

TÔMEI

User Manual

Version 4.3 - April 2017



O P E N A I R L O U D S P E A K E R S



EDEN ACOUSTIQUE

CONTENTS

INTRODUCTION	3
UNPACKING	4
1.1 Precautions	5
1.2 Larger crate	6
1.3 Smaller crate	6
INSTALLATION	9
2.1 Installing the spikes	10
2.2 Connecting TOMEI loudspeakers	10
2.3 Standard loudspeaker set-up	11
2.4 Control Unit	11
USING TOMEI LOUDSPEAKERS	12
3.1 Brief description	13
3.2 Before powering ON	13
3.3 Connecting a source component	13
3.4 Analog input	14
3.5 Digital input	14
3.6 Control Unit Display / Menu	14
3.7 Control Unit Modes	14
.....3.7.1 <i>Splash Screen</i>	15
.....3.7.1 <i>Volume Mode</i>	15
.....3.7.2 <i>Source selection</i>	15
.....3.7.3 <i>Settings</i>	15
.....3.7.5 <i>Settings Description</i>	16
3.8 Testing the installation	17
3.9 Positioning the TOMEI loudspeakers	17
3.10 Run-in period	17
TROUBLESHOOTING	18
SERVICE AND GUARANTEE	20
5.1 Service	21
5.2 Guarantee	21

INTRODUCTION

Congratulations on your purchase of the Eden Acoustique TOMEI playback system, a new vision of the high-end loudspeaker.

TOMEI means "*transparent, invisible*" in Japanese and it exactly defines the sound of your new loudspeakers. With TOMEI you do not hear a loudspeaker, you attend a live musical event.

Dipole loudspeakers propagate the sound in front of a baffle as well as towards the back. With TOMEI we went further by suspending the drivers in air without any boundaries. We call it Open Air Design. More than with any other loudspeaker this brings you closer to the real performance, making it live again.

The lack of a "box" around the speakers provides an accurate, highly resolving and transparent sound, easily recognized once heard. After a while you begin to hear the "box" in all conventional speakers... A digital signal processor (DSP) takes care of crossovers, phase accuracy and time delays with a precision and lack of distortion not possible in the analog domain. Each loudspeaker is driven by individual amplifiers, directly connected to the voice coil of each driver.

Skillfully handcrafted by hand, each TOMEI loudspeaker system is an exclusive, cutting-edge audio art item, as well as a stunning performer that will endow you with years of musical bliss.

This manual is intended to help you get the best musical experience from these exceptional performers..

The Eden Acoustique Team

UNPACKING



1.1 PRECAUTIONS

The crates are quite big so you may need help to move them. Please allow sufficient space for the boxes to be opened and the contents to be removed.

As part of the Eden Acoustique quality control process, we check every product carefully before packing to ensure that it reaches you in flawless condition.

Once the TOMEI system is unpacked, please check the units for any physical damage and retain the shipping crates and all relevant packing materials for use, should one of the units need returning.

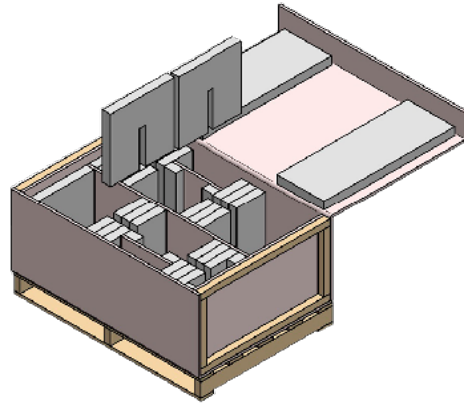
In the event that damage has occurred, please notify your Eden Acoustique dealer immediately, so that a written claim to cover the damages can be initiated. Check out the Service and Guarantee section for more information.



