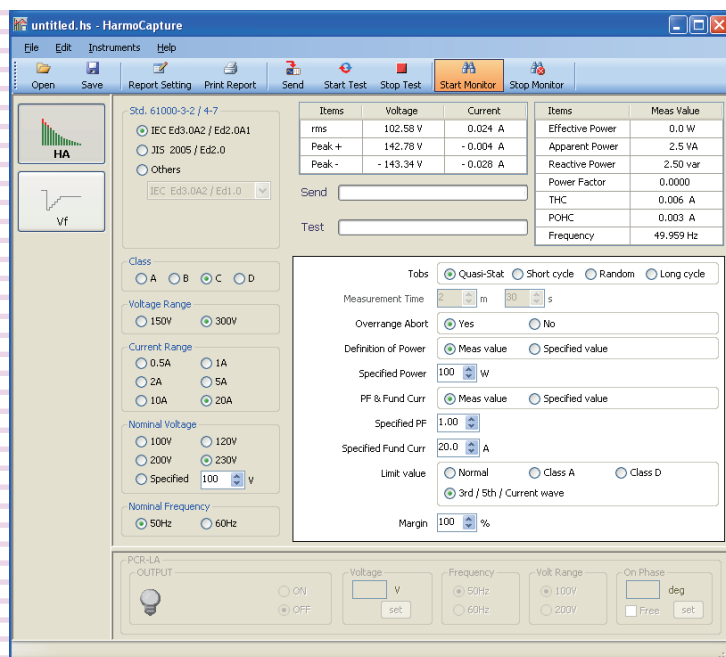# Operation Guide

Application Software

HarmoCapture

Ver. 3.5

About This Guide

This PDF version of the Operation Guide is provided so that you can print all or any portion of it.

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The specifications of this product and the contents of this operation guide are subject to change without prior notice.

Contents

Introduction

This operation guide explains how to:

- Perform standard conformance testing for harmonic currents and voltage fluctuations with HarmoCapture, and
- Print reports of test result files.

■ Product versions that this guide covers

This operation guide applies to HarmoCapture with version 3.5.

You can check the version from the help menu **About HarmoCapture**.

■ Required versions for related equipment

- KHA1000 Harmonic/Flicker Analyzer

  A KHA1000 with firmware version 1.7 or later is required. The version appears on the screen when the KHA1000 is turned on.

- PCR-LA (AC power supply)

  A PCR-LA with a firmware version other than 3.10 or later is required.

  The version appears on the control panel display when the PCR-LA is turned on.

- PCR-L (AC power supply)

  A PCR-LA with a firmware version other than 2.04 or later is required.

  The version appears on the control panel display when the PCR-L is turned on.

  Harmonics Explorer can also be used for the conventional AC Power Supply PCR-L Series. In this case, read "PCR-LA" as "PCR-L."

■ Who should read this operation guide?

The intended audience of this operation guide is anyone using the KHA1000 to control a harmonic current and voltage fluctuation test system or anyone teaching operators how to use such a system.

Explanations are given under the presumption that the reader has electrical knowledge related to harmonic current and voltage fluctuation tests.

■ Trademark acknowledgements

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■ Notations used in this guide

- The KHA1000 Harmonic/Flicker Analyzer may be called the KHA1000.
- "Personal computer" and "PC" are generic terms for personal computers and workstations.
- The following symbols are used with the explanations in this guide.

  ⚠ CAUTION — This symbol indicates a potentially hazardous situation. Ignoring the symbol may result in damage to the product or other property.

  NOTE — Indicates information that you should know.

What is HarmoCapture?

HarmoCapture is a software application for creating test conditions for harmonic current and voltage fluctuation tests. It can also be used to execute tests and to carry out other related operations.

HarmoCapture can be used to:

- Configure and save test conditions.
- Start and stop tests.
- Display test results.
- Create and save test result files.
- Monitoring the actual and ± peak values of current and voltage, active/apparent/reactive power, power factor, THC, POHC, and frequency
- Comment input in reports (Company, Test Engineer, Operating Mode, Climatic Conditions, Supply Source, and Reference Impedance)

Conformance Standards

HarmoCapture conforms to the following standards. The "Standard name notations" in the table are the symbols used in this product, and indicate the relevant standards for limit values and measuring techniques.

