TAD

TAD Micro Evolution One

TAD-ME1

SPEAKER SYSTEM

ENCEINTES ACOUSTIQUES

スピーカーシステム

АКУСТИЧЕСКАЯ СИСТЕМА

OWNER'S MANUAL

MODE D'EMPLOI

取扱説明書

РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ

BEFORE YOU START

Thank you for buying this TAD product. Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

- This speaker system has an impedance of 4 ohms, and should be connected only to an amplifier designed with a load impedance of 4 ohms (the amplifier's speaker output connector should clearly be labeled "4 ohms").

In order to prevent damage to the speaker system resulting from input overload, please observe the following precautions:

- Do not supply power to the speaker system in excess of the maximum permissible input.
- Always turn off the amplifier power whenever connecting this unit or other components to the amplifier.
- Be careful not to overload the amplifier by playing at high sound levels, as the amplifier's harmonic distortion will be increased and you may damage the speaker.

Caution: installation

- Do not place the speaker on an unstable surface. It could present a hazard if it falls, as well as potentially damaging the equipment.
- Do not attach these speakers to the wall or ceiling. They may fall off and cause injury.
- Switch off and unplug your AV equipment and consult the instructions when connecting up components. Make sure you use the correct connecting cables.
- Technical Audio Devices, Inc. is not responsible for any accidents or damage that result from improper installation, misuse or modification of the product, or natural disasters.

Caution: in use

- Do not allow the speaker to output distorted sound for long periods of times. This is an indication of using excessive power and can result in a fire hazard.
- Do not sit or stand on the speaker, or let children play on the speaker.
- Do not put large or heavy objects on top of the speaker.
- Do not place magnetic objects such as screwdrivers or iron parts near the tweeter or midrange. Since the speakers use strong magnets, the objects may be attracted, causing injury or damaging the diaphragm.

For U.S. model

WARNING: This product contains chemicals known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm.
Wash hands after handling.

D36-P5_C1_En

IMPORTANT NOTICE
THE MODEL NUMBER AND SERIAL NUMBER OF THIS EQUIPMENT ARE ON THE REAR OR BOTTOM. RECORD THESE NUMBERS IN THE SPACE BELOW FOR FUTURE REFERENCE.

MODEL NO. _____
SERIAL NO. _____

D36-AP9-2_A1_En

For European model

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for the correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

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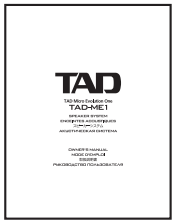
CONTENTS

Parts Included

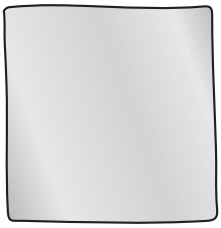
Check that the following items are included:

Accessory folder

● This Owner's Manual x 1



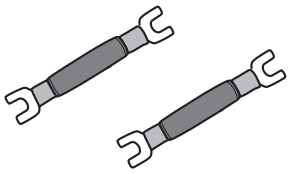
● Cleaning cloth x 1



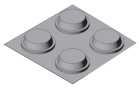
● Warranty card (This warranty is valid only in Japan.)

Accessory parts

● Shorting links x 2 (factory installed on speaker)



● Non-slip pad x 4



⚠ WARNING

Store small parts out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.

Note

Included parts may vary slightly by region.

INTRODUCTION

Inspiring the joy of listening

Technical Audio Devices Laboratories, Inc. (TADL) grew from the spirit to discover technologies to perfectly recreate the pure sound of life performances with uncompromising craftsmanship. We have inherited our philosophy from Bart Locanthi –recognized across the globe as the ultimate sound technologist–who believed that genuine technology is true to the basic and that genuine technology places greater importance on sound quality than on technology for its own sake. At TADL, we are honing our technology to create equipment that reproduces musical sounds that evoke both the energy and impact of life music.

TAD Micro Evolution One Features

TAD-ME1 is the speaker system by using the accumulated acoustic technology in TAD's past history and advanced audio technology in order to realize the emotional sound.

