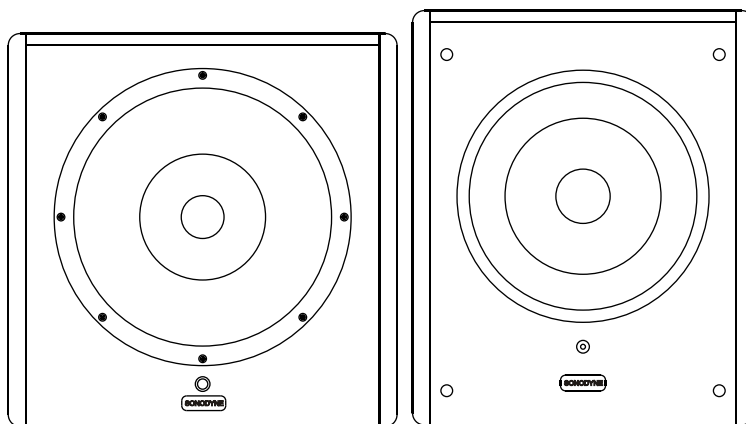


# SUB S10/ S12

powered subwoofer owners manual



# ● table of contents ●

STATUTORY INFORMATION	PAGE 1
INTRODUCTION	PAGE 2
PRODUCT FEATURES	PAGE 2
UNPACKING	PAGE 2
FIG. 1: CONTROLS	PAGE 3
AMPLIFIER FUNCTIONS & CONTROLS	PAGE 3 ~ 4
CONNECTIONS & OPERATIONS	PAGE 5
PLACEMENT OF SUBWOOFER	PAGE 6
TROUBLESHOOTING	PAGE 7
SPECIFICATIONS	PAGE 8

# ● statutory information

Thank you for selecting a Sonodyne SUB S10 / SUB S12 subwoofer.

Please read through this owner's manual carefully for details on product features and operation. Please unpack with care and retain the packaging for future use.

Please do not put this unit near any source of radiation/ heat/ directly under sunlight or in a dirty place.



The lightning flash with an arrowhead symbol is intended to warn the user that there is un-insulated (dangerous) voltage inside the unit.



The exclamation mark within an equilateral triangle symbol is intended to alert the user of presence of important operating instructions in the owner's manual accompanying the product.

## **WARNING**

- Do not put the unit in rain or moist places which will lead to shock or fire
- Do not block the ventilation area of the unit and place any material on the unit
- Ensure that the AC outlet has a firm earth connection
- Use only the AC cord supplied with the unit

## INTRODUCTION

Congratulations on having bought a SUB S10 / SUB S12 powered subwoofer! In order to get the best out of your equipment we suggest that you carefully read this manual before hooking it up with your existing system.

If you intend to use your powered subwoofer with your home theater, be prepared for a totally new experience. All those sounds that are meant to be felt, not heard - the explosions, the vibrations caused by the footsteps of a dinosaur, the thrust of a jet, they will all come alive in your room! It is not only special effects that your new powered subwoofer can deliver; with music, it introduces a new dimension to bass drum kicks, bass guitar notes and pedal organs. Your powered subwoofer is equipped with ample reserve power to effortlessly reproduce these very low frequencies with astounding realism, and thus allow you to explore new depths in your music.

## PRODUCT FEATURES

Your powered subwoofer has a host of features to ensure effective low frequency response. They are:

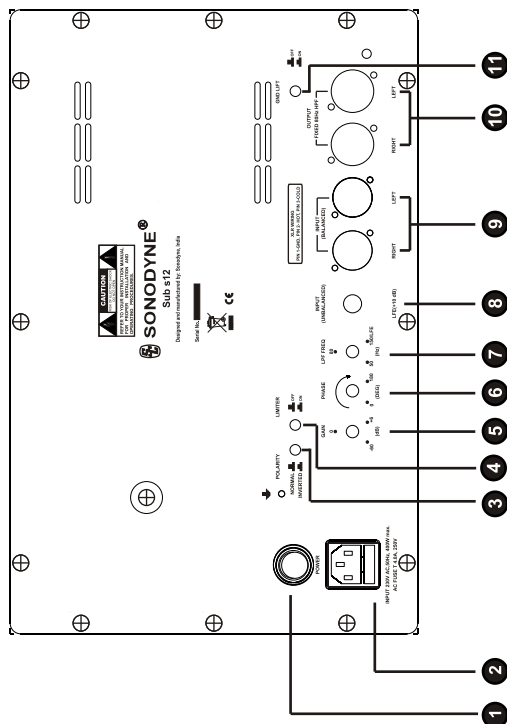
- Built in high power, low distortion power amplifier to drive the dedicated subwoofer driver
- Efficient subwoofer - amplifier integration that reproduces lows comfortably down to the threshold of human hearing
- Serious internal cabinet bracing and sealing to minimize spurious noises
- Frequency Control
- Phase Switch
- Level Control
- Left / Right inputs and bass-managed outputs
- LFE input

