Instruction Manual

MODEL 8241

USB Communication Set

This manual describes the specifications and handling precautions of the package. Before using this product, thoroughly read this manual to obtain a clear understanding on proper use.

KYORITSU ELECTRICAL
INSTRUMENTS WORKS, LTD.

Precautions before Use

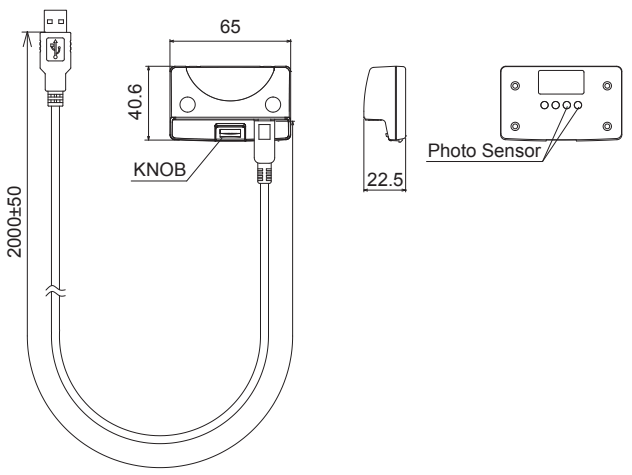
- This communication package is for our digital multimeters (DMM) and cannot be used with other Kyouritsu products.
- To ensure safety, turn off the DMM and remove the testing leads before attaching the communication adapter.
- Read through the instruction manual of the DMM as well.

General Specifications

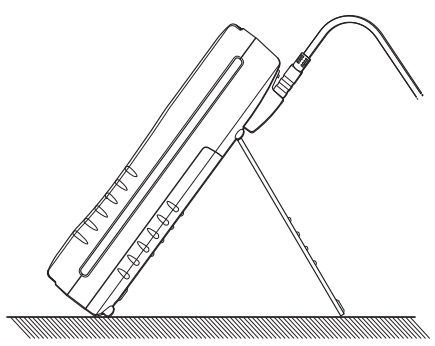
- Infrared Communication Adapter
  - External dimensions : 40.6(L)×65(W)×22.5(D) mm
  - Cable length : Approx 2m
  - Weight : Approx 80g
  - Specification of USB : Ver.1.1 (Reference)
- Communication Application Software
  - ・System Requirements
    - Operating system : Windows2000 or later
    - CPU : Pentium 133 MHz or faster (use a personal computer with a faster CPU if you cannot properly acquire measurement data)
    - Memory : At least 64 MB
    - Display : 1024×768 dots, 65536 colors or more
    - Storage device : Hard disk with at least 10 MB of free space and one CD drive
    - Microsoft Excel : Excel2000 or later
  - ・Main Specifications for Communication Application Software
    - Data receiver : Can receive save-mode and logging-mode memory data, and real-time data from a DMM. (Maximum receive real-time data: 32767)
    - Data processor : Can display digital data and trend graphs, saved and read data, and transfer data to Excel.

Windows and Excel are registered trade marks of Microsoft in the United States.
Pentium is a registered trademark of Intel in the United States.

External View



Connecting to DMM



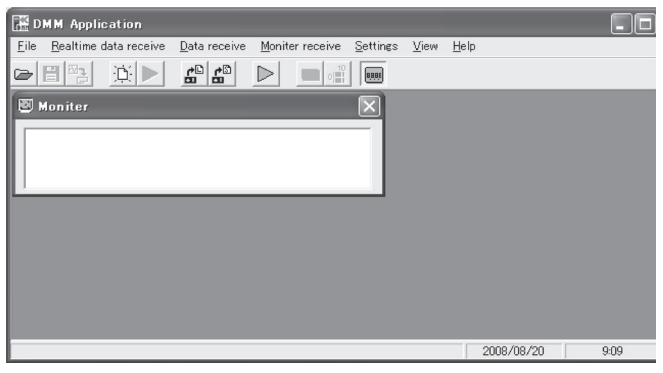
Attach the adapter to the back of the DMM in such a way that the cable is positioned in an upward direction.
Unlock the Knob to remove the adapter.

