www.swanspeakers.com https://www.facebook.com/SwansSpeakers/ Ver 1
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Due to the reasons in the change of design or others, product information contained here may not be in conformity with product itself. We reserve the right of no prior notice before change.

Hi-Fi Speaker
Product Manual

Design: SWAN

General breakdown and maintenance

1. Poor sound quality
Check that the power amplifier is operating normally or is not set up incorrectly;
Check if the signal cable between the sound source and the power amplifier is of poor quality or defective;
Check that the connection between the power amplifier and the speaker has good contact, and that the terminals of the two groups of terminals on the rear of the speaker have good contact;
Check that the speaker of the speaker box can produce sound, and judge whether the speaker is faulty or damaged;
Check that the connection wire of the speaker and phase of output terminal "+,-" of the power amplifier are connected correctly.

2. Completely no sound
Check that the connection between the speaker and the power amplifier is open;
Check that the power amplifier is operating works normally or is not adjusted correctly;
Check that the sound source is working properly or not adjusted correctly.
Check that the signal wire between the sound source and the power amplifier is open.

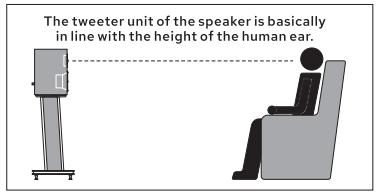
3. No sound on a particular channel
Change the connection line of the silent channel with the connection line of the vocal channel, and judge whether it is the problem of the speaker itself or the connection line or the power amplifier.

Foreword

Thank you for choosing the Hi-Fi speaker products produced by SWAN.
As a Hi-End advanced audio manufacturer, SWAN has been evaluated as follows: "SWAN combines international electro-acoustic technology with local production in China, which makes its products have fashionable appearance, outstanding sound quality and reasonable price".
Swanspeaker Systems, Inc. is an American audio company with many years' experience in the production of advanced audio products. It was acquired by SWAN in 1997. Frank Hale, the former president of the company and electroacoustic designer, became the chief designer of SWAN.
The engineers of SWAN have rich experience in electroacoustic practice, and the series of speaker systems developed by them stem from their deep understanding of electroacoustic transducer. SWAN's development centre is equipped with advanced acoustic analysis software and Danish B&K electroacoustic testing system; Precision material analysis, magnetic circuit analysis, laser interference spectrum analysis, digital DSP and other analysis instruments;
Different size audition rooms are used to evaluate the sound quality of audio products in various environments. Through these valuable research and development resources, SWAN engineers can constantly challenge the limits of sound reproduction system. The speakers you choose are designed by SWAN, and the speaker units are high quality SWAN products. SWAN hopes to bring you a beautiful musical experience, which is our good wish.
SWAN has two production bases in China, Asia, all of which have passed ISO9002 certification, equipped with a complete set of automatic production equipment imported from the United States, Denmark and Italy, and a fully computer-controlled quality management system. SWAN's product testing has always maintained a high standard. SWAN became a member company of American Speaker Manufacturers Association (ALMA) in 1995.
SWAN's idea is not only to convert audio signals into sound waves, because music has gone far beyond the simple concept of hearing. To be exact, music is the embodiment of the culture and lifestyle of our time. It is our requirement for SWAN speakers to reproduce the true and natural musical connotation and the musical connotation that artists try to express when playing. Therefore, it has the ability of balanced performance and clear sound quality in each range, and produces an accurate sense of space and positioning. The dynamic sound quality and technology are perfect, which is the unremitting pursuit of SWAN in the research and development field. Meeting the different needs of different users is the basic principle of SWAN. We are willing to provide products with outstanding performance and sound quality for everyone who loves music.
SWAN focus on sound quality.
Please read the product manual carefully before use, which will help you to use and maintain the speakers better.