## UNPACKING

Before installing your powered subwoofer, please ensure that the following are in the box:

1. 1 powered subwoofer
2. 1 mains cord
3. 4 x spikes + base
4. 1 x tightening lever

# ● controls & switches ● fig. 1: controls ●



## CONTROLS AND SWITCHES

1. **POWER:** This is a rocker type power switch which turns on power to the system. The ON position is indicated with a dot mark on the switch.
2. **IEC AC SOCKET:** This is a fused 3-pin IEC AC inlet for connecting to a wall outlet with the cable supplied. Please ensure that the wall outlet is properly earthed and is capable of providing the power requirement of the product, printed on the back panel at the bottom of the socket.
3. **POLARITY:** This allows you to reverse the polarity or phase of the subwoofer. Depending on the placement of your subwoofer and the setting of the crossover frequency control, there may be a cancellation in the frequency band where the output of the main speaker and the output of the subwoofer overlap. When this occurs, pressing the switch will restore the lows. This switch should be used along with the phase control. See under "Operations & Connections"

## ● controls & switches ●

4. **LIMITER:** The limiter switch when pressed, prevents overdrive of the amplifier and speaker from excessively strong signals and is a means to protect the amplifier and speaker under such conditions.
5. **GAIN:** This controls the level of the subwoofer output. At the minimum setting which is marked -60 dB, the level is the lowest. At +6 dB position which is the maximum setting, the level is the highest.
6. **PHASE:** This allows you to vary the phase of the subwoofer from 0° to 180° and is set so as to give the best low frequency reproduction at the listening position. This control is to be used along with the polarity switch. For more details please see under 'Operations & Connections'
7. **LPF FREQ:** This is the crossover frequency control of the subwoofer. A subwoofer generally reproduces frequencies from 150 Hz and below. The lowest frequency that can be reproduced is determined by the characteristics of the speaker unit itself while the upper frequency limit (in this case 150 Hz) is deliberately imposed. With your subwoofer, the upper limit (corner frequency) can be varied continuously between 50 ~ 150 Hz. There is no rule that governs the corner frequency setting. Do experiment with the range provided till you locate the point at which the overall sound of your audio system is balanced.
8. **LFE INPUT:** Connect the sub output of your source equipment, such as an A/V receiver, to this socket. This is an un-balanced RCA type input.
9. **LEFT/RIGHT INPUT:** Connect the main left and right outputs from your source equipment such as the PRE OUT of an amplifier, to these inputs. These are fully balanced 3 pin XLR type inputs. Pin connections are 1 ground, 2 hot or positive, and 3 cold or negative.
10. **OUTPUT:** These are high-pass filtered left and right channel outputs. Connect the inputs of your main speaker to these sockets. The S10/S12 will route the signal which you have connected to the LEFT INPUT socket, to the LEFT OUTPUT socket, and similarly, for the right channel. By default, the outputs will be high-pass filtered at 80 Hz. Please see under 'Operations & Connections'. The outputs are fully balanced types. Pin connections are 1 ground, 2 hot or positive, and 3 cold or negative.
11. **GND LIFT:** Press this switch if you hear a humming or buzzing sound after you have connected all equipments, without any music playing.

# ● connections & operations ●

With all audio equipment OFF

1. You may connect to the sub in two ways:
  - (a) Connect using RCA cables from the pre/sub out of your AVR to the LFE input of the sub
  - (b) Connect using XLR connector from your A/V stereo preamp to the left/right inputs. The XLR pin configuration are Pin 1 - ground, Pin 2 - hot, Pin 3- cold
2. If you so desire, you may connect the left/right active speaker/amplifier to the bass- managed output of the sub. The XLR pin configuration are Pin 1 - ground, Pin 2 - hot, Pin 3- cold
3. Keep the Gain control at '-60 dB' and the Crossover Freq. at or around '100 Hz'. Keep Limiter switch in OFF position, Polarity switch in Normal position and Phase control in 0° position.
4. Plug in the Mains Cord to a 230 V AC outlet.
5. Switch on power to the system
6. Switch 'ON' your source and amplifier/preamplifier.
7. Play a section of audio that you know has good low frequency (bass) recording.
8. Turn up the volume of your amp/preamp till you attain a comfortable listening level.
9. Now, slowly turn up the Level of your subwoofer till you reach the level of bass that you desire. If you wish, you may turn on the limiter switch. This will prevent the subwoofer from overdrive causing distortion at sudden loud levels.
10. Adjust the Freq. Control pot to find a setting that gives you the most satisfying bass response (It would be a good idea to find out the low frequency limit of your main speakers. This should allow you to have a more educated approach towards setting the limiting frequency of your subwoofer).
11. Press the Polarity Switch to Normal or Inverted to determine the setting that gives the better low frequency response. You may also vary the phase control (with the Polarity switch in Normal position) to see if the low frequencies are boosted.

