Mitutoyo

USB-ITPAK

Measurement Data Collection Software

Although Measurement Data can be simply loaded directly into a Microsoft Excel® spreadsheet by connecting the instrument and input tool to a computer, using the optional USB-ITPAK software enables time-saving operations and procedures that significantly improve reliability and efficiency.

- ITPAK creates inspection routines that guide the operator though the required measurements and ensures data from each gage is input into the correct cell.
- This is a must-have software for individuals who use Microsoft Excel® spreadsheets for data collection.
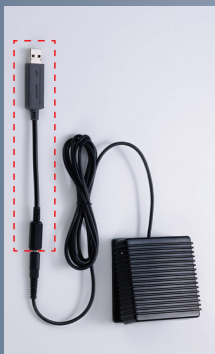
USB-ITPAK V2.1

USB dongle

A USB dongle must be connected to the PC running the software.
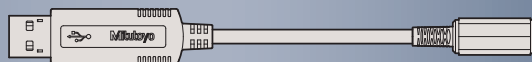
■ Features of USB-ITPAK V2.1

● The measuring methods can be configured, such as sequential measurement, batch measurement, individual measurement and more.

● Data input or cancellation can be triggered globally for multiple features and simultaneous measurement.

● Data can be canceled by a single operation of the foot switch or function key.

● The Microsoft Excel® spreadsheet can be automatically opened for data input.

● Input range can be specified per Digimatic Gage, reducing the chance of a misinput.

● The cursor movement after data input can be set to enable automatic input.

> USB-ITPAK is best used in high volume, multiple gage applications where the operator needs to ensure multiple data points are placed into the correct cells of their spreadsheet.

USB Foot switch Adapter

The USB Foot switch Adapter converts the Mitutoyo Foot switch into a USB device allowing it to be utilized by ITPAK to perform function such as: Data trigger, data cancel, and pass or fail for attribute collection. The cables are serialized so several can be used in one routine to perform dedicated functions.

Applications

Measurement Data Collection Software

Measurement values are input one by one according to a procedure previously defined by using one or more Digimatic Gages (via **IT-016U/USB-ITN** or **U-WAVE**).

(1) Measure outside diameter at X and Y of 5 workpieces with a micrometer.

(2) Measure length H of 5 workpieces.

(3) Inspect external view to check if there are any scratches or color shading and input "OK" or "NG".

U-WAVE-T

U-WAVE-R
The last data input may be canceled by pressing and holding the data switch

USB-ITN-C

USB hub (Commercial item)

USB-FSW × 4 pcs.
+
Foot switch × 4 pcs.

Character strings Input "OK"   Character strings Input "NG"   Data request*   Data cancel

*No data request for U-WAVE.

When a measuring procedure is executed, a window (as below) 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		

Cell movement direction after inputting data (down and right)
Carriage return (Low, column)
Microsoft Excel® sheet previously specified
Input range of micrometer (B2 to F3)
Input range of caliper (B4 to F4)
Input range of visual judgment (B5 to F5)

Cell that will receive next input is highlighted in green

Simultaneous Measurement

Measurement values are input simultaneously from several Digimatic Gages (via **IT-016U/USB-ITN**, **U-WAVE**)

U-WAVE-R

A special order U-WAVEPAK (Event drive) is required. (Refer to A-9.)

USB hub (Commercial item)

USB-ITN-C × 2

U-WAVE-T × 2 pcs.

USB-FSW × 2 pcs.
+
Foot switch × 2 pcs.

(Measurement examples)
Simultaneous measurement of the heights A to D on the workpiece below.

Height A   B   C   D

Data request   Data cancel

	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)

Individual Measurement

Several operators input measurement data asynchronously according to individually defined procedures (where to input, move direction, etc.) from each Digimatic Gage via **IT-016U/USB-ITN** or **U-WAVE**.

(Measurement example)
Two operators measure 6 workpieces (three each, both working at the same time)

USB hub (Commercial item)

U-WAVE-R

Since several individual operators perform measurement simultaneously, an operation key and a function key in the window below cannot be used at the same time. The only effective input device in this case is the foot switch (via USB-FSW).

Operator 1

USB-ITN-C

Operator 2

U-WAVE-T

The last data input may be canceled by pressing and holding the data switch

Workpiece Nos. 1 to 3   Data request   Data cancel

Workpiece Nos. 4 to 6

	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   Operator 2

Cell that will receive next input

Cell that will receive next input