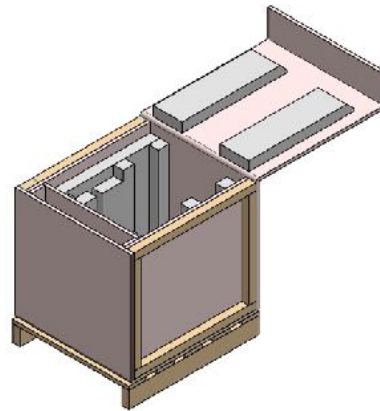
Take great care when unpacking or re-packing the TOMEI loudspeakers that you do not put undue pressure on the face containing the drive units, as they may be damaged if pressed.

TOMEI loudspeakers come in two crates.

The largest crate contains the two TOMEI towers on their wood stands.



The smallest crate contains the Control Unit (amplifiers and DSP) and the bass module. All cables and accessories are also included in a burlap pouch found in the front compartment.



1.2 LARGER CRATE

Remove the four screws, then open the crate. The screws are identified by a yellow surround.



Remove the padding material that protects the TOMEI monitors and the solid wood stands.



1.3 SMALLER CRATE

Remove the four screws, then open the crate.



Once the crate is open you will see the acrylic base of the bass module. It is seen from the bottom.



Extract the TOMEI towers from the foam protection by pulling carefully on the wood support.

Remove the black velvet protective hood.



Remove the bass module by pulling carefully on its acrylic base. The bass module is heavy and might require a second person to pull it out.

Remove the black velvet protective hood.



From the small crate: Remove the burlap pouch that contains the cables and accessories.

Remove and unpack the spikes from the pouch. You will install them later. The spikes and accessories come in three bags of four. The spike screws come in a single bag of twelve in two paper wrapped packages.



Remove the loudspeaker and AC cables from the pouch. You will install them later.



Remove the Control Unit carefully. It is located just besides the bass module in the crate in a black pouch.

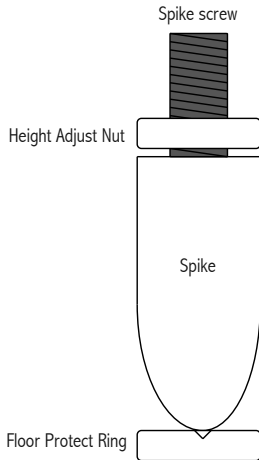


INSTALLATION



2.1 INSTALLING THE SPIKES

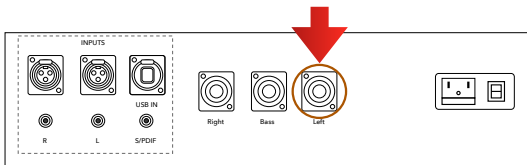
The speakers sit on damped aluminum spikes. To use, first install the spike screw, then screw on the height adjustment nut. Finally insert and screw in the spike into the opening under the speakers base. There are four spikes per speaker for a total of 12.



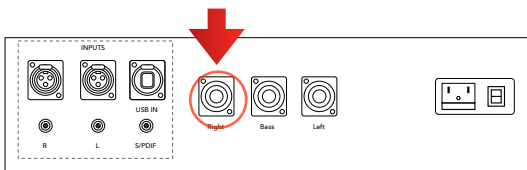
2.2 CONNECTING TOMEI LOUDSPEAKERS

TOMEI loudspeakers come with high-end bi-wire cables. The following images show each speaker connector.

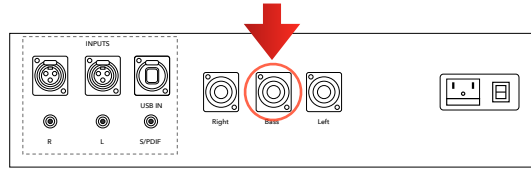
Left speaker:



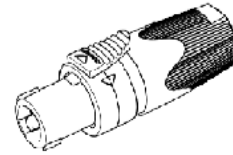
Right speaker:



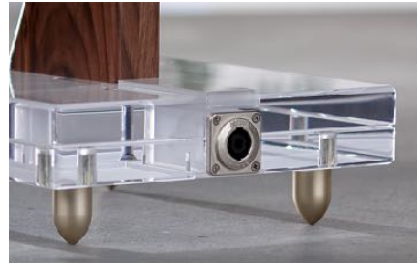
Bass speaker:



We use Neutrik Speakon™ connectors and plugs, which offer superior connections and will make your life easier.