Installing DMM Application Software

Insert the CD-ROM into the CD drive.
If the installer doesn't run automatically, execute the Setup.exe contained in the CD.
Follow the instructions in the supplied instruction manual to install the application.

Starting Application Software

Click on the Windows Start Menu and point to Programs, KEW and then DMM Application. The following screen appears.



- Descriptions of Toolbar Buttons

Reads saved data.	Saves received data.
Transfers displayed data to Excel.	Specifies new settings for receiving real-time data.
Starts receiving real-time data.	Receives DMM logging-mode data.
Receives DMM save-mode data.	Starts receiving monitor data.
Specifies interval and period for receiving real-time data.	Specifies graph scaling.
Turns on/off monitor display.	

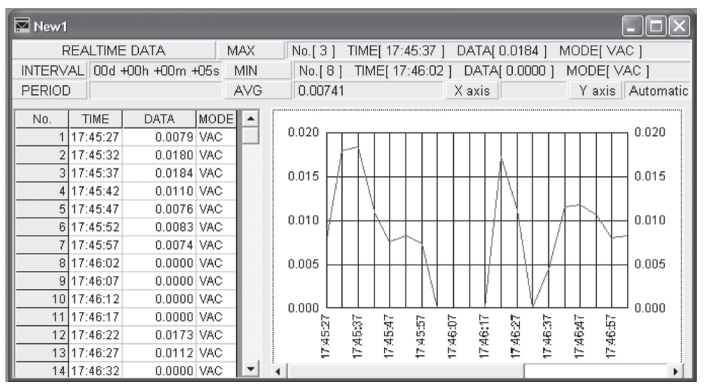
How to Use the Product

- Connecting to Personal Computer

  Connect the communication to a USB Port of the personal computer.
- Setting Communication Port

  Set the communication port to which the product is connected.
  Select Settings and then Communication Port. Specify the communication port number of the personal computer used. Refer to "3-3 COM Port Number" in the supplied Installation Instructions for the port number.
- Receiving Data

  Turn on the DMM to receive real-time data, logging-mode data and save-mode data. These data can be received by clicking the respective toolbar buttons shown above. Do not select the PRINT function of the DMM during a data receiving.

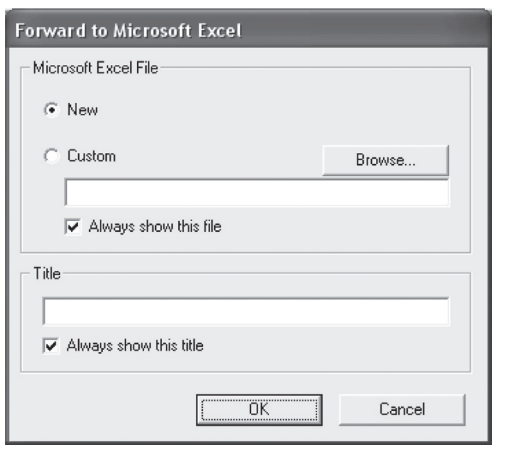


* This figure is an example of real-time data reception

- Auto-transferring Data to Excel

  Whenever you attempt to receive each data, a message appears asking whether or not to transfer the data to Excel. Click OK to receive data and transfer them simultaneously.
  Specify a file type from New or Custom in the dialog box that appears:
  - New file : You can arbitrarily choose a file name when saving from Excel.
  - Custom file : Adds a new spreadsheet to an existing file.

  You can also specify a graph title. Enter any title in the box shown in the dialog box and check the respective check boxes to store the existing custom file name and the title to memory until you restart DMM Application and transfer data to Excel.



Clicking OK automatically activates Excel and starts data transfer. When the transfer is complete, a graph frame and the graph are automatically generated. When you select Forward to Microsoft Excel from the File menu after receiving each data, the acquired data is immediately transferred and a frame and graph are generated.

Note: To interrupt data receiving or display a trend graph while real-time data is being received and transferred to Excel simultaneously, display DMM Application which is running in the background by clicking DMM Application on the taskbar.

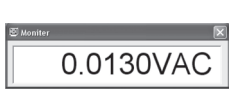
- Reading and Saving File

  You can read or save each of the acquired data. Select the commands from the File menu or the respective toolbar buttons for reading or saving the existing data.

