create a new central database" and then click Next



5

and then **Finish** to create a new center database.

🖁 Center Database Guide 🛛 🔀	🕄 Center Database Guide 🛛 🔀
Central database of the default installation path C:DataBase Alter Path	Center Database 3830.mdb Install in the path C:\DataBase
Current : c:\program files\PITE 3830 Ground-Fault Locator/3830 mdb Back Next Finish Cancel	Current : c:\program files\PITE 3830 Ground-Fault Locator(3830 mdb Back Next Finish Cancel

Fig 4.2.1.6



Users can alter the center database path if necessary. Click Alter Path to choose the correct path.

💤 Center Database Guide 💦 💫	👔 🖙 Catalog Change 🛛 🔀
Central database of the default installation path C:DataBase Alter Fath Current : c:program filesPITE 3830 Ground-Fault Locator/3830 mdb Back Next Finish Cancel	Input or Choose Target Catalog Path : (P) C:DataBase Catalog : (D) PTTE 3330 Ground-Fault Locator OK Uninstall Close Drive : (D) Close
Fig 4 2 1 8	Fig 4 2 1 0



⊢ıg 4.2.1.9

If it is not the first time for installation, users can select "use current path for database" and then click Next and then Finish to connect the current database.

4.2.2 Data Analysis

Data Analysis is for insulation test. It uses to analyze the insulation measuring data saved in the database.

Insulation Test





Fig 4.2.2.1

Click **Insul Test**, the screen of insul test is seen as below:

🛅 Insul Test		×	
	Test Date	:	
Totally record	Totally recorded 8 electrical Test Data		
OK	Delete	Close	

Fig 4.2.2.2

Device No.: The number of total devices which the Locator has tested.

Test Date: The date in which the device has tested by the Locator.

Click the specified device No. and then the test data will be showed on the right window of Test Date.

The total number of tested device and the total time of each tested device are showed at the window below. See screen:

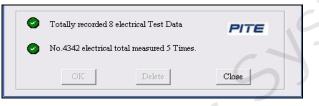


Fig 4.2.2.3

Click the specified date and then **OK** or double click the specified date, a window of the test data of the specified device in the current date will pop up like the screen:

1 Test Result: Devic	e No.: 1000 Dat	e: 2007-5-8 17:09:17
Device No.	Resistance(MQ)	Test Volt(V)
1#Point	211.1	1000
2#Point	228.3	1000
3#Point	210.2	1000
4#Point	0	0
5#Point	0	0
6#Point	0	0
Trendency Chart	Print	Close

The resistance and test voltage of each point of the device will be showed in the test report.

Click the button of Tendency Chart and then a screen of state analysis of the insul test will be showed. See screen:



0 1010 1	Analyzing: 9	 Feature: 🚺	•	
Insul MΩ	.7714			
	.6428			
	5142			
	.3857			
	2571			
	.1285			
	0 Close (C)	Date:		-

Fig 4.2.2.5

Print: The insul test report can be printed if click the button and then **Yes**. The screen of printed report is like this below:

		Insul Te	st Data Re	eport		
Report Date:	2010-7-17 10:11:34			Tester Sign;		
Device:	4342	Т	est Time:	2006-1-13 14:45:21		
Device No.	Resistance(MQ)	Test Volt(V)	Device No.	Resistance(MQ)	Test Volt(V)	
1#Point	9	1000	4#Point	.894	1000	
2#Point	.946	500	5#Point	1.8	250	
3#Point	.905	250	6#Point	.952	500	

Fig 4.2.2.6

4.2.3 Administrator

The administrator password of the system is **26880310**. For sure the safe of your measuring data, please take good care of your password.

1) Administrator Login

Click the "Admin" and then "Admin Login", a window of password input will pop up like this:

	🔭 Login 🛛 🔀
🗃 Gound-Fault Locator Data Management System	Password :
File(E) DataAnalysis(D) Admin(A) Help(H)	
S 🔹 🖉 🍸 🛛 Admin Login	OK

Fig 4.2.3.1

Fig 4.2.3.2

Input the password 26880310 and then a window of warming will pop up. See screen:





Fig 4.2.3.3

Click **OK** and you will log in the administrator.

