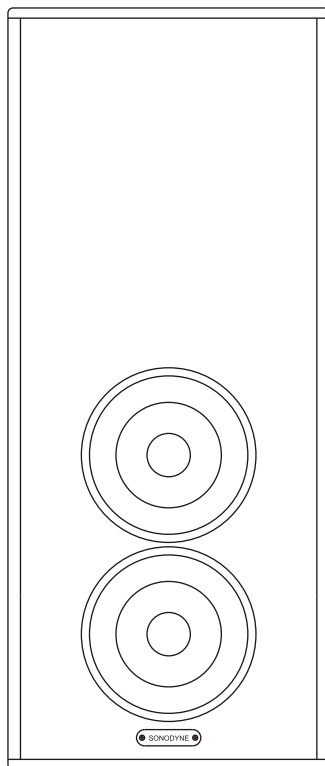


# SRT S21

subwoofer | owners manual



## INTRODUCTION

The SRT S21 is a dedicated subwoofer for the SRT package. It is a shallow-profile passive subwoofer to be used in conjunction with its dedicated active controller. The SRT S21 may be mounted vertically or horizontally using the wooden stand supplied.

It consists of the following in 3 boxes:

1. Subwoofer
2. Controller
3. Wooden stand for subwoofer

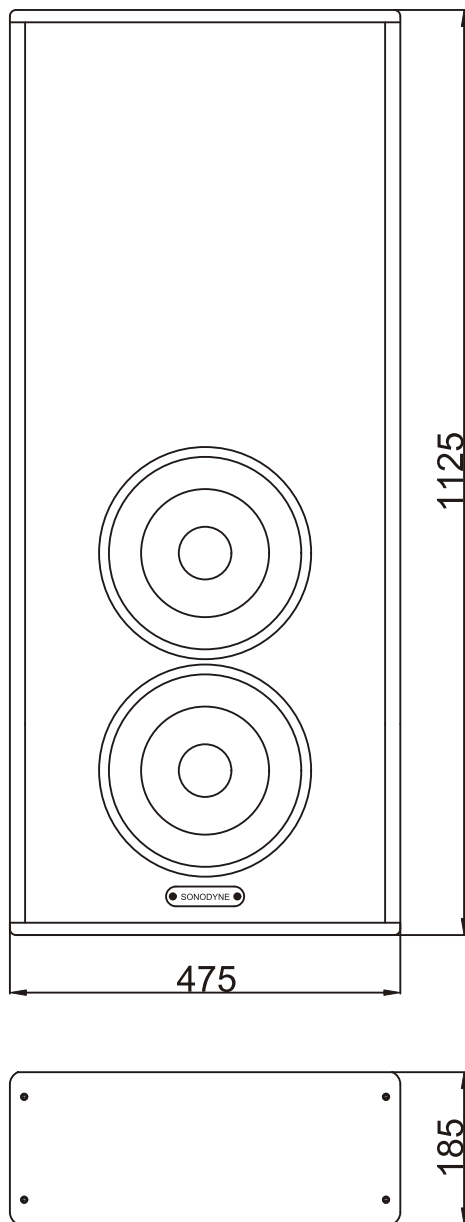
## DESCRIPTION

This is a dedicated subwoofer for the SRT package with its own controller. It comprises two 10" subwoofers mounted in a vented cabinet. The subwoofer drive units have large cone excursion which allow undistorted reproduction of low frequencies. A low resonance frequency ensures reproduction down to the lowest octave and the high SPL realised by a large double-magnet system allow effortless reproduction of the lows. Three aerodynamic vents tune the enclosure greatly reducing wind noise. The shallow depth of 7.5" allows it to be flush-mounted on a wall. Supplied wooden stands permit easy installation.

