Vibration Data Management System MAINTE PRO®

MK-210HEII for Windows

Next-Generation Diagnosis Tool for the IT Age

JFE Advantech Co., Ltd.

(Former name : Kawatetsu Advantech Co., Ltd.)

MK-210HEⅡ for Windows

identifies signs of equipment deterioration, assesses the causes of trouble, predicts when to make repairs, reduces the required number of maintenance personnel, lowers maintenance costs, and improves production efficiency.
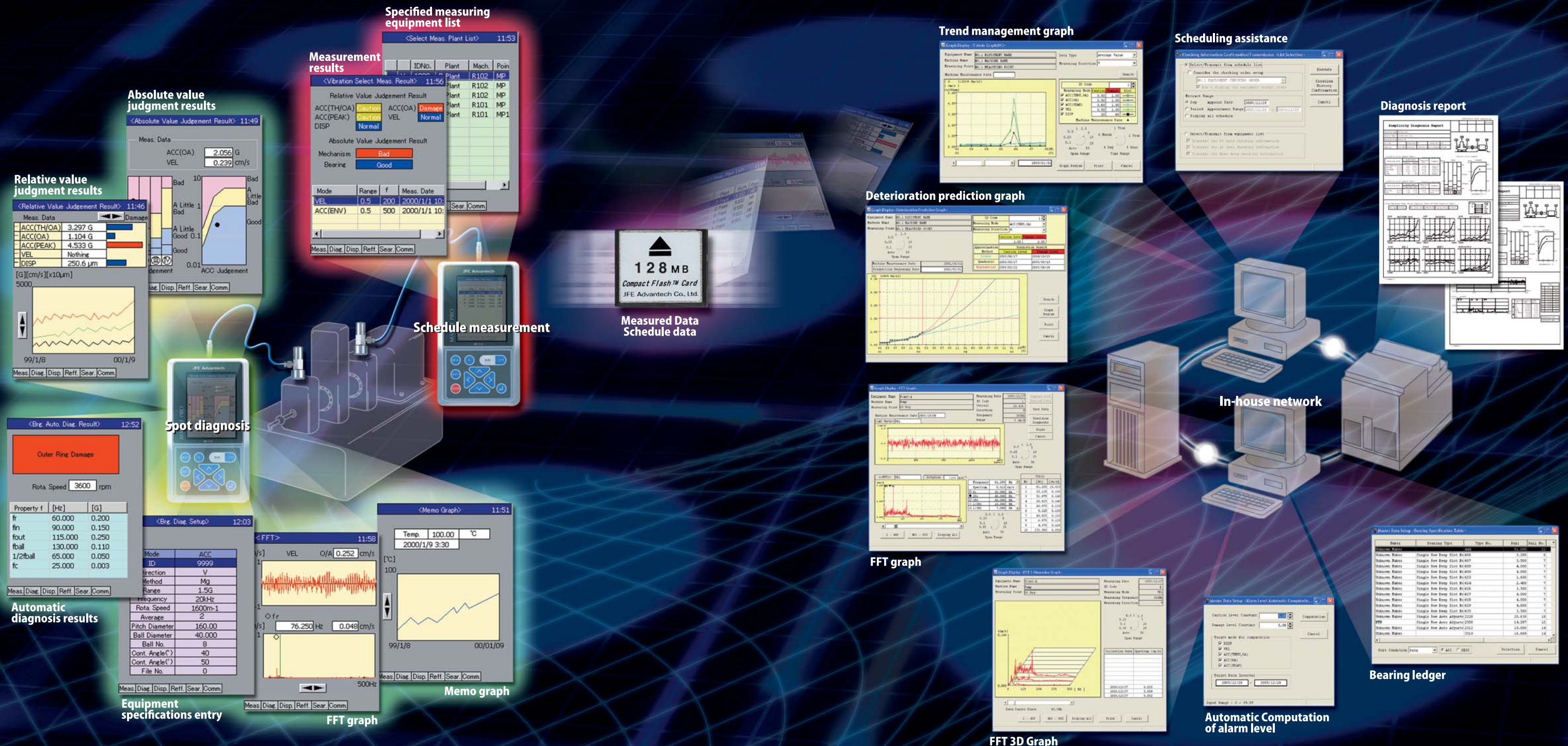
Features

- **Simple operation**
  Automatic measurement function, inspection information automatic creation

- **Large capacity memory**
  Uses a large capacity compact flash memory card.

- **Wide variety of configurations**
  Route measurement, schedule measurement, non-schedule measurement

- **Abundant know-how**
  Complete diagnostic logic, automatic report creation

- **Uses Windows CE**
  Easy-to-use user interface

- **Vertical color liquid crystal display**
  Colorful graphic displays, identifies the diagnostic results by color

- **2-mode measurement**
  Measures vibration and temperature

- **Built-in automatic diagnostic functions**
  Automatic diagnostics can be conducted on site

- **Diagnosis of variable speed equipment**
  Automatic detection and free setting of rotation speed

- **Water resistance comparable to IP66**
  Can be used without worry even during rainy weather

- **Linked with an equipment maintenance/management system**
  Increases efficiency of the maintenance operation using maintenance/management information and equipment diagnosis information

Precision diagnostic functions

- **Bearings**
  Inner race damage, outer race damage, ball damage, defective supports

- **Gears**
  Single-side contact, shaft center misalignment, tooth wear, defaced teeth, local defect

- **Mechanisms**
  Unbalance, misalignment, bent shaft, insufficient rack rigidity, shaft wear, play/looseness, installation misalignment

- **Pumps and fans**
  Pressure pulsation, uniform wear, uneven wear, local defect

- **Motors**
  High-frequency vibration, unbalanced voltage

Automatic diagnosis

Specified measuring equipment list

Measurement results

Absolute value judgment results

Relative value judgment results

Automatic diagnosis results

Equipment specifications entry

Spot diagnosis

Schedule measurement

Measured Data Schedule data

FFT graph

Memo graph

Trend management graph

Scheduling assistance

Diagnosis report

Deterioration prediction graph

FFT graph

In-house network

FFT 3D Graph

Automatic Computation of alarm level

Bearing ledger

128MB Compact Flash™ Card JFE Advantech Co., Ltd.