The way to connect the cables to the Control Unit and loudspeakers is as follows:



1. Place the cable plug on the corresponding Control Unit connector and slightly twist left so the cable plug inserts into it. Push the plug farther inside the connector while twisting to the right. The plug should latch in.
2. Connect one end of the speaker cables to the Control Unit and connect the other end to the corresponding loudspeaker.

NOTE

The bass cable is identified by a white label titled BASS.

2.3 STANDARD LOUDSPEAKER SET-UP

Your TOMEI loudspeaker system comes with two monitor speakers on their solid wood supports, one central bass module, and all the electronics in a stainless steel and acrylic (wood optional) enclosure called the Control Unit.

All three speakers connect to the Control Unit using the included cables.

For more details see Section 3 - Using Tomei Loudspeakers.

2.4 Control Unit

The Control Unit can be located on a shelf or equipment rack that is well ventilated like any other electronic gear.

All connections to the Control Unit are made on the back panel. It would be convenient to leave at least 8 inches (20 cm) behind the Control Unit so you can easily access/connect the cables.



USING TOMEI LOUDSPEAKERS



3.1 BRIEF DESCRIPTION

The TOMEI loudspeakers are the fruits of more than 3 years of continuous development to eliminate the loudspeaker enclosure from the sound reproduction equation. The finest electronics and state-of-the-art design combine to create what we believe is a new breed of loudspeakers we call *invisible*. Only the music must be heard, nothing else!

Being an active loudspeaker system, TOMEI provides an optimized coupling between the amplifier and the loudspeaker driver. Instead of inserting lossy passive crossover components to filter frequency ranges and flatten driver response by altering the signal after the amplifier, an active system performs the same task prior to amplification. The result is a more efficient system, unhindered by resistors, capacitors, or inductors.

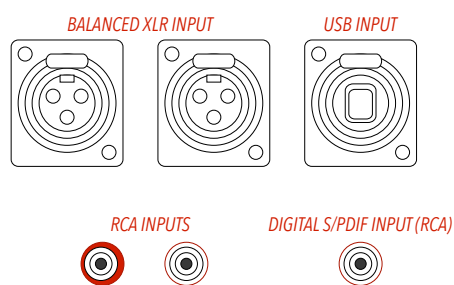
3.2 BEFORE POWERING ON

Make sure all connections are secure and the volume control is turned ALL THE WAY DOWN on your source component or on the Control Unit.

3.3 CONNECTING A SOURCE COMPONENT

The Control Unit offers balanced (XLR) and unbalanced (RCA) input connectors for analog signals. A high performance USB Audio Class 2 input is available, along with one S/PDIF input for other digital audio components.

To use an input you must select it using the SOURCE SELECTION menu on the display. (see section 3.7.2)



3.4 ANALOG INPUTS

We recommend using the balanced XLR inputs, but RCA cables can also be used with excellent results. Since the signal wiring inside the Control Unit is pure silver, using high quality interconnect cables will give the best results.

3.5 DIGITAL INPUTS

Your TOMEI loudspeakers use one S/PDIF digital input (up to 24 bits/192 kHz sampling rates) and a high quality USB Audio Class 2 input that accepts all types of HD music, up to DSD 64 and 128 formats (DSD over PCM).

To use that USB input, please use a high quality USB cable to connect your computer to the USB input on the back of the Control Unit. Once the connection is established between the computer and the Control Unit, you can launch your favorite HD music player or on demand streaming service application.

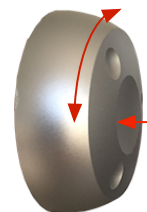
3.6 CONTROL UNIT DISPLAY / MENU

The display/encoder consists of a 2x16 alphanumeric display and a rotary encoder for control. The encoder rotates continuously and also has a pushbutton shaft switch. There is also an IR receiver that allows alternative control from an Apple Remote. The Apple remote is assumed to be the newer style (silver) that has 7 buttons.