## UNPACKING

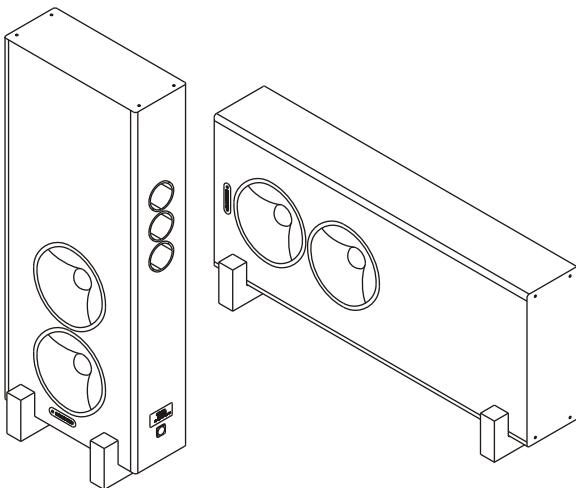
To unpack the unit, place the unit vertically and cut open the straps which hold the top and bottom tray and the sleeve together. Lift the top tray. Next hold the sleeve with both hands, and slide it up. Inside you will find one SRT S21 speaker wrapped in a protective bag and resting on buffers to prevent damage to the speaker. Inspect the speaker for any sign of damage. Please retain all packing materials in case you have to transport the unit in future.

## • SRT S21 dimensions •



## MOUNTING

The SRTS21 can be mounted either horizontally or vertically, with the help of the supplied wooden stands, as shown.



## CONNECTIONS

The SRT S21 sub has a 4-pole Neutrik socket mounted on the side panel (when mounted vertically). Connections are printed on a sticker fixed near the connector, and are as follows:

- 1+, positive
- 1-, negative

For cable selection, use the following chart to arrive at the proper gauge of cable depending upon the length of the connection. A 6-core or 6 single-core cables are required.

Upto 5 m: 23/36 multi-strand copper wire (23 strands of 36 SWG wire), equivalent to 0.65 square mm

5-10 m: 40/36 multi-strand copper wire (40 strands of 36 SWG wire), equivalent to 1.16 square mm

10-20 m: 70/36 multi-strand copper wire (70 strands of 36 SWG wire), equivalent to 2.08 square mm

# • SRT S21 controller •

## DESCRIPTION

This is a dedicated controller for the SRT S21 sub.

- It has a built-in low-pass filter with balanced output that feeds the input signal to the amp, eg, Sonodyne SRT 4200, driving the SUB.
- There are 2 types of input, one a low-pass input (LFE ) that is connected to the dedicated SUB output of a processor, eg, the Sonodyne DE 4348. The other is a stereo input. Both inputs are fully balanced XLR type.
- The output level, crossover frequency and phase can be changed with the help of three controls mounted on the rear panel.
- Also provided is a built-in limiter with a switch. Two other switches, a polarity switch and a ground-lift switch, allow fine-tuning of performance

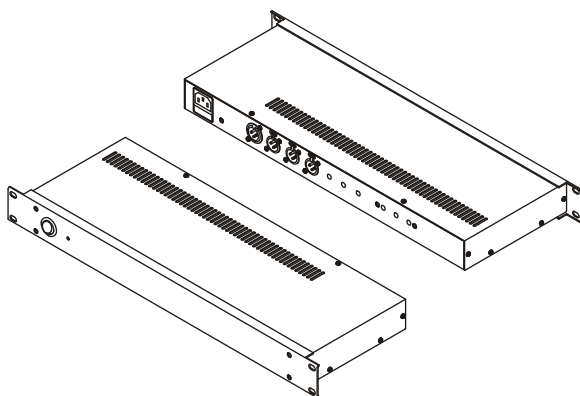
## UNPACKING

To unpack the unit, open the carton by cutting along the edge of the flaps. Push the flaps wide open. Inside you will find

- 1 x SRT S21 controller wrapped in a protective bag and resting on buffers
- 1 x IEC mains cord Carefully lift the unit from the EPE buffer. Inspect the unit for any sign of damage.

## RACK MOUNTING

The controller front panel has protrusions on each side along with 2 slots per side that permit it to be mounted in a full size rack.





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

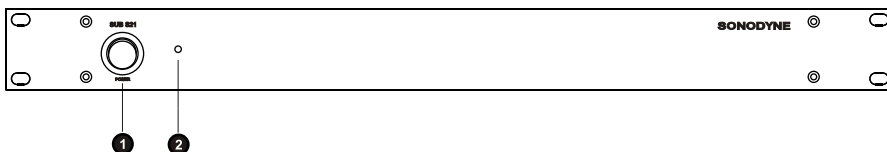


The exclamation mark within an equilateral triangle symbol is intended to alert the user of presence of important operating instructions in the owner's manual accompanying the product.