  Note: Data is saved as a CSV file. You can directly read the file in Excel, but do not overwrite the data. Doing so results in you not being able to read the data from DMM Application.

- DMM Monitor

  The DMM measured values can be regularly displayed on a personal computer screen. The Monitor screen is displayed by clicking the button for starting data reception.



Communication Settings

The communication settings for digital multimeters are fixed as follows.

Baud rate	: 9600 bps
Parity	: None
Stop bit	: 2 bits
Data length	: 8 bits
Handshake	: None
Delimiter	: <CrLf> fixed

Command References

● Request to Send Real-time Data

RR command	
Description	Used to acquire current measured value. The data can be consecutively acquired with a parameter following the command.
Command	・Single data acquisition : RR,1<CrLf> ・Consecutive data acquisition : RR,2<CrLf> ・Consecutive acquisition stop : RR,0<CrLf>
Return	・Single and consecutive data acquisition RR, S, MDDDDDDAUFFx<CrLf> S : Status→ N=Normal O=Over B=LowBatt M : Sign “－” or “＋” DDDDDD : measured value A : auxiliary unit (k, m, etc.) U : unit (V, A, etc.) FF : measurement function (DC, AC, etc.) x : Checksum Example) DC432.10mV → RR, N, +432.10mVDC7<CrLf>

● Request to Send Save-mode Data

RS command	
Description	Used to acquire the data from DMM save-mode memory. The number of memory data can be specified with a parameter following the command.
Command	RS, nn<CrLf> nn : memory number (00 to 99) (KEW1061, KEW1062, KEW1052)
Return	・When data with a specified number exists in save-mode memory RS, S, MDDDDDDAUFFx<CrLf> S : Status→ N=Normal O=Over B=LowBatt M : Sign “－” or “＋” DDDDDD : measured value A : auxiliary unit (k, m, etc.) U : unit (V, A, etc.) FF : measurement function (DC, AC, etc.) x : Checksum ・When data with a specified number does NOT exist in save-mode memory RS5<CrLf>

● Request to Send Logging-mode Data

RL command	
Description	Used to acquire data from DMM logging-mode memory. The number of memory data can be specified with a parameter following the command.
Command	RL, nnnn<CrLf> nnnn : memory number (0000 to 0999) (KEW1061) nnnn : memory number (0000 to 9999) (KEW1062) nnnn : memory number (0000 to 1599) (KEW1052)
Return	RL, S, MDDDDDDAUFFx<CrLf> S : Status→ N=Normal O=Over B=LowBatt M : Sign “－” or “＋” DDDDDD : measured value A : auxiliary unit (k, m, etc.) U : unit (V, A, etc.) FF : measurement function (DC, AC, etc.) x : Checksum ・When data with a specified number does NOT exist in logging-mode memory RLE<CrLf>

● Request to Send Logging-mode Data Count

RN command	
Description	Used to acquire the count of data in DMM logging-mode memory.
Command	RN<CrLf>
Return	RN, nnnnnx<CrLf> nnnnn : logging-mode data count (00000 to 01000) (KEW1061) nnnnn : logging-mode data count (00000 to 10000) (KEW1062) nnnn : logging-mode data count (0000 to 1600) (KEW1052) x : Checksum

● Request to Send Interval of Logging-mode Data

RI command	
Description	Used to acquire the measurement interval of data in DMM logging-mode memory.
Command	RI<CrLf>
Return	RI, nnnnx<CrLf> nnnn : interval of logging-mode data (0001 to 1800) sec x : Checksum

● About This Manual

1. The contents of this manual are subject to change without prior notice.
2. Extreme care has been taken in the preparation of this manual. Should, however, any questionable descriptions or missing information be found, contact your nearest sales representative.
3. Kyoritsu assumes no liability whatsoever for damages or injuries for which the cause is attributable to mishandling by the user.
4. The intention of this manual is to explain the product functions and Kyoritsu makes no warranty of any kind with regard to this manual, including but not limited to, implied warranties of merchantability and suitability for a particular purpose.

● After-sales Servicing

Should the product fail during operation or be not able to operate normally any more, and thus need to be repaired, contact the sales representative from which you purchased it.