Ergonomically, the Encoder and Apple Remote work in very similar fashion. Both controls can operate at the same time.

The encoder functions are as follows:

- Rotating clockwise increases the selection or moves toward the end of a list.
- Rotating counterclockwise decreases the selection or moves toward the start of a list.
- Normal Click (pushing like a mouse click) is a normal selection, works like an Enter key.
- Double-clicking (similar to a mouse).
- Long Click (holding the encoder button down for 2 seconds).



The Apple Remote functions are as follows:

- Up or Right Arrows function the same as a clockwise rotation of the encoder.
- Down or Left Arrows function the same as a counterclockwise rotation of the encoder.
- Center button like a normal click or long click. There is no double-click functionality
- The Pause Button functions like a double-click
- Menu is a hot key that eliminates the need for the Source Selection mode discussed below and offers a shortcut to get back to volume mode.

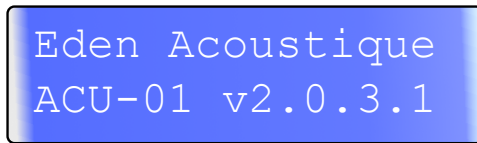


3.7 DISPLAY MODES

There are three main modes and one temporary mode:

- Splash
- Volume
- Source Selection
- Settings

3.7.1 SPLASH SCREEN



The splash screen typically displays company and product name along with version. It lasts for about 5 seconds.

3.7.2 VOLUME MODE



The volume mode is the normal operating mode. It displays the volume setting in 0.5dB steps. 0dB is maximum setting. It also displays the selected source. Volume level is independent for each source.

Rotating the encoder changes the volume for the selected source. Alternatively, you can use the Up, Down, Left or Right buttons of the Apple Remote. Double-clicking the encoder or pressing the Pause button of the remote causes the system to mute or unmute for all sources. When the system is muted, it is shown on the display as: **MUTED**.

3.7.3 SOURCE SELECTION

Source selection is invoked by a normal click of the encoder when starting in Volume Mode. Rotate the encoder to the desired selection and press the encoder again. This will accept the new source setting and return to Volume Mode.

Alternatively, you can use the Apple Remote Menu button to toggle through the selections. This is quicker and bypasses the Source Selection Mode (or returns to volume mode if already in Source Selection mode).

Three types of input sources are available:

- a. ANALOG: Both balanced and unbalanced analog inputs are available.
- b. USB AUDIO: A high-end USB Audio Class 2 input let's you connect your computer directly to the Control Unit to play HD music. It accepts all types of HD music up to 32 bits/384 kHz and DSD 64, 128 and 256.
- c. S/PDIF 1: this digital input accepts up to 24 bits/192 kHz audio.



3.7.4 SETTINGS



Settings are a collection of configurations, information or test features that are used occasionally.

To enter Settings, press the encoder for several seconds (Long click) until the display toggles to Settings. Then release the button. You can also do this with the Center button of the Apple Remote.

You can rotate the encoder (or use the Apple Remote arrows) to move through the various selections. Generally, pressing the encoder (Normal Click) will move you to a submenu or return you back to the main Settings menu.

To leave Setting go to the last selection - Exit and press the encoder. This takes you back to the normal operation - Volume Mode. You can alternately press the Menu button on the Apple Remote.

3.7.5 SETTINGS DESCRIPTION

DAC Level

The DAC Level adjusts the amplitude of the signal going to the amplifiers. You will normally set this to Consumer or Balanced.

Pro Audio: high level signal used in the audio industry. Increases output DAC levels by +4 dB.

Consumer (-6 dB): suggested DAC output level for most input types.

Balanced (-12 dB): optional DAC level setting for high level source input.

Balanced (-18 dB): optional DAC level setting for even higher level source input.