Classification	Standard name notation (used for HarmoCapture)	Standard number and edition for limit value[1]	Standard number and edition for measuring technique[1, 2]
Harmonic current test	IEC Ed2.2/Ed2.0	IEC 61000-3-2:Ed2.2(2004) EN 61000-3-2(2000)/A2(2005)	IEC 61000-4-7:Ed2.0(2002) EN 61000-4-7(2002)
	JIS 2005/Ed2.0	JIS C61000-3-2(2005)	IEC 61000-4-7:Ed2.0(2002)
	JIS 2003/Ed1.0	JIS C61000-3-2(2003)	JIS C61000-4-7(1997)
	IEC Ed2.2/Ed1.0	IEC 61000-3-2:Ed2.2(2004) EN 61000-3-2(2000)/A2(2005)	IEC 61000-4-7(1991) EN 61000-4-7(1993)
	JIS 2005/Ed1.0	JIS C61000-3-2(2005)	JIS C61000-4-7(1997)
	IEC Ed3.0/Ed2.0	IEC 61000-3-2:Ed3.0(2005) EN 61000-3-2(2006)	IEC 61000-4-7:Ed2.0(2002) EN 61000-4-7(2002)
	IEC Ed3.0/Ed1.0	IEC 61000-3-2:Ed3.0(2005) EN 61000-3-2(2006)	IEC 61000-4-7(1991) EN 61000-4-7(1993)
	IEC Ed3.0A2/Ed2.0A1	IEC 61000-3-2:Ed3.0(2005)/A2(2009) EN 61000-3-2(2006)/A2(2009)	IEC 61000-4-7:Ed2.0(2002)/A1(2008) EN 61000-4-7(2002)/A1(2009)
	IEC Ed3.0A2/Ed1.0	IEC 61000-3-2:Ed3.0(2005)/A2(2009) EN 61000-3-2(2006)/A2(2009)	IEC 61000-4-7(1991) EN 61000-4-7(1993)
Voltage fluctuation test	IEC 61000-3-3Ed2.0	IEC 61000-3-3:Ed2.0(2008) EN 61000-3-3(2008)	-
	IEC 61000-4-15Ed1.1	-	IEC 61000-4-15:Ed1.1(2003) EN 61000-4-15(1998)/A1(2003)
	IEC 61000-4-15Ed2.0	-	IEC 61000-4-15:Ed2.0(2010)

*1   EN standard names are also included in report printouts.

*2 Measuring technique standard that corresponds to limit value standard

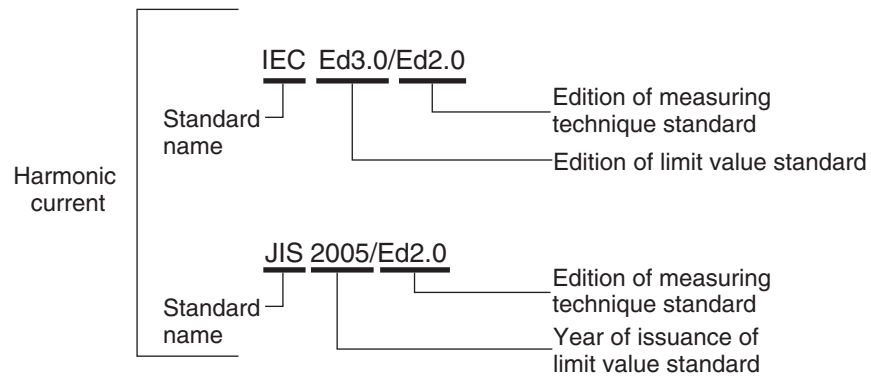IEC 61000-4-7:Ed2.0(2002)、 IEC 61000-4-7:Ed2.0(2002)/A1(2009)

The window width in measuring technique standards is 0.2 second. It is 10 cycles at a basic frequency of 50 Hz and 12 cycles at a basic frequency of 60 Hz. Harmonic groups are measured out of harmonic waves and interharmonic waves.

IEC 61000-4-7(1991)

The window width in measuring technique standards is 0.32 second at a basic frequency of 50 Hz and 0.266 second at a basic frequency of 60 Hz (either is a basic frequency of 16 cycles). Harmonic groups are not measured.

JIS C61000-4-7(1997)

The window width in measuring technique standards is 0.32 second at a basic frequency of 50 Hz and 0.266 second at a basic frequency of 60 Hz (either is a basic frequency of 16 cycles). Interharmonic waves and harmonic groups are not measured.

Harmonic current

IEC Ed3.0/Ed2.0

Standard name

Edition of measuring technique standard

Edition of limit value standard

JIS 2005/Ed2.0

Standard name

Edition of measuring technique standard

Year of issuance of limit value standard

Rules for standard name notations

Window Configuration

The harmonic current test window and the voltage fluctuation test window both consist of six panes.