1. Coaxial speaker unit with "CST[*1] driver"

The heart of the system is the Coherent Source Transducer (CST). The tweeter diaphragm is mounted concentrically within the midrange cone and provides a point source of sound from 420 Hz to 60 kHz. It results in creating both time coherency and matched directivity between the midrange and tweeter, producing superbly-controlled radiation patterns and ensuring a perfect spectral balance between the direct and reflected sounds arriving at the listener's ears. The result is more consistent sound throughout the listening room and improved imaging capability. By mounting this unit in the perfectly shaped enclosure, the CST driver is provided with optimum conditions for producing the utmost in performance.

2. Beryllium tweeter and magnesium midrange diaphragms

The tweeter features a light-weight, highly rigid beryllium diaphragm. Ultra-smooth features have been achieved with its semi-dome shape using HSDOM*[2]. Magnesium is utilized for the midrange diaphragm. It's combination of stiffness, low mass and durability ensure that the midrange is similarly reproduced with freedom from resonace and distortion.

3. Woofer designed with MACC[*3] diaphragm

The woofer adopts a newly developed MACC diaphragm made of bonded woven and nonwoven fabric of highly lightweight and firm aramid fiber. This enables to realize a rich low-pitch and clear mid-range audio frequency reproduction.

4. "SILENT[*4] Enclosure" for low resonance

The cabinet is constructed of high-rigidity Baltic birch plywood combined with MDF for high internal loss, achieving a "SILENT Enclosure" that combines high strength with low resonance. In addition, it is sandwiched from left to right by a highly dense and extremely strong, 4 mm thick structural steel plate to reduce the unnecessary resonance from the cabinet.

5. "Bi-Directional ADS [*5] port"

The bass reflex port has been integrated into the enclosure side of the speaker. The port opening is designed as horn-shaped slits located front-back and right-left, allowing the speaker to reproduce natural and luxuriant low-frequency sound even though a compact bookshelf-type speaker design. By eliminating unnecessary noise from the port and the influence of internal standing waves, the speaker produces clear bass sound with excellent response.

[*1] CST: Coherent Source Transducer
[*2] HSDOM: Harmonized Synthetic Diaphragm Optimum Method
[*3] MACC: Multi-layered Aramid Composite Cone
[*4] SILENT: Structurally Inert Laminated Enclosure Technology
[*5] Bi-Directional ADS: Bi-Directional Aero-Dynamic Slot

⚠ Precautions regarding the installation location

Do not install the speaker system in areas exposed to direct sunlight nor near heating appliances. Such conditions may result in shrinkage of the wood materials and finish, leading to deformation of the enclosure, discoloration, or damage to the speakers.
Conditions considered unpleasant by humans are detrimental to speakers as well. Providing a comfortable environment for the speakers will assist them in demonstrating their best performance. Please maintain the usage environment as follows:
Temperature: 15 °C to 25 °C (59 °F to 77 °F)
Relative Humidity: 35 % to 65 % (winter)
40 % to 70 % (summer)

- **When using room air-conditioners or stoves to rapidly cool or heat room spaces, take precautions to avoid excessive dehumidification.**
- **Avoid placing the speaker near areas such as windows, as outside air can cause condensation to occur within the speaker.**

⚠ Precautions during installation

- **The total weight of this speaker system is 20 kg (44 lbs). Before installing, confirm that the installation location is fully capable of supporting this weight**
- **Due to the weight involved, taking care not to pinch fingers between the speaker and other objects, and preventing the speaker system from falling.**
- **Avoid touching the front surface of speaker units, since you may deform or damage the enclosure mesh or speaker diaphragms.**

Installation

Installation on floor or rack

Stick the non-slip pads, which are provided with this unit at the bottom of the 4 side speakers while installing this unit.

Installation using speaker stands (sold separately)

This speaker system has been designed as a “bookshelf” type speaker. As a result, when mounted directly on the floor, bass sounds may be amplified as a result of reflection from the floor surface, potentially creating unpleasant listening effects. In such cases, a speaker stand can be used to elevate the speaker from the floor surface. In general, optimum performance will be produced by mounting the speaker system so that the high-range speakers (tweeters) are roughly at the listener’s ear level. In addition, to prevent dangerous tipping or falls, be sure to use screws to fix the speaker system in place. We recommend the use of the speaker stand TAD-ST3 for this purpose. For details consult the TAD-ST3 user manual.