ADC Level

The ADC Level settings adjust the sensitivity of the input for different types of analog sources. You will normally set this to Consumer or Balanced.

Pro Audio: high level signal used in the audio industry. Decreases input sensitivity by 4 dB.

Balanced (+6 dB): normal sensitivity level used when connecting to the balanced XLR connectors.

Consumer (+12 dB): normal sensitivity signal level used when connecting to the single ended RCA input connectors.

Balanced (+18 dB): Some manufacturers offer balanced outputs on their equipment, but use a different standard, which gives a lower signal level.

DAC Filter

This sets the internal DAC filters of the AKM AK4495 DACs. The *super slow roll off* setting is generally preferred. The options are:

- . Sharp Roll off
- . Slow Roll off
- . Short Delay Sharp Roll off
- . Short Delay Slow Roll off
- . Super Slow Roll off

ADC Filter

This sets the internal ADC filter of the AKM5397 ADC. The *minimum phase* setting is generally preferred. The options are:

- . Sharp Roll off
- . Short Delay
- . Minimum phase

Low and High Freq Shelf

The low and high frequency shelf settings can be used to apply gentle acoustic corrections in the bass and adjust the treble to taste.

The low settings vary from flat (0 dB) to ± 2.0 dB in 1 dB increments.

The high settings vary from flat (0 dB) to ± 2.0 dB, but with a first increment of 0.5 dB.

Exit

To go back to Volume mode you can either go to the Exit menu and press the encoder or the Apple remote center button (Normal Click) or on the Apple Remote just press Menu once.

3.8 TESTING THE INSTALLATION

With volume control turned all the way down on your source, turn the Control Unit ON.

Start playing music and GENTLY raise the volume of the source. You should hear sound coming from all speakers.

3.9 POSITIONING THE LOUDSPEAKERS

Like all dipole loudspeakers, the TOMEI will provide optimum performance when installed at least three feet from the front wall.

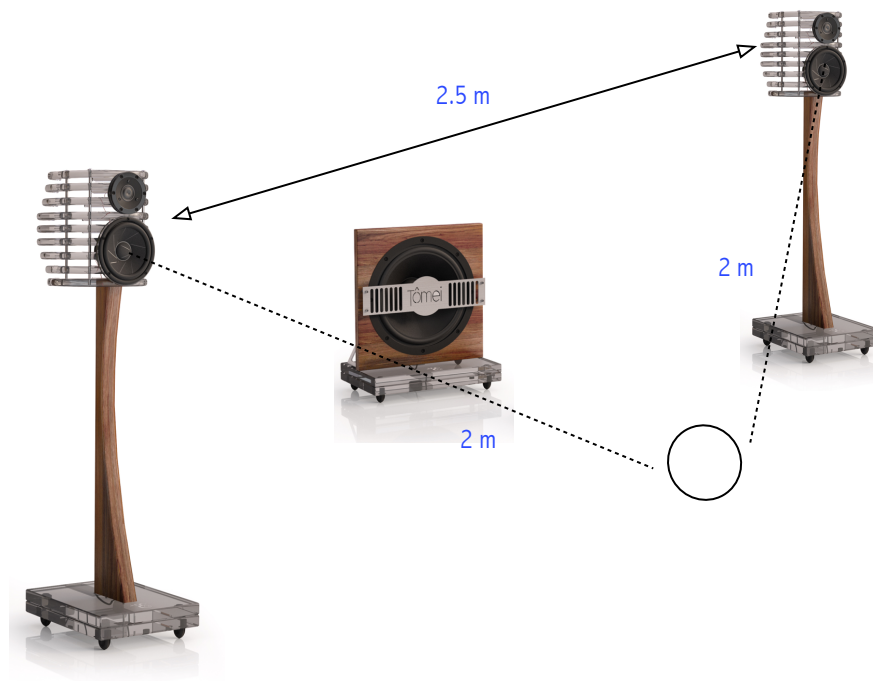
To obtain the best separation and imaging, we recommend sitting closer to the speakers than customary. Try sitting within an equilateral triangle with the speakers.