*Note - Since the last 4 steps are interdependent, you may have to repeat them before set-up is complete.*

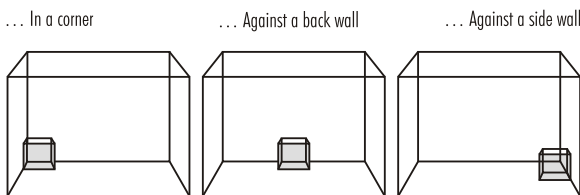
## • subwoofer placement • fig. 2 •

Low frequencies below 150 Hz are omnidirectional; that is, they seem to come from all directions. Hence it would not be possible to locate the subwoofer no matter where it is placed in your room. This, however, does not necessarily mean that the placement of the subwoofer is not critical. Each room, depending on its shape and dimensions, has a number of resonant frequencies that react with each other. Thus, the level of perceived bass may vary across a room depending on where source of sound is placed.

Suggestions on placement are given in the Figures below. It is important to note that every reflecting surface increases the low frequency level by 3 dB. Hence, when you place your subwoofer up against a wall, you get a higher level of low frequencies than when it is placed further away from any wall. Similarly, when you place it in a corner, the three reflecting surfaces further increase the level. However, this may result in uneven distribution of bass across your room, as discussed before. Hence, experiment with the placement and monitor its bass while sitting at your favorite listening spot. It may take a while before you finally arrive at the optimum location.

One experiment that usually works is this. Start out by placing your subwoofer where your favourite listening spot is (you will have to take the trouble of vacating your armchair, but only briefly!) Then, turn on your subwoofer and move across the room to find a spot where bass response is best. This is the optimal position of your subwoofer with reference to your favourite listening spot.

**FIG. 2: SUBWOOFER PLACEMENT**



# ● troubleshooting ●

Your subwoofer has undergone thorough measurement and testing in our factory before being shipped. Manufacturing defects have thus been minimized. However, in the unlikely event that practical inconveniences arise, the following should assist to remedy the same.

If your concern is not cited below, please contact your local Sonodyne dealer or a Sonodyne authorised service centre.

PROBLEM: Bass response seems to be inadequate...

- SOLUTION:
- A. Switch the Phase to the opposite of its current setting. If this fails, then turn the Corner Freq. knob further toward '150 Hz.' (It might so happen that there is inadequate low frequency information in the audio track, and thus you need to extend the upper frequency response of your subwoofer)
  - B. The subwoofer may not be getting adequate input drive. This can happen if you are using only one of the 2 Line Level inputs. Ensure that both L & R inputs of the subwoofer are receiving the input signal (even though the input may be mono).

# ● specifications ●

	SUB S10	SUB S12
DESCRIPTION	Front firing vented subwoofer	Front firing vented subwoofer
FREQUENCY RESPONSE (-3 dB)	35 Hz ~ crossover frequency	30 Hz ~ crossover frequency
USABLE FREQ. RESPONSE (-10 dB)	30 Hz	25 Hz
TRANSDUCER COMPLEMENTS	1 x 10" high-excursion subwoofer	1 x 12" high-excursion subwoofer
MAXIMUM SPL	112 dB	116 dB
AMPLIFIER POWER	200 W	300 W
AMPLIFIER TYPE	Class D	Class D
AMPLIFIER THD	< 0.1% at rated power	< 0.1% at rated power
INPUT SENSITIVITY AT 70 Hz	775 mV	775 mV
CROSS OVER FREQUENCY	Continuously variable: 50 ~ 150 Hz	Continuously variable: 50 ~ 150 Hz
PHASE	Variable: 0° to 180°	Variable: 0° to 180°
POLARITY	Switchable: Normal and inverted	Switchable: Normal and inverted
LIMITER	ON/OFF	ON/OFF
GROUND LIFT	ON/OFF	ON/OFF
INPUT	Left & Right: Balanced through XLR socket LFE: Unbalanced through RCA socket	Left & Right: Balanced through XLR socket LFE: Unbalanced through RCA socket
OUTPUT (LINE LEVEL)	Left and right, fixed 80 Hz Highpass, balanced through XLR socket	Left and right, fixed 80 Hz Highpass, balanced through XLR socket
FINISH	Painted	Painted
GRILL	Black colour grill cloth stretched on a one-piece MDF frame	Black colour grill cloth stretched on a one-piece MDF frame
DIMENSIONS (HxWxD) mm	422 x 349 x 446	402 x 398 x 555
NET WEIGHT	18.5 kg	29 kg
VOLUME	38 Litre	55 Litre

*Due to continuous improvements, all specifications are subject to change*

- notes •

[illegible]



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