ECO GREEN

Waveform Analysis Software
AS-70

RION

Completely Renewed Analysis Software from Rion

The Waveform Analysis Software AS-70 reads data from WAVE files and offers a wide range of functions, including graph display, level processing, frequency analysis (FFT analysis and octave band analysis), file output, and playback.

- **Easy and precise operation**
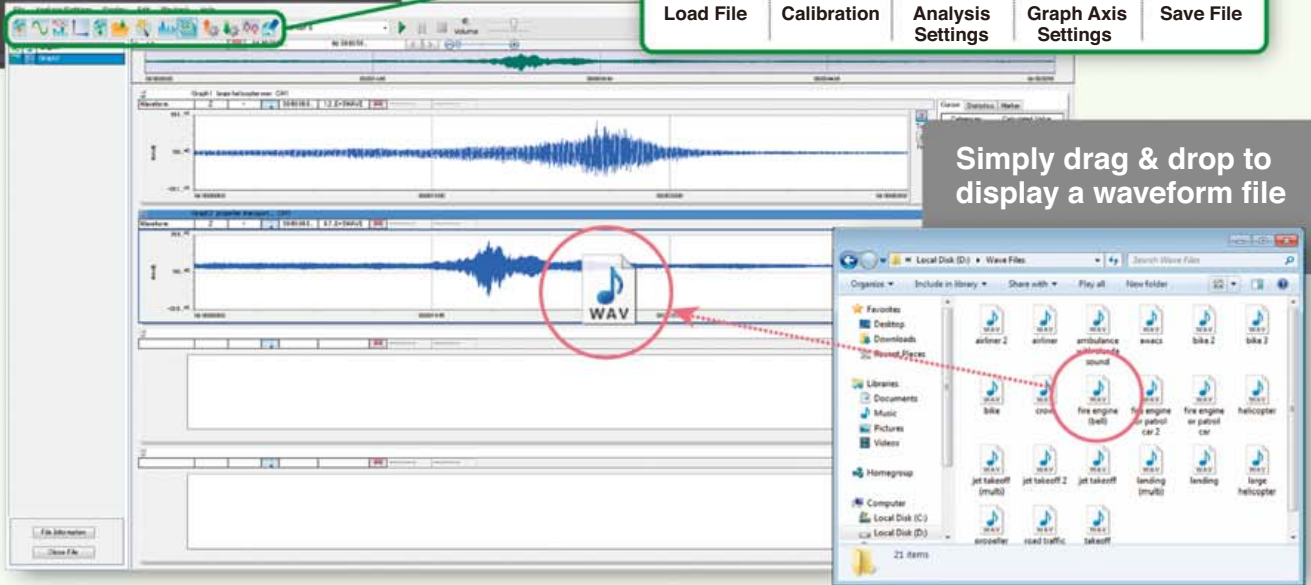- **Vastly improved processing speed**
- **Simultaneous analysis of multiple files**
- **User marker function**
- **Digital volume control**

Easy and precise operation

Tool bar layout reflects operation sequence

Load File | Calibration | Analysis Settings | Graph Axis Settings | Save File

Simply drag & drop to display a waveform file

Convenient wizard function for first-time users

Start Wizard
This Wizard helps you to conduct an analysis following the flow

Start → Open File → Calibration → Analysis Settings → Graph Axis Settings → Close Wizard

Operation steps clearly indicated
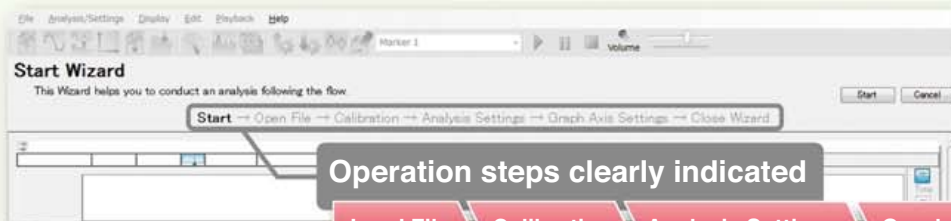
Load File 〉 Calibration 〉 Analysis Settings 〉 Graph Axis Settings 〉 Save File