## IMPORTANT SAFETY INSTRUCTIONS

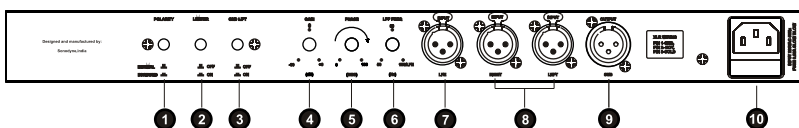
1. The unit should be connected only to a wall outlet providing the correct mains voltage and frequency as printed on the product.
2. Connect the unit to the mains only with the mains cable supplied with the unit.
3. Ensure that the wall outlet is properly earthed, that is, the earth must be connected to a earth bus-bar which connects to other audio equipments and is not shared by noisy equipments like computers, air-conditioners, lighting appliances etc. The earth connection must be checked and certified by a qualified electrical engineer.
4. Do not open the unit or attempt to service it yourself. There is no user-serviceable part inside. Refer servicing to qualified service personnel only.
5. Replace only with the same type and rating of fuse as printed on the product.
6. Do not overload wall outlets that provide power to this unit.

# ● installation: controls & switches ●



## FRONT PANEL

1. **POWER SWITCH:** This is a rocker type power switch that turns on power to the system. The ON position is indicated with a dot mark on the switch.
2. **POWER INDICATOR:** This glows blue when power is switched on.



## REAR PANEL

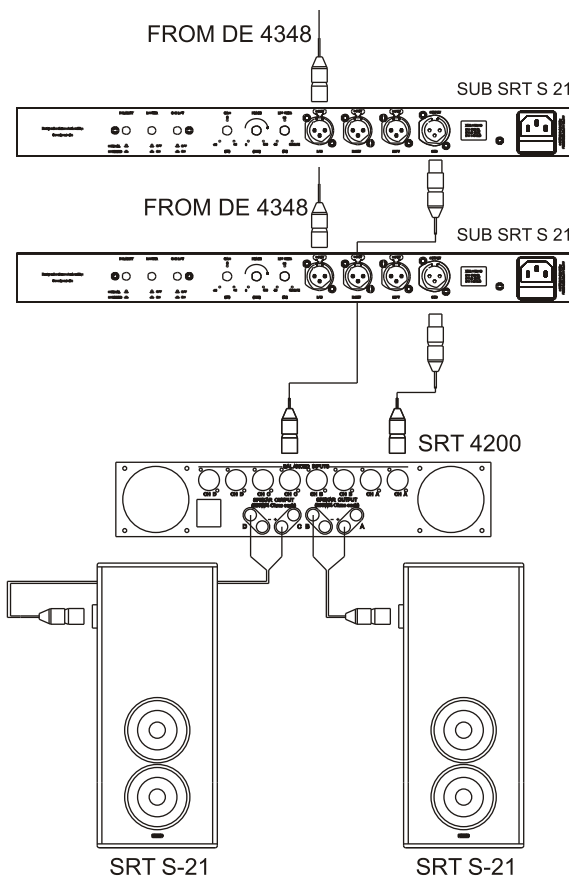
1. **POLARITY SWITCH:** With this switch you can reverse the polarity or phase of the subwoofer. Depending on the placement of your subwoofer and the setting of the crossover frequency control, there may be a partial or complete cancellation in the frequency band where the output of the main speaker and the output of the subwoofer overlap. When this occurs, pressing the switch will restore the lows. Use this switch for a quick fix solution to phase related problems. For discrete phase calibration use the phase control feature detailed in point 5.
2. **LIMITER SWITCH:** This switch, when engaged, prevents overdrive of the amplifier and speaker from excessively strong signals and protects the amplifier and speaker under such conditions. The limiter is a peak-detecting type and has an attack time of 1ms, and a decay time of 1 sec. Keep the limiter switch in ON position if there is a likelihood of frequent or continuous overdrive. You may engage this switch after finding the optimal drive level on the power amplifier

