

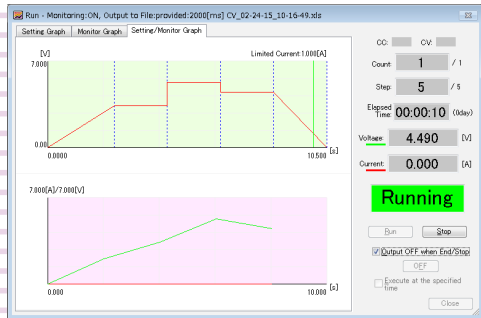


PART NO. Z1-006-410, IB029231
Feb. 2015

Sequence Creation Software Setup Guide

SD025-PMX Wavy for PMX

Ver 6.x



Thank you for purchasing the Sequence Creation Software SD025-PMX Wavy for PMX.

SD025-PMX Wavy for PMX is a software application that enables you to create and execute the sequences on Kikusui PMX Series regulated DC power supplies via the connected PC.

- You can create and edit sequences easily by using a mouse.
- During sequence execution, the software indicates the point being executed.
- You can monitor the voltage and current, and save the monitored data to a file.
- The software displays the monitored data as a real-time monitor graph.

This setup guide is included in the Wavy for PMX package. For details on operation, see the attached operation guide provided in both help and PDF format. Acrobat reader 9 or later is required to view the operation guide in PDF format.

Applicable version

This guide applies to version 6.x of SD025-PMX Wavy for PMX. To find out the version of the Wavy for PMX, click on the [Help] menu and select [About Wavy].

Related equipment versions

Wavy for PMX applies to PMX series with the following firmware versions.

- IOC Ver. 1.10 and later
- IFC Ver. 1.10 and later

The firmware version is displayed when you turn on the power switch of the PMX series.

Related manuals

For details about the PMX series regulated DC power supply, see the PMX series user's manual.

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INSTALLATION

An administrator account is required for the following installation.

Installing the VISA library

To use the PMX series, VISA library needs to be installed on your PC.

VISA (Virtual Instrument Software Architecture) library is a standard specification for measurement instrument connection software, which was developed by VXIplug&play Sytems Alliance. One of the following VISA libraries is required.

- NI-VISA by National Instruments (Ver.4.0 or later)
- Keysight VISA by Keysight Technologies (formerly Agilent Technologies) (Keysight IO Libraries Suite14.2 or later)
- KI-VISA Ver 5.1.2 or later

KI-VISA is an original VISA library developed by Kikusui Electronics Corporation, which supports IVI VISA 5.0 specification. You can download the latest version of this library through our website (<http://www.kikusui.co.jp/download/>).

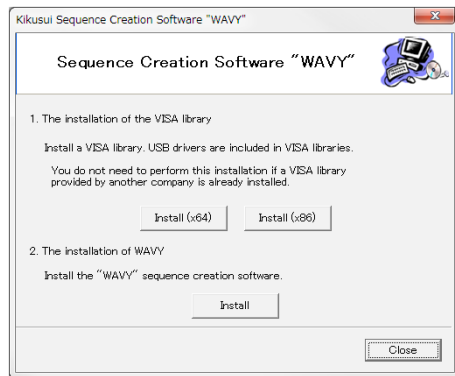
If NI-VISA or Keysight VISA is already installed on your PC, you do not need to install KI-VISA.

1 Insert the CD-ROM to your CD-ROM drive.

A setup window appears. Otherwise, double-click "AutoRun.exe" included in the CD-ROM.

2 Click [Install] under [1. The installation of the VISA library for using the USB or LAN].

Click [Install (x64)] for 64-bit OS or [Install (x86)] for 32-bit OS.



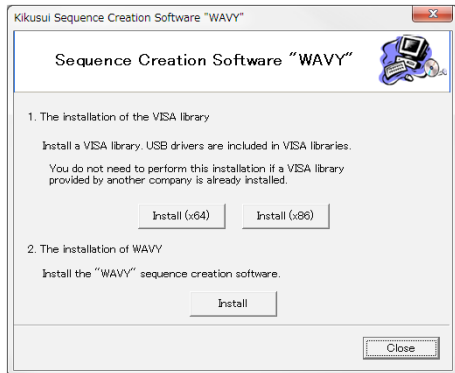
The VISA library installation initiates. In case that a VISA library has already been installed, the VISA library and its version are displayed. Do not install multiple VISA libraries on a single PC.

