

Thank you for purchasing this Murata product.
Please read this User's Guide completely before operating the unit.
Please retain this sheet for future reference.

Package Contents

One (1) pair Spherical Super Tweeters (or 1 pc in case of single spec.)
One (1) warranty card

In addition, for the ES-103B only:
One (1) pair of adapters for microphone stands

Important Safety Instructions

Symbols and other indications used in this manual



WARNING

If instructions bearing this mark are disregarded, there is a risk of death or severe injury.



CAUTION

If instructions bearing this mark are disregarded, there is a risk of injury to persons or damage to the product like household effects.



Prohibited action



Action that must be carried out

Misuse of this product may result in personal injury or death. Therefore, please follow the safety, installation and care instructions as outlined. Any changes or modifications to the Super Tweeters not expressly approved in this User's Guide will void your warranty.

Safety Instructions

Do not expose your Super Tweeters to rain, moisture or liquids of any kind.



Do not insert fingers or foreign objects between the fins. Under no circumstances should you touch the gold hemisphere at the center of the Super Tweeter.



Do not attempt to dismantle the housing. There are no user serviceable parts in this unit.



If there are any signs of over-heating, such as smoke or unusual odors, turn off your amplifier immediately. Then, disconnect the speaker leads from the Super Tweeters.



For repair, please contact your retailer.



Installation Instructions

Placement

This product is designed for use in a home audio system only. Do not install in vehicles.



Do not install the Super Tweeters in bathrooms, kitchens or any high-humidity environments.



Do not place the units in direct sunlight or near any heat source.



Install the units on stable supports, out of the reach of children.



Connection

Before connecting the units, please confirm that the amplifier is rated for using 8-Ohm speakers. Although the Super Tweeters are equipped with a protection circuit that will shut-down the units if the input power is exceeded, excessive power will eventually cause damage.



Care Instructions

Clean the units with a soft, clean, dry cloth.

Never apply benzene, thinner or any other cleaning chemicals to the Super Tweeters, as this will damage them.

Features

Fast transients

By virtue of piezoelectric ceramics, the spherical tweeters produce extremely high frequencies, resulting in superior transient responses to given input signals. This superior transient responses comes from the high self-resonance designed over the operating range. The effect for the listener is a uniquely natural reproduction of sound.

Extended frequency range

The frequency range of the Super Tweeters far exceeds those of regular speakers, covered up to 100 kHz, thereby yielding a richer, more accurate sound stage. New audio source like SACD and DVDA is well available and most of sound information is brought out.

Subtle harmonics

The rigidity of the ceramic dome creates the Super Tweeters' singular ability to reproduce subtle harmonics, which contribute to an exceptionally profound listening experience.

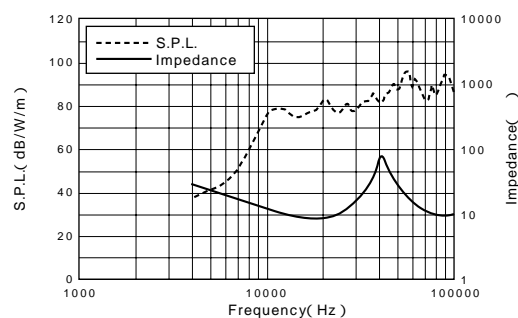
Dispersion

Given the spherical shape of the piezoceramic, the Super Tweeters have a wide dispersion angle that allows for the generation of omni-directional sound. The listener is not limited to a single location for the effect to be heard. The sound throughout the room is enhanced.

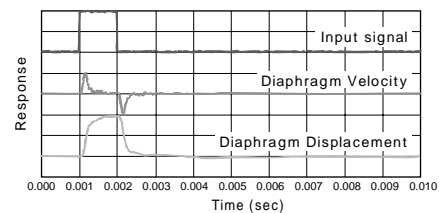
Specification

	ES103A/B	ES105
Average Sound Pressure Level	90dB/w/m	
Frequency range	15kHz ~ 100kHz	
Self-resonance frequency	103kHz	105kHz
Rated Impedance	8	
Long term maximum power	50W	
Dimensions	65 x L110 (mm)	W90 x H65 x D118 (mm)
Weight	1.3kg (2.9lbs)	1.1kg (2.4lbs)
Dispersion	Straight ± 45 degrees	