Test mode selection pane

Test standard selection pane

Indicator pane

Measured value monitor pane

Splitter

Standard conditions setting pane

PCR-LA control pane
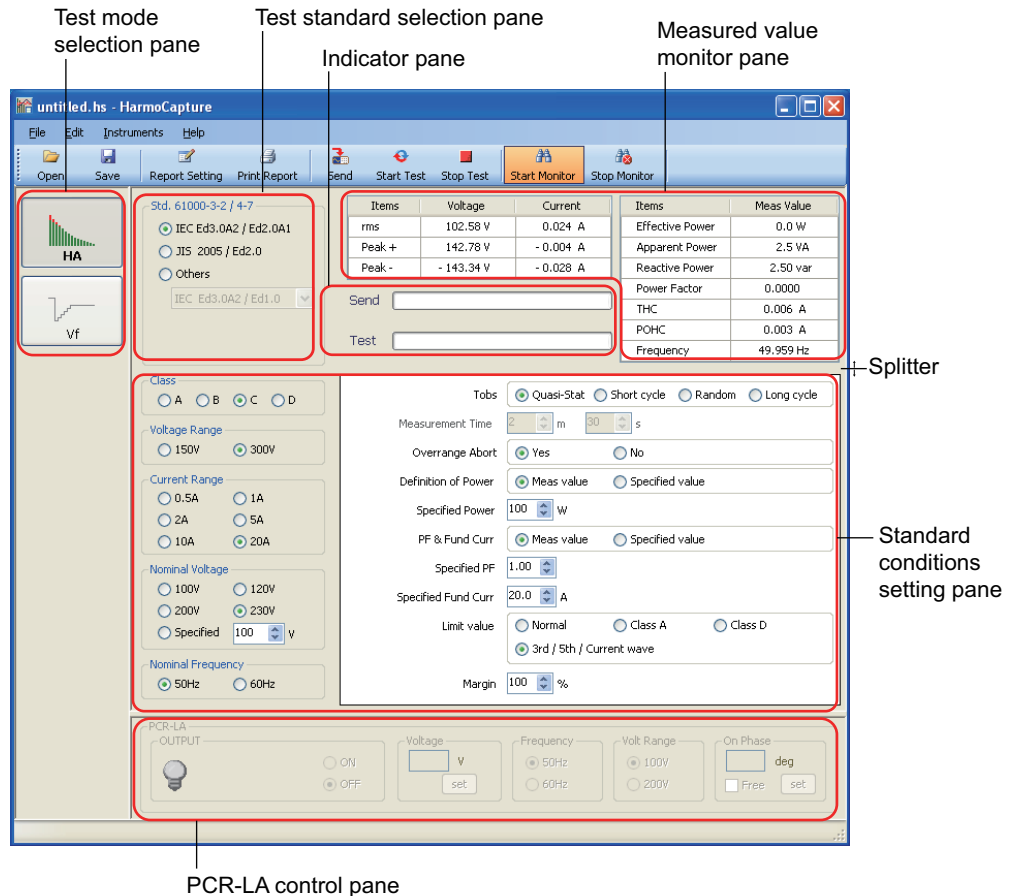
Item	Description
Test mode selection pane	Click HA (harmonic current test) or Vf (voltage fluctuation test) to select the test.
Test standard selection pane	Select the test standard.
Indicator pane	The send progress bar displays the progress of sending test conditions to the KHA1000. The test progress bar displays the progress of the current test.
Measured value monitor pane	Constantly monitors and displays the following measured values in a list when a test is not being executed: Rms current and voltage, positive and negative current and voltage peaks, active power, apparent power, reactive power, power factor, THC[*1], POHC[*1], and frequency.
Standard conditions setting pane	Select the class and set test conditions. The items that appear vary depending on the selected standard and class.
PCR-LA control pane	Makes it possible to turn on/off the PCR-LA output and to set the voltage, frequency, voltage range, and on phase.

*1   When HA (harmonic current test) is selected.

Using a Test Condition File

There are two types of test condition files.

- Test condition files that you create using HarmoCapture
- Test condition files that you save on the KHA1000

NOTE   Even if you don't create a test condition file, you can perform tests.

Creating a Test Condition File

1 **In the** Test mode selection pane**, select HA (harmonic current test) or Vf (voltage fluctuation test).**

2 **Edit or create a test condition file used to perform the standard conformance test.**

For details on conformance standards, see Conformance Standards.

- Setting Test Conditions for Harmonic Current Test

- Setting Test Conditions for Voltage Fluctuation Test
- Using a Test Condition File that You Saved on the KHA1000
- Opening an Existing Test Condition File

3   **Save the test conditions file.**

Using a Test Condition File that You Saved on the KHA1000

Follow the procedure below to load a test condition file that was saved on the KHA1000 to the PC and open it with HarmoCapture.

1 **Remove the CompactFlash card that contains the test conditions from the KHA1000.**

2 **Connect the CompactFlash card to the PC.**

3 **Load the test condition file from the CompactFlash card to the PC.**

4 **In the** Test mode selection pane**, select HA (harmonic current test) or Vf (voltage fluctuation test).**

5 **Click Open on the toolbar.**

The **HA(Vf) Condition file Open** dialog box appears.

6 **Select the file that you want to open.**

The test condition file name extension for harmonic current tests is .HS.
The test condition file name extension for voltage fluctuation tests is .VS.

Opening an Existing Test Condition File

Follow the procedure below to open a test condition file that you created using HarmoCapture.

1 In the Test mode selection pane**, select HA (harmonic current test) or Vf (voltage fluctuation test).**

2 Click **Open** on the toolbar.
The **HA(Vf) Condition file Open** dialog box appears.

3 **Select the file that you want to open.**
The test condition file name extension for harmonic current tests is .hs.
The test condition file name extension for voltage fluctuation tests is .vs.

Saving a Test Condition File

1 Click **Save** on the toolbar.
The test condition file that you are currently editing is saved.
If you are saving the test conditions for the first time, the **Save As** dialog box appears.

2 **Specify the save destination and file name.**
The test condition file name extension for harmonic current tests is .hs.
The test condition file name extension for voltage fluctuation tests is .vs.
Click Save.

Saving a Test Condition File with a New Name

1 **To save a test condition file with a new name, choose** **Save As** **from the** **File menu.**
The **Save As** dialog box appears.

