

## RH822 Dual-channel vibration analyzer



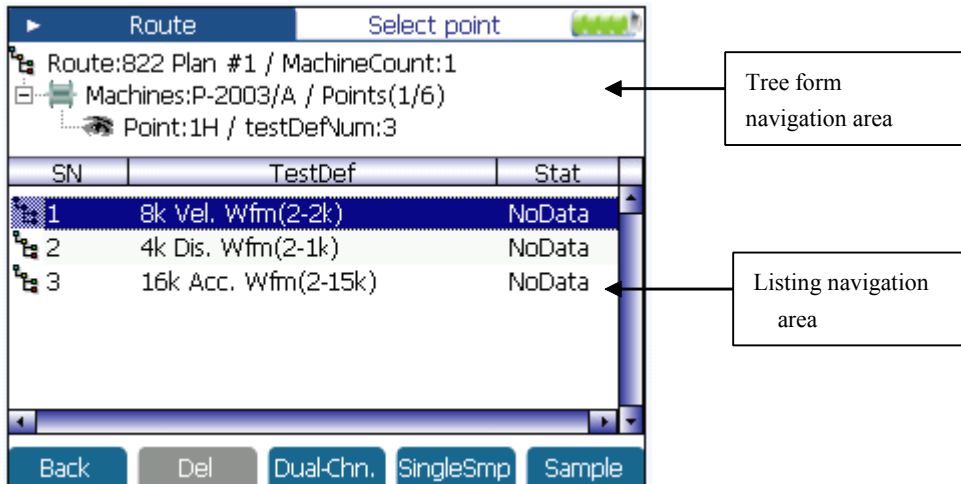
### Vibration analyzer with:

- Route measurements downloaded from PC-programme
- Single/Dual channel analysis
- Balancing
- Hammering response testing
- Coast-up and Coast-down
- RPM measurement
- Data view
- Output to computer and create report easily

## Route and analysis

### ※ Route measurements downloaded from PC-programme

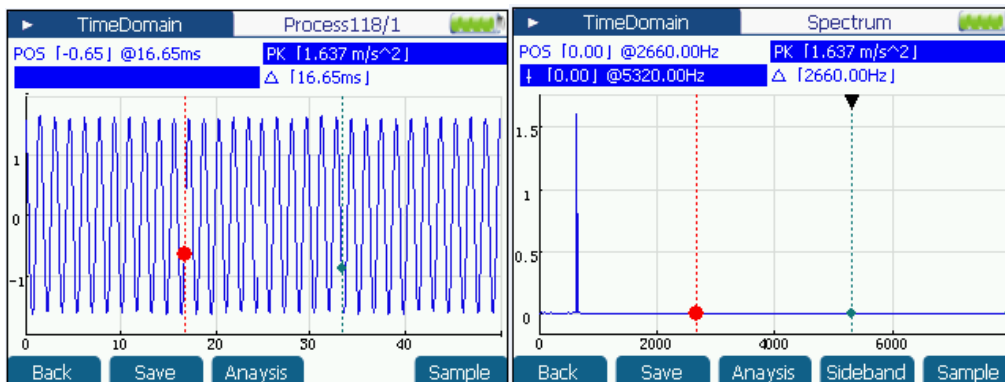
Download Route plan to RH822, then collect data according to the stated measurement definition.