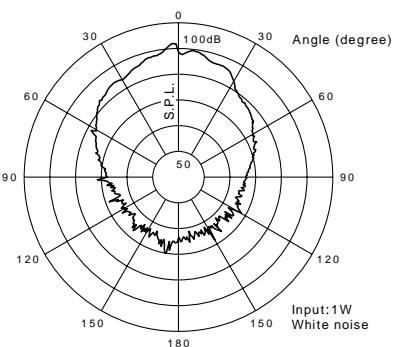
Frequency characteristics



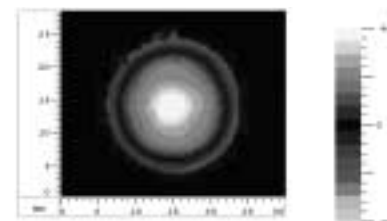
Transient characteristics (Spherical ceramics)



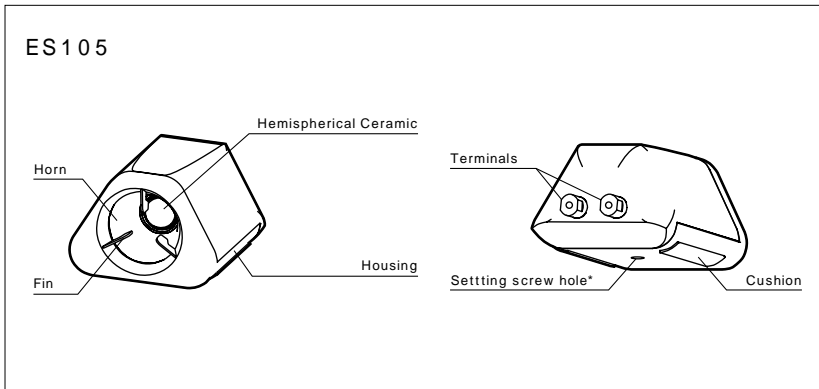
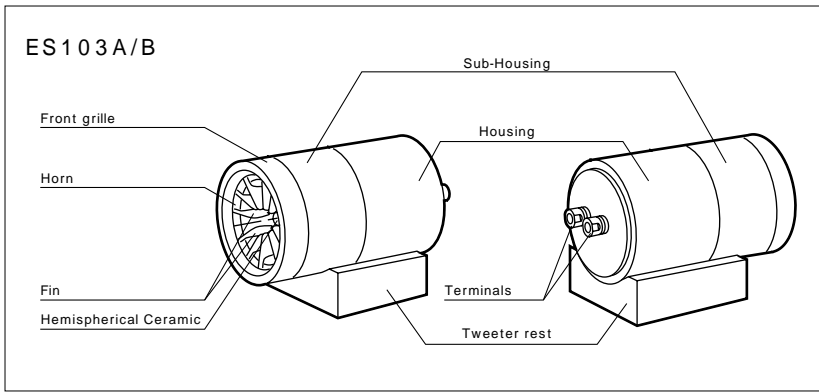
Dispersion



Breathing Vibration Mode (Measured by scanning laser vibrometer)



Parts Name



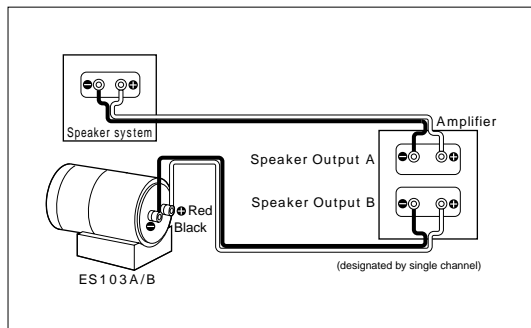
* The screw hole can be applied to the spec. "1/4-20UNC." It is also possible to fit up with microphone stands with the spec. "W3/8," by use of the adaptor which is an option or packed together with ES103B.

Connection

Please choose one of the following connection methods. (The following figures show the application of ES103A/B, but the same of ES105.)

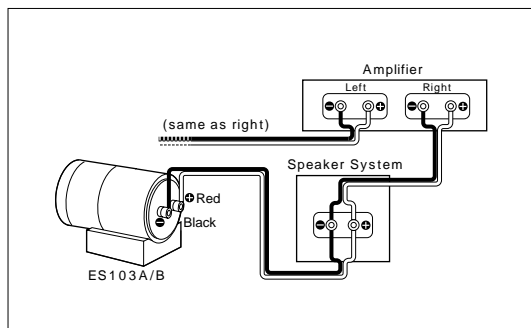
When connecting the Super Tweeters to an amplifier with two speaker outputs per channel:

1. Attach the main speakers cables to Output A.
2. Attach speaker cables to the Super Tweeter terminals.
3. Attach the other ends of the speaker cables to Output B, paying particular attention to polarity.
4. Check that all connections are tight.



