Silver W-12

owners manual

Contents

Introduction

Thank you for your purchase of the Monitor Audio Silver W-12 subwoofer, which has been designed and constructed using quality systems and materials to provide years of enjoyment, reliability and pride of ownership.

The Silver W12 is a completely new and sophisticated design featuring the powerful control of DSP processing and new driver design. The new 500 watt DSP controlled amplifier utilizes advanced switch-mode power conversion techniques and superior processing to increased dynamic control and far greater head-room before any sign of distortion.

The sealed box construction ensures this powerful combination delivers tight, powerful bass all the way down to a thunderous 22Hz in a typical room set up.

The W-12 features our innovative Automatic Position Correction (APC) system, developed completed in house. APC uses a microphone and test tones to automatically calculate detrimental room modes and automatically correct frequency response, optimizing it for the room and position. This is a simple and quick automated process that is a complete revelation to the installer and ensures the user is able to enjoy the sub-woofer quality how it was intended.

Please read through this manual to familiarise yourself with any safety advice and how to set up your subwoofer to achieve the very best listening experience.

Please retain this manual for future reference.

Spiked Foot Assembly
For Carpeted Floors

The Silver spiked foot assembly incorporates a spike for use on carpeted floors and also, a soft polymer pad (for use on wooden or tiled floors).

⚠ Please ensure there are no hidden wires under the carpet that could be damaged by the spikes.

Locking Nut

Main Threaded Assembly

Polymer Pad

Spike
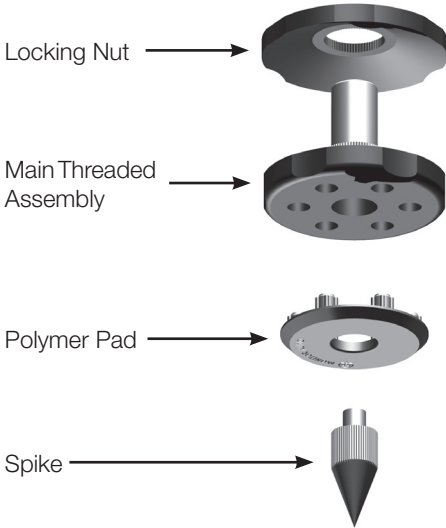
The foot comes fully assembled for use on carpeted floors. All that is required is fixing into the bottom of the cabinet. This is achieved by simply screwing the feet fully into the 4-threaded insert in the underside of the cabinet. If your carpet has a very thick pile, remove the soft polymer pad from the foot to ensure the spike goes right through the carpet into the floor. With great care turn your cabinet the right way up. Place the cabinet in your desired location, and check that it is level on all sides. If it is slightly uneven, unscrew the spike at the lowest point and check again.

Continue this process until the cabinet is fully level. Use the locking nut on the foot to fix the foot in place and to stop any unwanted vibrations.

Spiked Foot Fixing For Wooden/Hard Floors

For use on solid floors or where spikes are inappropriate, it is possible to use the foot without the spike. To use the foot in this manner carefully grip the knurled portion of the spike and rotate anti clockwise to unscrew the spike fully.

You may find it easier to first remove the polymer pad so as to gain more purchase on the spike.

