T1 ToneMatch™ Audio Engine

Frequently Asked Questions

Focus Categories

The Technology

What is the T1 ToneMatch™ audio engine?

The T1 ToneMatch™ audio engine is Bose's powerful multi-channel audio device designed for musicians for use with L1™ Model I and Model II systems, containing our largest library of ToneMatch™ presets, proprietary zEQ, and a complete suite of studio-class effects and processing.

The T1 was carefully designed with the needs of the musicians in mind. This makes for a completely integrated and powerful unit that is easy to use, and it alleviates many challenges associated with live performances.

What are ToneMatch presets, and what are their benefits?

ToneMatch presets are designed for specific instruments and microphones for use with the L1 Model I and Model II systems. ToneMatch presets are available for each channel and instantly bring you closer to the true sound of your voice or instrument – all at the touch of a button. When you select a proprietary ToneMatch preset for your microphone or instrument, you are tapping into a powerful new technology, available only from Bose.

What is the concept behind zEQ, and what are the benefits?

Ordinary tone controls are generic by design: “High,” “Mid” and “Low” controls are spread out across the entire musical spectrum. Proprietary zEQ automatically shifts the range of these controls so that they correspond directly to the range of your voice or instrument. zEQ gives you more precise control over your tone, making it easy to fine-tune your sound.

What is the benefit of the ToneMatch™ port on the T1?

When used with a ToneMatch™ cable, it connects the output of the T1 to the Model II power stands ToneMatch port. It also delivers power to the T1 from the Model II power stand. The user may enjoy the benefits of digital quality audio while alleviating the need for an additional power supply and excessive wiring when used with the L1 Model II system.

What is the proper method for setting the gain on the L1™ Model II power stand when connected to a T1 ToneMatch audio engine?

Adjust output volume of source to normal operating volume. Make sure that the Master volume and the channel volume on the T1 are set to 0. While playing your instrument/audio sources as loudly as you would during a performance, turn the Trim control on applicable channel of the T1 clockwise until the signal/clip indicator glows green or yellow. If the indicator flashes red or glows steady red, turn the trim control counterclockwise to decrease the level.

What are the preamp outputs on channels 1-3?

Direct dry output signal that may be connected to other amplifiers or recording devices. Preamp outputs for channels 1-3 accept a 1/4" TRS balanced phone plug cable.

Functionality

How many inputs does the T1 ToneMatch audio engine have, and what type are they?

Inputs 1-3 are analog input channels with a combination input connector. This connector supports either balanced XLR audio cables or 1/4" TS unbalanced phone plug cables. Easily connect multiple sources with the added flexibility of accepting either balanced XLR audio cables or 1/4" TS unbalanced phone plug cables.

Analog input channels 4/5 accept a 1/4" TRS balanced phone plug cable. Both inputs are affected by a common channel edit control. These stereo inputs are useful for connecting the outputs from PC soundcards, mixing consoles and digital keyboards.

How can you verify the version of ToneMatch presets that are on the T1?

Access the global preferences menu to confirm which interchangeable ToneMatch™ preset banks are loaded on the system. Use the Rotary encoder to select the global Prefs mode. Press Menu button to select menu list, then rotate the Select button to scroll through the list and highlight the ToneMatch description.

What is the process for updating the T1 with new ToneMatch presets?

The T1 is equipped with a USB interface that may be connected to a PC. Check www.Bose.com/musicians for periodic updates on preset availability.

What is a Bose® scene?

The T1 contains five Bose® scenes, which contain specific default processing configurations for various applications intended as a starting point in achieving great sound. The Bose scenes are Factory settings, Singer/songwriter, DJ/playback, Drums and bass, and Electric works.

Bose Scene 01 – Factory settings
This scene restores the T1 audio engine to the settings it had when it left the factory. Loading this scene erases any changes you previously made.

Bose Scene 02 – Singer/songwriter
Bose Scene 02 is designed for singer/songwriter playing keyboard or guitar and sometimes accompanied by an MP3 track.

Bose Scene 03 – DJ/playback
Bose Scene 03 is designed for a DJ event or any audio playback need. This setup uses two microphones and either an MP3 player, mixer or laptop PC.

Bose Scene 04 – Drums and bass
Bose Scene 04 is set up for a bass guitar, kick drum, and either an MP3 player or laptop PC.

Bose Scene 05 – Electric works
Bose Scene 05 is designed for electric and acoustic guitars, bass guitar and keyboard.

What is a user-defined scene?

The T1 allows the user to easily store, recall and edit performance scenes (a snapshot of the complete state of the unit) into five user-defined scenes.

