Measurement Data Collection Software
USB-ITPAK V3.0/V2.1

(**IT-016U**/**IT-020U**/**USB-ITN**/**U-WAVE**/**DP-1VA LOGGER** can be used to send the data to a Microsoft® Excel® worksheet.)

- **USB-ITPAK V3.0**/**V2.1** creates a procedure to input data from gages equipped with Digimatic output to Excel spreadsheets via **IT-016U**, **IT-020U**, **USB-ITN** or **U-WAVE**. This optional software facilitates the daily inspection work for mass-produced products.

V2.1	V3.0	Function
✓	✓	Sequential measurement: Inserts measurement data into the inspection certificate (Excel)
✓	✓	Simultaneous measurement: Simultaneously collects measurement data from multiple measuring instruments mounted on a jig
✓	✓	Individual measurement: Collects measurement data of separately conducted inspections into a single PC
—	✓	Simple measurement function: Automatically sorts measurement data and inserts the data into different columns in Excel
—	✓[1]	Setting of measuring instrument: Sets the calibration year and month, preset values, zero-setting, etc. for a measuring instrument
—	✓[1]	Measurement history: Records operators and measuring tools used in measurement data

Symbol: ✓[1]: Can be used only when connected with **USB-ITPAK V3.0**, **ID-CNX**/**ID-FNX** and **USB-ITN-SF**/**IT-020U**. ✓: Can be used —: Cannot be used

Note 1: **V3.0** can be downloaded from our website.
Note 2: For **V3.0**, features common with **V2.1** can be used by purchasing **V3.0** (**06AGR543**) and connecting a USB dongle to your PC.

Main features of USB-ITPAK V3.0/V2.1

- **Setting of Microsoft Excel input:**
  Designation of where to input (workbook, worksheet, cell range), cursor move (right, down), and others.
- **Selection of measuring method (3 modes available)**
  1) Sequential measurement 2) Simultaneous measurement 3) Individual measurement (refer to page 09-17 for details).
- **Control item and instruction at data input**

Control item	Mouse operation	Function key	Foot switch + USB-FSW	Data switch when using **U-WAVE**	Data switch other than **U-WAVE**
Data output request	✓*1	✓*1	✓	✓*2	✓
Data cancel	✓*1	✓*1	✓	✓ Press and hold*2	
Data skip	✓*1	✓*1	✓		
Character input (example: OK or NG etc.)			✓ Pre-registered character strings		

*1 Not available during individual measurement.
*2 Not available during simultaneous measurement in the event driven mode.

- **Number of connectable gages**

Available devices	Maximum number of connection (total of (1), (2), and (3))	Others
1) **IT-020U**/**USB-ITN**	For Windows 2000/XP: Up to 100 units*3 For Windows Vista/7/8/8.1/10/11: Up to 20 units*3 (For **U-WAVE-R**, plus 100 per unit in terms of available gages.)	• Maximum registration (total of (1), (2), and (3)) 400 units
2) **USB-FSW**		
3) **U-WAVE-R** (Up to 100 gages connectable to each **U-WAVE-R**. **U-WAVE-T** ID: 00 to 99)		• Control/identification of connecting gage VCP (Virtual COM port) Switch from HID to VCP for (1) and (2). The VCP driver software is supplied with **USB-ITPAK**.

- **Data loading time**: when using **IT-020U**/**USB-ITN**, 0.2 s to 0.3 s per gage unit
  U-WAVE event driven mode: 0.5 s data refresh interval
- **Timer input function** (only in simultaneous measurement)
  Input interval (time): 0.1 s*4 to 24 hours at maximum
- **Measurement date/time display function** (available in sequential and simultaneous measurements)
  The display format is subject to the setting of the Excel sheet.

*3 The actual number can be less depending on the system configuration.
*4 If a shorter time is set, a priority is given to the longer time compared with the actual communication time.