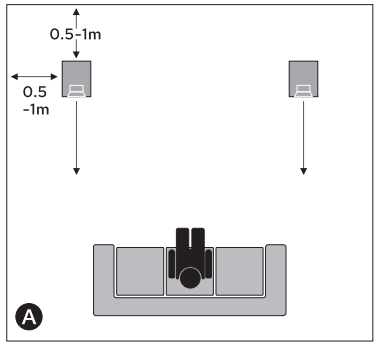
Speaker placement

Floorstanding speakers can be placed directly on the floor or on top of hardwood boards, stone, rubber pads, carpets, or even on spikes of various materials between the speakers and the floor. Isolation spikes made of various materials between the speakers and the floor. Bookshelf speakers can be placed on bookshelves or desks, but it is recommended that special speaker stands are used to achieve the best sound quality. The basic requirements for speaker stands are stability, balance, and a low centre of gravity. The height of the stands should be such that when the speakers are placed on them, the tweeters are at ear level when the listener is seated.

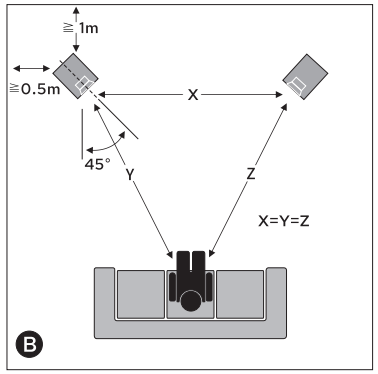


Owning high-quality equipment does not guarantee ideal sound performance. It is recommended that you carefully adjust the placement of the speakers in the room to achieve the desired sound reproduction. Below are some common speaker placement methods for your reference.

1. Conventional parallel placement (Figure A) This is the most commonly used placement method. The speakers are placed parallel to each other with no tilt. The distance between the speakers and the side walls should be between 0.5-1 metre and can be adjusted to achieve the ideal position. The listener should be positioned on the centre line between the two speakers for listening. This placement method may be considered if the high-frequency part of the entire frequency range are too prominent and sounds harsh. It will help to restore a more balanced sound. However, the reproduction of the sound field may be affected by this placement method, so adjustments may need to be made to achieve the desired effect.



2. Equilateral triangle placement (Figure B) This is a placement method that can easily achieve good sound effects. It is important to note that the distance between the speakers and the rear wall should be at least 1 meter, and the distance between the speakers and the side walls should be at least 0.5 meters. The two speakers and the listener form an equilateral triangle, and the speakers should be tilted inward at an angle of approximately 45 degrees. This placement method can reduce the interference of sound reflections from the walls and better reproduce soundstage positioning. It also improves the presentation of music details.



Maintenance

SWAN speakers are exquisitely crafted and finished, and will operate reliably for a long time in a suitable environment , generally without special care. Speakers should be kept away from corrosive liquids and gases, and should not be placed in places with high temperatures, humidity and large variations.

in temperature and humidity for a long time, or in direct sunlight for long periods of time. Do not touch the speaker diap hragm with your hands, otherwise it may damage the speaker, especially the dome tweeter. If there is any dust, it can be cleaned regularly with a clean soft cloth, and if there is any stain, it can be wiped with a detergent that does not contain a solvent for strengthening chemistry. The speaker's grill cover has the functions of dustproof, speaker protection and aesthetics.

The material of the grill cover is meticulously selected with minimal impact on the sound . Be careful when taking and placing the net. After removing the grill cover, the midrange and treble of the speaker wil l be slightly improved, but for the effective protection of the speaker, it is recommended that you install the grill cover.



Avoid magnetization interference.



No direct sunlight for a long time



No placing in high temperature and humidityfor a long time, and the temperature and humidity change greatly.



No touching speaker diaphragm with yourhands.



Avoid contact with corrosive liquids and gases.

Listening environment

In order to obtain ideal listening effect, in addition to ensuring the quality of equipment, it is also necessary to properly handle the listening environment, reduce unnecessary reflections and make the reverberation time as appropriate as possible. The position of the speaker in the room directly affects the sound effect, the sound transparency, and even whether the sound field is truly reproduced or not. The size, proportional structure and interior furnishings of the room also affect the listening effect. Pay attention to the fact that the length, width and height of the room can't be an integer multiple (such as square room, 2 times, 4 times, etc.), otherwise standing waves (harmful harmonics vibration)will generate and making the sound turbid and unclear. A large smooth wall surface and glass will cause strong reflection of sound waves, which will blur the sound image and destroy the reproduction and positioning of sound field.