Template function makes it easy to repeat processing sequences

Automatic analysis

Load parameter settings created previously

Load Template
The settings (Calibration, Analysis, Graph Axis and Graph Size) are set according to the saved information.
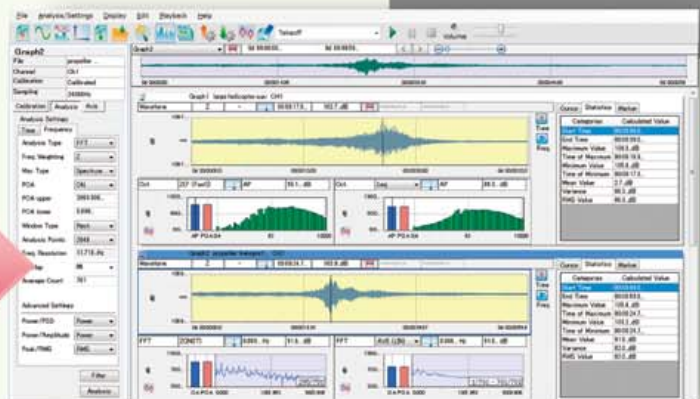
Select Template
FFT & OCT ▼ | Apply | Delete

Back

Vastly improved processing speed

Stress-free analysis of large data volumes

Comparison of processing time to previous product.

Time from file reading to processing result display

Previous product
DA-20PA1

AS-70

Processing time
1/5 ※

※Measurement conditions

Operation environment	CPU Core i5 3.2 GHz, 4 GB
	Quantization: 16 bit, Number of channels: 4
Data file recorded time	1 h 24 min.
Processing time	6 min

Simultaneous analysis of multiple files

WAVE files from different sources, such as a sound level meter and data recorder, and from multiple locations can be loaded and analyzed simultaneously. A variety of operations can be performed easily and with high processing speed, such as graphical display, level processing, sound playback and FFT and octave band analysis. The results can be saved in various formats.

Sound Level Meter

Data Recorder

Setting method

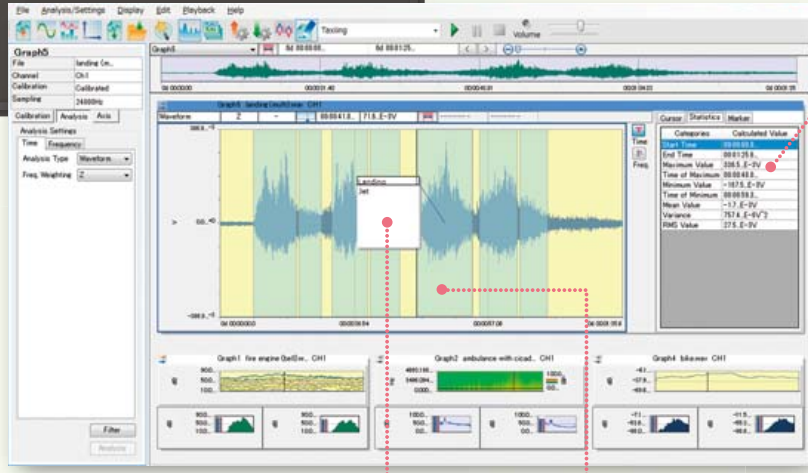### Settings can be made globally or for each graph individually

Global

Graph-specific

When operating with multiple graphs, the analysis type (octave band analysis, FFT analysis) and analysis parameters can be set either globally or for each graph separately.

Analysis Settings

Settings of waveform analysis conditions
Input parameters for each graph and click 'Analysis'.

User marker function

Markers with comments can be placed on the time graph.