MK-210HE II for Windows

Equipment Diagnosis Instrument MK-210HE II Specifications

◗ Vibration meter unit

Input signal	Acceleration pickup signal, 1 channel		
Measurement mode Measurement frequency range Measurement range	Measurement mode	Measurement frequency range	Measurement range
	Acceleration ACC (TH/OA)	5 - 20kHz	0.5, 1.5, 5, 15, 50 G$_{O-P}$ (1G=9.8m/s^2)
	Acceleration ACC (OA)	1k - 20kHz	
	Acceleration ACC (PEAK)	1k - 20kHz	
	Acceleration ACC (ENV)	1k - 20kHz	
	Velocity VEL	5 - 1kHz	0.5, 1.5, 5, 15, 50 cm/s$_{O-P}$
	Displacement DISP	5 - 250Hz	50, 150, 500, 1500, 5000μm$_{P-P}$
Analysis frequency range	100, 200, 500, 1k, 2k, 5k. 10k, 20kHz (F.S)		
Resolution	1/400, 1/800 of the analysis frequency range		

◗ Temperature measurement unit

Input signal	3-wire type resistance temperature probe, Pt100Ω 1 channel
Measurement range	0 - 100℃

◗ Digital circuit unit

Display	STN color liquid crystal (240 x 320 dots) with back light
OS	Microsoft® Windows® CE Version 3.0
External memory	128MB compact flash memory card (installed in card slot)
Card slot	Compact flash card slot, TYPE I/II (3.3V specifications)

◗ Software function specifications

Measurement	Specific measurement, free measurement, vibration frequency analysis, vibration automatic precision diagnosis
Display	Relative value, absolute value assessment results, relative comparison graph, absolute comparison graph, vibration time axis waveform, vibration frequency analysis results, measurement ID list, bearing ledger

◗ General specifications

Main power	Rechargeable battery pack (lithium ion rechargeable batteries, hard pack) Charger specifications: Input AC 100V ±10%, 50/60 Hz
Continuous operation time	5 hours or more (when backlight is not used)
Charging time	Approx. 1 hour (time to fully charge)
Body protective construction	Dust-resistant and water-resistant construction (comparable to IP66)
Usage temperature range	0 ℃ to 50℃ (90%RH, no condensation)
Storage temperature range	-10℃ to 60℃ (90%RH, no condensation)
External dimensions (body)	97W X 50D X 170H (mm)
Weight (body)	Approx. 550g (including rechargeable battery pack)

MK-210HE II Data Processing Software Specifications

◗ Data files that can be managed

Equipment management	Maximum of 10,000 files
Vibration level data	Maximum of 10 million files
Vibration waveform data	Maximum of 30,000 files
Vibration waveform initial data	Maximum of 10,000 files x 5 modes
Temperature, memo data	Maximum of 10 million files

◗ Data transfer method (between MK-210HE II and a personal computer)

Memory card (standard)	Compact flash memory card

◗ Data display and output

Vibration data	Relative comparison graph, mutual comparison graph, vibration time axis waveform, vibration frequency analysis results
	Vibration frequency analysis results 3D display, simple and precision diagnosis reports
	Diagnosis report output in Excel (Excel 2000 or later) List of vibration DC data assessments
Temperature, memo data	Relative comparison graph, mutual comparison graph
Inspection information	Inspection schedule management
Data registration management	ID code, equipment specifications, diagnosis conditions, inspection route, schedule, equipment maintenance record, bearing ledger, operation, network environment settings

◗ Operation environment

Personal computer	PC/AT 100% compatible CPU: Pentium 200 MHz, RAM: 64MB or more Required hard disk capacity: 150MB or more Card slot: PC card or Compact Flash memory card
OS	Standard support: Windows 98, ME, 2000 and XP
Printer	Printer that supports Windows

Standard accessories

◗ MK-210HE II for Windows

Equipment diagnostic instrument: MK-210HE II-E			MK-210HE II Data Management Software MK-9802-E		
Measurement instrument main unit		1 set	Software CD		1 piece
Vibration pick-up	PU-626D-C1-NC	1 piece			
Magnet	MK-9002	1 piece			
Rechargeable battery pack	MK-8401	1 piece	PC card adapter	CFC-ADP02	1 piece
Recharger	MK-8220	1 piece			
Compact flash memory card 128MB	CFI-128MDG (H02AA)	1 piece			
Carrying case	MK-9701	1 piece	User's manual		1 copy
MK-210HE II instruction manual		1 copy			

Option

◗ Optional accessories

Vibration pick-up	PU-616D-C1-NC
Vibration pick-up	PU-601R-C
Magnet type temperature sensor	MK-9401
Spare rechargeable battery pack	MK-8401
Spare recharger	MK-8220
AC adaptor	MK-9501
Compact flash memory card 32MB	CFI-128MDG (H02AA)
PC card adaptor	CFC-ADP02
USB-CF reader/writer	REX-CF03F
Carrying case	MK-9701
MK-210HE II client software	MK-9802-E
12-channel switch box	MK-8310A
Connection cable for switch box	CJ-01-5

※ Windows® is a registered trademark of Microsoft Corporation of the United States. Pentium is a registered trademark of Intel Corporation.

※ Specifications may be changed without notice according to technical improvements.