Installing Wavy for PMX

1 Insert the CD-ROM to your CD-ROM drive.

A setup window appears. Otherwise, double-click "AutoRun.exe" included in the CD-ROM.

2 Click [Install] under [2. The Installation of WAVY].



3 Follow the instructions until the installation is complete.

4 Click [Close].

Uninstalling Wavy for PMX

To remove the [Kikusui SD025-PMX Wavy for PMX], open the [Control Panel] and click [Program] and [Program and Features].

SAFETY PRECAUTIONS

Before using Wavy for PMX, carefully read the operation guide of PMX series regulated DC power supply. Be sure to connect and handle the device properly. Improper connections or handling may lead to serious accidents, injury, and fire.

SYSTEM REQUIREMENTS

- Core2 or higher
- Windows 8, or Windows 7
- 2 GB RAM (Minimum)
- 10 GB or more of free hard-disk space
- A display that supports 1024 x 768 or higher resolution (96 DPI)
- CD-ROM drive
- Mouse
- RS232C, USB, or LAN (depending on the interface to use)

If you intend to perform the sequence for a long duration of time, be sure to install sufficient RAM for better performance. It is recommended to install RAM larger than 4 GB.

To use a USB interface, ensure that a VISA library is installed on your PC.

In case of using a USB serial converter for RS232C connection, the software may not function properly.

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CONNECTING PC TO PMX SERIES

For details on connecting PC to PMX series, see "Interface Setup" section in the PMX series Communication Interface Manual. Note that the cables are not included in the product package.

RS232C	The RS232C port on PMX is a D-sub 9-pin connector.
USB	To connect PC to PMX series via a USB, use a standard USB cable.
LAN	To connect PC to PMX series via a network hub or router, use a standard LAN cable (category 5, straight). To connect PC directly to PMX, use a crossover LAN cable.

Configuring PMX settings

- 1 Make sure that the PMX output is off.**
- 2 Press [CONFIG] key twice.**
The voltmeter displays "CF20."
- 3 Turn [CURRENT] knob to select the interface to use.**
Set "232" for RS232C, "uSb" for USB, and "LAN" for LAN.
- 4 If you selected LAN, press the CONFIG switch, and then turn the VOLTAGE and CURRENT knobs to set the protocol.**
Set DHCP (CF30) and AUTO IP (CF31) to "on."
- 5 Press [LOCAL] key.**
The PMX series exits from CONFIG settings.
- 6 Turn off the PMX series and then back on.**
The settings are applied.

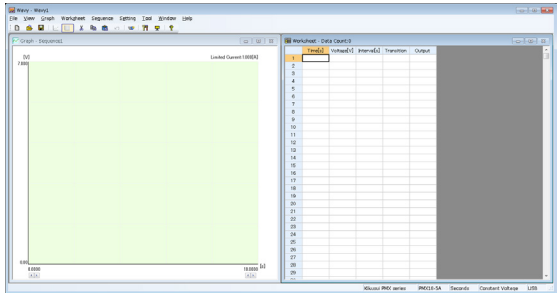
To use a fixed IP address for LAN interface, you need to configure the LAN settings via the web interface. To access the web, search the VXI-11 measurement instrument in the VISA application and then click the hyperlink indicated in the search result. Once you have configured the settings, set DHCP (CF30) and AUTO IP (CF31) to "off" and restart the PMX.

STARTING WAVY FOR PMX

Before starting Wavy for PMX, make sure that the power-saving mode and the screen saver are turned off and all the other applications are closed on your PC. When your PC supports either Advanced Power Management (APM) or sleep mode, turn off these functions.

Changing the DPI setting may result in improper appearance of the display.