Optional Accessories for USB-ITPAK

USB Foot Switch Adapter USB-FSW

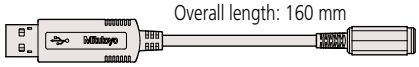
This USB adapter for connecting a PC is required when using the Foot Switch (**937179T**) in **USB-ITN**.
A dedicated VCP driver for this adapter is included in **USB-ITPAK**.

Main specification

- With **USB-ITPAK**, application of the foot switch can be set.
- Data control: "Data request", "Data cancel", "Data skip"
- Character string input (e.g. GO/NG, etc.)

Note: **USB-FSW** is used for installation of the VCP driver.

Foot Switch Adapter USB-FSW



Optional Accessories

Model	USB-ITPAK V3.0	USB-ITPAK V2.1
Code No.	**06AGR543** (USB dongle only)	**06AFM386** (Software+USB dongle)
Compatible OS (Windows)	Windows 10 64 bit only Windows 11	Windows 2000 SP4 to Windows 10
Compatible Excel version	Excel 2010, 2013, 2016, 2021, Microsoft 365	Excel 2002, 2003, 2007, 2010, 2013, 2016, Microsoft 365

Upgrading from **V1.0**/**V2.0** is not supported.

USB-ITPAK V3.0

Download software

USB dongle

Allows for use of all functions of the software when connected to a PC

USB-ITPAK V2.1

USB dongle

Allows for use of the software when connected to a PC

Operating environment

Compatible OS*1	**USB-ITPAK V3.0**: Windows 10 (64 bit only) Windows 11
	USB-ITPAK V2.1: Windows 2000 SP4 Windows XP SP2 or later Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10
Supported Excel versions*2	**USB-ITPAK V3.0**: 2010, 2013, 2016, 2021 Microsoft 365
	USB-ITPAK V2.1: 2002, 2003, 2007, 2010, 2013, 2016 Microsoft 365
Hard disk	**USB-ITPAK V3.0**: Free space of more than 15 MB **USB-ITPAK V2.1**: Free space of more than 10 MB
CD-ROM drive	For program installation*4
USB port*3	2 ports or more
Monitor resolution	**USB-ITPAK V3.0**: 1024×768, 256 colors or more **USB-ITPAK V2.1**: 800×600, 256 colors or more

*1 32-bit, 64-bit OS supported
*2 Operation with Excel for MAC OS is not guaranteed.
*3 A commercially available hub can be used.
(USB certified product is recommended)
*4 **V3.0** does not require a CD drive but does require an Internet connection for download.

Language support

- Operation language (17 languages)
  Japanese, English, German, French, Spanish, Italian, Czech, Swedish, Turkish, Polish, Hungarian, Russian, Korean, Chinese (traditional/simplified), Dutch, Portuguese
- Operation manual (PDF file)
  Japanese, English, German

Code No.

Model	USB-FSW
Code No.	**06ADV384**

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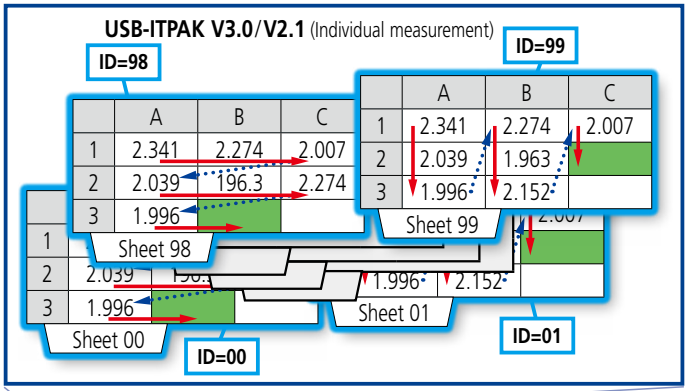
Example of measurement using the U-WAVE Series wireless communication system

<Data sorting of individual measurements>

Data from multiple Digimatic gages sent to separate Excel sheets

Measurement data from multiple measuring instruments can easily be sorted and inserted into the respective sheets in Excel.