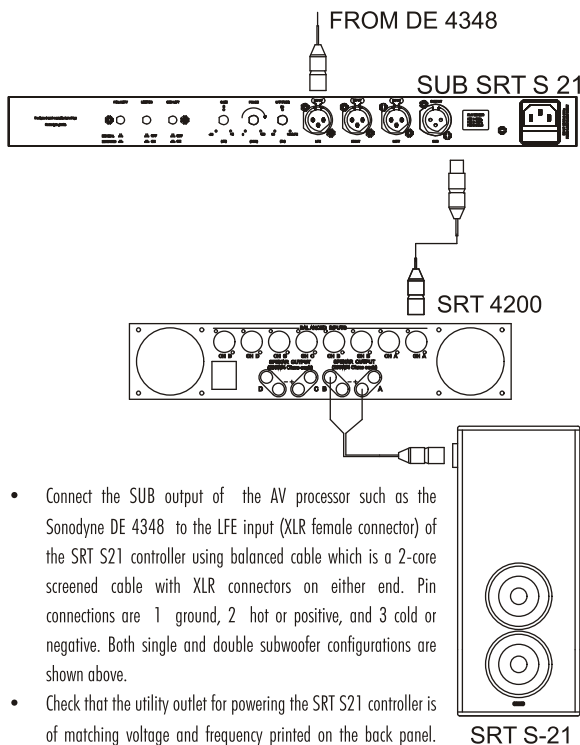
# ● installation: controls & switches ●

3. **GND LIFT SWITCH:** This switch, when activated, connects a high resistance between earth pin of the input XLR sockets and the circuit ground of the controller, which are otherwise shorted (in OFF position). In a properly earthed system, with correctly earthed source equipment, no hum or buzz should be audible and the switch should be left in OFF position. However, in a noisy environment where the ground is shared by computers, air-conditioners etc, or where signal wires are laid parallel to power cables, hum or buzz may be audible because of ground loops. Pressing this switch will eliminate such problems. Note that this switch does not defeat the safety ground connection of the product.
4. **GAIN CONTROL:** This controls the output level. The control has a range of -60 dB to +6 dB. When turned all the way down, it fully attenuates the sub output. At mid position, the gain is 0dB, and at extreme (clockwise max) position, the gain is 6dB. This control is used to balance the lows of the subwoofer with the full-range signal from your main speakers.
5. **PHASE CONTROL:** This allows you to fine tune the phase of the subwoofer at the listening position. The procedure for adjusting the phase is given in the section under Setup.
6. **LPF FREQ CONTROL:** This is the crossover frequency control of the subwoofer. LPF stands for low pass filter that feeds low frequencies only to the subwoofer. The range is 50 Hz to 150 Hz. At mid position, the frequency setting is 80 Hz. Use this control according to the low frequency response of your main speakers. If you have connected a dedicated sub out channel from your AV processor, such as the Sonodyne DE 4348, to the LFE input, keep the frequency control at the LFE setting, which is the extreme clockwise setting (since the .1 signal is already crossover filtered signal)
7. **LFE INPUT:** Connect the dedicated sub output of your AV processor, such as the Sonodyne DE 4348, which is already low-pass filtered, to this socket. This is a fully balanced input. Pin connections are: 1: ground, 2: hot or positive, 3: cold or negative.
8. **LEFT/RIGHT INPUT:** These are fully balanced stereo inputs. This is useful if you are using the SRT as a dedicated stereo (2 channel) application. Pin connections are: 1: ground, 2: hot or positive, 3: cold or negative.
9. **OUTPUT:** Connect this to input of your amplifier such as the Sonodyne SRT-4200. The outputs is a fully balanced XLR type. Pin connections are: 1: ground, 2: hot or positive, 3: cold or negative.
10. **IEC AC SOCKET:** This is a fused 3-pin IEC AC receptacle for connecting to a wall outlet with the cable supplied. Ensure that the wall outlet is properly earthed, i.e., The earth must be connected to an earth bus-bar which connects to other audio equipment and is not shared by noisy equipment like computers, air conditioners, lighting appliances etc. The earth connection is also required in the interests of your own safety, should any fault occur. Please check that the wall outlet is capable of providing the current requirement of the product, printed on the back panel near the IEC socket

Please see the two figures on page 8 & page 9:

1. Connection of 1 x SRT S21 SUB and controller along with the SRT 4200 amplifier is shown in the connection diagram. The amplifier is run in bridged mode (Ch A and Ch B bridged).
2. To drive 2 x SRT S21: The DE 4348 has 2 SUB OUTs. The SRT 4200 amplifier has provision to drive one more subwoofer. For this, channel C and channel D are to be bridged, which will drive the second subwoofer. The input to the amplifier will be from the output of the second controller.