- **Dedicated Speaker Stand TAD-ST3 (sold separately)**

To elicit the best possible performance from the TAD Micro Evolution One speaker system, TAD has simultaneously engineered the dedicated speaker stand TAD-ST3 (sold separately). These stands have been optimized to assure high damping characteristics and stable barycentric positioning. Install TAD-ST3 as it is, without the non-slip pads.

Choosing Where To Place The Speakers

Speaker placement within the listening room will have a great impact upon the total performance of the unit in terms of bass performance, tonal accuracy, and imaging. All rooms are different and so this section is intended as a guide only. Experimentation in your room will yield optimum results.

Begin by placing the rear of the speakers approximately one to two feet in from the front walls and the sides one to two feet in from the side walls of your listening room, as shown in Figure 1. Your listening position should be roughly equal to the distance between the two speakers. Also, turn the speakers inward so each axis points toward the listening position.

Next, connect the audio system as described in *CONNECTING THE SPEAKERS* on page 7. Then, optimize the speaker placement as described in *OPTIMIZING THE SYSTEM* on page 9.

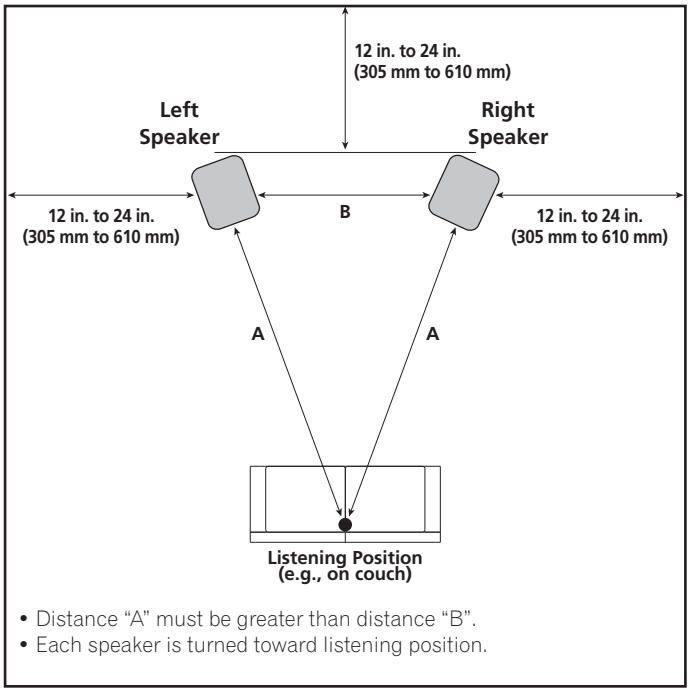


Figure 1. Placement of a pair of speakers for stereo music listening

Speaker care

The unit is crafted with a painted finish. Wipe the cabinet surface gently with the accessory cleaning cloth to remove dust and fingerprints.

⚠ CAUTION

- **When dusting the cabinet, do not use cleansers, abrasives or chemically impregnated cloths.**
- **Contact with alcohol, benzene, insecticides or other chemicals may cause peeling or discoloration of the finished surface.**

⚠ CAUTION

- **When connecting speakers or other components, always turn off the power to the amplifier, and disconnect the power cord.**
- **Speaker cables are not furnished with this speaker system, and must be purchased separately.**
- **After connecting the speakers, gently pull on the speaker cables to confirm that each cable wire is connected securely to its respective terminal. Loose connections may result in interrupted sound or noise.**
- **Do not allow wires from one connector or cable to touch those from another, since excessive load may be applied to the amplifier, causing the amplifier to stop operating or be damaged.**
- **If the polarity (+/–) of either right or left speaker is mistakenly reversed when connected to the amplifier, the speakers will be unable to produce proper stereo phase effect.**

Input terminal specifications

This speaker system is provided with LF (Low-Frequency) input terminals for the woofer, and HF (High-Frequency) input terminals for CST (Coherent Source Transducer) connections.

Single-Wire Connections

When adopting single-wire connections, use the furnished accessory shorting links to connect the LF input terminals (for woofer) to the HF input terminals (for CST).

Use the shorting links to connect the upper/lower HF input terminals to the upper/lower LF input terminals as shown in Figure 2, then connect the positive (+) speaker wire from the amplifier to either of the speaker's red connector terminals, and the negative (–) speaker wire from the amplifier to either of the speaker's black connector terminals.

