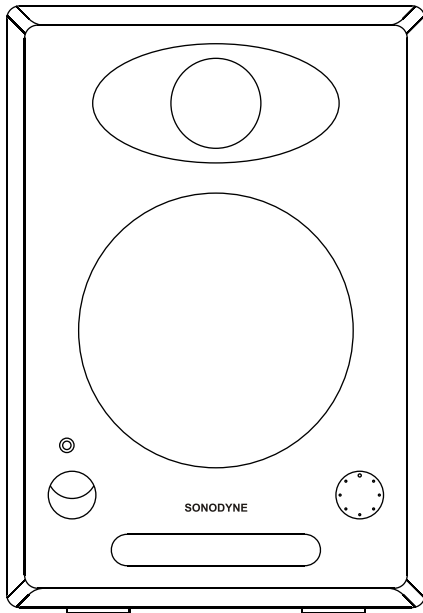
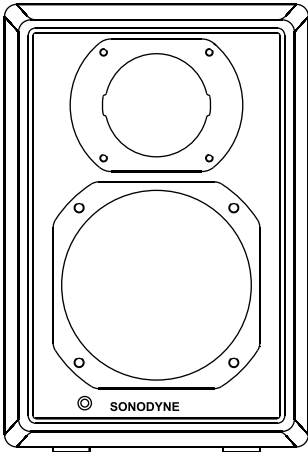


SRP 350/400

active reference monitor | owners manual



STATUTORY INFORMATION

Congratulations on your purchase of the SRP 350/ SRP 400, 2-way bi-amped professional active monitor. It can be used for broadcast and TV control rooms, recording studios, surround sound systems, custom installations and a variety of other professional applications.



The lightning flash with an arrowhead symbol is intended to warn the user that there is uninsulated (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

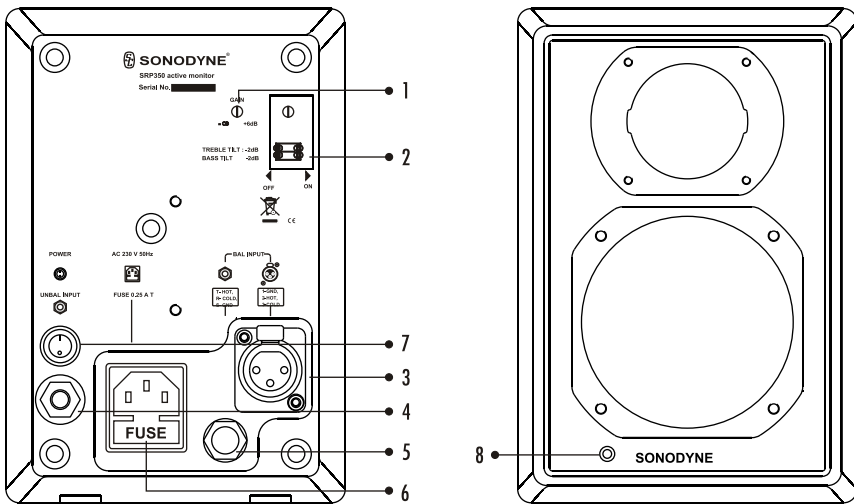
1. The unit should be connected only to a wall outlet providing the correct mains voltage and frequency as printed on the product.
2. Connect the unit to the mains only with the mains cable supplied with the unit.
3. Ensure that the wall outlet is properly earthed, that is, the earth must be connected 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 place the unit on an unstable surface that may topple and cause the unit to fall, thereby causing injury to the user or other people.
5. Do not place the unit outdoors where it may be exposed to strong sunlight, rain or moisture. Do not place it near a water body or sprinkler.
6. Do not cover the unit or block the ventilation holes on the back which may cause it to heat up.
7. Do not place the unit near heat radiating items like stoves, radiator etc.
8. Do not allow liquid or any chemical to spill on or into the product.
9. Do not allow the mains cord to be trodden or pinched particularly at the wall outlets or at the point of entry of the cord into the unit.
10. 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.
11. Replace only with the same type and rating of fuse as printed on the product.
12. Do not overload wall outlets that provide power to this unit.

