EZCT-2000

VERSION 1.x SOFTWARE MANUAL

For Use with Vanguard's

EZCT-S2, EZCT-S2A, EZCT-2000, EZCT-2000A, EZCT-2000B

Current Transformer Testers





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TABLE OF CONTENTS

Figure 1. Test Record in EZCT-2000 Software and Microsoft Excel	19
Figure 2. Test Record in EZCT-2000 Software and in Plain Text Format	21
Figure 3. Typical Test Record Page (Excitation Test)	22
Figure 4. Test Record Page Displaying Current Ratio and Phase Error Tables	23
Figure 5. Typical EZCT-S2/EZCT-2000 Summary Report	24
Figure 6. Typical EZCT-2000B Summary Report	25
Figure 7. Typical Test Record Printouts	29

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CONVENTIONS USED IN THIS DOCUMENT

This document uses the following conventions:

- Microsoft[®] Windows XP and Vista will be simply referred to as Windows in this manual
- The general term "CT Tester" used in this manual refers to any of the EZCT-2000 compatible Vanguard Current-Transformer Testers (EZCT-S2, EZCT-S2A, EZCT-2000, EZCT-2000A, EZCT-2000B)
- Menu names are referred to as Menu Name
- Menu items are referred to as Menu Item
- Dialog boxes and their elements (buttons, options, etc.) are referred to as "Dialog Box Element"
- PC keyboard keys are referred to as [Key]. Key combinations are shown as [Key]+[Key].
- File locations, directories, and filenames are shown as "C:\folder\filename"
- Warning messages are indicated as:



Important notes are indicated as:



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1.0 INTRODUCTION

The EZCT-2000 software is a Windows-based PC software application for use with Vanguard's EZCT line of current-transformer testers (EZCT-S2, EZCT-S2A, EZCT-2000, EZCT-2000A, EZCT-2000B). This software allows users to perform the following tasks:

- Test a current-transformer directly from a PC.
- Create test plans for current-transformers.
 - o The test plan can be created on the PC and then transferred to the CT Tester.
 - A test plan can be used to quickly test a current-transformer and obtain test results.
 - A test plan can be retrieved from a CT Tester and saved on the PC hard drive.
- Export test records in Microsoft[®] Excel[®] format.
- Retrieve test records stored in a CT Tester.

1.1 System Requirements

The EZCT-2000 software has the following minimum system requirements:

- PC running Microsoft[®] Windows[®] XP/Vista/7/8/8.1
- 2 Megabytes of hard drive space
- CD-ROM or DVD-ROM drive
- RS-232C (serial) port or USB port

2.0 SOFTWARE INSTALLATION

Follow the steps below to install the EZCT-2000 software on your PC.

- 1. Insert the installation CD in the PC's CD or DVD drive.
- 2. From the Windows Desktop, click on the "Start" button to bring up the Start Menu.
- 3. From the *Start Menu*, click on *My Computer* to open the My Computer window.
- 4. Double click (or single click in some Windows configurations) on your CD/DVD Drive icon to navigate the installation CD. The contents of the CD will be listed as shown below:



5. Double click (or single click in some Windows configurations) on the *"EZCT-2000 Software Rev 1.x.exe"* file to start the installation process. The EZCT-2000 InstallShield Wizard will appear as shown below:

EZCT-2000 - InstallShield	Wizard	×
N	Welcome to the InstallShield Wizard for EZCT-2000	
	The InstallShield Wizard will install EZCT-2000 on your computer. To continue, click Next.	
	< <u>B</u> ack <u>Next</u> > Cance	:

6. Click on the "Next" button to continue. The following screen will be displayed showing the location on your hard drive where the software will be installed (C:\Vanguard\EZCT-2000):

EZCT-2000) - InstallShield Wizard	
Choose D Select fo	Destination Location Ider where setup will install files.	
	Install EZCT-2000 to: c:\Vanguard\EZCT-2000	Change
InstallShield -		<pre>< Back Next > Cancel</pre>

7. You may choose a different installation location by clicking on the "Change..." button and then browsing to the location on your hard drive where you would like to install the software. If you would like to install the software in the default location, click on the "Next" button to continue. The following screen will be displayed:

EZCT-2000 - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
InstallShield	

8. Click on the "Install" button. The InstallShield Wizard will copy files to your hard drive. The following screen will be displayed once the software has been successfully installed:

EZCT-2000 - InstallShield	Vizard	
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed EZCT-2000. Click Finish to exit the wizard.	
	< Back Finish Cancel	

9. Click on the "Finish" button to close the InstallShield Wizard and complete the installation process.

3.0 STARTING AND CONFIGURING THE EZCT-2000 SOFTWARE

During the installation process, a Vanguard program group will be created under the *All Programs* submenu in the Windows *Start* menu. To launch the EZCT-2000 software:



You can create a shortcut on your desktop to speed up the application launching process. Please see the Microsoft Windows Help and Support Center (can be accessed by pressing the F1 key when viewing the Windows desktop) for information on how to create shortcuts.

- 1. Click on the Windows "Start" menu button to open the *Start Menu*.
- 2. Click on the All Programs menu item.
- 3. Click on the *Vanguard* menu item.
- 4. Click on the *EZCT-2000* menu item. The EZCT-2000 main application window will appear as shown below:



3.1 Main Menu Item Descriptions

The EZCT-2000 Main Menu bar features the following menus:

- File:
 - o Create and transfer test plans
 - o Retrieve test records from the hard drive or from a CT Tester
 - Configure system parameters and options
 - o Use various file utilities
 - o Run tests
 - o Print test records
 - o Exit the program
- *Recall-Test*: Recall test records from the PC hard drive for viewing
- Run-Test: Run a test plan
- *Retrieve-Test*: Retrieve test records from a CT Tester
- Test-Plan: Create, retrieve, modify, and transfer test plans
- File-Utilities: Access the test records directory and export test records
- Application: Configure application setup parameters
- Help: View basic version information about the software and the connected CT Tester

EZCT-2000 Software Main Menu Structure

Help	About											
Application												
File-Utilities	File Manipulation	Export Test to Text File										
Test-Plan	Create Test Plan	Mouny test Plan to device Transfer Test Plan to device Retrieve Test Plan from device										
Retrieve-Test												
Run-Test			Create Test Plan	Modify Test Plan Transfer Test Plan to device	Retrieve Test Plan from device	File Manipulation	Export lest to Excel Export Test to Text File					
Recall-Test			•		lecord from Device	•	to Panel Control	etup				
File	Recall Test	Close Test Save Test	Test Plan	Run Test	Retrieve Test F	File Utilities	Return Device	Application St	Print Print Preview Print Setup	Recent File	Exit	