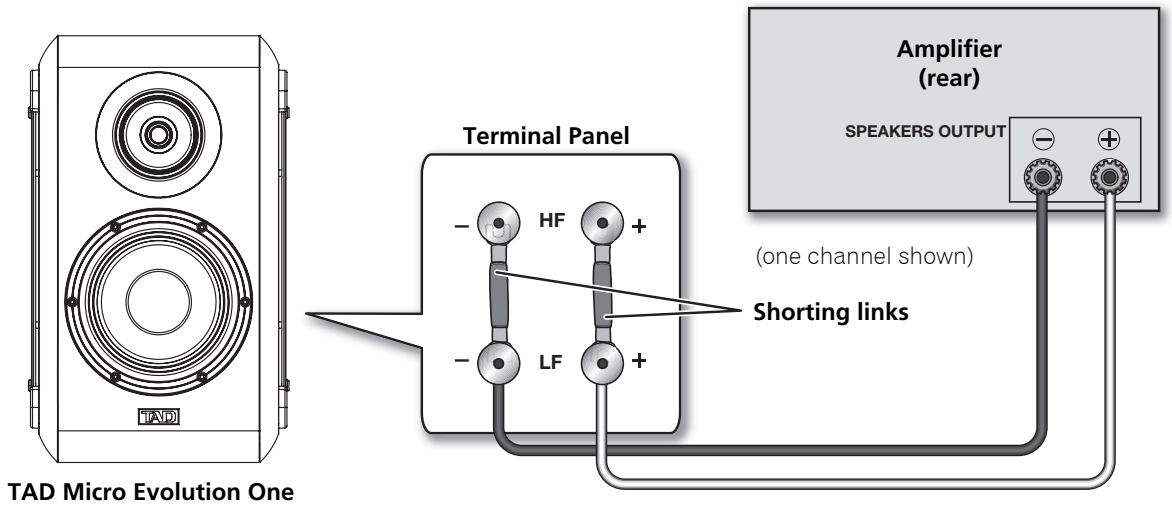


Figure 2. Connecting a speaker in a single-wired system

Bi-Wire Connections

When adopting bi-wire connections, the speaker cables from the amplifier are connected individually to the LF input terminals (for woofer) and the HF input terminals (for CST).
Connect one set of speaker cables to the LF input terminals (for woofer). Then, connect the other set of speaker cables to the HF input terminals (for CST). Finally, connect the respective speaker cables in pairs to the amplifier's speaker terminals.
Take care to connect both (+) wires to the (+) amplifier terminals and both (–) wires to the (–) amplifier terminals, as shown in Figure 3.

⚠ CAUTION

● **Remove the shorting links before connecting speaker cables in bi-wiring connections.**