User-defined scenes help achieve consistent sound with minimal configuration. After editing a Bose® scene to your preference, you may re-save it as a user-defined scene, allowing you to easily recall it at a later time. This greatly reduces the amount of configuration required.

What is a shared scene?

A shared scene is a bank of five scenes that you can send out of the T1 to a PC when using the L1™ updater software. This allows you to share scenes with other members of the user community. To obtain software, please go to www.Bose.com/musicians.

Does the T1 ToneMatch™ audio engine have built-in effects? What are some of the features and applications where they may be used?

Yes. Below is a list of effects that users may independently assign/adjust for any or all channels. The user also enjoys discrete control over designated parameters for each respective channel.

Effects

Modulation

Chorus 1:Brite - Shimmering chorus that works well with acoustic instruments. Includes adjustable mix, depth and speed parameters.

Chorus 2: Warm - Similar to Chorus 1 but with a little less high frequencies. Includes adjustable mix, depth and speed parameters and works well with electric guitars and basses.

Chorus 3: Dark - Similar to Chorus 2 but with less high frequencies for a darker tone. Includes adjustable mix, depth and speed parameters, and works well with electric guitars and basses.

Flanger 1: Tape - Tape-style flanger with no feedback. Includes adjustable mix, depth and speed parameters, and works well with electric guitars and basses.

Flanger 2: Feedback - Same as Flanger 1 but with preset Feedback effect.

Phaser 1: Stomp - Classic "stomp box"-style phaser. Features a preset wide speed with variable speed and feedback parameters, and works well with electric guitars/basses and keyboards.

Phaser 2: Rack - Classic "rack"-style phaser. Features a positive mix type with variable speed and feedback parameters, and works well on electric guitars/basses and keyboards.

Phaser 3: Warm - Vintage-style phaser. Features a positive mix type with variable speed and feedback parameters, and works well as an effect on electric guitars/basses and keyboards.

Phaser 4: Bright - Phaser with no bass. Features a positive mix type with variable speed and feedback parameters that works well on electric guitars and keyboards.

Tremolo - Vintage-style tremolo effect with variable speed and depth parameters that works well as an effect on guitars and keyboards.

Delay

Choose from analog, digital or tape delay. Independently assign/adjust the delay settings for desired channels with discrete control over the mix and feedback time parameters for each channel. For example, the user may select a tape delay for the vocal on Channel 1 while selecting an analog delay for the guitar on Channel 2.

Digital Delay - Digital delay effect where the repeats remain uncolored. Features adjustable mix, time, and feedback parameters, and may be used on guitars, drums or vocals.

Analog Delay - Classic analog delay effect, where the repeats continuously deteriorate. Features adjustable mix, time and feedback parameters, and may be used with guitars, drums or vocals.

Tape Delay - Vintage-style tape delay effect, where the repeats deteriorate even more than analog delay, and may be used with guitars, horns, harmonica or vocals.

Reverb

The T1 allows access to a global reverb type that may be applied to all channels. The reverb types are plate, small, medium, large and cavern. Control decay time and level of reverb signal sent through master output. Please keep in mind that once you select a global reverb type to be used among any or all channels, you may control the mix and

brightness of each channel. However, the type of reverb may only be altered for all channels. This is achieved through adjusting the Reverb Type audio engine mode.

Plate - Creates the ambience of a medium-sized space. Features adjustable time and balance (ratio of early/later reflections) parameters and may be used with guitar, horns, percussion instruments and vocals.

Small - Creates the ambience of a small-sized space. Features adjustable time and balance (ratio of early/later reflections) parameters and may be used with guitar, horns, percussion instruments and vocals.

Medium - Creates the ambience of a medium-sized space. Features adjustable time and balance (ratio of early/later reflections) parameters and may be used with guitar, horns, percussion instruments and vocals.

Large - Creates the ambience of a large-sized space. Features adjustable time and balance (ratio of early/later reflections) parameters, and may be used with guitar, horns, percussion instruments and vocals.

Cavern - Creates the ambience of an extremely large space. Features adjustable time and balance (ratio of early/later reflections) parameters, and may be used with guitar, horns, percussion instruments and vocals.

Dynamics Processing

Compressor 1: Light - Compressor featuring a preset low compression ratio with variable threshold and gain parameters. May be used as a general-purpose compression for most instruments and microphones that require minimal-level control.

Compressor 2: Medium - Compressor featuring a preset moderate compression ratio with variable threshold and gain parameters and may be used with basses, guitars, keyboards, vocals or other instruments requiring subtle level control.

Compressor 3: Heavy - Compressor featuring a preset high compression ratio with variable threshold and gain parameters and may be used with loud instruments such as horns and drums, vocals or other instruments that require more aggressive level control.