The pad should be replaced before carrying out the levelling operation previously described.
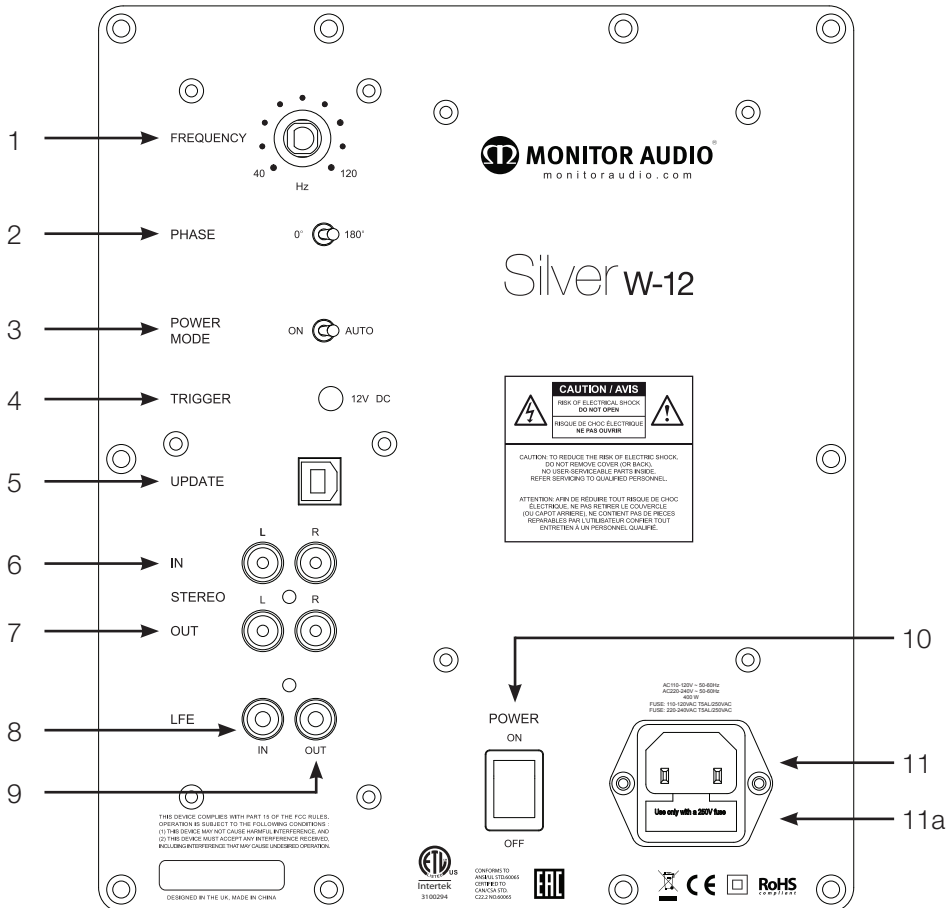
1. Crossover Frequency Control

   The crossover frequency control only operates when connected to the stereo inputs. It does not have any effect when connected to the LFE input. This control feature is used to set the upper frequency limit (low pass) of the Silver W-12. The crossover control should be set in accordance with the size or bass output of the main/satellite speakers. Refer to the following chart as a guide to setting the crossover frequency control to the optimum position. Much will depend on the correct low frequency response of the main speakers and their position within the room. Experimentation is advisable.

Type of Main Speaker	Crossover Control Setting
Large floor-standing speaker	40-60 Hz
Small floor-standing speaker	50-70Hz
Large stand-mount/ bookshelf speaker	50-80 Hz
Small stand-mount/ bookshelf speaker	60-90 Hz
Small satellite speaker	80-120 Hz

2. Phase Control Switch

The Phase Control is used to synchronise any delay between the Silver W-12 and main/ satellite speakers. When the Silver W-12 is in phase with the main/satellite speakers the sound should be full bodied. Sit in a normal listening position whilst adjusting the phase switch. Help from another person may be required. When set correctly the location of the subwoofer should be almost undetectable. Experimentation is recommended in order to achieve optimum results. However it should be noted that in most cases the phase control switch should be set to 0 degrees, especially when using a digital AV processor or AV receiver amplifier.

3. Power Mode Switch with On-Auto Facility

The Power Mode Switch has two positions: 'On'–'Auto'. With the switch in the 'On' position, the subwoofer is permanently switched on under all conditions and will need to be manually put into Standby mode. While in Standby mode, the W-12 may be woken by pressing the EQ button. In the 'Auto' position the subwoofer will automatically wake once an input signal is received and will remain on while still receiving a signal. The Silver W-12 will switch into standby mode following a period of 20 minutes without an LFE signal. Refer to page 9 for further information.

4. 12 Volt Trigger Input ~ Centre Pin = +12Vdc

For external power control from AV amplifier/ receiver to the W-12. Monitor Audio recommend using this function and a lead is supplied. This 12 volt signal is generated by the AV amp/receiver and tells the W-12 to turn on from standby mode. This allows a more accurately controlled auto on/off function, and is far more energy efficient. When using the 12v trigger, the Power Mode Switch (3) must be in the **AUTO** position, for it to function correctly.

5. USB Connector

This is provided to update the firmware within the W-12.

6. RCA Line Level Inputs (Stereo Left & Right)

For connection to a 2 channel/ stereo amplifier system. Connection should be provided by a pair of high-quality signal cables from the pre-out section of an amplifier. **Note:-** cable lengths should not exceed 10 metres to avoid interference from other electrical appliances.

