

Intelligent Sewing System

System tool for achieving
visualization of the sewing line



The production data can be checked on a "Visualization of the sewing line" enables

The Intelligent Sewing System is a system tool consisting of data analysis software a data measuring terminal (IT Series) for realizing a "visualization of the sewing site

IA-1 (Intelligent Application)

The Intelligent Sewing System is software which analyzes sewing data measured by the IT Series. Data are loaded on a personal computer and various kinds of information are displayed in the form of lists and charts, thereby facilitating the detection of problems.

Functions of the IA-1

- Progress information monitor
 - Progress on a line-by-line basis
 - Display of the list / layout of each individual operator
- Machine operation monitor
 - Information on the operation rate of a sewing machine
 - Rate of Machine Turned Off
 - Average Sewing Speed
 - Information on maintenance
- Production line analysis
 - Line balance
 - Change in the output
 - Process analysis
 - Operation analysis
 - Motion analysis
- Line balance simulation
- Sewing recorder (IT-100)
- Basic data on wages

* Languages that can be displayed on the IA-1 are English, Chinese (simplified characters) and Japanese.

Visualization of the production line

Progress information monitor

The advance/delay status of the production line with respect to the production target can be monitored with the four different signal colors (red, blue, yellow and green) in real time.



Information on progress (list)



Information on progress (layout)

Visualization by means of the Intelligent Sewing System

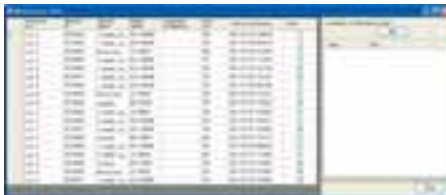
Visualization of the machine

Machine operation monitor

Information of the sewing machine operation (sewing, stop and power-off) and the sewing speed are displayed. Error information is also obtained as maintenance information. These pieces of information contribute to the most effective use of the facilities.



Information on the sewing machine operation

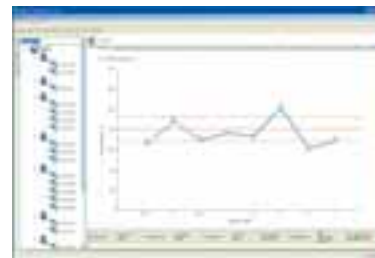


Information on maintenance

Visualization of the work

Production line analysis

Analysis of the line balance, which determines the productivity of the line, allows the identification of bottleneck processes, thereby helping improve work distribution.



Line balance



Motion analysis

real-time basis through networking! the early detection of a problem.

(IA-1) and

"

IT Series (Intelligent Terminal)

The production data on the sewing site can be directly measured by connecting the Intelligent Sewing System to the sewing machine. On the IT Series display, the clock display and the display of the production target and actual number of pieces produced are enabled. It is expected that these displays help strengthen the operator's motivation for work.

* For the data measurement, an automatic measurement (frequency of thread trimming) or a manual measurement (by means of a manual switch) can be selected.



IT-100



IT-10



IT-20

* Download the Instruction Manual for the IT Series from the JUKI website.

LAN-capable (network)

Data are automatically transmitted to a personal computer by connecting the Intelligent Sewing System to the network, thereby enabling real-time analysis of the production data. (Data measurement is conducted by the IT Series. The measured data is transferred to a personal computer which has the IA-1 installed.)



Man-hour reduction

Troublesome data measurements are no longer required

IE staff is no longer required to measure data with a stopwatch or the like. In addition, data compilation and graph making are easily carried out by the IA-1. As a result, IE staff is able to concentrate on the early detection of problems and improvement activities.