<timer input + measurement date/time display during simultaneous measurement>

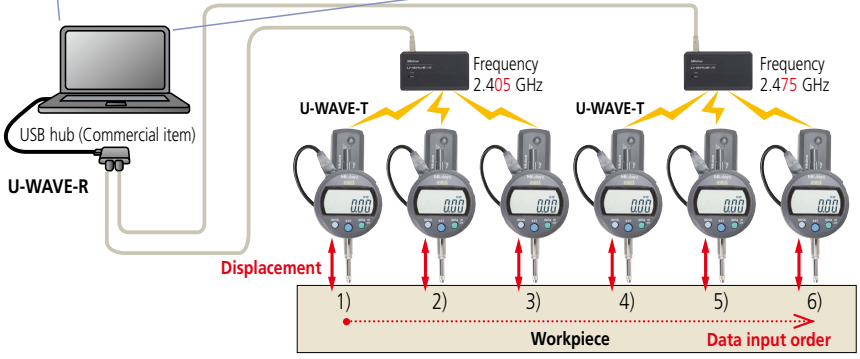
Automatically obtains displacement data in a certain input interval

The event-driven operation function of **U-WAVE** enables data collection at a preset time by timer.

USB-ITPAK V3.0/V2.1 simultaneous measurement + timer input (example: 5 s interval)

	A	B	C	D	E	F	G
1	Displacement 1)	Displacement 2)	Displacement 3)	Displacement 4)	Displacement 5)	Displacement 6)	Measurement date/time
2	0.281	0.162	0.121	0.051	0.011	–0.001	2013/4/1 7 30 00
3	0.279	0.152	0.133	0.064	0.018	–0.003	2013/4/1 7 30 05
4	0.265	0.149	0.142	0.089	0.021	–0.007	2013/4/1 7 30 10
5							
6							

5 s
5 s
5 s



The input interval can be arbitrarily set by 0.1 seconds intervals up to 24 hours. If a smaller value than the data loading time is set, the actual measurement time will be the input interval.
With **U-WAVE**, an error (no data) may occur if less than 0.5 seconds is set for the input interval. This is because the data request signal is issued before the data comes in, based on the event driven data refresh interval that is set to 0.5 seconds (fixed).

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Measurement Data Management

Measurement Data Management
USB-ITPAK V3.0/V2.1 (IT-016U/IT-020U/USB-ITN/U-WAVE/DP-1VA LOGGER connectable)

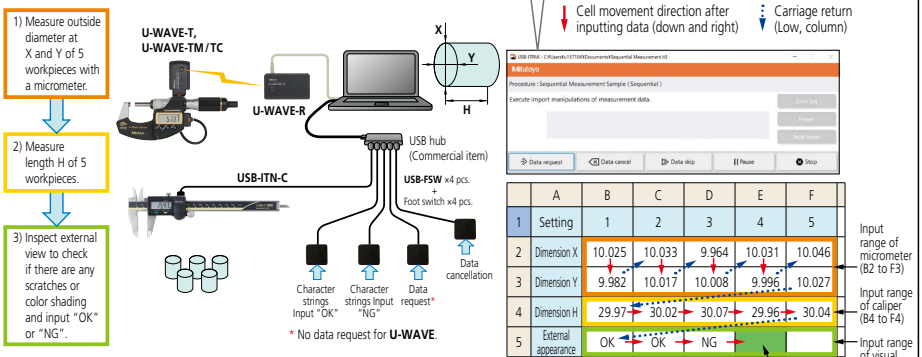
A desired measurement sequence to collect data into Excel can be created by using USB-ITPAK with an input tool or U-WAVE.

Measurement applications of USB-ITPAK (Three examples of how **USB-ITPAK** can be deployed are shown below)

Sequential measurement Example of measurement using input according to pre-registered procedures

(Measurement example) The outside diameters at X and Y and length (H) of 5 workpieces are measured in order, as shown below. Finally, a visual inspection is performed (for scratches, uneven coloring, etc.) to determine Go/±NG judgment.