UNPACKING • SWITCHES & CONTROLS: SRP 350

UNPACKING

To unpack the unit, open the carton by cutting along the edge of the flaps. Push the flaps wide open. Fold any one flap and tilt the carton on this edge taking care that the flap stays open. Gently turn the carton upside down so that all the 4 flaps stay open and spread out, and the unit comes to rest on the styrofoam buffer. Remove the styrofoam buffer on the bottom of the unit, facing you. Carefully lift the unit from the styrofoam buffer on which it is resting, strip it of its protective cover and place it in its intended location.

SWITCHES & CONTROLS: SRP 350



1. GAIN

This control adjusts the gain of the SRP 350. At the extreme anti-clockwise position, the gain is $-\infty$, which signifies mute, and at the extreme clockwise position it is +6dB. At the center position the gain is 0dB. To help you identify the center position, a mechanical detent is provided in the control. With the gain control in the center position, an input signal equal to the rated sensitivity of the product will produce an SPL of 90dB at 1 meter distance.

CONTROLS & SWITCHES: SRP 350

2. ROOM COMPENSATION SWITCHES

BASS TILT – This switch, when activated, introduces a negative-going tilt in the low frequencies starting from 100Hz. The maximum cut is 2dB. This feature is necessary to compensate for reflections from the console surface which creates a boost in the low frequencies.

TREBLE TILT - This switch, when activated, introduces a negative-going tilt in the high frequencies starting from 4kHz. The maximum cut is 2 dB. This feature is useful when the room is fairly live or for listening position close to the monitors.

3. BALANCED INPUT

This is a fully balanced XLR input socket. Pin connections are 1: ground, 2: hot or positive, and 3: cold or negative.

4. UNBALANCED INPUT

This is an unbalanced RCA input. It is useful when connecting sources having an unbalanced output.

5. LINK

This is a TRS type socket wired in parallel to the balanced input socket and is used for daisy chaining the signal to another product. Pin connections are tip- positive, ring –negative, and sleeve-ground.

6. IEC AC SOCKET

This is a fused 3-pin IEC AC receptacle for connecting to a wall outlet with the cable supplied. The value of the in-built fuse is 0.25 AT. In case it needs replacement, replace with only the same type and rating. To access the fuse, insert a thin flat object like the blade of a small screwdriver in the center of the slot just above the fuse-holder and pull the compartment towards you. 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 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 AC socket.

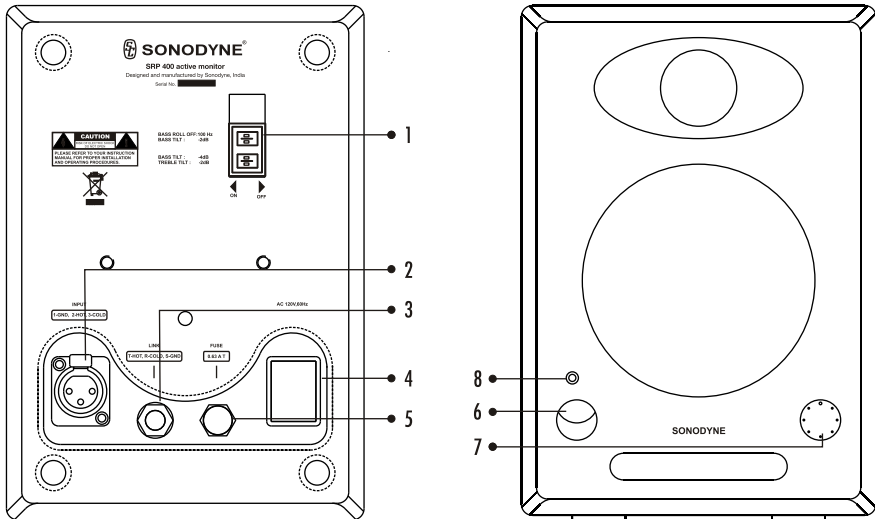
7. POWER

This is a rocker type power switch which turns on power to the system. The ON position is indicated with a dot.