● Function comparison table among the T-100, -10 and -20

Models name		IT-100 ^{※1}	IT-10	IT-20
Display screen		Dot type LCD	7-segment 12-digit LCD	7-segment 4-digit LCD
Sewing machine operation panel functions		Provided (with the programming function)	Provided	Not Provided
Clock display		○	○	○
Output of measured data to the network		○	○	○
Storage of measured data on the internal memory		○ ^{※2}	—	—
Buzzer		○	○	○
Signaling function by means of a blinking of the power LED		○	○	○
Display of the production target and the actual number of pieces produced		○ ^{※3}	○ ^{※3}	—
External interface	LAN connector	○	○	○
	USB connector ^{※4}	○	○	○
	RS-232C	○	○	○
Data measuring function	Actual output	○	○	○
	Information on the sewing machine operation	○	○	○
	Information on errors of the sewing machine	○	○	△ ^{※5}
	Sewing recorder	○	—	—
Applicable control box	SC-920/921/922	○	○	—
	SC-915/916	○	—	○
	SC-500/510/910(N)	—	—	○
	Others(MC/EC)	—	—	△ ^{※6}

※1 The IT-100 is able to use all functions of the IP-110 (conventional type operation panel).

※2 External output is allowed by means of a USB port

※3 The displayed number of pieces produced is not linked with the data stored in the IA-1.

※4 The sewing machine cannot be operated if the USB thumb drive remains inserted.

※5 The function marked with an asterisk is not supported by some models of the sewing machine.

※6 Refer to the table of optional cables for connecting the IT-20.

■ WHEN YOU PLACE ORDERS

IT 10 IT 100

IT 20 A

Applicable models	Applicable control box	Code
DDL-9000B, LH-3500A-7 Series, DLN-9010A, LZ-2282N-7, LZ-2284N-7, DDL-8700-7, DDL-5571N, DDL-5581N, DDL-5550N-7, DDL-5600N-7, DLD-5430N-7, DLM-5400N-7, DLN-5410N-7, DLU-5490N-7, DMN-5420N-7	SC-920	A
DLN-6390-7, LZ-2284C-7	SC-921	
MO-6700 Series, MO-6900 Series, MF-7500 Series, MF-7700 Series, MF-7800 Series, MF-7900 Series, MF-7200D Series, MF-3620, MS-3580, MH-1410, MH-480-5 Series	SC-921	B
DSC-240-7 Series, DSU-140-7 Series, DU-141H-7, LZH-1290-7	SC-921	C
LU-1500N-7 Series, LU-1500NA-7 Series, LU-2200N-7 Series, LU-2800-7 Series, DNU-1541-7, LS-1342-7, PLC-1700-7 Series	SC-922	

Caution: For control boxes other than those installed on the sewing machine models listed above, the IT-20 is applicable.

Applicable models	Applicable control box	Applicable operation panel	Code
LK-1900A Series	MC-596	Standard panel	A
LK-1900AN Series	MC-598		
MEB-3810	MC-621		
LBH-1790	MC-601		
AE-200A	MC-660		
AC-172N-1790	MC-546		
ACF-172-1790	MC-545	IP-200 IP-310 IP-400 IP-410 IP-420	A
AMS-210E	MC-583		
AMS-221E	MC-584		
AMS-224E	MC-585		
AMS-224E	MC-586		
LK-1900A Series	MC-596		
LBH-1790	MC-601		
AMB-289	MC-640		
DP-2100*	MC-650		
APW-895/APW-896	Exclusive control box		
AMS-210EN	MC-587	IP-420	A
AMS-221EN	MC-588		
AMS-224EN	MC-589		

Caution: For those sewing machine models of which the code is not "A", the optional connection cables listed below are required.

* For the DP-2100 (MC-650), the main software has to be updated to the special version.

■ OPTIONS

● Optional connection cable for the IT-20

To use the IT-20 with the IT-compatible sewing machine/control box, purchase the IT-20 and also place an order for the corresponding connecting cable.