2 **Specify the save destination and file name.**
The test condition file name extension for harmonic current tests is .hs.
The test condition file name extension for voltage fluctuation tests is .vs.
Click Save.

Controlling the AC Power Supply

You can use the HarmoCapture AC power source control pane to control the PCR-LA AC power supply.

⚠ **CAUTION**   Set the PCR-LA output voltage and frequency according to the EUT's power rating.

NOTE
- Set the voltage range first. You cannot enter a voltage that exceeds the voltage range that you selected.
- You can change the voltage range when the output is turned off.

Item	Description
OUTPUT ON	Turn the PCR-LA AC power supply output on or off by selecting the **On** or **Off** option.
Voltage	Set the PCR-LA AC power supply output voltage. Enter the appropriate value according to the EUT power rating and the voltage range that you selected.
Frequency	Select the PCR-LA AC power supply frequency.
Voltage Range	Select the PCR-LA voltage range. • Select **100 V** when the voltage is from 0 V to 152.5 V (phase voltage) or from 0 V to 264.1 V (line voltage.) • Select **200 V** when the voltage is from 0 V to 304.8 V (phase voltage) or from 0 V to 527.9 V (line voltage.)
On-Phase	You can set the initial voltage phase angle that is generated when the output is turned on. You can set the phase in the range of 0° to 360°. To disable the on-phase feature, select the **Free** check box.

Starting the Monitoring Operation

When you start monitoring, you can view the EUT's current, voltage, power, and other values on the Measured value monitor pane until you start testing.

■ **Starting the monitoring of measured values**

Click **Start Monitor** on the toolbar. You cannot operate the KHA1000 from the front panel while it is being monitored by HarmoCapture.

■ **Stopping the monitoring of measured values**

Click **Stop Monitor** on the toolbar and press the LOCAL key on the front panel of the KHA1000 . You can now operate the KHA1000 from the panel.

NOTE Do not change the settings in the PCR-LA control pane while monitoring is stopped. If you do, a communication error may occur.

Measured Value Monitor Pane

HarmoCapture monitors the following values.

	Values that HarmoCapture can monitor
Harmonic current test	• Rms current and voltage • Positive and negative current and voltage peaks • Active power, apparent power, and reactive power • Power factor • THC and POHC • Frequency
Voltage fluctuation test	• Rms current and voltage • Positive and negative current and voltage peaks • Active power, apparent power, and reactive power • Power factor • Frequency

Setting Test Conditions for Harmonic Current Test

For details on the items in the harmonic current test, refer to the KHA1000 Operation Manual.

Selecting the Testing Mode

In the Test mode selection pane, select **HA** (harmonic current test).
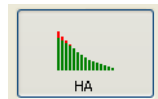
Selecting a Test Standard

In the Test standard selection pane, select the limitation standard and the standard for measurement techniques. If you want to select a standard other than IEC Ed3.0A2/Ed2.0A1 or JIS 2005/Ed2.0, select "Others," and then select the standard from the box.

For further information about Standard name notations, see Conformance Standards.

To measure harmonic groups out of harmonic waves and interharmonic waves, select IEC Ed3.0A2/Ed2.0 A1or JIS 2005/Ed2.0; otherwise, select IEC Ed3.0A2/Ed1.0, IEC Ed3.0/Ed1.0, IEC Ed2.2/Ed1.0, or IS 2003/Ed1.0.
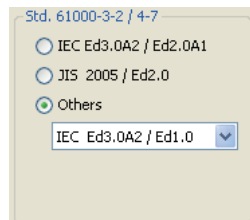
When IEC Standard is Selected

The following items can be set when you select IEC Ed3.0A2/Ed2.0A1, IEC Ed3.0A2/Ed1.0, IEC Ed3.0/Ed2.0, IEC Ed2.2/Ed2.0, IEC Ed3.0/Ed1.0, or IEC Ed2.2/Ed1.0.

Item	Description
Class	Select the class according to the EUT. The limit value that is used as the reference for standard conformance judgment is determined by the class.
Voltage Range	150 V, 300 V
Current Range	0.5 A, 1 A, 2 A, 5 A, 10 A, 20 A
Nominal Voltage	100 V, 120 V, 200 V, 230 V, Specified value[*1]
Nominal Frequency	50 Hz, 60 Hz
Tobs (Test observation period)	Quasi-Stat, Short cycle, Random, and Long cycle
Measurement Time	1 second to 10 minutes[*2]
Overrange Abort	Yes/No
Definition of Power	Meas value and Specified value
Specified Power	0 W to 4000 W
Margin	10 % to 100 % (level setting to indicate WARNING for standard limit values)
PF & Fund Curr (When Class C is selected.)	Meas value and Specified value
Specified PF (When Class C is selected.)	0.00 to 1.00
Specified Fund Curr (When Class C is selected.)	0.0 A to 20.0 A
Limit value (When Class C is selected.)	Normal, Class A, Class D, and 3rd/5th/Current Wave[*3]

*1.   The input range is from 100 V to 400 V.
*2.   If you set the standard to IEC Ed3.0A2/Ed2.0A1 or IEC Ed3.0A2/Ed1.0, select Class C, and set the limit values to 3rd/5th/Current Wave, the measurement time will be 0.2 seconds. The Measurement Time setting will be disabled.
*3.   This is enabled when you select the IEC Ed3.0A2/Ed2.0A1 standard or the IEC Ed3.0A2/Ed1.0 standard.

