



Hello! Welcome to RION's company tour!

Today, I'm going to show you our sound level meter.

Hello!
Nice to meet you!

This is a RION sound level meter.

WOW!!!

RION
Sound Level Meter
NL-52

RION Sound Level Meter

makes invisible sound visible!

Er, what is a sound level meter?

Hmm...

True, you can't see sound, but the true nature of sound is that it shakes the air.

Shake
Shake

Sound is VIBRATION.

A sound level meter is an instrument that measures how loud a sound is.

Huh? Does it? How?

You can't see sound.

For example, let's beat on this.

Ah! It's a drum.

TAP

You see, the surface of the drum is vibrating, isn't it?

Tap Tap

Vibrates Vibrates

And when you stop this vibration...

Ha!

The sound stops too.

Stop

You're right.

Silence

This vibration can be visible like this drawing.

<Sound shape>

Magnitude

Time

Oh, it's like a wave.

Is this sound?

Can I also see how loud a sound is?

Yes, you can realize it by the amplitude of the vibration.

Loud sound

Wide

Quiet sound

Narrow

Sound Level is measured in units of dB (decibels).

Ears hurt

Car horn

Telephone bell

Whispering

Maximum sound from a cricket

Cicada chirping

Airplane engine

So, a higher number means a louder sound.

140dB

130

120

110

100

90

80

70

60

50

40

30

20

10

0

A sound level meter is an instrument that converts the loudness of the detected sound into a numerical value.

Sound

520

520

Pop

Why do you measure sound?

You can use measurements to make sure living environments are comfortable.

Have you ever seen something like this at a construction site?

CLANG

CLANK

Rwho hhhh!

Sound Level 65 dB

Vibration 55 dB

Yeah, sure.

Me, too!

You can measure construction site noise using a sound level meter, then display it so people can check

Measure

Display

Sound Level

60 dB

if the noise level is too high.

What if a loud noise continues on the streets or near your home?

GAAAHH

STOP THAT NOISE!

XX Construction

I wouldn't like that!

That really would be a trouble!

You may not be able to hear people's voices or the TV.

You'll grow frustrated with the noisy environment.

The sound level meter monitors noise levels to prevent such a situation.

Loud

Pop

When the noise exceeds the set limit, a warning lamp will light.

The sound level meter is an instrument, so the incoming sound is registered just as it is.

00 dB

But the human ear hears things based on our unique human characteristics.

Huh? XX dB?

Eeeee

Zoom

Buzzz

00 dB

♥ dB

Oh, I'm glad.

Phew!

So, the sound level meter is working in place of our ears.

One thing, though-when you measure sound with a sound level meter, it's not exactly the same as when you hear with your ears.

Really?