3.2 Application Setup

Before using the program, the application setup parameters should be reviewed and changed as required. To change the setup parameters:

- 1. Make sure the EZCT-2000 software is running on the PC.
- 2. Click on the *Application* menu (Alternatively you can click on the *File* menu and select *Application Setup...*). The following window will be displayed:

Application Setup	\mathbf{X}
 Default Print Orientation O Landscape O Portrait 	Communications Use USB port COM Port: COM1:
Localization Frequency: 60 Hz Summary Page Display	Date Format: (US) MM/DD/YY
Select tap and then press up or down to change order.	Order Tap 1 X1-X2 2 X1-X3 3 X1-X4 4 X1-X5 5 X2-X3 6 X2-X4 7 X2-X5 8 X3-X4 9 X3-X5 10 X4-X5
Test Record Path C:\Vanguard\EZCT-2000\ Test Plan Path C:\Vanguard\EZCT-2000\	Test Plans Edit
	OK Cancel

a. Default Print Orientation

Select the default print orientation for printing test results by clicking on either the "Landscape" (horizontal) or "Portrait" (vertical) radio button. The landscape orientation is recommended for printing test records.

b. Communications

If the CT Tester is connected to the PC via the USB port, check the "Use USB port" checkbox. You can ignore the "Port:" drop down lists.

If the CT Tester is connected to the PC via the RS-232C (serial) port, un-check the "Use USB port" and select the correct COM: port from the "Port:" drop-down list.

c. Localization

Select the correct frequency from the "Frequency:" drop-down list (60 Hz or 50 Hz).



The frequency selection is for test record reference only. The CT's are tested at the supplied line voltage and frequency.

Select the preferred date format from the "Date Format:" drop-down list.

d. Summary Page Display

In this section you can configure the order the tap information is displayed on the summary page of a test record (see section 4.6). To change the order of a tap, click on the tap and then click on either the up arrow or the down arrow to the right of the list. The selected tap will be moved up or down on the list respectively. The tap order information is stored with each test record.

e. Test Record Path

The default location where test records are stored on the PC hard drive is listed in the "Test Record Path" section. You can change the default test record storage location by clicking on the "Edit" button and then selecting a different folder.

f. Test Plan Path

The default location where test plans are stored on the PC hard drive is listed in the "Test Plan Path" section. You can change the default test plan storage location by clicking on the "Edit" button and then selecting a different folder.

3. Click on the "OK" button to apply all changes to the application settings. The settings will be permanently stored for the current and any future sessions.

3.3 Printer Setup

To setup the printer:

1. Click on the *File* menu and select *Print Setup...* The following window will be displayed:

Print Setu	p			? 🗙
Printer				
Name:	Brother HL-5240 series		-	Properties
Status:	Ready			
Type:	Brother HL-5240 series			
Where:	USB001			
Comment	:			
Paper			Orientatio	n
Size:	Letter	•		Portrait
Source:	Auto Select	•	Ă	C Landscape
Network.			OK	Cancel

- 2. Select the printer you would like to use from the "Name" drop-down list.
- 3. Select the appropriate options for the printer.
- 4. Click on the "OK" button.

4.0 WORKING WITH TEST RECORDS

The EZCT-2000 software can be used to retrieve test records from a CT Tester or from the PC hard drive. Once a test record is retrieved, you can change the record header information, print the test results, change the nameplate ratio values, change the knee point marker, change the frequency, add or modify test notes, and save the record to the hard drive.

4.1 Retrieving Test Records From a CT Tester

To retrieve a test record from a CT Tester:

1. Make sure the EZCT-2000 software is running. Connect the CT Tester to the PC via either the RS-232C port or the USB port.



2. Click on the *Retrieve-Test* menu (alternatively you can click on the *File* menu and then select *Retrieve Test Record From Device...*). A window will appear listing a directory of all the test records stored in the CT Tester's memory as shown below:

Device Directory				
Test Date 0002 07/31/09 07:37 0001 07/31/09 07:30	Company	Stati	on Circui	t
File Prefix: Test				
		Download Test	Canc	el

3. You can select a test record to be retrieved by clicking on the test record number. The selected record will be highlighted. You may select multiple records by holding down the [CTRL] key and clicking on the record numbers. All selected records will be highlighted. You may de-select a selected record by holding down the [CTRL] key and clicking on the selected record number a second time.

4. The "File Prefix" input field allows you to enter a word that will be used as part of the filename for the stored record on the PC hard drive. When a test record is retrieved from a CT Tester and stored on the hard drive, the filename is in the following format:



So if you would like the filename to be "*sample_test1.test*", enter the word *sample_test* in the "File Prefix" input field.

5. Click on the "Download Test" button. The following window will be displayed:

Select folder to save to	
E 🕼 Desktop	
B. Wy Computer	
🗈 🥯 Local Disk (C:)	
⊞ 💽 TTRA-S2 (D:)	
🕀 🥪 My Book (E:)	
Documents	
€ Tamim's Documents	
🗐 🐨 My Network Places	
Downloads	
1	
OK Cancel	

6. Browse to the folder where you would like the test record(s) to be saved and then click on the "OK" button. The selected test record(s) will be retrieved from the CT Tester and saved in the selected folder. The last test record that was retrieved will be displayed in the EZCT-2000 software.



To overwrite the existing file, click on the "Yes" button.

If you do not want to overwrite the existing file with the retrieved test record, click on the "No" button. The following window will be displayed:

OK Cancel

Enter a new file name for the retrieved test record and then click on the "OK" button. The test record will be retrieved from the CT Tester and saved with the new file name at the selected location.

4.2 Recalling a Test Record From the PC Hard Drive

Test records stored on the PC hard drive can be recalled using the steps below:

1. Click on the *Recall-Test* menu (or click on the *File* menu and select *Recall Test*). The following window will be displayed:

Open Test								
hot Path:	C:\Working	g Directory\Do	cuments and Fo	orms\Product Ma	nuals\EZCT-2000B Softv	vare Manual\ezct2000records		Shot Path
Filename	V	Date		# Tests	Company	Station	Circuit	
33453-Pol 33453 tes	lanity1.test	07/16/09	10.07.05	10	Vanguard ViC	LAB LAB2		
								OK Cancel

- The "Shot Path:" section at the top of the window displays the name of the directory where the test records are being retrieved from. If you wish to retrieve records from a different directory, click on the "Shot Path" button and browse to the folder containing the test records.
- You can click on a column heading to sort the test records based on the column heading name (filename, date, number of tests, company, station, or circuit). An arrow next to the heading name will indicate whether the list is sorted in ascending or descending order. Click on the heading again to reverse the sort order.
- Click on the filename you would like to retrieve and click on the "OK" button. The test record will be loaded and the tabulated test results will be displayed (please see section 4.6 for details).