7. RCA Line Level Outputs (Stereo Left & Right)

To be used to feed additional sub-woofers to the W-12 by 'daisy chain' type connection. The outputs are link out only connections and do not provide any form of filtering.

8. LFE Input (RCA Type)

This input is to be used when connecting the W-12 to an AV amplifier/ receiver. When using the LFE input, the crossover control is not used. This is due to the crossover function being controlled and set by the AV amplifier/ processor when it's set up procedure is run.

9. LFE Output/ Link (RCA Type)

To be used to feed additional sub-woofers to the W-12 by 'daisy chain' type connection. The output is a link out only connection and does not provide any form of filtering.

10. Mains Power Switch

The Mains Power Switch should be switched to the 'Off' position when the Silver W-12 will not be used for extended periods. The switch must be in the 'On' position for the subwoofer to function.

WARNING: Due to the mains switch being located on the rear panel, the apparatus must be located in the open area with no obstructions to access the mains switch.

11. IEC Mains Power Connector/ Fuse Location

The Silver W-12 is supplied with a two-pin mains input socket for connection to the mains supply. Use ONLY the appropriate IEC mains lead provided with the product. Also fitted is an external mains fuse. If a fuse blows during operation a spare fuse is provided within the fuse holder for replacement. If you wish to change the fuse, you can do this by removing the IEC mains lead and carefully levering out the original fuse from its holder below the IEC mains input socket (11a). If the fuse blows again it is advisable to seek help from an authorised service agent. DO NOT attempt to re-fit a further fuse as this could result in serious damage to the amplifier unit.

Top Control Panel

1. EQ Button

   This button has multiple functions, these are listed below:

   • It wakes the W-12 from standby with a single press

   • A long press (5 seconds) puts the W-12 into standby mode.

   • When operational, it cycles through three different EQ profiles.

   • The LED indicates selected EQ profile (while operational) and other states depending on mode and colour. A colour matrix can be found below.

        WHITE   -   Boot sequence
        BLUE   -   EQ Profile 1 (Movies)
        PINK   -   EQ Profile 2 (Music)
        GREEN   -   EQ Profile 3 (Impact)
        CYAN   -   Room Calibration In Progress
        RED   -   Factory Reset (Static)

        YELLOW & OTHER COLOUR - Fault mode (when flashing with other colour. See below.)

   Further information on the EQ profiles can be found on page 10.

2. Calibration Button

   The calibration button is used to enter 'Automatic Position Correction (APC). This is used to take SPL measurements of the room and to correct the frequency response of the speaker to offset any colouration effects of the environment.
   Refer to page 8 for further information on running the APC.

3. Microphone socket

   Used to set the sub woofer up to adjust for the room acoustics.
   Refer to page 8

4. Volume Control

This is used to set the volume control of the sub-woofer. Adjust this to a level at which the sub-woofer blends seamlessly into the rest of your system. See the Set Up proceedure on page 9 for recommended initial settings.

Initial Set Up

⚠️ **Leave the Silver W-12 unplugged from the mains until all signal cables are connected.**

The W-12 should now be sited in the most suitable position, preferably not directly in the corner of a room as this may cause excessive bass boom. Once a desirable position is achieved it is important to check if the cables are long enough to reach comfortably without being under tension. Cables should be less than 10 metres to avoid interference.

⚠️ **Never connect or disconnect the RCA input/ output leads with the Silver W-12 switched on.**

For initial setting up, put the Power Mode Switch in the 'On' position and leave the 12v trigger cable disconnected.

Once the input (and output if necessary) cables are connected and the power mode switch is in the On position, the W-12 can be connected to the mains power supply and switched on at the mains power switch.

Power Cycle

When the W-12 powers up for the first time or when it has been turned off for a long period, the EQ button will flash red 3 times while powering up and then go in to standby mode (if power mode switch is in the auto position).

When it senses a signal or is activated by the 12v trigger, the LED will illuminate white while booting and then the colour of the previously sleceted (or default) EQ profile.

If the power mode switch is in the On position it will be white while booting up and then to the colour of the previously selected (or default) EQ profile.

To continue with the set up procedure, put the power mode switch in the 'On' position so that the APC can be initiated.

Set Up
Automatic Position Correction

Automatic Position Correction (APC) will optimise the acoustic output of the subwoofer to match the ideal system performance by removing the dominant room modes from the listening position. The APC will take measurements from 3 different seating locations within the room to achieve the most accurate correction.