Start by placing the towers 7 to 8 feet (2.5 meters) apart, with their back four 4 feet (1.2 meters) from the front wall, and the seating position seven 6 -7 feet (2 meters) from each speaker. The bass module should be positioned midway between the towers, but one 1 foot (30 cm) behind the plane of the speakers.

3.10 RUN IN PERIOD

Loudspeakers are mechanical transducers whose tolerances adjust over time.

A proper run in period is therefore essential to get the best from your loudspeakers. While the TOMEI will sound great after about two weeks, they will need at least 100 hours of normal play to achieve their best sound. Cone characteristics will improve during this time and the resulting improvements in sound will be clearly audible, offering a smoother, more natural sound.



TROUBLESHOOTING



Front display does not lit

Make sure the power cord is connected and well seated in its receptacle. Make sure the Control Unit power switch is ON.

Hum or buzzing sound

If a hum or buzzing sound can be heard when you are 3 feet or farther from one speaker, this may be caused by incorrect grounding, ground loop or improper connections between components. Check all connections.

No sound

Make sure the Control Unit power on LED is lighted and the display shows its entry level menu. Make sure all cables going from the Control Unit to the loudspeakers are connected and properly seated. Make sure you have one source component connected to an input on the Control Unit.

Sound level lower on unbalanced analog inputs

You can adjust the sensitivity of the analog inputs to compensate for this. See section 3.7.5 on how to adjust the ADC or DAC levels.

Absent or weak bass

Please make sure the bass module cable is well connected between the Control Unit and the bass module. Make sure the bass module is at least 1 meter (3 feet) from any boundaries at its back. Bass level will gradually *decrease* as the bass module gets *closer* to the back wall.

Unable to access the Control Unit menu

On power ON, the splash screen first appears and while the initialization process is going on, the menu items of the Control Unit can't be accessed. Initialization takes approximately 3 - 5 seconds to complete.

USB - No sound

Please make sure you selected the USB input on the Control Unit and that your USB cable connection with the computer is well done. Also make sure *dspMusik* is selected as the Audio or Output Device in your HD music player.

S/PDIF - No sound

Please make sure you selected the S/PDIF input on the Control Unit and that your digital cable connection with the digital source is well done.

ANALOG - No sound

Please make sure you selected the ANALOG input on the Control Unit.

Sound lower and distorted on analog inputs

You must connect only one analog set of cables on the analog inputs. Either to the unbalanced or balanced analog inputs, but not both.

REMOTE CONTROL - Does not respond or erratic

The Apple remote uses infrared signals (IR) to communicate. The Control Unit must be in line of sight and aligned with the remote control for it to work. It responds up to about 12 ft. away.

SERVICE AND GUARANTEE



5.1 SERVICE

The TOMEI components have been carefully designed to give years of untroubled service. There are no user-serviceable parts inside the case.

The only maintenance needed is to clean the acrylic and wood parts with a smooth cloth, using appropriate cleaning products. Eden Acoustique offers such a cleaning product for acrylic and wood. Please contact your Eden Acoustique dealer for more info.

In the unlikely event that your TOMEI DSP loudspeaker fails to function correctly, it should be returned, in its original packaging, to your Eden Acoustique dealer.

No responsibility can be accepted for the TOMEI loudspeakers whilst in transit to the factory or an agent, and customers are therefore advised to insure the unit. When seeking service under guarantee, proof of the date of purchase will be required.

Please keep your invoice and serial number safely.

5.2 GUARANTEE

Each TOMEI Loudspeaker System is guaranteed against defects in material and workmanship for two years from the date of purchase.

The guarantee is void if the TOMEI Loudspeaker System has been subject to misuse, accident, or negligence, or has been tampered with or modified in any way without the written authorization of Eden Acoustique Inc.

Attempted servicing by unauthorized people may also invalidate this guarantee. Labor and carriage charges are not covered unless by local agreement.



Open Air Loudspeakers
Finely handcrafted in Canada

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