When JIS 2005/Ed2.0 or JIS 2005/Ed1.0 is Selected

Item	Description
Class	Select the class according to the EUT. The limit value that is used as the reference for standard conformance judgment is determined by the class.
Voltage Range	150 V, 300 V
Current Range	0.5 A, 1 A, 2 A, 5 A, 10 A, 20 A
Nominal Voltage	100 V, 120 V, 200 V, 230 V
Nominal Frequency	50 Hz, 60 Hz
Tobs (Test observation period)	Quasi-Stat, Short cycle, Random, and Long cycle
Measurement Time	1 second to 10 minutes
Overrange Abort	Yes/No
Definition of Power	Meas value and Specified value
Specified Power	0 W to 4000 W
Margin	10 % to 100 % (level setting to indicate WARNING for standard limit values)
Reference impedance	Use/Un-use
600 W Air-conditioner (When Class A is selected.)	Yes/No
PF & Fund Curr (When Class C is selected.)	Meas value and Specified value
Specified PF (When Class C is selected.)	0.00 to 1.00
Specified Fund Curr (When Class C is selected.)	0.0 A to 20.0 A
Limit value (When Class C is selected.)	Normal, Class A, and Class D

When JIS 2003/Ed1.0 is Selected

Item	Description
Class	Select the class according to the EUT. The limit value that is used as the reference for standard conformance judgment is determined by the class.
Voltage Range	150 V, 300 V
Current Range	0.5 A, 1 A, 2 A, 5 A, 10 A, 20 A
Nominal Voltage	100 V, 120 V, 200 V, 230 V
Nominal Frequency	50 Hz, 60 Hz
Measurement Time	1 second to 2 minutes and 30 seconds
Overrange Abort	Yes/No
Ignore > 19th gentle fall	Ignore, Don't Ignore
Smoothing	Disable, 1.5 s, and 4 averages
Ignore ≤ 5 mA, 0.6 %	Ignore, Don't Ignore
Margin	10 % to 100 % (level setting to indicate WARNING for standard limit values)
600 W Air-conditioner (When Class A is selected.)	Yes/No
PF & Fund Curr (When Class C is selected.)	Meas value and Specified value
Specified PF (When Class C is selected.)	0.00 to 1.00
Specified Fund Curr (When Class C is selected.)	0.0 A to 20.0 A
Limit value (35 W or less) (When Class C is selected.)	Normal, Class D and Ignore
Definition of Power (When Class D is selected.)	Every window, average and specified value
Specified Power (When Class D is selected.)	0 W to 4000 W
Ignore ≤ 75 W (When Class D is selected.)	Ignore, Don't Ignore

Executing a Harmonic Current Test

This section explains the testing procedure for the following two tests separately.

- Performing a Test Based on IEC or JIS 2005 Standards
- Performing a Test Based on JIS Standard

Performing a Test Based on IEC or JIS 2005 Standards

· ·

This section explains the testing procedure for the cases when you have selected one of the following standards.

- IEC Ed3.0A2/Ed2.0A1, IEC Ed3.0A2/Ed1.0, IEC Ed3.0/Ed2.0, IEC Ed2.2/Ed2.0, IEC Ed3.0/Ed1.0, or IEC Ed2.2/Ed1.0
- When you have selected the JIS 2005/Ed2.0 or JIS 2005/Ed1.0 standard and set Reference impedance to "Un-use."

NOTE

- When test conditions on the KHA1000 are set to the test conditions for the JIS 2005/Ed2.0 or JIS 2005/Ed1.0 standard, the **AC Power Source** button is displayed on the toolbar. If you are using one of the standards listed above and you have set Reference impedance to "Use," before you perform the test, you have to turn the EUT power source off and check the performance of the AC power test source. Use the **AC Power Source** button to perform this check. If you have set Reference impedance to "Un-use," the checking procedure of the AC power source is the same as the procedure for the IEC standards, so you do not need to use the **AC Power Source** button.
- When test conditions on the KHA1000 are set to the test conditions for an IEC standard, the **AC Power Source** button is not displayed on the toolbar. Because the IEC standards do not require that the EUT power source be turned off to check the AC power test source, HarmoCapture automatically checks the AC power source when the test is performed. This check only takes a moment to complete.

1 **To send the test conditions set, click the Send button on the toolbar.**

The test conditions are set in the KHA1000.

2 **Click Start Test on the toolbar.**
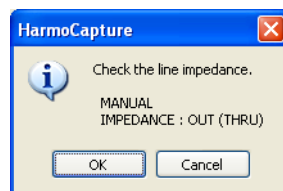
A line impedance setup confirmation dialog box appears.

3 **If the line impedance network is set correctly, click OK.**

If you click **Cancel**, the test is not executed.

After the test starts, the test progress bar indicates the progress.

You can abort the test in the middle of a test.