Noise gate - adjustable threshold and speed independently assignable for each channel. Controls extraneous noise from open microphones or hot instrument pickups from being introduced into the system.

Limiter – User-adjustable threshold and gain settings are independently assignable for each channel.
Prevents input signals from overloading, helping to maintain consistent gain staging.

De-Esser – User-adjustable threshold and gain settings are independently assignable for each channel.
Compression useful in reducing high-end frequencies associated with vocal sibilant sounds.

Kick Gate - regular and fast gate types with user-adjustable threshold and tight settings that are independently assignable to each channel. Add punch or tightness to achieve desired kick-drum level.

Can you assign multiple effects to any or all channels?

Yes. The user may run multiple effects on one channel while simultaneously running a set of completely different effects on each of the other channels. Each effect type has designated user-adjustable parameters, which also may vary from channel to channel.

Can I create a sub mix to send to a house PA system or recording device?

Yes. The Aux mode on the T1 allows you to send selected input channels to the Aux output. By accessing the Aux mode via the mode selector, you then have the ability to determine if the signal will be Dry (after preamp), Pre (includes EQ and FX) or Post (after fader).

Applications

Does the T1 have amp modeling capability?

No. Distortion must be produced first and then fed into the T1 as a clean, non-clipping signal. To achieve distortion, the guitarist can use a few methods:

- Inline devices: One popular method would be to use any of the effects pedals on the market or use a DSP-based amplifier modeler, such as the Line 6 "Pod" that models the tone produced by amplifier tubes, guitar transducers and guitar amplifier speaker cabinets.

- Miking a guitar amplifier: Another method would be to use a guitar amplifier, and mic the speaker as closely as possible. The trick here is to run the amplifier at the lowest level at which the correct tone is attainable but does not diminish the benefits of the L1™ Model II system. Louder amplifiers can be located and miked offstage. Miking small, low-watt amplifiers is a better technique for this method.

- Use a loading device. Some electric guitarists may prefer to use their amplifier's output as an input signal into the power stand. Before doing this, they must use a load device, such as a "Plate Soak" or a "Hot Plate" to give a line-level output suitable for the input stage of the T1.

- Use the "line output" of a guitar amplifier. Some amplifiers have this option, and it may be suitable for some guitarists. The only suggestion here is to turn the volume of the amplifier down so only the L1™ Model II system is heard.

Refer to the Bose® website and Musicians Community Forum at www.Bose.com/musicians to learn how to interface additional instruments with the system.

General

I own an L1™ Model I system. Can I purchase the T1 separately and use it with the system?

Yes. The T1 is available for purchase separately and may be used with either an L1™ Model I or Model II system. When used with a Model II system, the audio is connected digitally via the ToneMatch™ ports. When used with a Model I, a separate power supply is required to power the T1, and the audio is analog. When using with a Model I, simply connect the T1's Master Output jack to the analog input of Channel 3 or 4 on the Model I power stand. The T1 power supply is available through Bose or authorized dealers of the L1 family of products.

Can the T1 be used as a stand-alone mixer?

Yes. However, many of the advantages that the L1 family of products provide, such as even sound dispersion and portability, are not realized when the T1 is used with conventional speaker systems.

The L1 Product Family

When was the L1 Model II system first available for consumers to purchase?

On March 28, 2007, Bose Corporation introduced the L1 Model II family of products. They will be available for sale May 1, 2007 through authorized dealers.

Does the T1 compete with any of Bose's existing portable professional systems?

Yes. There are some situations where in the past we would have recommended a Bose solution comprised of our L1 Model I system or other portable products, where today we would recommend the T1 ToneMatch™ audio engine. Live music performance is the most obvious application where we would do so. There remain a number of applications where our existing portable products are an excellent choice.

What is included with the purchase of the T1 ToneMatch™ audio engine?

T1 ToneMatch™ audio engine
Includes the following:

-T1 ToneMatch audio engine (with protective top)
-Soft carry bag
-ToneMatch™ cable
-Carriage
-Mounting bar
-DVD-ROM

What other L1™ family of products do you recommend to use with the T1? What do they include?

L1™ Model II system
Includes the following:

- Cylindrical Radiator® loudspeaker
- L1™ Model II power stand
- B1 bass module
- Padded carrying bags for L1, power stand and B1
- 4 conductor Bass Module cable
- AC Power cord
- Demonstration DVD
- L1™ Model II Owner's Guide, B1 Bass Module Owner's Guide, Quick Setup Guide and product registration card

PackLite® power amplifier Model A1
Designed for instruments that require additional headroom and increased output in the deep bass range, such as electric bass, bass drum and high-output playback of recorded dance music. The PackLite power amplifier can power up to two additional B1 bass modules.