8. LED INDICATOR

This is a power indicator. It turns blue when power is switched on.

CONTROLS & SWITCHES: SRP 400



1. ROOM COMPENSATION SWITCHES

BASS ROLL-OFF This is a DIP type switch which when activated, rolls off the low frequencies at 6dB/octave, below 100Hz.

BASS TILT -2dB – This switch, when activated, introduces a negative-going tilt in the low frequencies starting from 100Hz. The maximum cut is 2dB. This feature is necessary to compensate for reflections from the console surface which creates a boost in the low frequencies.

BASS TILT -4dB – This switch, when activated, introduces a negative-going tilt in the low frequencies starting from 100Hz. The maximum cut is 4dB. This feature is necessary to compensate for severe reflections from the console surface which creates a boost in the low frequencies.

TREBLE TILT - This switch, when activated, introduces a negative-going tilt in the high frequencies starting from 4kHz. The maximum cut is -2dB. This feature is useful when the room is fairly live or for listening position close to the monitors.

2. BALANCED INPUT

This is a fully balanced XLR input socket. Pin connections are 1: ground, 2: hot or positive, and 3: cold or negative.

3. LINK

This is a TRS type socket wired in parallel to the balanced input socket and is used for looping the signal to another product. Pin connections are tip: positive, ring: negative, and sleeve: ground.

CONTROLS & SWITCHES: SRP 400

4. IEC AC SOCKET

This is an un-fused 3-pin IEC AC receptacle for connecting to a wall outlet with the cable supplied. 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 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 AC socket.

5. FUSE

This is a 20mm closed type fuse holder with a glass-cartridge fuse. The value of the fuse is 0.63A time delay. In case it needs replacement, unscrew the cap by inserting a coin in the slot and replace with only the same type and rating.

6. POWER

This is a rocker type power switch which turns on power to the system. The ON position is indicated with a dot.

7. GAIN

This control adjusts the gain of the SRP 400. At the extreme anti-clockwise position, the gain is $-\infty$, which signifies mute, and at the extreme clockwise position it is +6dB. At the center position the gain is 0 dB. To help you identify the center position, a mechanical detent is provided in the control. With the gain control in the center position, an input signal equal to the rated sensitivity of the product will produce an SPL of 90dB at 1 meter distance.

8. LED INDICATOR

This is a power indicator. It turns blue when power is switched on.

Plots

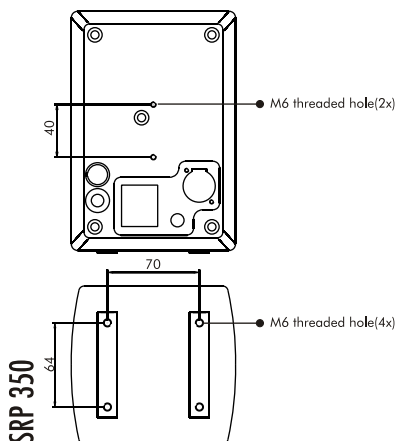
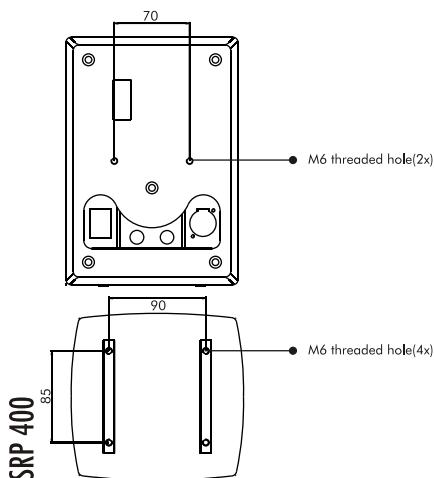
SPEAKER PLACEMENT, MOUNTING & POSITIONING

DISTANCE FROM THE WALLS

While placing speakers, make sure that they are at least 40 cm away from any reflecting surface. This will help minimise bumps in the low-frequency response due to reflections, and also ensure that the rear-mounting port is unobstructed. It is also required to ensure that the heat sinks at the back have adequate ventilation, for uninterrupted operation.