4.3 Saving a Test Record

4.3.1. Saving a Test Record With Its Original Filename

1. If changes have been made to the current test record and you would like to save it with its original filename, click on the *Save* menu and select *Overwrite*.

Alternatively, you can select the *Save Test* option from the *File* menu.

NOTE

2. The test record will be saved with its original filename.

4.3.2. Saving a Test Record With a Different Filename

1. To save an open test record with a different filename, click on the *Save* menu and select *Save As*. The following window will be displayed:

Save As							? 🛛
Save in:	azct2000recon	ds	*	6	1 🖻	•	
My Recent Documents	🖬 93459.test 🖬 93459-Polarity1	.test					
Desktop							
My Documents							
Wy Computer	File name:				~]	Save
My Network	Save as type:	Test (*test)			*]	Cancel

- 2. Browse to the folder where you would like to save the test record.
- 3. Enter the filename in the "File name:" input field.
- 4. Click on the "Save" button. The test record will be saved with the new filename.

4.4 Opening the Test Records Folder

To quickly access the default test record storage folder:

1. Click on the *File-Utilities* menu and then select *File Manipulation* (Alternatively you can click on the *File* menu, click on *File Utilities*, and then select *File Manipulation*). The default test record storage folder will be opened in Windows Explorer as shown below:



2. You can use standard Windows Explorer commands to copy, move, or delete the test record files.

4.5 Exporting a Test Record in Microsoft[®] Excel[®] Format

You can export one or more test records in Microsoft[®] Excel[®] format. To export a test record in Excel[®] format:

 From the *File-Utilities* menu, click on *Export Test to Excel* (alternatively you can click on the *File* menu, click on *File Utilities*, and then select *Export Test to Excel*). The following window will be displayed:



2. If the test record you would like to export is not in the current directory, click on the "Shot Path" button at the top right of the window and browse to the directory containing the file. Once you have located the test record to be exported, click on the file name. You may select additional test records by holding down the [CTRL] key and clicking on each subsequent file name. Once you have selected the test record(s) to be exported, click on the "OK" button. The following window will be displayed:

Browse for Folder
Select folder to save to
Complete My Documents My Computer My Computer My Computer My Coll Disk (C:) Documents My Book (E:) Documents My Digital Camera My Digital Camera My Network Places Downloads
OK Cancel

3. Browse to the folder where you would like the Excel[®] file(s) to be saved and click on the "OK" button. Figure 1 shows a test record in the EZCT-2000 software compared with the exported data in Excel[®].



Figure 1. Test Record in EZCT-2000 Software and Microsoft Excel

4.6 Exporting a Test Record to a Text File

Test records can also be exported to a plain text file. To export a test record to a text file:

 From the *File-Utilities* menu, click on *Export Test To Text File* (alternatively you can click on the *File* menu, click on *File Utilities*, and then select *Export Test to Text File*). The following window will be displayed:

Open Test						
Shot Path: C:Wangua	rd\EZCT-2000\Test Record	3				Shot Path
Filename 🗸	Date	# Tests	Company	Station	Circuit	
Test2.test Test1.test test.test Sample2.test Sample1.test sample11.test	07/31/09 07:37:22 08/20/09 13:41:25 07/16/09 09:16:04 07/31/09 07:37:22 07/31/09 07:30:01 08/20/09 13:41:25	2 1 10 2 1	VIC	LAB2		
DL Test9.test 93459-Polarity1.test 93459.test 1.test	07/06/09 15:59:34 07/16/09 10:07:05 07/16/09 09:16:04 07/31/09 07:30:01	3 2 10 1	VANGUARD Vanguard VIC	A LAB LAB2	3	
						OK Cancel

2. If the test record you would like to export is not in the current directory, click on the "Shot Path" button at the top right of the window and browse to the directory containing the file. Once you have located the test record to be exported, click on the file name. You may select multiple test records by holding down the [CTRL] key and clicking on each subsequent file name. Once you have selected the test record(s) to be exported, click on the "OK" button. The following window will be displayed:

Browse for Folder
Select folder to save to
Besktop My Documents My Computer My Coll Coll Disk (C:) Decal Disk (C:) TTRA-S2 (D:) My Book (E:) My Documents My Digital Camera My Digital Camera My Network Places Downloads
OK Cancel

3. Browse to the folder where you would like the text file(s) to be saved and click on the "OK" button. Figure 2 shows a test record in the EZCT-2000 software compared with the exported data in plain text format.



Figure 2. Test Record in EZCT-2000 Software and in Plain Text Format

4.7 Working with Tabulated Test Results

Once a test record has been retrieved (see sections 4.1 and 4.2 for instructions), the record details will be displayed as shown in Figure 3 below:

Fie Cose Save Pint Hep FILENARE: DL Test5.test NFR: 4 TEST # 1: X1-X2 DATE: 07/06/09 15:59:34 MODEL: 5 TEST NOTES: STATION: A OPERATOR: 9 C TEST NOTES: STATION: A OPERATOR: 9 C TREST NOTES: TEE 30 VEE 45 TEC 10/50 TEE 40 TEC 10/50 NP-PATIO: 1000/5 Ex TVPC: TEE 30 Deg Typ[Volts1: 121.04 Vep[Volts1: 105.40 Vpp[Volts1: 122.04 NP-PATIO: 200.021 Ex TVPC: TEE 30.16 Typ[Aupp1: 0.0754 Tsp[Amp1: 0.0634 Tsp[Amp2: 0.0844 E EBROR: 0.0106 Minding Res: 309.18 Imili - ohms Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Torrest Tarrest Torrest Torrest Torrest Torrest Torrest Torrest	Vanguard EZCT-2000 Software Version 1.27			
FILENALE: DL Test5.test MFR: 4 TEST # 1: X1-X2 DATE: 07/06/09 10:39:34 MODEL: 5 NEE TYPE: IEEE 30 Deg STATION: A DPERATOR: 0 DPERATOR: 0 PREMOVE: 0 CAMPARY: VANCUARD SI: 6 DPERATOR: 0 PREMOVE: 0 CAMPARY: 7 TEEE 45 DPERATOR: 0 PREMOVE: 0 PREMOVE: 0 VAP(VOLTe1: 121.04 VAP(VOLTe1: 125.04 VAP(VOLTe1: 129.04 MATE: VYPE: IEEE 30 Deg TEEE 40 TEST 40:05 NP-PATIO: 1200.051 Ex (VVolte1: 78.400 Phase Angle: 0.06' VAP(VOLTe1: 121.04 VAP(VOLTe1: 125.04 MATE: VYPE: IEEE 30 Deg In Phase 1000 V TEST 40:05 NP (Note: 10:060 NOT Note: VYPE: VOLTe1: 100.050 In Phase 1000 V TEST 40:05 NOT NOT Note: VYPE: VOLTe1: 100.050 Note: VYPE: VOLTe1: 100.050 In Phase 1000 V TEST 40:00 NOT Note: VYPE: VOLTe1: 100.050 1000 V TEST 40:00 NOTE: VOLT: VOLTE: VOLT: VOLT: VOLTE: VOLT: VOLTE: VOLTE: VOLT: VOLTE: VO	File Close Save Print Help			
FILENDAGE: EL Tave3. teat: LFT: 4 TEST 10/16/00 15:53:34 LEE: 4 TEST 10/16/16 LEE: 4/2 LEE: 4/2 LEE: 4/2 LEE: 10/16/16 LEE: 4/2 LEE: 4/2 <thlee: 2<="" 4="" th=""> <thle: 2<="" 4="" th=""> LEE: 4/2 <</thle:></thlee:>				
IEEE 30 IEEE 45 IEC 10/50 NP-RATID: 1000/5 Ex V[Volts]: 78.400 Phase Angle:0.06* Vhp[Volts]: 121.84 Vhp[Volts]: 105.48 Vhp[Volts]: 120.94 M-RATID: 200.021 Ex I[Amps]: 0.050 In Phase Ibp[Amps]: 0.0754 Ikp[Amps]: 0.0634 Ikp[Amps]: 0.064 Ikp[Amps]: 0.064 Ikp[Amps]: 0.056 In Phase 10000 Impose 1 Impose 2 Impose	FILENAME: DL Test9.test MFR: 4 DATE: 07/05/09 15:59:34 MODEL: 5 COMPANY: VANGUARD SN: 6 STATION: A OPERATOR: 8 □ CIRCUTT: 3 COMMENTS: 7	TEST TEST N INTE FREQU	# 1: X1-X2 DTES: TYPE: IEEE 30 Deg ENCY: 60 Hz	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	IEEE 30 IEEE 45 IEC 10/50	NP-RATIO: 1000/5	Ex V[Volts]: 78.400	Phase Angle:0.06°
Itp[Amps]: 0.0754 $Itp[Amps]: 0.0634 $ $Itp[Amps]: 0.0644 $ $PEROR: 0.0106 $ $Minding Res: 309.18 mill-chass$ $C transform Pier Pier Pier Pier Pier Pier Pier Pier$	Vkp[Volts]: 121.84 Vkp[Volts]: 105.48 Vkp[Volts]: 12	9.04 M-RATID: 200.021	Ex I[Amps]: 0.050	In Phase
10000 Thereases for Plot 10000 Thereases for Plot 100000 100000 100000 100000 100000 100000 100000 100000 100000 1000000 1000000 1000000 1000000 1000000 1000000 10000000 10000000 10000000 100000000 100000000 1000000000 100000000000 10000000000000 1000000000000000000000000000000000000	Ikp[Amps]: 0.0754 Ikp[Amps]: 0.0634 Ikp[Amps]: 0.06	844 % ERROR: 0.0106	Winding Res: 309.18 mill	-ohms
S 0.0000 7.80 14 1.0000 139.98 189.98 0 0.0100 9.07 01.000 17 2.0000 181.07 81.83 7 0.0200 2.0100 181.07 81.03 1 0.0000 100 <td>Image: constraint free intermediate free intermediate</td> <td>CT DATA POINTE POINT CER(A) POINT (A) POINT CER(A) POINT CER(A)<!--</td--><td>VT2 (V) 2 (OMD) POIDE CEA (LA) VT 0.00 44 0.0214 C 0.00 44 0.0244 C 0.00 44 0.0243 E 0.00 47 0.0243 E 0.00 40 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.42 201.12 EO 0.0242 E 0.44 67.024 E 0.1052 E 1.45 501.024 E 0.1052 E E 1.46 601.90 E 0.1052 E E E 2.13 F00.48 E 0.2024 E E E E 1.42 E1.24 E E E E E E E E E E <t< td=""><td>0(7) 2 (080) 44 1341.43 84 1345.43 43 1395.14 6.74 1461.37 9.35 161.37 9.36 1232.43 2.22 130.13 8.37 973.70 9.38 160.31 1.30 838.03 8.26 260.74 1.30 838.03 8.26 260.74 1.34 264.48 9.37 264.48 9.38 265.03 1.42 284.03 1.43 284.03 1.44 130.03 2.37 26.37 3.38 76.92</td></t<></td></td>	Image: constraint free intermediate	CT DATA POINTE POINT CER(A) POINT (A) POINT CER(A) POINT CER(A) </td <td>VT2 (V) 2 (OMD) POIDE CEA (LA) VT 0.00 44 0.0214 C 0.00 44 0.0244 C 0.00 44 0.0243 E 0.00 47 0.0243 E 0.00 40 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.42 201.12 EO 0.0242 E 0.44 67.024 E 0.1052 E 1.45 501.024 E 0.1052 E E 1.46 601.90 E 0.1052 E E E 2.13 F00.48 E 0.2024 E E E E 1.42 E1.24 E E E E E E E E E E <t< td=""><td>0(7) 2 (080) 44 1341.43 84 1345.43 43 1395.14 6.74 1461.37 9.35 161.37 9.36 1232.43 2.22 130.13 8.37 973.70 9.38 160.31 1.30 838.03 8.26 260.74 1.30 838.03 8.26 260.74 1.34 264.48 9.37 264.48 9.38 265.03 1.42 284.03 1.43 284.03 1.44 130.03 2.37 26.37 3.38 76.92</td></t<></td>	VT2 (V) 2 (OMD) POIDE CEA (LA) VT 0.00 44 0.0214 C 0.00 44 0.0244 C 0.00 44 0.0243 E 0.00 47 0.0243 E 0.00 40 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.02 201.02 H 0.0242 E 0.42 201.12 EO 0.0242 E 0.44 67.024 E 0.1052 E 1.45 501.024 E 0.1052 E E 1.46 601.90 E 0.1052 E E E 2.13 F00.48 E 0.2024 E E E E 1.42 E1.24 E E E E E E E E E E <t< td=""><td>0(7) 2 (080) 44 1341.43 84 1345.43 43 1395.14 6.74 1461.37 9.35 161.37 9.36 1232.43 2.22 130.13 8.37 973.70 9.38 160.31 1.30 838.03 8.26 260.74 1.30 838.03 8.26 260.74 1.34 264.48 9.37 264.48 9.38 265.03 1.42 284.03 1.43 284.03 1.44 130.03 2.37 26.37 3.38 76.92</td></t<>	0(7) 2 (080) 44 1341.43 84 1345.43 43 1395.14 6.74 1461.37 9.35 161.37 9.36 1232.43 2.22 130.13 8.37 973.70 9.38 160.31 1.30 838.03 8.26 260.74 1.30 838.03 8.26 260.74 1.34 264.48 9.37 264.48 9.38 265.03 1.42 284.03 1.43 284.03 1.44 130.03 2.37 26.37 3.38 76.92