Performing a Test Based on IEC or JIS 2005 Standards (continued)

4 **When the test is complete, a judgment result dialog box appears. To save the test results, click Yes.**

To print reports, you must save the test result file.

5 **Stop the test.**

Performing a Test Based on JIS Standard

This section explains the testing procedure for the cases when you have selected one of the following standards.

- When you have selected the JIS 2005/Ed2.0 or JIS 2005/Ed1.0 standard and set Reference impedance to "Use."
- JIS 2003/Ed1.0

NOTE
- If you have selected one of the standards listed above, before you perform the test, you have to turn the EUT power source off and check the performance of the AC power test source. To comply with this requirement, if you send JIS standard test conditions to the KHA1000, the **AC Power Source** button is displayed on the HarmoCapture toolbar. When this button is displayed, you can check the AC power test source at any time.
- When test conditions on the KHA1000 are set to the test conditions for an IEC standard, the **AC Power Source** button is not displayed on the toolbar. Because the IEC standards do not require that the EUT power source be turned off to check the AC power test source, HarmoCapture automatically checks the AC power source when the test is performed. This check only takes a moment to complete.

1 **To send the test conditions set, click the Send button on the toolbar.**
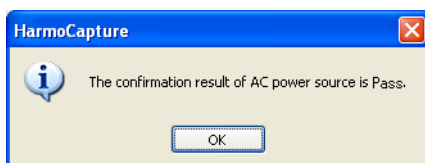
The test conditions are set in the KHA1000, and the AC Power Source button is displayed on the toolbar.

2 **Turn the EUT off.**

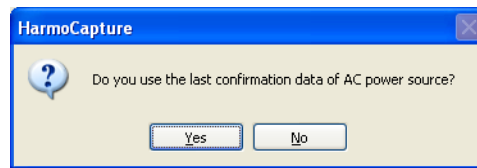**3** **Click the AC Power Source button on the toolbar.**

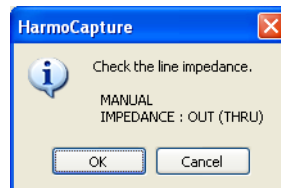A dialog box that shows the results of the check is displayed.

4 **Click OK.**

5 **Click Start Test on the toolbar.**
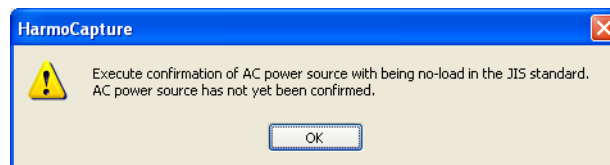
A dialog box asking whether you want to use the data that was received from the check of the AC power source that was performed in Step 3 is displayed.

Next, a line impedance setup confirmation dialog box appears.

If you did not check the AC power source in Step 3 , the following dialog box is displayed.

Click OK, and return to Step 2 .

After you perform the check of the AC power source once, this dialog box will not be displayed again until you restart HarmoCapture.

6 **If the line impedance network is set correctly, click OK.**

If you click **Cancel**, the test is not executed.

After the test starts, the test progress bar indicates the progress.

You can abort the test in the middle of a test.

7 **When the test is complete, a judgment result dialog box appears. To save the test results, click Yes.**
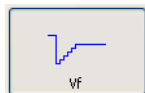
To print reports, you must save the test result file.

8 **Stop the test.**

Setting Test Conditions for Voltage Fluctuation Test

For details on the items in the voltage fluctuation test, refer to the KHA1000 Operation Manual.
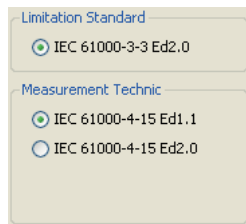
Selecting the Testing Mode

In the Test mode selection pane, select **Vf** (voltage fluctuation test).

Selecting a Test Standard

In the Test standard selection pane, select the limitation standard. The measurement technique is fixed at IEC 61000-3-3 Ed2.0.

Setting Test Conditions

| Item	Description
Voltage Range	150 V, 300 V
Current Range	0.5 A, 1 A, 2 A, 5 A, 10 A, 20 A
Nominal Voltage	100 V, 120 V, 200 V, 230 V
Nominal Frequency	50 Hz, 60 Hz
d Measurement Method	Pst Auto, Manual
Pst/d Measurement Time	Select Pst Auto in the d Measurement Method. Pst Measurement Time: 30 seconds to 15 minutes
	Select Manual in the d Measurement Method. d Measurement Time: 30 seconds to 3 minutes
Pst/d Measurement Count	Select Pst Auto in the d Measurement Method. Pst Measurement Count: 1 to 12
	Select Manual in the d Measurement Method. d Measurement Count: 3 to 24
Overrange Abort	Yes/No
dmax Limit Value	4 %, 6 %, and 7 %
Flicker Margin	10 % to 100 % (level setting to indicate WARNING for standard limit values)
d Margin	10 % to 100 % (level setting to indicate WARNING for standard limit values)
Judgement Material	Select the Juge factor items (Pst, Plt, dc, dmax, d(t)>3.3%). When the several factor items are selected, it test with the several limit values for each factor item.

Executing a Voltage Fluctuation Test

Follow the Voltage Fluctuation test procedure below.