MOUNTING OF MONITORS

The speakers may be mounted on brackets fixed to wall, or on stands. There are 2 x M6 threaded metal inserts on the back, and 4 x M6 threaded inserts on the bottom. The position of inserts on the back and the bottom are shown in the figure.



POSITIONING OF MONITORS

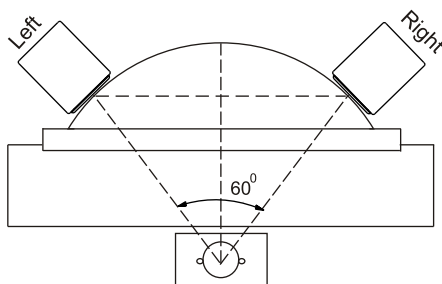
To get the flattest response, place the monitors vertically such that the center of the tweeter is roughly at ear level. If the tweeter level is lower than the ear level, there will be a loss in high frequencies, depending on how much lower the tweeter is, below ear-level. You can compensate this to some extent with the help of the High shelving switch (please see under (1) for SRP 400 and (2) for SRP 350). If the tweeter is higher than ear level, then, in addition to loss in high frequencies, there will be a dip around 2.5~3.5kHz.

STEREO/SURROUND SOUND SET-UP

STEREO SET-UP

The following sketch shows a 2 channel set-up. The important part here is to place the speakers such that the head of the listener and the two monitors lie at the vertices of an equilateral triangle.

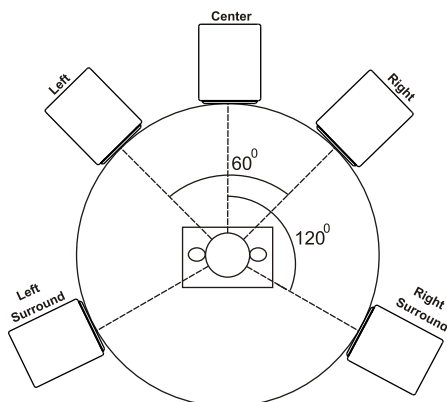
Fig: Stereo set-up



SURROUND SOUND SET-UP

The following sketch shows a 5.1 set-up. This is an ITU recommended configuration which may vary depending upon the purpose of the control room (audio or film). However, it is recommended to have a symmetrical listening position with the front left and right speakers facing the listener and the surround speakers located at the back of the listener.

Fig: Surround sound set-up



OPERATION

Connect the balanced output of your mixer or other source equipment to the balanced input (XLR female connector) of your monitor with a 2-core screened cable fitted with an XLR connector. Pin connections are pin1- earth or ground, pin2 – hot or positive, and pin3- cold or negative. If the output of your source equipment is unbalanced, (which however is not recommended because of noise pick-up problems), short pins and pin1.

Check that the utility outlet for powering your unit is of matching voltage and frequency printed on the back panel. Also ensure that it is capable of providing the required power, as printed on the back panel, and 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 equipment, lighting equipment or computers.

Connect the mains cable supplied with the unit, to the utility wall outlet after you have connected all other equipments. Switch on the console or source equipment first. Switch on power to the monitor last. That way, you will not hear any nasty turn-on thumps generated by other equipments upstream which may be damaging to your ears and your monitor.

A blue indicator on the front of the unit will light up. This indicates that your unit has powered up and is ready for use.

Keep all switches in their OFF position, initially. Leave the gain control also at mid or 0dB position. Play some recorded source material. Depending on the placement of your speaker and your personal preference for the type of mix you want, you may want to adjust the room compensation switches, which are explained in details under Controls & Switches (Page 4) for SRP 400 and Controls & Switches (Page 3) for SRP 350

While setting the gain control, it is best to keep it at the setting matching to the full-scale output of your mixer or source equipment. If you do not have information on the full-scale output of your source, turn up the master level controls to the max setting and adjust the sensitivity control of the monitor so that you start to hear distortion.