Figure 3. Typical Test Record Page (Excitation Test)

The menus on the menu bar will also change to provide additional options relevant to working with a test record.

A test record usually consists of multiple pages. Press the **[Page Down]** or **[Page Up]** key to view the next or previous page, respectively. Figure 4 below is an example of a test record page displaying the current ratio and phase error tables (EZCT-2000/2000B only):

/anguard EZCT-2000 Software V	/ersion 1.27							
Close Save Print Help								
FILENAME: DL Test9.test DATE: 07/06/09 15:5 COMPANY: VANGUARD STATION: A CIPCUIM: 2	t 59:34 Mi OPERJ	MFR: 4 DDEL: 5 SN: 6 ATOR: 8 []		TEST TEST NO KNEE T FREQUE	# 1: X1-X2)TES: 'YPE: IEEE 30 !NCY: 60 Hz	Deg		
TREE 30 TRE	EE 45	TEC 10/50	NP-BATTO: 100	0/5	Ex VIVoltal:	78 400	Phase A	nale:0.06°
Wentwoltel: 121 94	p[Voltal: 105.49	Van [Volto]: 129.04	M-PATTO: 200	021	Ex T[Amma]: 0	050	To Dhoo	
The (Armel: 0.0754 The	p[Voits]. 105.48	Vxp[V0103]: 123.04	A ERROR: 0.01	021	Ex I[Amps]. U	200.10	In Phase	
Ixp[Amps]. 0.0754 IXp	p(Ampa). 0.0654	1xp[Amps]. 0.0844	S ERROR. 0.03	.00	winding Kes.	309.10 MII	1-Onns	
				BURDS VA/CDS 010.00/0.40 005.00/0.40 001.25/0.40 001.25/0.40 005.00/0.40 005.00/0.40 001.25/0.40 001.25/0.40	CURRENT R 58 -00.178* -00.178* -00.08* -00.08* -00.08* -00.078* 0 -00.078* 0 -00.078* 0 -00.078* -00.078* 0 -00.078* 0 -00.00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.078* 0 -00.088* 0 -00.078* 0 -00.078* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088* 0 -00.078* 0 -00.088* 0 -00.088*	ATIO ERROR 10% -00.17%* -00.128* -00.08%* -00.08%* -00.08% -00.08% -00.08% -00.06% -00.06% -00.04%	TABLE CURRENT 208 -00.148 -00.099 -00.099 -00.099 -00.099 -00.089 -00.088 -00.058 -00.058 -00.058 -00.058	(5.0 Å) 40% -00.10% -00.00% -00.00% -00.05% 200% -00.05% -00.05% -00.05% -00.04% -00.04% -00.04% -00.04%
				BURDE	PHASE (PHASE ER EN PER	ERROR TABL ROR IN MIN CENT RATED	E UTES) CURRENT	(5.0 A)
.001 A .01 .	A 0.1 A 1	.0 A 10 A		010.00/0 40	000.52*	000.52*	000.32	408
				005.00/0.40	001.33*	001.32*	001.15	000.80
				002.50/0.40	001.73*	001.73*	001.64	001.18
				001.25/0.40	001.93*	001.93*	001.90	001.38
				550.00/1.00	002.12*	002.14*	002.13*	001.00
				VA/COS	50%	100%	120%	200%
				010.00/1.00	002.33	001.92	001.85	001.62
				005.00/1.00	001.91	001.48	001.41	001.27
				002.50/1.00	001.69	001.28	001.20	001.08
				001.25/1.00	001.57	001.18	001.10	000.97
	(Double click to edit	file)		550.0071.00	Note: "*"	Estimated	value	500.00
	(Double click to ear				noce.	25 orma ded	sarae	
								NUM

Figure 4. Test Record Page Displaying Current Ratio and Phase Error Tables (EZCT-2000/2000B Only)

The last page of the test results contains a summary report. Figure 5 shows a typical summary report. Figure 6 shows a typical EZCT-2000B summary report with the insulation resistance test and burden test results.

Vanguard EZ	T-2000 Software	Version 1.27								
Close Save	Print Help									
FILENA DA COMPA STATI CIRCU	FILENAME: 93459.test MFR: SUMARY REPORT DATE: 07/16/09 09:16:04 MODEL: EZCT-2000 KNEE TYPE: TEEE 30 Deg COMPANY: VIC SN: 93459 FREQUENCY: 60 Hz STATION: LAB2 OPERATOR: VN COMMENTS:									
Test	Тар	IEEE30	IEEE45	IEC 10/50	NP-Ratio	M-Ratio	8 Error	Phase Angle	Winding Res	
1	X1-X3	408.52	331.04	460.56	440/1	439.866	0.0305 %	-0.02°	477.50 m-ohms	
2	X1-X2	185.36	148.88	208.44	200/1	199.829	0.0854 %	0.08°	211.14 m-ohms	
3	X1-X4	462.60	375.60	520.52	500/1	499.932	0.0135 %	0.06°	550.75 m-ohms	
4	X1-X5	554.32	452.12	628.84	600/1	599.556	0.0741 %	0.00°	670.11 m-ohms	
5	X2-X3	222.00	180.20	250.96	240/1	239.935	0.0269 %	0.04°	269.46 m-ohms	
6	X2-X4	278.80	223.72	313.28	300/1	299.732	0.0894 %	0.04°	342.76 m-ohms	
7	X2-X5	369.40	304.72	418.16	400/1	399.851	0.0374 %	0.04°	461.88 m-ohms	
8	X3-X4	55.52	43.76	63.04	60/1	59.998	0.0038 %	0.02°	75.35 m-ohms	
9	X3-X5	148.28	119.84	166.72	160/1	159.948	0.0328 %	0.04°	194.81 m-ohms	
10	X4-X5	92.48	74.92	104.68	100/1	99.997	0.0030 %	-0.02°	122.24 m-ohms	
2000 1000 100										
dv.		(Double cli	ik to edit file)						NUM SCR	

