

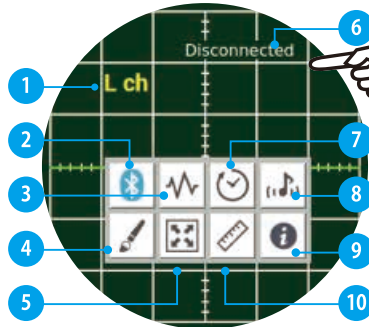
"Showa retro" measuring instrument
Bluetooth® audio speaker

*In order to use this product properly, Please read the operation manual carefully before use.

BSP-10 Touch panel operation manual

● Descriptions on Menu bar

The Menu bar will be displayed on the touch panel when you long press the panel (for about 2 seconds). To turn off the Menu bar, short press anywhere on the touch panel except the menu bar.



Touch with your fingertips!
*When it is hard to operate with your fingertips, use a touch pen or a cotton swab.

- 1 Display the selected mode of waveform
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Bluetooth pairing

● When connecting the product with a device for the first time

- Operation on this product : Press the Bluetooth pairing button.
- Operation on the Bluetooth device (smartphone etc.) :

The name of this product will be displayed as a device on the Bluetooth setting screen. Select this device to connect.

● When connecting the product after the second time

It is not necessary to press the Bluetooth pairing button, if the Bluetooth device that has been connected once before. You can simply connect by selecting the device name of this product on the Bluetooth setting screen of the Bluetooth device.

● Connect with the other devices

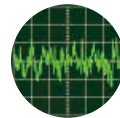
When the Bluetooth pairing button is pressed, the pairing with the connected Bluetooth device will be cancelled.
(To connect with the other devices, select the device name of this product from the Bluetooth device.)



Change the mode of waveform

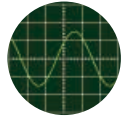
When the waveform switch button is pressed, the displayed mode of waveform switches in the sequence of "Lch" → "Rch" → "L / Rch" → "Lissajous curve" → "Sine wave (DEMO)" → "Triangle wave (DEMO)" → "Square wave (DEMO)" → "OFF" → "Lch". The details of each mode of waveform are shown below. (Default value: "Lch")

- **Lch**
Displays the left channel signal of the audio being played.
- **Rch**
Displays the right channel signal of the audio being played.
- **L/Rch**
Displays both channels at the same time. When the audio is being played, the left channel signal is displayed in green and the right channel signal is displayed in yellow.
- **Lissajous curve**
Displays a lissajous curve by combined waveforms of the audio being displayed for which the left channel signal is plotted on the X axis (vertical) and the right channel signal is plotted on the Y axis (horizontal).
- **Sine wave (DEMO)**
Displays the built-in sweep sine wave.
- **Triangle wave (DEMO)**
Displays the built-in sweep triangle wave.
- **Square wave (DEMO)**
Displays the built-in sweep square wave.
- **OFF**
The no-display mode of waveform.



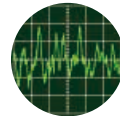
Lch

Sine wave (DEMO)



Rch

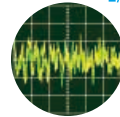
Triangle wave (DEMO)



L/Rch



Square wave (DEMO)



Lissajous curve



NOTE

This setting can be memorized only while the power is on of this product (when the power is turned on, it returns to the default setting [Lch]). This setting will not affect to the audio signal output from the speaker (the signal to the speaker is fixed in the mode of L + R [monaural]).



Change the interval of display update

Press the update interval change button → it displays the dialog, then select the display update interval (refresh rate) using the up and down arrow buttons.

This value changes the update rate of the waveform display. (Default value: 100)

* Resolution: 10 to 90 for 10 ms step, 100 to 1000 for 100 ms step



Adjustment for the draw position

Press the draw position adjustment button → it displays the dialog, then select the display position (number of pixels from the top edge) using the up and down arrow buttons.

The display position changes vertically depending on this value. (Default value: 7)



Waveform for 50 (example)



Output the test audio

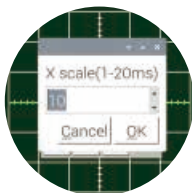
When you press the test audio output button, it outputs the test audio.(for about 7 seconds)
When the audio is played by the paired Bluetooth device, the test audio will output at the same time.



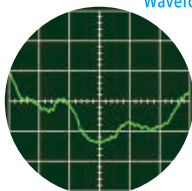
Change the scale of X axis (time axis)

Press the X-axis scale change button → it displays the dialog, then select the time (ms) per X-axis grid (1 scale) using the up and down arrow buttons. This value changes the density of the waveform display. (Default value: 10)

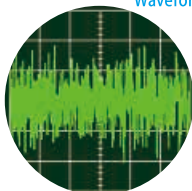
* Resolution: 1 to 9 for 1ms step, 10 to 100 for 10ms step



Waveform for 1ms (example)

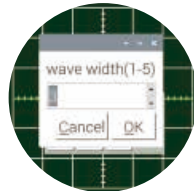


Waveform for 20ms (example)

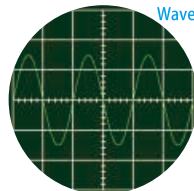


Change the waveform width

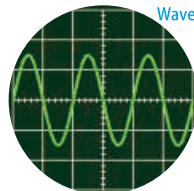
Press the change button for the waveform width → it displays the dialog, then select the waveform width (thickness) using the up and down arrow buttons. (Default value: 3)



Waveform for 1 (example)



Waveform for 5 (example)



Information

Displays the QR code of the product website where you can view the operation manuals.