Access a specific point from the marker list

Choose from 10 types of marker names

Settings for Marker Names	
Marker Name1	Takeoff
Marker Name2	Landing
Marker Name3	Taxiing
Marker Name4	Car
Marker Name5	Bird/Dog
Marker Name6	Marker 6
Marker Name7	Marker 7
Marker Name8	Marker 8
Marker Name9	Marker 9
Marker Name...	Marker 10

Enter any comment

Add marker

Digital volume control

When playing back data with low recording level (because level range was too big, or bit word length too long), the volume may be very low, making the sound difficult to hear. The digital volume control lets you play such files at a higher volume.
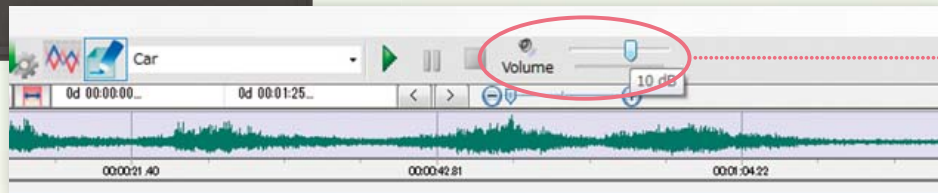
Digital volume control

Supported models (WAVE files recorded with the following products can be used)

RIONOTE **NX-42WR** **VX-55WR** **NX-28WR** **SA-78WR** **DA-20/40/21** **VA-12**

General WAVE format files can also be opened (with some restrictions regarding sampling frequency and number of channels)

Specifications

| Applicable standards		IEC 61672-1:2013, JIS C 1509-1:2005 (Frequency weightings A, C, Z; Class 1)
		ISO 7196:1995 (Frequency weighting characteristic G)
		IEC 61260-1:2014, JIS C 1514:2002 (Octave-band and 1/3 octave-band filters, Class 1)
		JIS C 1510:1995 (Frequency weightings for vertical and horizontal vibration)
Supported file format	WAVE format	Sampling frequencies [Hz]：64 k／51.2 k／48 k／32 k／25.6 k／24 k／16 k／12.8 k／12 k／5.12 k／2.56 k／2.4 k／1.28 k／1.2 k／1 k／512／256／240
		Bit word length：16 bit／24 bit
Time graphs	Display types	Amplitude waveform, level waveform, band level, spectrogram
	Frequency weighting characteristics	Z, A, C, G, C to A, L_{vz} (vertical characteristics), L_{vxy} (horizontal characteristics)
	Time weighting characteristics	10 ms, F (Fast), 630 ms, S (Slow), 10 s
Frequency graphs	Display types	Octave band analysis, FFT analysis
Octave band analysis	Bandwidth	Octave band: 0.5 Hz to 16 kHz (16 bands)
		1/3 octave band: 0.4 Hz to 20 kHz (48 bands)
FFT analysis	Window functions	Rectangular, Hanning, Flat-top, Hamming
	Number of analysis points	32 to 65 536 (base-2)
	Overlap	0 to 99 %
	Data view	Power spectrum, power spectrum density (Power/Amplitude, Peak/RMS selectable)
Statistical processing	Amplitude waveform	Maximum value, minimum value, average value, variance, effective value
	Level waveform/octave analysis	L_{eq}, L_E, L_{max}, L_{min}, L_N (5 types)
	FFT analysis	Linear average, maximum value

File save function	Save formats	WAVE format, text format
	Successive calculation results	Results saved as text at calculation intervals (1 ms to 24 h)
Other functions	Differential and integral filter	1st order integration, 2nd order integration, 1st order differential, 2nd order differential
	HPF, LPF	Cutoff frequency: any setting
		Slope: 6 dB/12 dB/18 dB/24 dB (per octave)
	Overlay	Two frequency spectra can be shown as a superimposed (overlay) graph, with optional difference indication
	Real-sound playback	Play, stop, pause, digital volume control
	Clipboard copy	Screen, graph, list

Recommended operation environment	
CPU	Intel Core i5 2 GHz or faster
RAM	2 GB or more, 4 GB recommended
HDD	20 GB or more (free space), 100 GB or more recommended
Display	XGA (1024 x 768 pixels) resolution or higher
Supported operating systems	Microsoft Windows 7 Professional 32 bit/64 bit, 8.1 Pro 32 bit/64 bit, 10 Pro 32 bit/64 bit
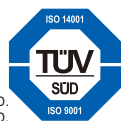
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