Figure 5. Typical EZCT-S2/EZCT-2000 Summary Report

REV 1 EZCT-2000 VERSION 1.x SOFTWARE MANUAL

FILENAI DA COMPAI STATI CIRCU	ME: DL Test9.test TE: 07/06/09 15:59 NY: VANGUARD DN: A IT: 3	9:34	MFR: 4 MODEL: 5 SN: 6 OPERATOR: 8 COMMENTS: 7			KNEE TYPE: FREQUENCY:	SULMAR IEEE 30 60 Hz	Y REPORT O Deg	,		
est	Tap	IEEE30	IEEE45	IEC 10/50	NP-Ratio	M-Ratio	8 Erro	r	Phase Angle	Winding Res	
	X1-X3	270.52	228.32	283.04	2200/5	439.876	0.0283	8	0.12°	624.46 m-ohms	
	X1-X2	121.84	105.48	129.04	1000/5	200.021	0.0106	8	0.06°	309.18 m-ohms	
	X1-X4	312.88	264.20	320.48	2500/5	499.893	0.0213	8	0.08°	707.16 m-ohms	
200		.1A	1.0 Å	Test He just a	CURRENT: RESISTANCE: 	10.06 HEER-A 99.44 HEE-DHE	1075 5	MEASUREI MEASUREI TAPEDANG BURDEN: POWER FJ	0 UURRENT: 4.999 0 VOLTAGE: 0.52 CE (2): 0.10 ACTOR: 1.00	2 A 8 V, 0.97 DEG 6 DHIS 7 VA	
		(Double clic	k to edit file)								

Figure 6. Typical EZCT-2000B Summary Report with Insulation Resistance and Burden Test Results

The summary report lists the taps in the order configured in the Application Setup window (see section 3.2). If you wish to change the tap order:

- 1. Close the test record.
- 2. Change the tap order in the Application Setup window (see section 3.2)
- 3. Re-open the test record and view the last page. The tap information will now be listed in the order configured in the Application Setup window.

4.7.1. Editing a Test Record

To edit a test record:

 Double click anywhere on the displayed test record. The following window will be displayed:

						_					_	
Company:	VANGUARD		Mode	el: E	5				Select tap	and then	Order	Tap V1.V3
Station:	A		SN:	e	6				change or	r down to der.	2	X1-X2
Sircuit:	3		Oper	ator: 8	8 🗆]		4	X1-X4 X1-X5
Mfr:	4		Comr	nents:	7]		5	X2-X3 X2-X4
inee Point M	larker: IEEE 30 deg	~	Frequ	iency:	60 Hz	~		tepad)		7 8 9	X2-X5 X3-X4 X3-X5
											10	X4-X5
		Ratio	Excitation	Winding Res Test	Excitati	on	Excitation	Curr	ent Ratio			Peneat
	Nameplate Ratio	Test	(Cot	nes rest	Voltage		Current	Erro	r Calculation	Test Note		Test
·X2	1000 / 5				300	1	2	Y	Edit			
X3	2200 / 5				500	\sim	2	~	Edit			
N4	2500	Y			1200	~	2	×	Edit			

- 2. You can edit the test record header information (such as Company, Station, Circuit, Manufacturer, etc.) by entering data in the corresponding fields at the top of the screen.
- 3. You can also change the knee point marker and the frequency. The nameplate ratios for each tap connection can be edited as well. Test notes can be added or modified for each tap connection.
 - If the knee point marker is changed, the CT Excitation Plot will be updated accordingly to display the selected knee point marker.
 - **NOTES** If the nameplate ratio is changed for a tap connection, the percentage error will be automatically re-calculated.
 - The frequency is for reference only. The CT test is conducted at the supplied line voltage and frequency.
- 4. You can access the Notepad by clicking on the "Notepad" button. Enter any relevant notes about the test in the Notepad and then click on the "OK" button.

REV 1 EZCT-2000 VERSION 1.x SOFTWARE MANUAL

5. You can change the tap order for the summary report display (last page of the test record) by clicking on a tap and then clicking on the up or down arrow to the right of the dialog box. The selected tap will be moved up or down on the list respectively. The summary report will then display the information for each tap in this order as shown below:



6. If you have a CT Tester connected to the PC, you can quickly repeat any of the tests listed. Click on the "Repeat Test" check box next to the test that you would like to run. The test options will become active as shown below:

	Nameplate Ra	atio		Ratio Test	Excitation Test	Winding Res Test	Excitation Voltage	r	Excitation Current	Current Ratio Error Calculation	Test Note	Repeat Test
X1-X2	1000	1	5				300	~	2	 Edit 		

- You can change the nameplate ratio values by changing the high and low values.
- You can select which tests to run by checking or un-checking the corresponding check box for each test (Ratio Test, Excitation Test, Winding Res Test).
- You can select the excitation voltage from the "Excitation Voltage" drop-down list.
- The excitation current can be selected from the "Excitation Current" drop-down list.
- The current ratio error calculation settings can be set by clicking on the "Edit" button under the column heading.
- Any relevant test notes can be entered in the "Test Note" field.

Once you have configured the parameters for the test, click on the "Repeat Tests" button at the bottom of the window. The selected tests will be performed and the test record will be updated with the new test results.

7. Click on the "OK" button after you have made any necessary changes. Also, make sure to save the test record in order to retain any changes (see section 4.3).

4.7.2. Printing the Tabulated Test Results

To print the tabulated test results:

- 1. Click on the *Print* menu (Alternatively you can click on the *File* menu and then select *Print*...). The print dialog box will appear.
- 2. Select the printer to print to and make any necessary changes to the printer's parameters and then click on the "OK" button. The test results will be printed. Sample test record printouts are shown in Figure 7.