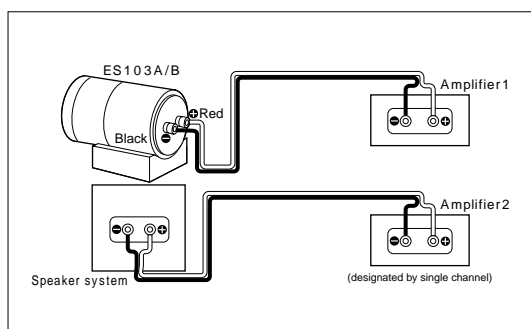
When connecting the Super Tweeters to the main speakers:

1. Attach speaker cables to the Super Tweeter terminals.
2. Attach the other ends of the speaker cables to the main speaker terminals, paying particular attention to the polarity.
3. Check that all connections are tight.



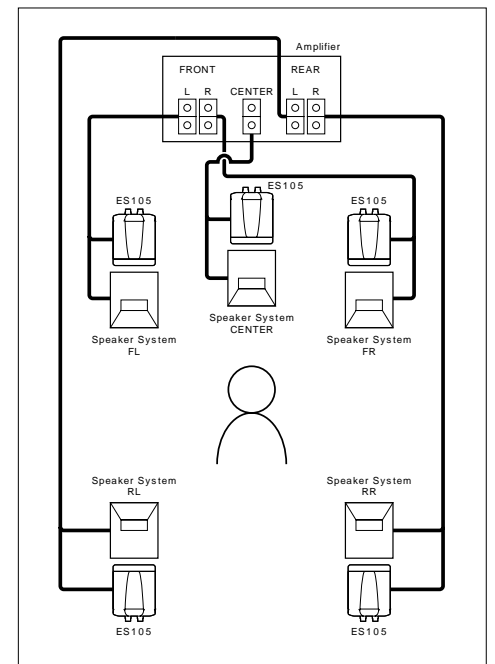
When connecting the Super Tweeters to a dedicated amplifier:

1. Attach speaker cables to the Super Tweeter terminals.
2. Attach the other ends of the speaker cables directly to the amplifier outputs, paying particular attention to polarity.
3. Check that all connections are tight.



(Caution)
Output signal from the tweeter is hardly audible. Please pay enough attention not to apply too much power.

Application to home theater in addition to "Front L · R," "CENTER" and "Rear L · R" are also available for surrounding air in the room.



Troubleshooting

The Super Tweeters is designed and constructed to provide the user with many years of reliable operation. However, if there seems to be a problem with the unit, please follow the instructions below.

If tweeters are not working, please check by the following method

Listen to the tweeter next to your ear. If you can hear the subtle sound of a cymbal or high frequencies then The Super Tweeters is working.

If you can not feel the effect of tweeters, please check by the following method.

- 1) If the music source is not suitable like scarce high frequency level or low signal density, please try various music source.
- 2) Please insert a rubber sheet between the tweeter and the speaker cabinet.
- 3) Please move your ear position to the tweeter's height.
- 4) Please set the tweeter at the same height level with the speaker driver.
- 5) Please adjust the direction of the tweeters and check the sound dispersion.
- 6) Please cover the tweeter and compare the sound of covered with not-covered.

If you can not feel the sound effect with the above mentioned way, please contact us.

Protective Circuitry

If the input power is exceeded, a protection circuit built into The Super Tweeters will activate. The Super Tweeters will recover when the input power is reduced and consequently the temperature inside The Super Tweeters cools down. This protection circuit is for prevention of risks occurred by excess input power, not for compensation of excess power.

If you see smoke, or perceive a strange smell

Turn off the amplifier, then disconnect the speaker leads. Contact the place of purchase with the warranty document and proof of purchase.

Warranty and Service

Warranty Card

The terms of the Murata warranty are specified on the warranty card. Proof of purchase will be required for warranty service.

Service

Please contact your retailer for service or email speaker@murata.co.jp. Include the model name, serial number, purchase date and problem description. If the equipment requires service after the warranty period has expired, the owner will be responsible for any repair and shipping costs. Please be advised that parts may not be available for units that have not been in production for longer than eight years.

Notice to Users

© 2005 Murata Manufacturing Co., Ltd. All rights reserved. This User's Guide, and the information described herein, in whole or in part, may not be reproduced, translated, or reduced to any machine-readable form without prior written approval.



Head Office : 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555 Japan
International Division : 3-29-12, Sibuya, Shibuya-ku, Tokyo 150-0002, Japan
URL : <http://www.murata.com/speaker/>
E-mail : speaker@murata.co.jp