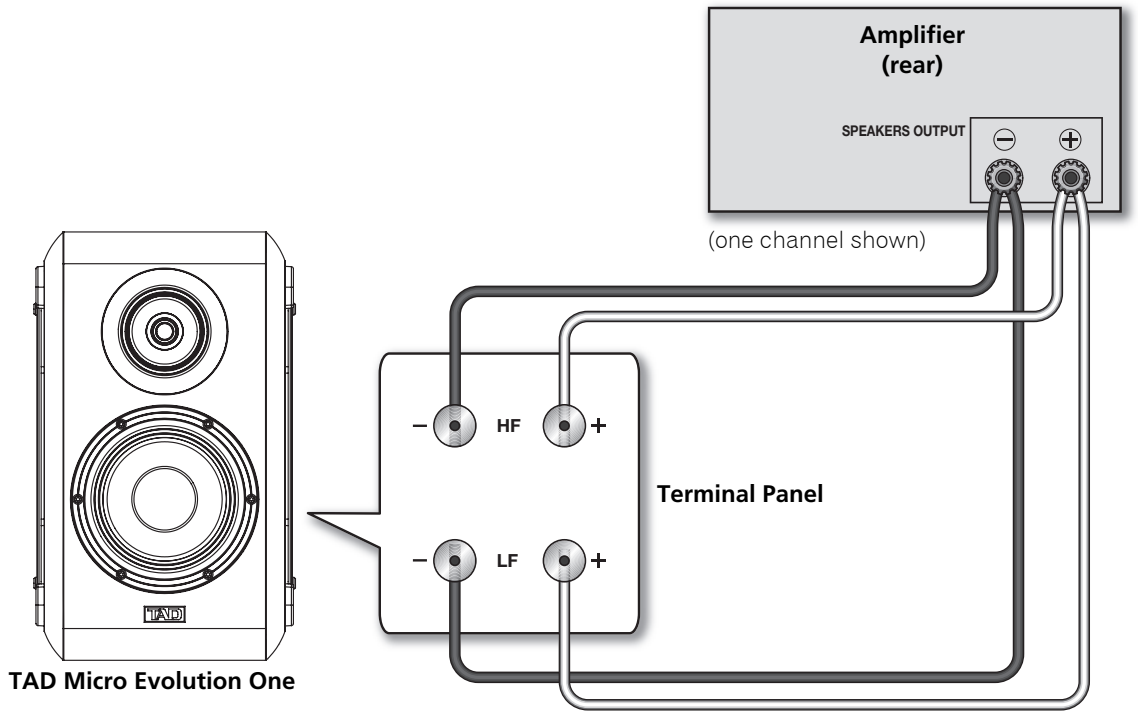


Figure 3. Connecting a speaker in a bi-wired system

Improving Bass Performance

Select a music track with well-recorded bass, such as acoustic string bass. Listen for all the bass notes having roughly equal level. If any notes jump out at you more strongly than others, try moving the speaker system until you get the most even progression of the notes.

Typically, moving them towards the walls will increase low bass output, but can result in more unevenness higher up the musical scale. Moving them closer to the side walls will not produce the same effect as moving closer to the back wall, so try experimenting moving both ways for the most pleasing sound.

Also listen to drum sounds. The kick drum should sound tight and fast, without low-frequency boom. Changes in speaker position of as little as a few inches can have a large effect upon bass performance, so take time and try many positions.

A useful tip to speed up the process is to have a partner move around the room while talking. Listen to where the voice sounds most natural, without added chestiness, and position the speaker system in that location.

Improving Imaging

Now select music with a strong center image. Listen for that image to be exactly centered between the speakers, and to be well-focused. If the image is unclear and spreads wide, the side walls are probably creating strong reflections. Try moving the speakers closer together to reduce this effect. If this brings them too close, try instead toeing in the speakers so that the axis crosses in front of the listening position. Because of the superior off-axis performance of the CST driver, the strength of the side-wall reflections will be reduced, and at the same time, the image will be stabilized and focused.

Now listen to music with well-recorded acoustics. Check that the image is wide and deep. Limited depth suggests that the speakers are placed too close to the front wall. Try moving them forward.

Final Optimization

You may find that as you move the speakers to optimize one aspect of performance another worsens; for example, trading improved image accuracy for poorer bass response. If this occurs, try moving your listening position. Bass response is governed strongly by both speaker and listening positions, whereas imaging is mostly determined by the speaker position. Therefore, you may find that if optimizing for imaging compromises bass, then changing the listening position will bring back bass performance.

The room characteristics will also have a profound influence upon the sound. *Live* rooms, with few soft furnishings and hard floors, will impart an artificial sense of spaciousness to the sound but reduce the intimacy and accuracy. Overly *dead* rooms, with lots of furnishing, carpets, and drapes will produce a very dry, lifeless sound and require lots more power to drive the speaker system to adequate sound levels. The optimum is somewhere in-between. Avoid hard, unbroken, parallel walls, especially side walls, as these impart strong flutter-type echoes and will have a bad influence on the imaging. Try and break up long expanses of walls with drapes, wall hangings, or bookshelves, and try not to introduce too much asymmetry into the room layout, as this will also affect the imaging.

SPECIFICATIONS

Model Name
TAD Micro Evolution One

Model No.
TAD-ME1

Design
Bass reflex, bookshelf-type speaker

Drive units
Bass driver ..... 16 cm (6 1/2 in.) cone
Midrange/Tweeter
..... concentric 9 cm (3 1/2 in.) cone/ 2.5 cm (1 in.) semi-dome

Performance Data
Frequency Range.....36 Hz to 60 kHz
Crossover Frequencies..... 420 Hz, and 2.5 kHz
Maximum input power..... 150 W
Sensitivity .....85 dB @ 2.83 V and 1 m (anechoic conditions)
Impedance ..... 4 ohms

Physical Data
Weight ..... 20 kg (44 lbs)
Dimensions
- Width ..... 251 mm (9 7/8 in.)
- Height ..... 411 mm (16 3/16 in.)
- Depth ..... 402 mm (15 13/16 in.)