REV 1 EZCT-2000 VERSION 1.x SOFTWARE MANUAL



Figure 7. Typical Test Record Printouts

5.0 WORKING WITH TEST PLANS

The EZCT-2000 software can be used to create current-transformer test plans. Test plans can then be run from the PC or transferred to the CT Tester to be run from the CT Tester (in standalone mode). Test plans can also be retrieved from a CT Tester using the EZCT-2000 software.

5.1 Retrieving Test Plans From a CT Tester

To retrieve a test plan from a CT Tester:

- 1. Make sure the EZCT-2000 software is running. Connect the CT Tester to the PC via either the RS-232C port or the USB port.
- From the *Test-Plan* menu select *Retrieve Test Plan from device* (alternatively you can click on the *File* menu, click on *Test Plan* and then select *Retrieve Test Plan from device*). A window will appear listing a directory of all the test plans stored in the CT Tester's memory as shown below:

Test Plan Directory				
Plan Knee Type	Company	Station	Circuit	1
0001 IEEE 45 Deg	Vanguard Instruments	Lab		
Select All	Filename Prefix: plan		ΟΚ	Cancel

- 3. You can select a test plan to be retrieved by clicking on the test plan number. The selected test plan will be highlighted. You may select multiple test plans by holding down the **[CTRL]** key and clicking on the test plan numbers. All selected test plans will be highlighted. You may de-select a selected test plan by holding down the **[CTRL]** key and clicking on the selected test plan number a second time. To select all of the test plans, click on the "Select All" button.
- 4. The "Filename Prefix" input field allows you to enter a word that will be used as part of the filename for the stored test plan on the PC hard drive. When a test plan is retrieved from a CT Tester and stored on the hard drive, the filename is in the following format:



So if you would like the filename to be "*sample_plan1.plan*", enter the word *sample_plan* in the "Filename Prefix" input field.

5. Click on the "OK" button. The following window will be displayed:

Browse for Folder	?×
Select Folder to store files	
Source Files	~
System Volume Information	
TTRA TEST PLAN	
ATRT03 S2	
□ CT-2000	
Test Plans	
	~
ОК Са	ncel

Navigate to the folder where you would like the retrieved test plan(s) to be saved and then click on the "OK" button. The selected test plan(s) will be retrieved from the CT Tester and stored on the PC in the selected directory.

	If a test plan file with the same name already exists at the storage location, the following window will be displayed:
NOTE	EZCT-2000
	Overwrite file plan1.plan
	Yes No Cancel
	Click on the "Concel" button to concel the retrieval process

Click on the "Cancel" button to cancel the retrieval process.

Click on the "Yes" button if you would like the existing file to be overwritten with the new file.

Click on the "No" button if you do not want the existing file to be overwritten. The following window will be displayed:

New Filename	
Enter Filename	
1	
	OK Cancel
	OK Cancel

Enter a new file name for the retrieved test plan and then click on the "OK" button. The test plan will be retrieved from the CT Tester and saved with the new file name at the selected location.

5.2 Modifying a Test Plan Stored on the PC

Test plans stored on the PC hard drive can be recalled and modified using the steps below:

 From the *Test-Plan* menu, click on *Modify Test Plan* (alternatively, you can click on the *File* menu, click on *Test Plan*, and then select *Modify Test Plan*). The following window will be displayed:

Open								? 🛛
Look in:	🚞 Test Plans		*	€	ø	ø	•	
My Recent Documents	Plan01.plan							
My Documents My Computer	File name: Files of type:	Test Plan (*.plan)				*		Open Cancel
My Network		Open as read-only						

Browse to the folder containing the test plan that you would like to modify. Click on the file name and then click on the "Open" button.

Select dev	ice type ti	est plan	0	EZCT-200	0 0	EZCT-S2	O EZCT	-2000B					
Company:	Vangua	rd Instrur	nents		М	odel:							
Station:	Lab				S	N:							
Circuit:					0	perator:							
Mfr:	Siemen	s			С	omments:							
Knee Point	Marker:	IEEE 45	i deg	~	Ratio Test	Winding Res Test	Excitation Test	Evoit	ation	Evoitatio		Current Batio	
	Nar	neplate F	l atio					Volta	ge	Current	. I	Error Calculation	Test Note
X1-X5:	400)	1	1				50	~	2	*	Edit	
×1-×4:	300)	1	1				300	~	1	~	Edit	
X1-X3:	240)	1	1				300	~	1	~	Edit	
X1-X2:	80		1	1				300	~	1	~	Edit	
X2-X5:	160)	1	1				300	~	1	~	Edit	
X2-X4:	60		1	1				300	~	1	~	Edit	
X2-X3:	20		1	1				300	~	1	~	Edit	
X3-X5:			1	5				300	~	1	*	Edit	
X3 : X4:			1	5				300	~	1	*	Edit	
×4-×5:			1	5				300	*	1	*	Edit	
					un linei datie	in Taot		Bun Bi	uden Te	est			
				0.55	in mounde	() + 000V		T-0.0		14 (2)	tarte		
				0.51	IUV	(O 1,000V		Test Li	irrent =	IA ()	l est L	Jurrent = 5A	

2. The test plan will be loaded and the test parameters will be displayed as shown below:

Modify any of the test plan parameters as needed and then click on the "Save" button.



Test plan options are available depending on the device selected in the "Select device type test plan" section at the top of the window.

3. The following window will be displayed:

Save As							?×	
Save in	🗀 Test Plans		~	G 💋	ø			
My Recent Documents Desktop My Documents	🖬 Plan01.plan							.0
My Computer	File name: Save as type:	Test Plan (*.plan)			*		ave ancel	

Browse to the folder where you would like to save the modified test plan. Enter a file name in the "File name:" field and click on the "Save" button. The modified test plan will be saved with the new file name. Selecting the same file name will override the test plan name.

5.3 Transferring Test Plans to a CT Tester

To transfer a test plan from the PC hard drive to a CT Tester:

 From the *Test-Plan* menu, click on *Transfer Test Plan to device* (alternatively, you can click on the *File* menu, click on *Test Plan*, and then select *Transfer Test Plan to device*). The following window will be displayed:

Open							? 🛛
Look in:	🚞 Test Plans		*	G	1 🖻	•	
My Recent Documents	Modified.plan Plan01.plan						
Desktop							
My Documents							
3							
My Computer	File name:				~	·	Open
My Network	Files of type:	Test Plan (*.plan)			~	·	Cancel

Browse to the folder containing the test plan that you would like to transfer to the CT Tester. Once you have located the test plan, click on the file name and then click on the "Open" button.