There are several simple ways to deal with the listening environment:

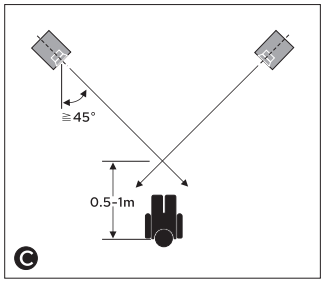
1. Carpeting all or part of the ground in the listening area of the room to eliminate the reflection of sound waves smoothly.
2. Sticking or hanging sound-absorbing materials on smooth walls with strong sound reflection in the room, or even hanging some cotton and linen fabrics, is also beneficial to improving the listening environment.
3. Replace the curtains with multi-layer ones, and choose thick fabrics to eliminate resonance of sound waves reflected by glass.

Run-in

"Run-in" refers to the process of further aging and stabilization of speakers. Speaker is a transducer that converts audio signal into mechanical vibration to make sound. It is composed of many mechanical parts and electronic components, just like a newly bought car needs a period of "running-in". Although the speaker has gone through many processes and times of intensive aging before leaving the factory, it is beneficial to "run-in" the newly purchased speaker at home for some time, which can stabilize the playback sound of the speaker, remove the stiff feeling and improve the sound quality. The time for "running-in" is generally 48-100 hours. "Runin" at home is simple, or it can be done simultaneously with normal music listening , because when listening music at a generally moderate volume, this process itself is also "running in". As time goes by, based on 2-3 hours of listening per day, the speaker can generally be cooked up in about a month. The music themes selected for the speaker are mainly symphonies and pop music, etc. These types of music have rich information in various frequency bands, which can make all frequency bands of the speaker "run in". Do not turn up the volume too high during the "run-in" process, because long term overload will easily burn out the speakers, and such noisy sound will also make neighbors and family members feel uneasy.

Speaker placement

3. Inner cross placement (Figure C)
This placement method is similar to the equilateral triangle placement. The speakers are angled inwards ,closer to the side walls, at an angle of 45 degrees or more. The axes of the two speakers intersect in front of the listener at a distance of 0.5-1 meter. This placement method may be considered if the room is narrow and long, or if the listening environment is complex.



Non-magnetic speakers should be placed as far away as possible from objects that are prone to magnetic interference, such as televisions, watches, mobile phones, and IC cards. Generally, placing non-magnetic speakers are placed at a distance of 0.5-0.8 meters from a television will minimise the level of magnetic interference.

Wiring method

Some speakers have only one set (two) of gold-plated wire terminals on the back, while others have two sets (four) of gold-plated wire terminals. For speakers with two sets of wire terminals can be used for bi-wiring connection. Before leaving the factory, the two sets of wire terminals are already connected in parallel by two gold-plated copper connection plates. You can directly connect the speaker directly to either set of terminals using a stereo power amplifier (called an amplifier).

The quality of the connection cable between the speaker and the amplifier directly affects the sound reproduction quality. It is recommended that you use a thicker oxygen-free copper cable specifically designed for speakers. The higher the purity of the copper wire, the better its conductivity, the less likely it is to age, and the easier it is to ensure lossless transmission of audio current. Audiophiles with higher demands can choose copper speaker cables, silver-plated cables, or other high-quality cables that use new composite materials to achieve better sound performance.