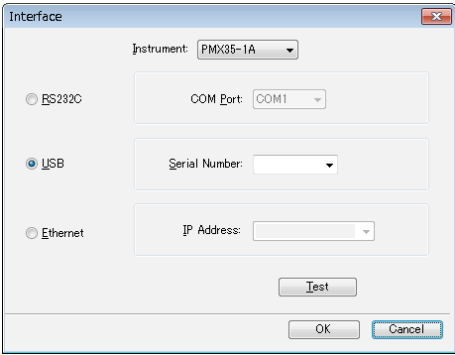
To start Wavy for PMX, click on the [Start] menu and select [All Programs]. Then, select [Kikusui], [SD025-PMX], and [Wavy for PMX] in this order.



CONFIGURING THE INTERFACE

After launching Wavy for PMX for the first time, you need to configure the interface.

- 1 Click on the [Setting] menu and select [Interface].**



- 2 From [Instrument], select the model name of the PMX series to connect to.**

RS232C

- 3 Select [RS232C].**
- 4 Select [COM] port.**

USB

- 3 Select [RS232C].**
- 4 Select the connected PMX from the [Serial Number].**

You can find out the serial number on the rear panel of the PMX.

LAN

- 3 Select [Ethernet].**
- 4 Select the connected PMX from the [IP Address].**

You can confirm the IP address by referring to the config settings (CF35 to CF 38) on the PMX.

If the IP address is not displayed, you need to search for the device connected through LAN using the VISA library. For details, see the operation guide.

- 5 Click [Test].**

Verify that your PC is communicating with the PMX.

FEATURE INTRODUCTION

For details on operation, see the attached operation guide in both help and PDF format.

Acrobat reader is required to view the operation guide in PDF format.

Sequence execution

- 1 Click on [Sequence] menu and select [Mode].**

In the [Mode] window, set the operating mode (Constant Voltage (CV) mode or Constant Current (CC) mode), the execution time unit, and the repetition count.

- 2 Create the steps.**

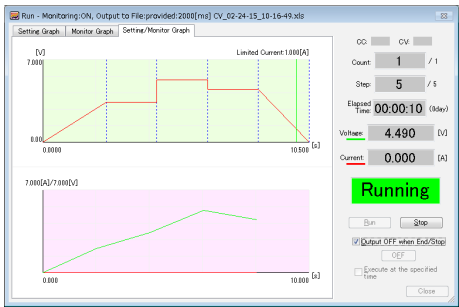
You can create steps by either drawing the lines in [Graph] window or directly entering values in [Worksheet] window.

You can also configure protection functions.

Save the created steps to a file which you can edit later on.

- 3 Click on [Sequence] menu and select [Run].**

The [Run] window opens and the sequence is executed.



You can have both the setting graph and real-time monitor graph appear in the [Run] window.

During execution, the repetition count, the step position, and the elapsed time are displayed.

Depending on the monitoring configuration, voltage and and/or current values are also displayed.

The monitored data can be saved to a file.

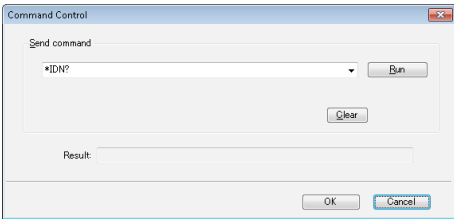
Remote control panel

You can use Wavy for PMX to set the PMX series' voltage and current, turn the output on and off, and monitor values.



Cammand control

You can send PMX series commands from Wavy for PMX.



SPECIFICATIONS

Operating Mode: Constant Voltage (CV), Constant Current (CC)

Number of Significant Decimal Places*1: 3 digits

Monitoring: Output current value, output voltage value

Monitoring Interval*2: 200 ms to 600 000 ms (0.2 s to 600 s)

Total Number of Steps: 1024

Range of Sequence (Interval) *2

Unit	Range	Setting resolution
s (seconds)	0.5 s to 999.5 s	0.5 s
min (minutes)	0.1 min to 999.9 min	0.1 min
h (hours)	0.1 h to 999.9 h	0.1 h

- *1 This depends on the range of the connected PMX Series.
- *2 The accuracy depends on your PC environment.