2. The following window will be displayed showing a listing of the CT Tester's test plan memory locations and their contents:

Test Pl	an Directory				
Plan	Knee Type	Company	Station	Circuit	<u>^</u>
0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012	IEEE 45 Deg EMPTY EMPTY EMPTY EMPTY EMPTY EMPTY EMPTY EMPTY EMPTY EMPTY	Vanguard Instruments	Lab		
0012 0013 0014 0015 0016	EMPTY EMPTY EMPTY EMPTY				
Sel	ect All	Filename Prefix: plan		ОК	Cancel

Click on an empty location where you would like the test plan to be transferred to and click on the "OK" button. The test plan will be transferred to the CT Tester and stored in the selected memory location.

If there are no empty memory locations available, you can select a memory location with data in it, and it will be over-ridden with the transferred test plan.

NOTE

5.4 Creating Test Plans

To create a test plan:

 Click on the *Test-Plan* menu and select *Create Test Plan* (alternatively, you can click on the *File* menu, click on *Test Plan*, and then select *Create Test Plan*). The following window will be displayed:

Select device t Company: Station: Circuit: Afr:	iype test plan OEZ	2CT-2000 O	EZCT-S2	€ZCT-	-2000B			
(nee Point Marl	ker: IEEE 30 deg Nameplate Ratio	Ratio Test	Winding Res Test	Excitation Test	Excitation Voltage	Excitation Current	Current Ratio Error Calculation	Test Note
×1-×5:	/ 5				300 💌	1 🗸	Edit	
×1-×4:	/ 5				300 💌	1 🗸	Edit	
X1-X3:	/ 5				300 💌	1 🗸	Edit	
×1-×2:	/ 5				300 💌	1 🗸	Edit	
X2-X5:	/ 5				300 🔽	1 💌	Edit	
X2 - X4:	/ 5				300 💌	1 🗸	Edit	
X2-X3:	/ 5				300 💌	1 🗸	Edit	
X3-X5:	/ 5				300 💌	1 🗸	Edit	
X3·X4:	/ 5				300 🐱	1 🗸	Edit	
×4-×5:	/ 5				300 💌	1 🗸	Edit	
		Run Insulatio	on Test		Run Burden Te	st		
		() 500V	() 1.000V		Test Current = 1	IA 💿 Test	Current = 5A	

- Select the CT Tester model that the test plan is being created for by clicking on the corresponding radio button in the "Select device type test plan" section at the top of the window. Any options that are not supported by the selected device will be grayed out. Also, the excitation voltage drop-down lists will be updated to only display voltages supported by the selected device.
- 3. Enter the relevant header information at the top of the form (such as Company name, Station name, etc.).
- 4. Select the knee point marker from the "Knee Point Marker:" drop-down list.

5. For each tap connection you would like to test, click on the check box under each test type that you would like to perform. For example, to perform a ratio test on the X1-X5 tap connection, check the check box under the "Ratio Test" column in the X1-X5 row.

NOTE	The Winding Resistance Test is only a 2000B models. This option will be ac checked first. If you have checked the box under the "Edit" button under the "Current Rat	available for the EZCT-2000 and EZCT- tivated only if the Excitation Test is ne "Winding Res Test" column, the tio Error Calculation" box will also
	calculation parameters as shown bel	ow:
	Current Ratio Error Calculation	
	Run Test (requires res. test) Max Burden: 0 [0-500 VA] Power Factor: 0 [0.00 - 1.00] [Cos Phi] Rated Sec Cur: 0 [1.0 - 5.0 A]	
	If you would like to run this test, click	on the "Run Test" checkbox and then

enter the test parameters in the fields below ("Max Burden", "Power Factor", and "Rated Sec Cur"). Click on the "OK" button to save the settings.

- a. Once a test has been selected for a tap connection, the "Nameplate Ratio" input fields will be activated. Enter the nameplate ratio values for the tap connection.
- b. Select the excitation voltage from the "Excitation Voltage" drop-down list corresponding to the tap connection.
- c. Select the excitation current from the "Excitation Current" drop-down list corresponding to the tap connection.
- d. Enter any relevant test notes in the corresponding "Test Note" field.
- 6. EZCT-2000B only
 - a. If you would like to run an insulation test, click on the "Run Insulation Test" check box and then select the insulation test voltage by clicking on the corresponding radio button.
 - b. If you would like to run a burden test, click on the "Run Burden Test" check box and then select the burden test current by clicking on the corresponding radio button.

7. Click on the "Save" button. The following window will be displayed:

Save in: Test Plans Image: Constraint of the state of th	ve As					? 🔀	
My Recent Documents Documents Deskton	Save in:	🚞 Test Plans		~	3 🦻 📂 🖽	•	
My Documents	My Recent Documents Desktop My Documents	Modified.plan Plan01.plan plan1.plan plan7.plan sample.plan					.0
My Computer File name:	My Computer	File name:			~	Save	
Save as type: Test Plan (*.plan) Cancel	Salaria de Caracita de Caracit	Save as type:	Test Plan (*.plan)		~	Cancel	

Browse to the location where you would like to save the test plan. Enter a file name in the "File name:" input field and click on the "Save" button. The test plan will be saved in the selected location.

6.0 RUNNING TESTS

The EZCT-2000 software can be used with a test plan to run a current-transformer test directly from the PC. To run a test using the EZCT-2000 software:

- 1. Connect the CT Tester to the PC via either the RS-232C port or the USB port.
- 2. Make the test connections per the CT Tester's User's Manual.
- 3. Click on the *Run-Test* menu (alternatively, you can click on the *File* menu and select *Run Test*). The following window will be displayed:

Open						? 🛛
Look in:	🚞 Test Plans		*	G 🦻	• 📰	
My Recent Documents	Modified.plan new plan.plan Plan01.plan plan1.plan plan7.plan sample.plan					
My Documents						
My Computer	File name:				*	Open
My Network	Files of type:	Test Plan (*.plan)			~	Cancel

Browse to the folder containing the test plan that you would like to use. Click on the test plan file name and then click on the "Open" button.

4. The following confirmation window will be displayed:

EZCT-2000		
Run Test Plan sample.plan ?		
Yes No		

Click on the "Yes" button.

5. The EZCT-2000 software will start running the tests configured in the test plan. The following window will be displayed showing the status of the current test being performed:

Running te	st 🔀		
Status: Running F	Ratio Test #01		
NOTE	You can stop the testing proces	ss by clicking on the "Abort" button.	

6. When testing has finished, the test results will be displayed. Please see section 4.0 for further information about working with test records.



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