Warming: In order to protect the rights of administrator, the password input can be tried no more than three times. If a warming window like below pops up, please restart the system and then try it again.

warn	
8	Password Error, sorry, the time you try is over 3 times, the Data cannot be Deleted
	<u>Ок</u>

Fig 4.2.3.4

Note: data delete is the function special for administrator. The data cannot be deleted only login the administrator.

2) Modify Password

Password can be modified in the following screen only after you log in the administrator.

Click "Admin" and then "Modify Password", a screen will be showed as below:

👫 Modify Password	
Old Password:	
New Password :	
Confirm:	
ОК	Cancel

Fig 4.2.3.5

Please input the old password, then new password twice and confirm by clicking the button **OK**. Then the password will be modified successfully.

3) Delete Data

The test data can be deleted only after you log in the administrator. It contains two types of data delete: **delete specified device data** and **delete specified date data**.

Click "Admin" and then "Delete Data", a screen of delete data will be showed as below:

🔽 Da	ita Delete			
Plea	se Choose Delete Data Type	1		
O	O Insul Test			
	Next			
Fig 4.2.3.6				

Select "Insul Test", and then click Next

1. Delete Specified Device Data



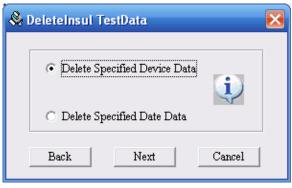


Fig 4.2.3.7

The function is used to modify the number of a tested device.

Select a device and then click **Delete** and **Yes**, the total test data of the device will be deleted. See screen as below:

Deleteinsul TestData	\mathbf{X}
Please select the	deleted device No.
Please Select	•
Please Select 1000 111	
2000	Cancel
Fig 4.2	.3.8
Warn	
Delete1000No.DeviceInsul TestData continue?	a , Delete operation cannot be resumed,still
	<u>Y</u> es <u>N</u> o
Fig 4.2	.3.9

2. Delete Specified Date Data

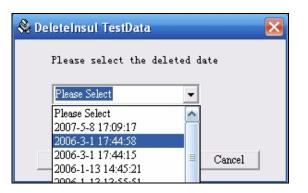
🗞 Deleteinsul TestData				
 Delete Specified Device Data Delete Specified Date Data 				
Back Next Cancel				

Fig 4.2.3.10

The function is used to delete the data of specified time in which a device is tested.

Select the date and then click **Delete** and **Yes**, the total data of the date will be deleted. See screen as below:





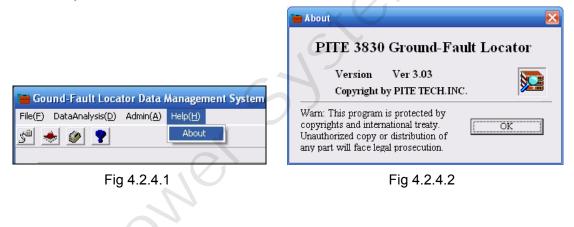


Warn Delete5/8/2007 5:09:17 PMmeasurementInsul be resumed, still continue?	TestData, Delete operation	n cannot
	<u>Y</u> es	No

Fig 4.2.3.12

4.2.4 About

Click "Help" and then "About", then a screen of the information of Locator will be showed as below:



5. SERVICE & MAINTENANCE

5.1 Cleaning

Clean PITE 3830 main unit and its accessories with soft damp cloth and a mild cleaner. Do not use abrasives, solvents, or alcohol, as they can deform or discolor the Locator and the accessories. After cleaning voltage testing clip with software cloth, clean it again with water and wipe it. Do not damage the metal part of the clips to ensure its accurate performance during testing.

WARNING: For your own safety, make sure that the main unit and accessories are not working and disconnected from the power supply before cleaning.



5.2 Storage

After using PITE 3830, put the main unit and all its accessories into the carrying case, store the case in ventilating place under proper temperature and humidity. Never expose the Tester and its accessories to water, high humidity, or dampness. If not used for some time, the Li-battery will discharge itself gradually. To keep its best performance, you are suggested to charge the battery periodically, like once a month.

6. FAQ

Q: Testing data has big error

A: Please check if battery and main unit are well connected. If not, correct it.

Q: Screen has no display after power on.

A: Please check if battery is power off. If so, charge it before testing.

Q: Keyboard becomes invalid or mixed up.

A: Please check if buttons are stuck in the key hole. If so, put them to pop up.

Q: Data management software could not get data.

A: Please check if network work fine or management software is properly installed.