PackLite Extended Bass Package
(Adds more bass output to any of the above bass packages)
The PackLite® extended bass package comes with:
- PackLite power amplifier

- ¼" TRS cable (18")
- Nylon carry pouch for the amplifier

What are the available accessories for the T1?

T1 ToneMatch™ audio engine power supply
Required when connecting the T1 to a L1™ model 1 system

ToneMatch audio engine microphone stand bracket
Use to mount the T1 on the pole of a microphone stand

What additional accessories are available for the L1 product family?

For product codes and part numbers for accessories below, please refer to Appendix A.

B1 bass module
This compact, powerful bass enclosure delivers the depth and impact of such instruments as bass guitar, drums and low voices. Low-pitched wind or stringed instruments, guitars and keyboards also can benefit from the additional low-end output that the B1 provides. Includes professional padded gig bag and one cable to connect the B1 bass module to the power stand, and a slip cover.

Standard B1 carrying cover
A standard carrying cover for the B1 bass module. Cover is a direct replacement for the cover included with a new L1 Model I or Model II system package.

B1 cable 5.5" (1.7m)
Heavy-duty 4-pin cable connects B1 bass modules to L1 Model II or Model II power stands. Longer B1 cables may be obtained from www.audiopile.net.

Heavy-duty B1 gig bag
Custom-designed to hold your B1 bass module. Incorporates our high-end construction features to protect from scuffs and scrapes on all six sides.

PackLite® power amplifier Model A1
Designed for instruments that require additional headroom and increased output in the deep bass range, such as electric bass, bass drum and high-output playback of recorded dance music. The PackLite power amplifier can power up to two additional B1 bass modules.

Carry pouch for Model A1 Amplifier
Standard nylon protective pouch for the A1 PackLite® power amplifier

¼-in TRS Cable for A1 amplifier 18-in (0.5m)
Standard, balanced tip-ring-sleeve 1/4" cable connects the A1 PackLite® power amplifier to a power stand.

Heavy-duty power stand/L1™/duffle carrying bag set
Durable and form-fitted, the heavy-duty gig bag set will help protect the L1™ loudspeaker and power stand components during transport. Telescoping travel handle and roller wheels makes for a very easy transport of the power stand. The L1 bag, lined with extra padding, comes with a shoulder strap. A rugged duffle bag contains convenient pockets and can hold the R1 remote control with plenty of room for cables and accessories.

Standard power stand/L1™ carrying bag set
Standard carrying bags for the power stand and L1 loudspeaker. Set of three bags is a direct replacement for the set included with a new L1 Model I or Model II system package.

L1™ Model II power stand cord (120-volt only)
Designed to connect a 120-volt power stand to an AC outlet.

Support

Where can I collaborate with Bose staff and existing owners to learn more on how the T1 ToneMatch™ audio engine can work for my specific application?

We host a public forum that allows our helpful user community to share their experiences and collaborate in real time on topics that are important to them. Here you will find extensive application-specific documentation and helpful hints. The forum is fully searchable and can be accessed at http://bose.infopop.cc/6/ubb.x.

You also may contact our product support team and speak with our knowledgeable staff of musicians. They may be reached at 877-335-2673.

What is the limited warranty?

The limited warranty on all electronic components in the United States is one year. For limited warranty information in other parts of the world, please visit www.Bose.com/musicians for more information.
Are there any user-replaceable parts?

Certain user-replaceable parts are available for the product family. Please contact our support department at 877-335-2673 for details.

Are the products repairable? To what extent?

Yes, the products are repairable.

What are the replacement costs?

Call 877-335-2673 or e-mail support@Bose.com for further details.

There is a buzz in the system. Any suggestions on how to fix it?

Noise and buzzing is a typical problem with pro audio gear. The new Bose® approach is very much immune to noise because it is a simple, independent system. The typical buzzes and hums associated with ground loops are gone when you use an independent system that is not interconnected electronically to other pieces of equipment. Some equipment could still be connected to the Bose system. This is not a comprehensive guide to noise troubleshooting but will offer a suggestion. One of the most important suggestions to alleviate buzz and hum in a system is to plug all interconnected gear into the same electrical circuit. Guitar players or vocalists with effects should plug those units into the same electrical outlet as their power stand. This normally fixes all problems. Do not use 3- prong to 2-prong adapters, also known as 'cheaters' or ‘ground lifters’. This is a serious safety threat, which bypasses a safety grounding mechanism.

Can I use this 120-volt system in another country?

No. The unit does not have a universal power supply; use the 120V version only in 120V countries. Use the 240V version in countries with 220,230 or 240V systems at 50Hz. We do not have a 100V.

Appendix A: Accessories