Normally, this should happen between 0 and +3dB. If it is not, you may need to alter the gain of your source equipment accordingly.

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 source equipment is not turned all the way down.
3. Check that signal is present at the output sockets of console or other source equipment.
4. 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. If you are using an unbalanced connection, make sure that pin2 is connected as the live terminal and pin2 and pin3 are tied together at the source end.

SPECIFICATIONS

	SRP 350	SRP 400
DESCRIPTION	2 way bi-amplifier speaker	2 way bi-amplifier speaker
TRANSDUCER COMPLEMENTS	LF: Magnetically shielded 3" glass-fiber cone woofer HF: Magnetically shielded 26mm silk dome tweeter mounted on waveguide	LF: Magnetically shielded 4.5" CURV cone woofer HF: Magnetically shielded 26mm silk dome with custom waveguide
ENCLOSURE TYPE	Sealed	Vented, through front-firing aerodynamic port
ENCLOSURE MATERIAL	Pressure die-cast aluminum	Pressure die-cast aluminum
OVERALL FREQ. RESP. (± 2 dB)	95Hz ~ 22kHz	75Hz ~ 22kHz
USABLE FREQ. RANGE (-10dB)	80Hz ~ 25kHz	65Hz ~ 25kHz
MAX. LONG TERM SPL, 1/2 SPACE	95dB	100dB
HORIZONTAL BEAM WIDTH	86.5° (averaged between 5 ~ 16kHz)	82.8° (averaged between 5 ~ 16kHz)
VERTICAL BEAM WIDTH	77.2° (averaged between 5 ~ 16kHz)	64° (averaged between 5 ~ 16kHz)
THD (@ 95dB SPL)	80Hz ~ 200Hz <3%; >200Hz <1%	80Hz ~ 200Hz <3%; >200Hz <1%
AMP. POWER BEFORE CLIPPING	LF: 15W, HF: 15W	LF: 25W, HF: 25W
S/N RATIO (AT UNITY GAIN)	> 90dB, referred to full output	> 90dB, referred to full output
AMP. THD AT RATED POWER	< 0.1%	< 0.1%
INPUT	Fully balanced through XLR & TRS sockets; unbalanced RCA	Fully balanced through XLR & TRS sockets
INPUT LEVEL FOR 90dB SPL @1M	+2dBu	-2dBu
CMRR	> 65dB	> 65dB
CROSSOVER FREQ	2.7kHz	3.0kHz
GAIN CONTROL RANGE	$-\infty$ to +6dB, 0dB at center position	$-\infty$ to +6dB, 0dB at center position
BASS ROLL-OFF	NA	100Hz, 6dB/octave
BASS TILT	-2dB @ 100Hz	-2dB, -4dB, -6dB @ 100Hz
TREBLE TILT	-2dB @ 4kHz	-2dB @ 4kHz
CONTROLS : FRONT	NA	Gain, Power
CONTROLS : REAR	Gain, Power, Bass tilt, Treble tilt	Bass tilt, Treble tilt
INDICATOR	Power ON /OFF	Power ON /OFF
PROTECTION	Over current, Overheat , RFI, Switch on/ off transients	Over current, Overheat , RFI, Switch on/ off transients
POWER REQUIREMENT	230VAC, $\pm 10\%$, 50Hz; 115V optional	230VAC, $\pm 10\%$, 50Hz; 115V optional
POWER CONSUMPTION	45VA Max.	70VA Max.
FINISH	Powder coated (grey/white/black)	Powder coated (grey/white/black)
DIMENSIONS (WxHxD) mm	125 x 184 x 120	160 x 232 x 155
NET WEIGHT	2.5kg	4.4kg
INSERTS FOR MOUNTING	2 x M6 inserts on rear; 4 x M6 inserts on base	2 x M6 inserts on rear; 4 x M6 inserts on base
WALL MOUNT BRACKET	SRP WB 1	SRP WB 1

Due to continuous improvements, all specifications are subject to change



A product of the Mukherjee Innovation Centre

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