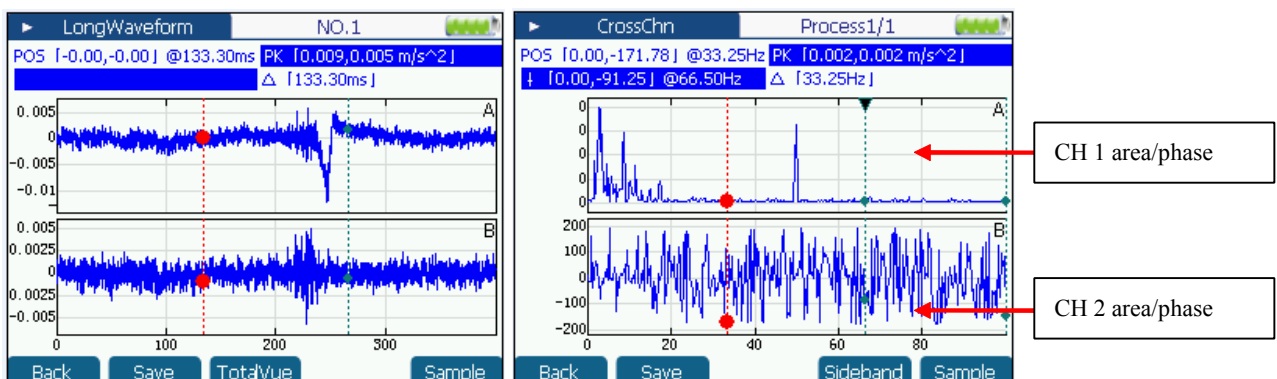
### ※ Single/Dual channel analysis

RH822 provided single and dual channel vibration analysis function, have vibration waveform and spectrum waveform analysis:

The single channel analysis include waveform, spectrum, long waveform and total value trend.



Dual channel analysis include waveform, spectrum, long waveform, total value trend and cross-phase.



## ※ Balancing

Provided a simple and direct method of one or two plane balancing for rotary machine, There are three measuring method :

### 1) Initial vibration:

Measuring the vibration value before trial weight added, then correct the vibration value through the measured value.

### 2) Try weight measurement:

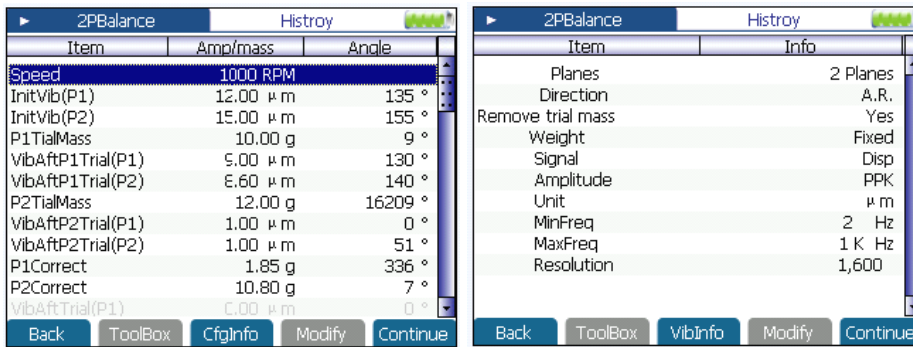
Measuring after trial weight added on one plane of the machine, then judge the machine influence caused by the trial weight, the ideal measured value should have 30% changes on amplitude or 30° changes on phase.

### 3) Unbalance after correction:

The vibration value measured is the trial weight or correction weight added, remnants unbalance is used to measure remnants unbalance, trial weight is used to eliminate initial unbalance, correction weight is used to eliminate the vibration value measured in remnants unbalance.

The screenshots illustrate the following steps in the balancing process:

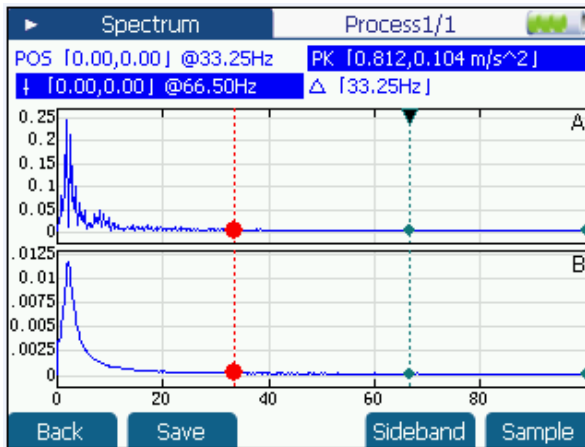
- Basic-setting:** Configuration for 2 Planes, Angle A.R., Weight Fixed, Number 4, and Bias 9. Includes a circular diagram for weight placement.
- 2PBalance Initial:** Shows 0 RPM | 0.0 Hz and initial unbalance values for P1(CHA) and P2(CHB) at 0.00 μm and 0°.
- 2PBalance Initial (Running):** Shows 1000 RPM | 16.7 Hz and measured unbalance values: P1(CHA) 12.00 μm @ 135°, P2(CHB) 15.00 μm @ 155°.
- 2PlaneBalance 1PTrial:** Trial weight configuration with RoterMass, Radius, TialMass (10g), and Position (0°).
- 2PBalance P2TrialMass:** Trial weight configuration with RoterMass, Radius, TialMass (12g), and Position (180°).
- 2PBalance CorrectMas:** Final correction results: P1: 1.85g @ 336° (-|156°), P2: 10.8g @ 7° (-|187°). Lists masses for P1Pos1 (1.01g), P1Pos2 (1.55g), P2Pos1 (10.79g), and P2Pos2 (0.43g).