1 **To send the test conditions set, click the Send button on the toolbar.**

2 **Click Start Test on the toolbar.**
A line impedance setup confirmation dialog box appears.
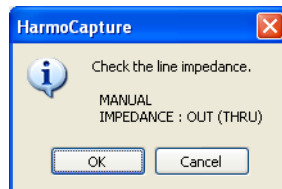
3 **If the line impedance network is set correctly, click OK.**
If you click **Cancel**, the test is not executed.
After the test starts, the test progress bar indicates the progress.

You can abort the test in the middle of a test.

4 **When the test is complete, a judgment result dialog box appears. To save the test results, click Yes.**
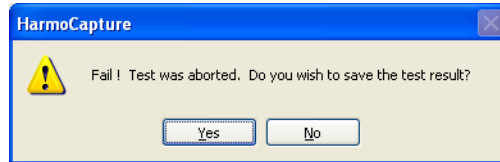To print reports, you must save the test result file.

5 **Stop the test.**

Aborting the Test

1   **Click Stop Test on the toolbar.**
When the test is complete, a dialog box appears asking whether you want to save the test results.

2   **To save the test results, click Yes. Otherwise, click No.**
The **Save As** dialog box appears.

3   **Specify the save destination and file name.**
The test result file name extension for harmonic current tests is .hr.
The test result file name extension for voltage fluctuation tests is .vr.

4   **Click Save.**

Stopping the Test System

When using the PCR-LA AC Power Supply

1   **Turn the EUT off.**

2   **Click Off under OUTPUT ON in the PCR-LA control pane.**
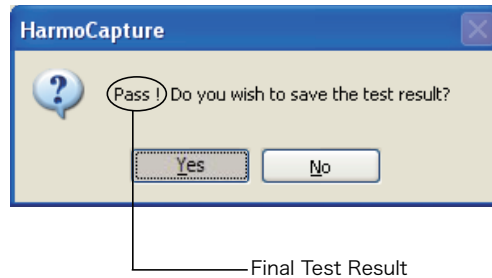
When using another AC power supply

1   **Turn the EUT off.**

2   **Turn the AC power supply output off.**

Saving a Test Result File

When the test is complete, a judgment result dialog box appears. The judgment result can take on any of the following values.

HarmoCapture

(Pass !) Do you wish to save the test result?

Yes   No

————————Final Test Result

- Pass: Less than or equal to the set margin
- Warn: Greater than the set margin but less than the limit
- Fail: Greater than the limit

1 **To save the test results, click Yes.**

If you do not wish to save the test results, exit by clicking the **No** button.

2 **In the Save as (HA(Vf) result file) dialog box, specify the save destination and file name.**

The test result file name extension for harmonic current tests is .hr.
The test result file name extension for voltage fluctuation tests is .vr.

3 **Click Save.**

Printing a Report

Reports are printable PDF files of test result files. You can include comments in reports, such as the company name and test environment.

Reports are automatically saved in the same folder as test result files using the same file name as the test result file that they are converted from and a .pdf extension.

NOTE   To print PDF files, you need a PDF viewing application such as Adobe Reader.
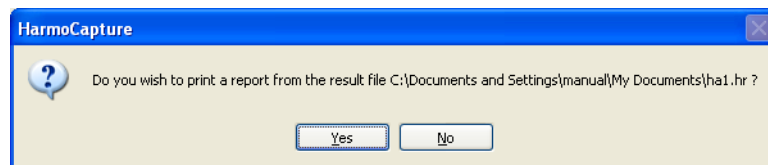
There are two ways to print reports.

- Printing a Report after the Completion of Each Test
- Printing a Report by Selecting a Test Result File
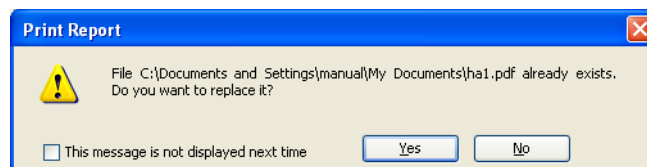
Printing a Report after the Completion of Each Test

1 **Open the Report Setting dialog box, enter necessary comments and test information.**

2 **Click Print Report on the toolbar.**

A Print confirmation dialog box appears.

If HarmoCapture does not have the previous test result file information, a message appears. Select a test result file to print.

3 **Click Yes.**

Your PDF viewing application (such as Adobe Reader) starts, and the report appears.

If you already printed this report and there is a PDF file with the same name, a message appears.
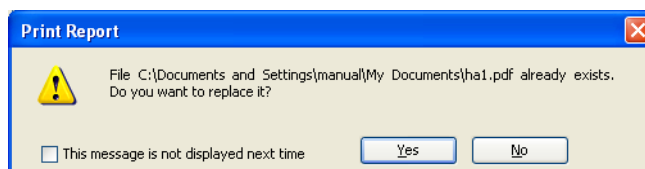
If you select the **This message is not displayed next time** check box, the message will not appear the next time. You can clear this check box in the **Report Setting** dialog box.

4 **Print the report from your PDF viewing application.**

Printing a Report by Selecting a Test Result File

1 **In the Test mode selection pane, select the appropriate test mode.**

If you want to print a harmonic current test report, select HA. If you want to print a voltage fluctuation test report, select Vf.