No.	Description	Part No.	Applicable models / Applicable control box
1	SC CABLE A-ASSY. (Connector 13pin)* ¹	40105536	General machine / SC-810, SC-910, SC-910N, SC-915, SC-916
2	SC CABLE B-ASSY. (Connector 11pin)* ¹	40105537	General machine / SC-500 * ²
3	SC CABLE C-ASSY. (Connector 8pin, 4pin)* ¹	40105538	General machine / SC-510
4	SC CABLE D-ASSY. (Connector 7pin)* ¹	40105539	General machine / EC-10B * ² * ³
5	MC CABLE E-SET.* ⁴ (Connector 30pin)	40105566	* ² AMS-210D / MC-580, AMS-215D / MC-581, AMS-221D / MC-581, LK-1900 / MC-590, LK-1903 / BR25 / MC-591, LK-1910,20 / MC-592, LK-1930 / MC-593, LK-194* / MC-594, MOL-254 / MC-610 (RoHS compliant product)* ⁵
6	MC CABLE F-SET.* ⁴ (Connector 34pin)	40105567	* ² LBH-1700 / MC-600, MEB-3200 / MC-620, MOL-254 / MC-610 (RoHS non-compliant product)* ⁵
7	MC CABLE G-SET. (Connector 26pin, 5pin)	40105568	AB-1351 / MC-615

*¹ This cable may not be applicable, depending on the machine head or control box with which the cable is used or the status of use. Contact JUKI for details.

*² The automatic count-finishing function and the BT signal are not provided. Depending on the purpose of use, the No. of pieces counter switch (manual switch) may need to be separately ordered.

*³ Only applicable to "Pattern REV.F/R-2, Function REV. 04 or later"

*⁴ This cable is sold in sets as "cable + accessory (cable clip band)".

*⁵ Discriminable by the color of back light of the operation panel (Blue: RoHS non-compliant product; green: RoHS compliant product)

● PRODUCTION SWITCH ASSY. [Part No. 40116035]

This is a manual switch for counting data such as the output.

PC operating environment for the IA-1

CPU	2 gigahertz (GHz), 32-bit (x86) or 64-bit (x64) processor (Intel® Core™ i5-2520M processor or faster recommended)
Monitor resolution	High-definition video adapter and monitor of XGA (1024 × 768) or higher (1280 × 800 or higher) is recommended
Memory	1 GB RAM (32-bit) or 2 GB RAM (64-bit) (2 GB or higher is recommended)
Hard disk	Disk space of 15 GB or more * Disk space requirements may increase according to the environment of usage (30 GB or more is recommended)
Operating System	Windows® 7, Windows® Vista Service Pack 1, Windows® XP Service Pack 3 (Recommend Windows® 7 Professional 32-bit)

* Microsoft Windows is a trademark of Microsoft Corporation, U.S.A., registered in the U.S.A. and other countries.

* Other company names and product names/brand names are trademarks or registered trademarks of the respective companies.

● To order, please contact your nearest JUKI distributor.

JUKI® 2-11-1, TSURUMAKI, TAMA-SHI,
TOKYO 206-8551, JAPAN
PHONE : (81) 42-357-2254
FAX : (81) 42-357-2274
http://www.juki.com

* Specifications and appearance are subject to change without prior notice for improvement.

* Read the instruction manual before putting the machine into service to ensure safety.

* This catalogue prints with environment-friendly soyink on recycle paper.



JUKI CORPORATION HEAD OFFICE

Juki Corporation operates an environmental management system to promote and conduct the following as the company engages in the research, development, design, sales, distribution, and maintenance of industrial sewing machines, household sewing machines, industrial robots, etc., and in the provision of sales and maintenance services for data entry systems:

- (1) The development of products and engineering processes that are safe to the environment
- (2) Green procurement and green purchasing
- (3) Energy conservation (reduction in carbon-dioxide emissions)
- (4) Resource saving (reduction of papers purchased, etc.)
- (5) Reduction and recycling of waste
- (6) Improvement of logistics efficiency (modal shift and improvement of packaging, packing, etc.)