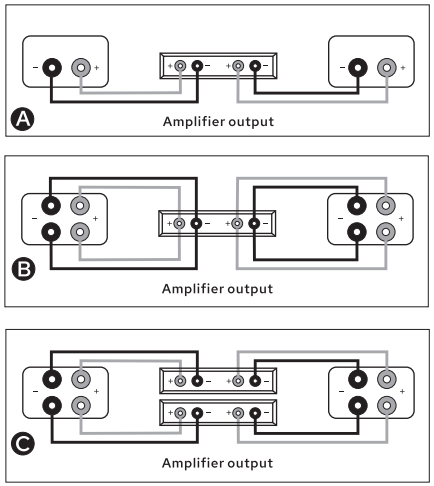
It is important to ensure that the high fidelity speaker is in phase with the amplifier, as this is the primary requirement for good sound quality. When making the connecting, ensure that the phase of the speaker's input terminals matches the corresponding phase of the amplifier's output terminals: connect the '+' phase to the '+' phase, and the '-' phase to the '-' phase. Typically, the '+' phase is indicated by the color red, while the '-' phase is indicated by the colors blue, black, or white.

Wiring method

There are several common ways to connect speakers and amplifiers:
1. Single amplifier single wire connection: See Figure A, each speaker is connected to the left and right channel output terminals of the amplifier by using one set of speaker wires.

2. Single amplifier bi-wire connection: See Figure B, using only one stereo amplifier, each speaker is connected to the left and right channel output terminals of the amplifier by using two sets of speaker wires.

3. Dual amplifier bi-wire connection: See Figure C, using two stereo amplifiers are used, and each speaker is connected to the left and right channel output terminals of the two amplifiers by using two sets of speaker wires.



Choosing an amplifier

To match high-fidelity speakers with an ideal amplifier and fully unleash the excellent music reproduction capabilities of the speakers, you should choose high-quality stereo amplifiers such as solid-state transistor amplifiers or tube amplifiers (referred to as high-fidelity amplifiers). Generally, multi-channel home theater amplifiers are not recommended.
In addition, the selection of an amplifier should also consider both technical parameter compatibility and timbre characteristics.

The technical parameter of the amplifier should match the speakers:
1. Impedance matching: Most modern solid-state high-fidelity amplifiers can directly drive speakers with a rated impedance of 4-8 ohms. When pairing with high-fidelity speakers, apart from the difference in output power due to impedance variations, generally no impedance matching issue. However, when pairing tube amplifiers with speakers, it is necessary to connect the corresponding impedance terminals of the amplifier based on the rated impedance of the speakers. This is to prevent impedance mismatch from causing abnormal operation of the tube amplifier and affecting the normal sound quality.
The back panel of high-fidelity speakers typically indicates the power range that the speakers can handle. The rated power (RMS) of the high-fidelity amplifier should be referenced based on the upper limit of the speaker's power range. To fully leverage the excellent music reproduction capabilities of Hi-Fi speakers, the rated power

Choosing an amplifier

(RMS) of the Hi-Fi amplifier should be 1.5-1.7 times the upper limit of the speaker's power range. If you prefer music genres with larger dynamic range, such as pop or classical music, the rated power (RMS) of the amplifier should be 2-2.5 times the upper limit of the speaker's power range.For example, if the power range of the high-fidelity speakers is 10-60W, taking the upper limit of 60W as a reference, a rated power of 90-102W for the high-fidelity amplifier would be suitable for general applications. For music genres with larger dynamic range, a rated power of 120-150W would be appropriate.
2. The choice of timbre characteristics:
Different combinations of high-fidelity amplifiers and speakers can result in different tonal characteristics. Currently, there is no single technical parameter that can directly indicate the quality of sound produced by audio equipment such as amplifiers and speakers. Therefore, It is recommended that you conduct actual listening tests to match the amplifier and speakers to achieve a sound that suits your personal taste.
You may also consider purchasing a Swan Hi-Fi amplifier to pair with your speakers.

Usage of the amplifier

When connecting the signal line and the speaker line, the power supply of the sound source and the amplifier should be turned off;
The power of the amplifier and the signal source should be turned on when the volume knob of the amplifier is set to mute, and then the volume should be gradually increased;
The power should be turned on in the order of sound source first, amplifier second, and turned off in the order of amplifier first, sound source second;
Do not plug or unplug the speaker wire and signal wire while the amplifier is powered on, otherwise it is very likely to burn out the speaker or amplifier.