2 **Open the Report Setting dialog box, enter necessary comments and test information.**

3 **From the File menu, choose Select file and Print Report.**

The **Open HA(Vf) result file** dialog box appears.

4 **Select the test result file that you want to print a report of, and click Open.**

Your PDF viewing application (such as Adobe Reader) starts, and the report appears.

If you already printed this report and there is a PDF file with the same name, a message appears.

Print Report

File C:\Documents and Settings\manual\My Documents\ha1.pdf already exists.
Do you want to replace it?

☐ This message is not displayed next time   Yes   No

If you select the **This message is not displayed next time** check box, the message will not appear the next time. You can clear this check box in the **Report Setting** dialog box.

5 **Print the report from your PDF viewing application.**

Configuring the Report Format

In the Report Setting dialog box, you can:

- Entering comments and test information.
- Selecting footer option.
- Enable or disable the PDF file overwrite message.

Entering Comments and Test Information

In the **Report Setting** dialog box, you can enter comments and test information that are printed on the first report page.

The comments are used for the report printing. To input comments, click the **Report Setting** button on the toolbar.

1 **On the toolbar, click the Report Setting button.**

The Report Setting dialog box appears.

The comment input items include **Comment Replacement** that can be input by the KHA1000 and **Test Information** that can be input only by HarmoCapture or the HA File Analyzer.

The **Use these comments** check box for comments is used to print a report of the contents input by the KHA1000. To print a report of the contents input by the KHA1000, uncheck the **Use these comments** check box. The comments input by the KHA1000 are displayed on the report.

Entering Comments and Test Information (continued)

■ Comments

Item	Description
Use these comments	If you select this check box, the comments in the boxes listed under this check box will be printed in the report.
Memo	
Model Name	The name of the EUT
Type	The model number of the EUT
Serial No.	The serial number of the EUT

■ Test information

| Item	Description
Company	
Test Engineer	
Operating Mode	
Climatic Condition	
Supply Source	
Reference Impedance	

■ Footer option

Adds a footer to a report.

You can select any one of **Full path + File name**, **File name**, **Nothing**, or **Arbitrary Character Strings**.

The character strings that you enter in the **Arbitrary Character Strings** combo box are stored, when you click the **OK**. Up to eight of the most recent characters are stored.

PDF Overwrite Message

If you select a test result file that you have printed before, a PDF file overwrite message appears. The **Do not display** check box is used to enable or disable this message.
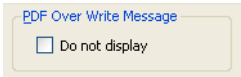
If you select the **This message is not displayed next time** check box in the PDF file overwrite dialog box, the **Do not display** check box in the **Report Setting** dialog box is also selected. If you clear the **Do not display** check box, the PDF file overwrite message is enabled.
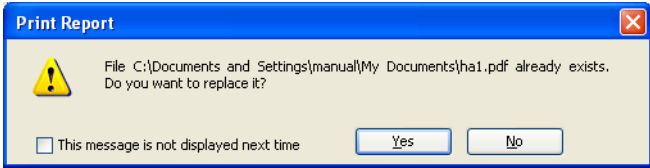
Menu Reference

Menu	Description
File	
Open...[*1]	Opens HarmoCapture or KHA1000 test conditions file.
Save[*1]	Saves the test conditions that you are currently editing to a file. (The file is saved with an .hs or .vs extension.)
SaveAs...	Saves the test conditions that you are editing to a file with the name that you specify. (The file is saved with an .hs or .vs extension.)
Print Report[*1]	Prints a report of the last test result file that was saved since you started HarmoCapture.
Select File and Print Report...	Prints a report of a test result file you saved on the KHA1000 or a test result file you saved using HarmoCapture.
Exit	Exit from HarmoCapture.
Edit	
Report Setting...[*1]	You can enter the comments and test information that are printed in reports.
Instruments	
Send[*1]	Sends the test conditions set by HarmoCapture to the KHA1000.
Start Test[*1]	Executes a test under the test conditions currently being displayed.
Stop Test[*1]	Stops the test currently being executed.
Start Monitor[*1]	Starts the real-time monitoring of values that the KHA1000 is measuring.
Stop Monitor[*1]	Stops the real-time monitoring of values that the KHA1000 is measuring.
Output ON of PCR-LA	Turns on the PCR-LA power to be supplied to equipment under test.
Output OFF of PCR-LA	Turns off the PCR-LA power to be supplied to equipment under test.
AC Power Source[*1, *2]	Checks the performance of the AC power supply for a test.
I/O Configuration...	Specifies the name of the VISA resource and whether or not to use the PCR-LA.
Help	
Contents (Japanese)	Opens the HarmoCapture Japanese Operation Guide.
Contents (English)	Opens the HarmoCapture English Operation Guide.
User's Manual (Japanese)	Opens the HarmoCapture Japanese PDF Operation Guide.
User's Manual (English)	Opens the HarmoCapture English PDF Operation Guide.
About HarmoCapture...	Displays the version of HarmoCapture.

[*1]   The toolbar provides buttons.
[*2]   Only when the KHA1000 can perform JIS standard tests