- Connect the SUB output of the AV processor such as the Sonodyne DE 4348 to the LFE input (XLR female connector) of the SRT S21 controller using balanced cable which is a 2-core screened cable with XLR connectors on either end. Pin connections are 1 ground, 2 hot or positive, and 3 cold or negative. Both single and double subwoofer configurations are shown above.
- Check that the utility outlet for powering the SRT S21 controller is of matching voltage and frequency printed on the back panel. Also ensure that the earth of the IEC socket is connected to the safety earth of the premises through a separate conductor so that it does not share the earth with noisy equipments such as air-conditioning, lighting equipment or computers.
- Connect the mains cable of the controller supplied with the unit, to the utility wall outlet after you have connected all other equipments. Switch on the AV receiver first. Switch on power to the amplifier last. That way, you will not hear any nasty turn-on thumps which may be damaging to your ears and equipment.
- A blue indicator on the front of the controller unit will light up. This indicates that your unit has powered up and is ready for operation.
- Initially maintain the following settings:
  - Keep PHASE control to 0° (extreme anticlockwise) position
  - The frequency control to 150 Hz (extreme clockwise position),
  - Keep limiter switch in ON position
  - Polarity switch in OFF position,
  - Ground lift switch also in OFF position.
  - Leave the gain control at mid or 0 dB position.

Play a known recorded source material. Depending on the placement of your speaker and your personal preference, you may want to adjust the level, phase and frequency controls, which are explained in details under Front Panel Controls and Switches

# ● troubleshooting ●

SYMPTOM: No power (Blue indicator does not light up)

POSSIBLE REMEDIES:

1. Check that the mains cable is properly plugged into the wall outlet.
2. Check that correct voltage is available from the wall outlet.
3. Check that the fuse in the IEC AC socket has not blown. Replace with spare fuse inside the fuse cover if fuse has blown.
4. Check that the power switch is turned on.

SYMPTOM: No sound

POSSIBLE REMEDIES:

1. Check that input cable is plugged in.
2. Check that level control of the AV receiver is not turned all the way down.
3. Check that cable connection is OK- there should be continuity for each of the pins between one end and the other.

SYMPTOM: Distorted sound

POSSIBLE REMEDIES:

1. Check whether output level from console or source equipment too high, causing overload of input stages
2. Check for loose cable contacts.

SYMPTOM: Buzz/hum

POSSIBLE REMEDIES:

1. Unplug the input cable or cables one by one, till the buzz disappears. If buzz does not disappear, your monitor unit is faulty.
2. Check that the cable contacts are OK- replace with a cable that is known to be good.
3. Press the ground-lift switch to see if the buzz disappears.

# ● specifications ●

DESCRIPTION	Shallow-profile passive <b>subwoofer</b> with controller
TRANSDUCER COMPLEMENTS	2 x 10" subwoofer
ENCLOSURE TYPE	Vented, through side-firing aerodynamic port
<b>SYSTEM</b>	
OVERALL FREQUENCY RESPONSE	30 Hz ~ crossover frequency
USEABLE FREQUENCY RESPONSE	35 Hz ~ crossover frequency
RECOMMENDED AMPLIFIER POWER	400 W at 4 $\Omega$
SPL, 1W/1M HALF SPACE	95 dB
IMPEDANCE	8 $\Omega$
INPUT CONNECTOR (Speaker)	4 pole Neutrik Speakon socket
<b>CONTROLLER</b>	
OUTPUT	Fully balanced through XLR socket
MAXIMUM OUTPUT VOLTAGE	8 V
S/N RATIO	100 dB, referred to full output
THD + NOISE	0.01 % or less
INPUT	Fully balanced through XLR socket
GAIN CONTROL RANGE	$-\infty$ to +6 dB, 0 dB at center position
FREQUENCY CONTROL	50 Hz ~ 150 Hz
PHASE CONTROL	0° ~ 180°
CONTROLS	Gain, Frequency and Phase on rear
SWITCHES	Power switch on front. Polarity, limiter and ground lift on rear.
INDICATOR	Power indicator on front
POWER REQUIREMENT	230 V AC, $\pm 10$ %, 50 Hz
POWER CONSUMPTION	460 W max
<b>MECHANICAL</b>	
SUB DIMENSIONS (HxWxD) mm	475 x 1125 x 185, horizontally mounted
SUB FINISH	Black Painted
MOUNTING OPTIONS	Wooden stand
CONTROLLER DIMENSIONS (HxWxD)mm	44 x 482 x 165
CONTROLLER FINISH	Black Painted
MOUNTING OPTIONS	Rack-mounting

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



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