The balance precision is depend on the demands of users.

### ※ Hammering response testing

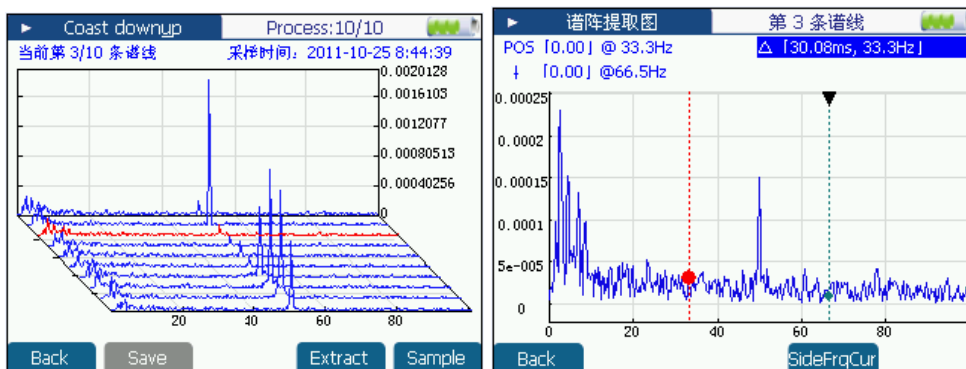
【Trigger method】 is analog trigger, it can be Channel A trigger or Channel B trigger.



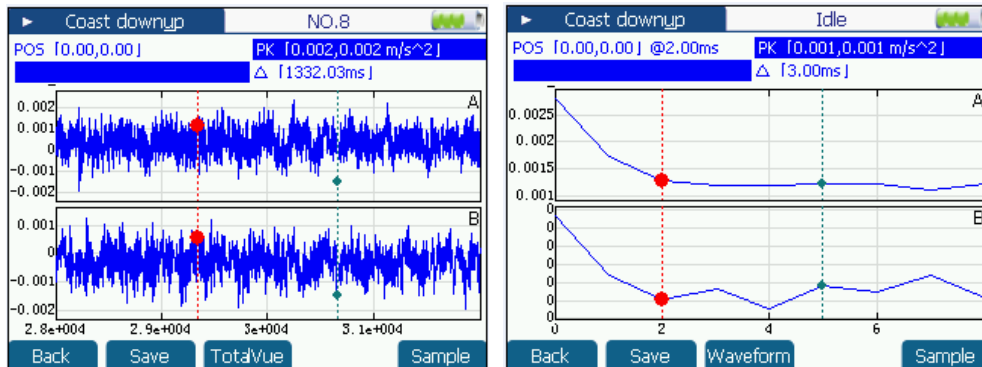
### ※ Coast-up and Coast-down

Users can choose waveform and spectrum array method while measuring.

The lines in spectrum array can be selected through 【↓】 or 【↑】 when measurement stopped and the value reached, the selected lines can be observed in details through 【Draw】 key and shows in red.