NOTE: Please run the APC before running the automatic room set up of your AV amplifier.

To perform APC, follow the steps listed below:

1. Pressing the Calibration Button (item 2, page 6) while in normal operation will enter calibration mode. A flashing blue LED in the calibration button indicates that the subwoofer is ready to perform an APC measurement.

2. Place the microphone in the normal listening position, then press the EQ button to activate a room measurement. This will flash cyan and a series of tones will be heard.

   If it doesn't get a good enough reading, the EQ button LED will blink red and the sub will run the test tones again until it gets an accurate enough measurement. The LED will then blink green, then purple (processing the equalisation) and go off. The Calibration button will be flashing blue indicating that it needs to run a second and third set of tones.

3. Repeat step 2 in another 2 listening positions to provide more room information for the subwoofer.

   Good locations for the 2nd and 3rd measurements would be 1m to the immediate left and right of the initial listening position.

The subwoofer will then calculate the error between the current listening position and the ideal frequency response of the system, then calculate and apply digital filters to optimise the listening experience for the room.

When it has completed the APC the Calibration Button LED will go off, and the EQ Button LED will go the colour of the previously selected EQ profile.

If you do not wish to run a second and third APC frequency sweep, you can cancel the test by pressing the Calibration Button again.

Connected to an AV Receiver

The majority of AV amplifiers have automatic setup systems. If your amp has an auto set up procedure, run this now with the volume set to around 10 - 12 o'clock, and the power mode switch in the On position.

When the auto set up is complete check the settings on the AV amp for the sub woofer to ensure they are correct. The crossover frequency should be roughly the same as in the table on page 4 and the level should be no more/ less than +/- 3dB. If not we would suggest adjusting accordingly.

Now play a variety of music/ film excerpts that you are familiar with gradually increasing the volume to an average listening level once you are sure everything is working correctly.

Connected to a Stereo Amplifier

Stereo L & R input may be required if using a 2-channel stereo amplifier, or an amplifier with no LFE output. Connect 2 x interconnect cables (left and right) from an amplifier to connections marked Inputs L & R.

With the pre/ integrated amplifier set to a low level, set the subwoofer up using the suggested guide below before playing any music/ test tones.

- Set the volume to around 10 o'clock (Page 6)
- Frequency should be set in accordance to your main speakers (refer to the table on Page 4)
- Phase to 0 (Page 4)

Now play some familiar music and gradually adjust the volume and/ or the frequency until happy with the integration and balance of the sub woofer with the rest of the system.

EQ Profiles

The Silver W-12 has 3 preset EQ profiles. These are EQ1 (Movies), EQ2 (Music) and EQ3 (Impact).

These profiles change the characteristics of the sound from the subwoofer. We highly recommend experimenting with the different profiles to see which most suits your room, tastes, environment, etc. An example of the different profiles do can be seen below:

Silver W12 EQ Profiles
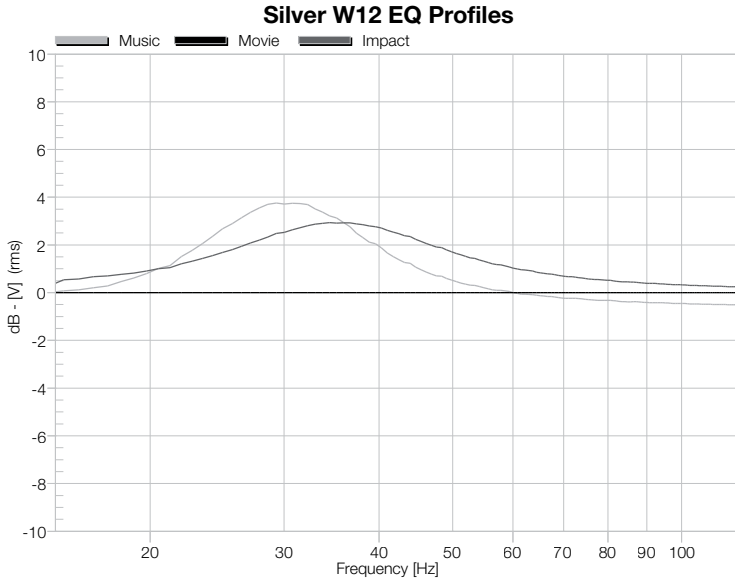
Additional Information for Auto On/ Off and Signal Sensing

In auto power mode, the method which wakes the system up takes priority until it is put into standby, with trigger always taking priority over signal sensing.