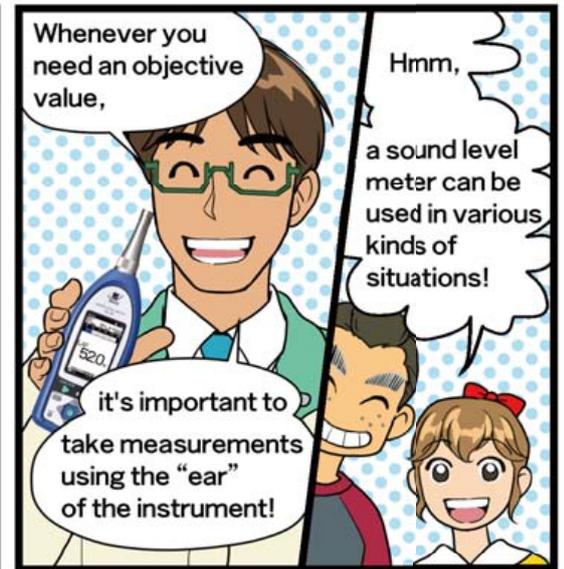
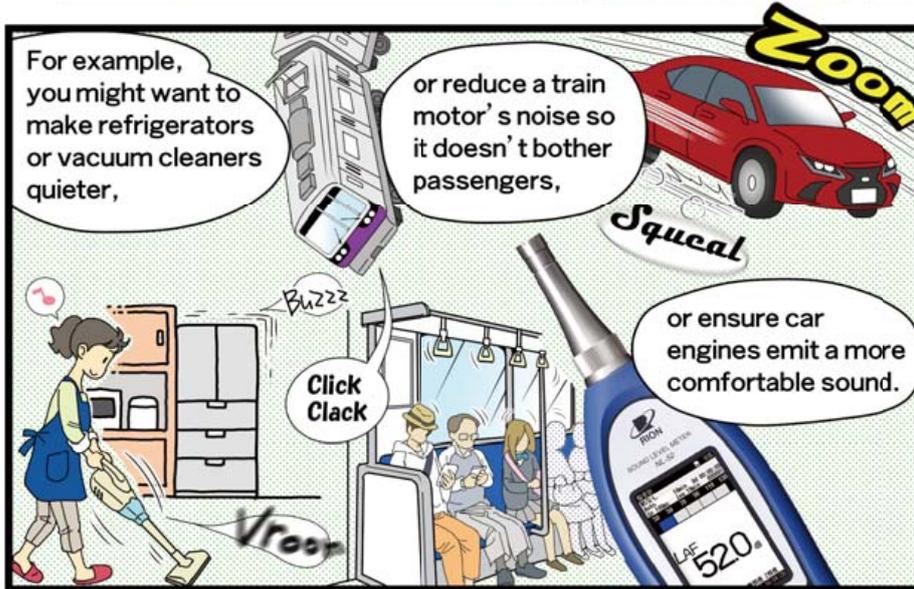
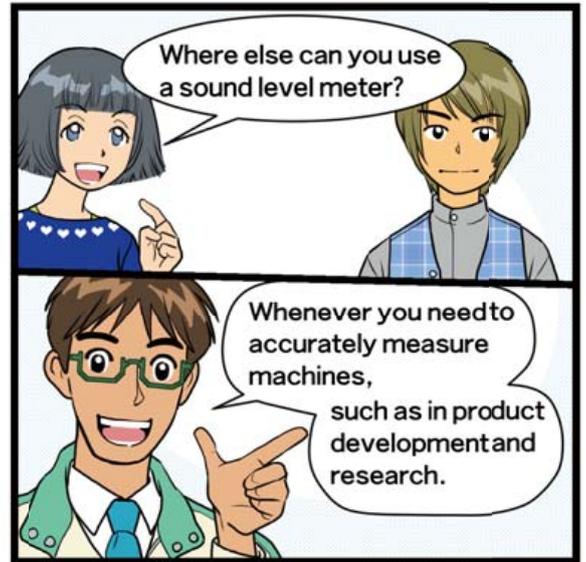
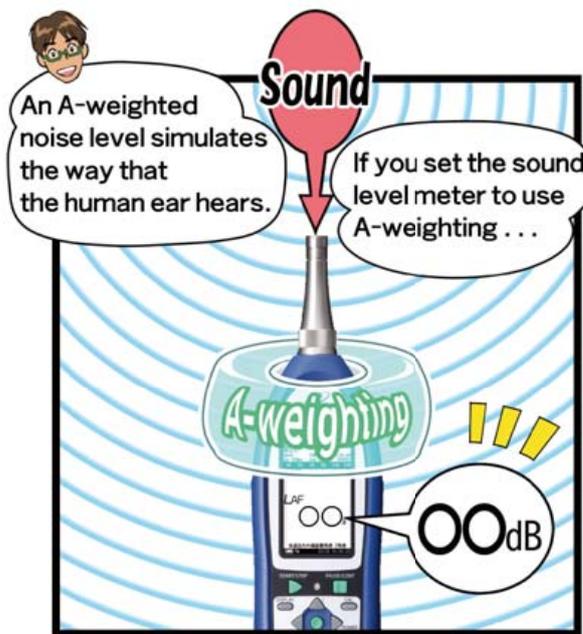
Is that so?

Why not?

Oh, come on!

So, the sound level meter for noise monitoring uses something called "A-weighting."

A-weighting?



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