When a measuring procedure is executed, a window is displayed. "Data request*", "Data cancel*", "Data skip*", "Aborting", "Complete" can be specified. * These operations can be allocated to the function key or foot switch (via **USB-FSW**).

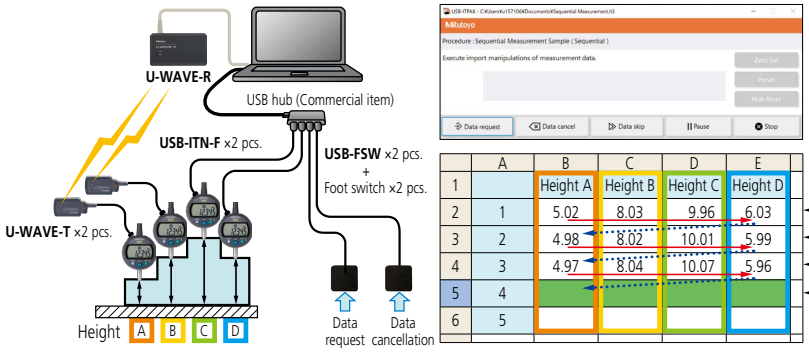


	A	B	C	D	E	F
1	Setting	1	2	3	4	5
2	Dimension X	10.025	10.033	9.964	10.031	10.046
3	Dimension Y	9.982	10.017	10.008	9.996	10.027
4	Dimension H	29.97	30.02	30.07	29.96	30.04
5	External appearance	OK	OK	NG		

* These are common options for **IT-020U**, **USB-ITN**, and **U-WAVE**. They cannot be used with **IT-007R**.

Simultaneous measurement Example of measurement involving importing data from multiple Digimatic gages at once

(Measurement example) Batch (simultaneous) measurement of 4 heights (A to D) of the workpiece shown below.



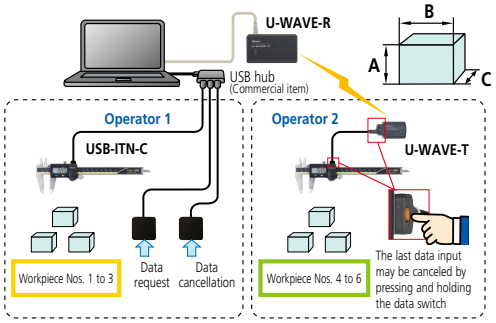
	A	B	C	D	E
1		Height A	Height B	Height C	Height D
2	1	5.02	8.03	9.96	6.03
3	2	4.98	8.02	10.01	5.99
4	3	4.97	8.04	10.07	5.96
5	4				
6	5				

First measurement (finished)
Second measurement (finished)
Third measurement (finished)
Fourth measurement (Wait for next input)

Note: When using **U-WAVE** for batch measurement, it will operate in "Event Drive mode."

Individual measurement Example of simultaneous work by multiple operators

(Measurement example) Two operators measure 6 workpieces 3 workpieces per operator



	A	B	C	D	E	F	G
1	Setting	1	2	3	4	5	6
2	Dimension A	10.02	10.03	9.96	10.15	10.23	10.04
3	Dimension B	9.98	10.01	10.07	9.99	9.78	
4	Dimension C	10.15	10.14		9.96	10.27	

Operator 1 Cell that will receive next input
Operator 2 Cell that will receive next input

USB-FSW ×2 pcs. + Foot switch ×2 pcs.

Notes on using USB-ITPAK V3.0/V2.1:

- Do not merge the cells in the specified range as a measurement data input.
- During measurement, the Microsoft Excel worksheet cannot be modified in any way apart from entering data. If you need to modify the sheet, it is necessary to abort or finish the measurement.
- If the OS build version is old, it may not be possible to use **U-WAVE fit *Bluetooth*®** and **U-WAVE fit** or **U-WAVE-T** together.