Supplied accessories
Accessory folder
- This Owner's Manual x 1
- Cleaning cloth x 1
- Warranty card (This warranty is valid only in Japan.)

Accessory parts
- Non-slip pad x 4
- Shorting links x 2

Note
Included parts may vary slightly by region.

The specifications and construction details in this and related TAD publications are subject to change without notice. The TAD logo is a registered trademark of Technical Audio Devices, Inc.

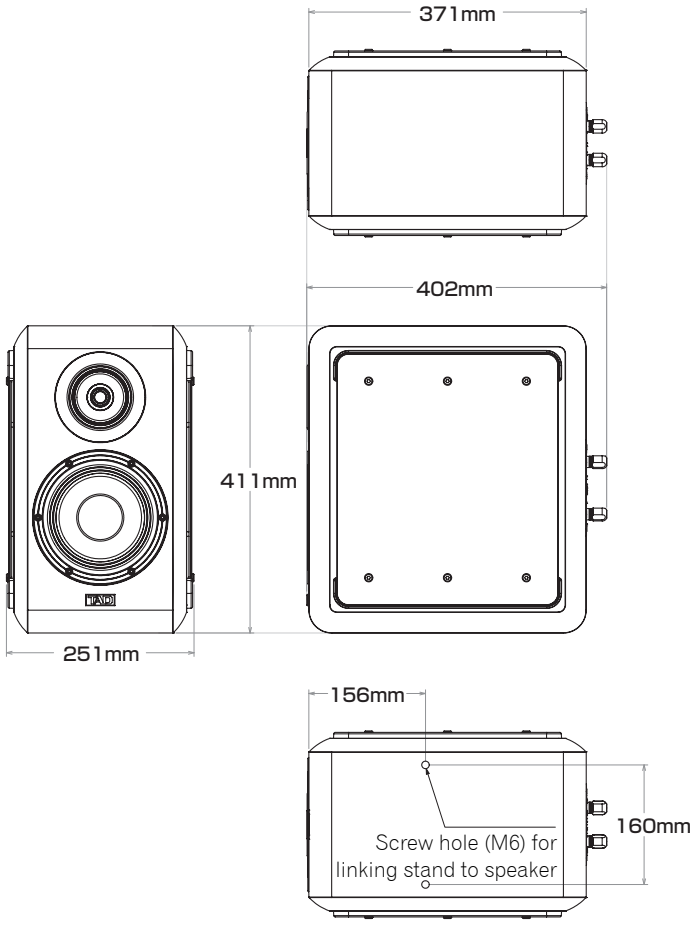


Figure 6. Overall dimensions of the TAD Micro Evolution One speaker system

The Safety of Your Ears is in Your Hands

Get the most out of your equipment by playing it at a safe level – a level that lets the sound come through clearly without annoying blaring or distortion and, most importantly, without affecting your sensitive hearing. Sound can be deceiving. Over time, your hearing "comfort level" adapts to higher volumes of sound, so what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

ESTABLISH A SAFE LEVEL:

- Set your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, without distortion.
- Once you have established a comfortable sound level, set the dial and leave it there.

BE SURE TO OBSERVE THE FOLLOWING GUIDELINES:

- Do not turn up the volume so high that you can't hear what's around you.
- Use caution or temporarily discontinue use in potentially hazardous situations.
- Do not use headphones while operating a motorized vehicle; the use of headphones may create a traffic hazard and is illegal in many areas.

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Примечание:
В соответствии со статьей 5 Закона Российской Федерации “О защите прав потребителя” и Указанием Правительства Российской Федерации № 720 от 16 июня 1997 года корпорация Pioneer Europe NV устанавливает условие на следующую продолжительность срока службы официально поставляемых на Российский рынок товаров.

Аудио и видеооборудование: 7 лет
Переносное аудиооборудование: 6 лет
Другое оборудование (наушники, микрофон и т.д.): 5 лет
Автомобильная электроника: 6 лет

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