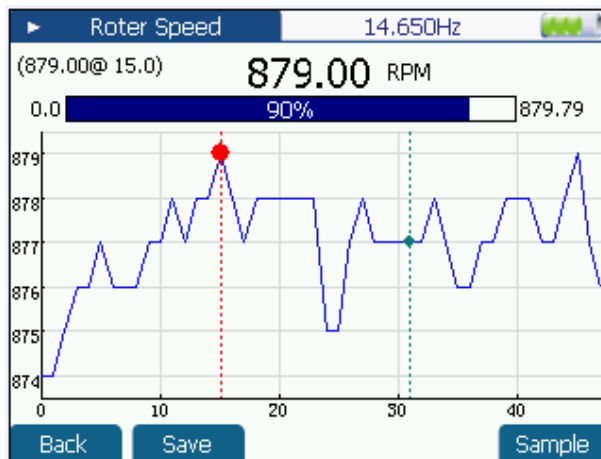


The data will be displayed as waveform when choose waveform.



### ※ RPM measurement

The waveform displays trends for all measured RPM value.



### ※ Data view

Users can view any data stored in RH822 directly.

### ※ Output to computer and create report easily

All route and off-route data can be output to computer for detailed analysis by software and create to Word file report.

# Technical specification

## Hardware specification

Products description	Specification
<b>Accessories</b>	
Size	190mm x 110mm x 38mm
Weight	715g (1.52 lbs)
Case	Material: 80% ABS & 20% polycarbonate plastic
Display	TFT real color LCD 320 x 240, 65536 color, with back light
<b>Connectors</b>	
PC Comms	USB connector, RS232 serial port Ethernet(optional)
Signal input	Channel A 5 needle ODU, ICP/AC/DC Channel B 5 needle ODU, ICP/AC/DC
Others	RPM trigger input, power input/ battery recharge
<b>System</b>	
Operation system	Microsoft Windows® CE 4.2
Processor	ARM9 400MHz
SDRAM	64 MB
Flash memory	64 MB
MMC/SD card	Maximum storage capacity is 2GB (optional)
LED indicator	Red, Green, Yellow

## Battery and environment

Products description	Specification
<b>Battery</b>	
Type	Rechargeable Li-ion battery
Capacity	3500mAh@7.4V
Energy	>8 hours
Rechargeable	Supplied by external DC
<b>Environment</b>	
IP grade	IP65 (dustproof and waterproof)
Drop testing	2 meters (to Mil-Std 810)
Operating temperature range	-10°C to +50°C (14°F to 122°F)
Storage temperature range	-20°C to +60°C (-4°F to +140°F)
Humidity	0% to 80 RH

## Signal measurement

Products description	Specification
<b>Signal measurement</b>	

Input signal type	Acceleration sensor Velocity sensor Displacement sensor Acceleration/velocity sensor AC/ DC voltage
Channel Qty.	2 channel simultaneously Channel A ICP/AC/DC Channel B ICP/AC/DC
Signal input	ICP™ (20V @ 2.4 mA) AC signal, DC signal, RPM signal
Measurement definition	Acceleration, velocity, displacement, phase, voltage.
Measuring type	Spectrum, waveform, cross-phase, total value, long waveform
<b>Signal measurement continue</b>	
Input signal range	± 40V
Signal	RMS, Peak value, Peak to Peak True Peak, True Peak to Peak
Auto range	Support
Dynamic range	>80 dB
Frequency range	(Fmax) all input = 40 kHz (Fmin) DC input = DC AC/ICP input = 0.16 Hz
Filter: high-pass	2Hz / 10Hz / 100Hz / 1000Hz
Filter: low-pass	10Hz / 100Hz / 1000Hz / 40kHz
Anti-aliasing filter	50Hz-40kHz
Refresh rate	40 kHz (Single channel)
FFT resolution ratio	400 ~ 25600 lines
Sampling length	256 ~ 65536 point
Averaging	Time, spectrum
Window function type	Rectangle, Hanning, Hamming, Aggravate average, Flat Top

## **A complete instrument set contains:**

1 pc Instrument incl. batteries      2 pc Vibration Transducers with magnet base  
 1 pc Optical RPM transducer      2 pc connecting column and verification card  
 1 pc Reflective tape                      1 pc quick start manual  
 1 pc adapter                              1 pc carry bag for instrument  
 1 pc USB cable  
 1 pc transfer cable for RPM transducer  
 1 disk with software, user manual and relative study files

**ROZH reserves the right to make changes in this technical specification.**

# ROZH

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