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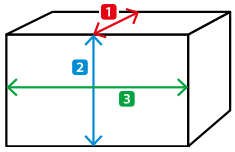
Bidirectional serial communication

With bidirectional serial communication (Digimatic S1) enabled measuring instruments, it is possible to use **USB-ITPAK V3.0** on a PC to control, configure, and collect information from the measuring instruments in addition to ordinary measurement data collection. This reduces labour and time for inspection and greatly increases efficiency.

Equipped with an automatic sorting function for sorting input measurement data [Easy input mode]

This function can be implemented even if the measuring instrument does not support bidirectional serial communication. After setting, measurement values are automatically sorted into an Excel sheet as needed.



Only the number of measurement items is preset.
(Example: number of measurement items = 3)

1 D: 10 mm
2 H: 20 mm
3 W: 30 mm

With normal input
(Entered into column A only.)

		A	B
1	1	10.11	
2	2	20.05	
3	3	29.99	
1	4	10.54	
2	5	20.45	

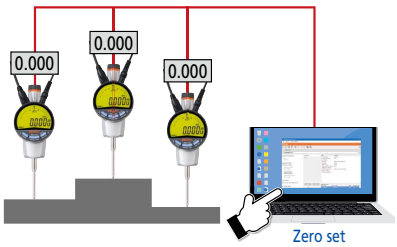
With automatic sorting function
(Once entered into column A, similar data is automatically classified.)

		A	B	C	D	E
1	1	10.11		10.11	20.05	29.99
2	2	20.05		10.54	20.45	29.5
3	3	29.99		9.78	20.3	30.4
1	4	10.54		9.99	20.07	30.22
2	5	20.45				

Digimatic S1 applicable model Example of measurement using the **ID-CNX/ID-FNX**

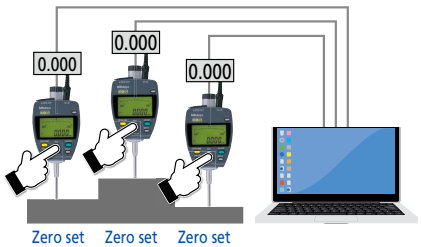
Function example (1) Control of ID-C/ID-F from PC

ID-CNX/ID-FNX + USB-ITPAK V3.0



- It is possible to zero-set or preset measuring instruments collectively from **USB-ITPAK V3.0** on a PC.

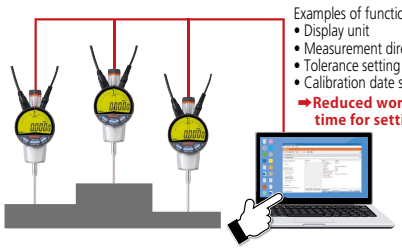
Instruments not supporting bidirectional serial communication + USB-ITPAK



- It is necessary to manually zero-set or preset measuring instruments individually.

Function example (2) Measuring instrument setting

ID-CNX/ID-FNX + USB-ITPAK V3.0

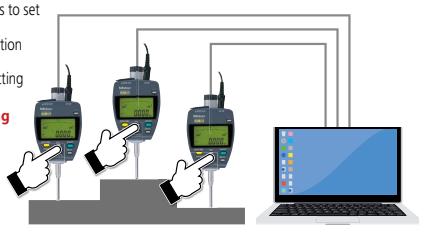


Examples of functions to set
- Display unit
- Measurement direction
- Tolerance setting
- Calibration date setting

➡**Reduced work time for setting**

- It is possible to set the functions of measuring instruments from **USB-ITPAK V3.0**.
- The settings of functions can be saved on a PC and copied to other measuring instruments.

Instruments not supporting bidirectional serial communication + USB-ITPAK



- It is necessary to manually change the settings.

Note: The above is possible only when bidirectional serial communication (Digimatic S1) enabled measuring instruments are used with USB Input Tool Direct or **IT-020U**. It is not possible with measuring instruments not supporting Digimatic S1 or **U-WAVE** Series.

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