Signal sense is around 1mV sensitive on both the stereo and LFE inputs.

Some examples can be seen below:

1. The system is woken up with signal. When the signal is stopped, a 20 minute timer will start counting down to zero. At zero, the system will enter standby again. If a signal is re-introduced within this 20 minute window, the system will reset and stop the timer. The trigger line will not have any effect.

2. The system is woken up with the 12V trigger going high. The signal sense will not affect the state of the amplifier. The amplifier will automatically enter standby when the 12V trigger line transitions low.

3. The system is woken up with both signal present and the 12V trigger high. Trigger will take the priority, and signal sense will not have any effect.

Specification

System Format	Sealed Cabinet with 25mm M.D.F construction with internal bracing
Low Frequency Response	20Hz (Typical IEC room)
Upper Frequency Limit	40 – 120 Hz Variable
Low Pass Filter Alignment	Active 4th, order 24db/octave
Amplifier Power Output	500 Watts Continuous
Amplifier Classification	Class- D amplifier with Switch mode power supply (SMPSU)
Bass EQ Profiles	1: Movie, 2: Music, 3: Impact
Phase Control	0 & 180 degrees (switchable)
Auto Sensing	Line Level >2mV
Input Level Requirements	Standby after 20 minutes if no signal sensed
Driver Compliment	1 x 12" C-CAM® sub-woofer driver featuring triple suspension and 3" long throw voice coil
Connections	Stereo RCA in, Stereo RCA link out, LFE in, LFE link out, 12v Trigger in (3.5mm mono mini-jack), USB (for updating firmware)
12v Trigger Input	5 - 12v via 3.5mm mono mini-jack socket
Cabinet Dimensions (Excluding grille and amp) (H x W x D)	340 x 340 x 380mm 13 $^{3/8}$ x 13 $^{3/8}$ x 14 $^{15/16}$ Inch
Dimensions (Including grille, amp & feet) (H x W x D)	370 x 340 x 410mm 14 $^{9/16}$ x 13 $^{3/8}$ x 16 $^{1/8}$ Inch
Input Impedance	>20K Ohms
Mains Input Voltage	110 - 120 Vac / 220 - 240 Vac 50/60Hz (Electronically Auto selected)
Power Consumption	400 Watts / 0.5 Watts in Standby (ErP approved)
Weight (unpacked)	20.1Kg (44lb 4oz)

C-CAM® is a registered trade mark of Monitor Audio Ltd

Trouble Shooting
Fault Mode

The Silver W-12 can display 3 individual faults codes. Each fault mode makes the LED in the EQ Button alternate between yellow and another colour; red, green or blue.

Mode 1 - Power supply unit issue
Yellow/Red flashing

Mode 2 - Power amplifier issue
Yellow/Green flashing

If these faults occur, try carrying out a power cycle first, leaving the mains power removed for at least 5 minutes. If that doesn't solve the error try a factory reset.

If it still does not output a signal or the fault mode is still present, please contact your local dealer/ distributor or Monitor Audio immediately.

Factory Reset

If any problems or glitches occur, the first port of call will be a factory reset. This is actuated via a long press of button 1 and button 2 simultaneously.

This will reset -
- The current saved EQ (Resets to profile 1)
- Any saved microphone calibration data
- Any saved APC filter profiles

Firmware Version

A short press of both buttons causes the system to report its current firmware version by blinking the LED's within the buttons.

The LED within the EQ Button denotes a 1 and the LED within the Calibration button denotes a 0. Add up the pattern and pauses to determine the firmware version, for example:

Firmware version 2.1.1 would be 2 x EQ LED - Pause - 1 x EQ LED - Pause - 1 x EQ LED

Firmware version 3.0.0 would be 3 x EQ LED - Pause - 1 x Calibration LED - Pause - 1 x Calibration LED.

Owner Information

Product Details

Model: **Silver W-12**

Product Serial No: _____

Amp panel Serial No: _____

Date of Purchase: _____

Dealer Details

Dealer Name: _____

Address: _____

_____

Post code: _____

E-mail address: _____

Monitor Audio reserves the right to alter specifications without notice.