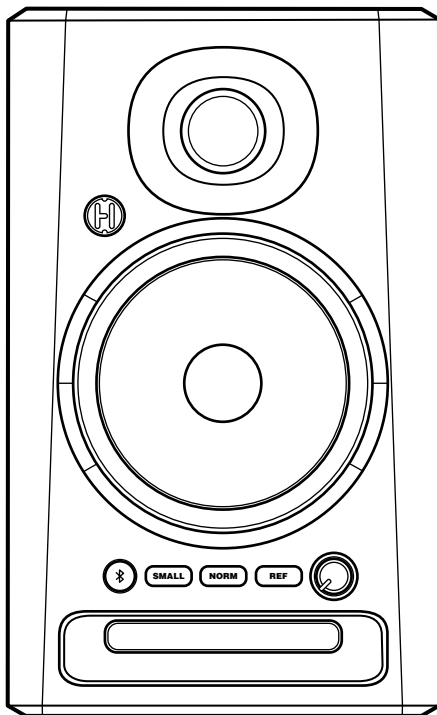




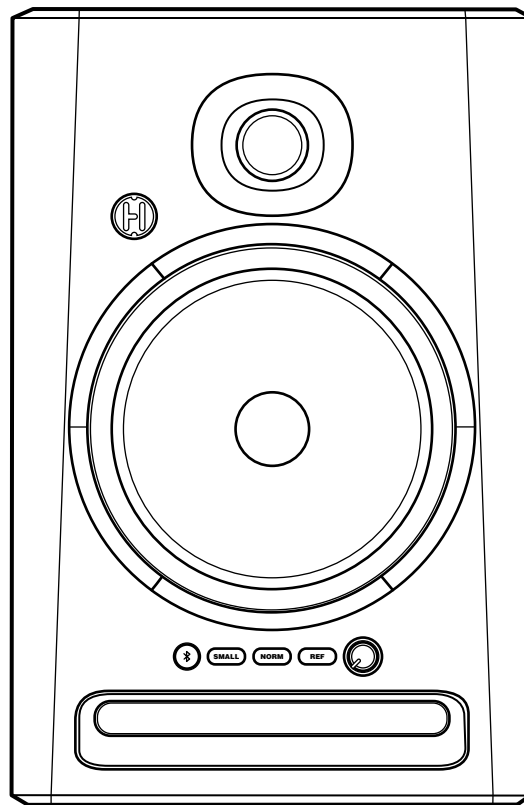
HARBINGER

VARI STUDIO

SM505, SM508 OWNER'S MANUAL



SM505

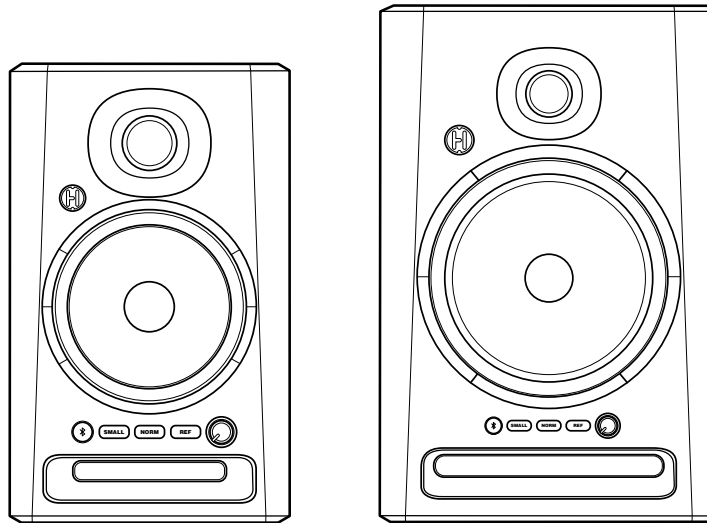


SM508



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SM505

SM508

INTRODUCTION

The Harbinger VARI Studio Series combines carefully selected drivers, a wide dispersion waveguide, front bass port, and 3 carefully crafted DSP voicings to provide a superior studio monitor experience.

FEATURES

- Perfect Mix DSP: 3 DSP Voicings let you craft and verify your mix
 - REF: Hear the truth of your mix more accurately
 - SMALL: Hear your mix with smaller speaker sound
 - NORM: Enjoy classic, entertaining, hi-fi sound
- Connect 4 inputs including wireless audio via Bluetooth®
 - Combo jacks accept XLR or 1/4-inch, balanced, +4dBu signals
 - CA and 1/4-inch jack jacks accept unbalanced -10dBV unbalanced inputs
- Rear panel High and Low Frequency adjustments let you optimize the sound for your setup or preferences

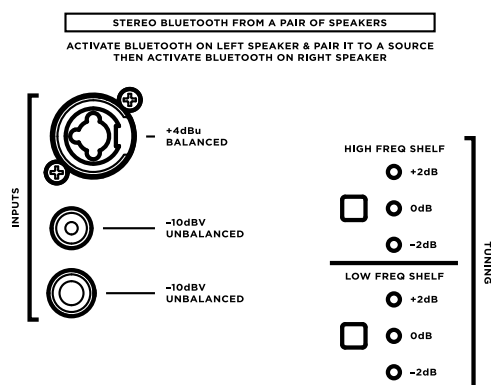
QUICK START GUIDE: VARI SM505 & SM508

SETTING UP / HELPFUL TIPS

- Position VARI speaker in desired location, and ensure it is stable.
- Make sure the Power Switch is off.
- Turn front panel Volume knob to minimum.
- Set rear panel High Frequency and Low Frequency Shelf Filters to “0dB”.

MAKING THE CONNECTIONS

- Connect audio source cables to the desired input connectors.
- For balanced connections, use XLR or 1/4-inch TRS cables.
- For unbalanced connections, use 1/4-inch TS or Phono/RCA cables.
- All inputs, including Bluetooth, can be used at the same time.



VOICING

- **SMALL:** Use this simulation of small speakers and devices to check to make sure your mix will translate well to smaller speaker systems, including phones, tablets, laptops, and small Bluetooth speakers.
- **NORM:** Classic Studio monitor sound. This is the default sound of the monitor, that is great for entertainment listening.
- **REF:** Use this extremely accurate and uncolored voicing to accurately judge your mix, and ensure that the mix you make will translate well to other speaker systems.



POWERING UP

- Turn on rear panel power switch.
- Press the desired voicing button on the front panel, SMALL, NORM, or REF. (for initial set-up we suggest NORM).
- Turn volume knob to middle to low position level, and play source audio connected to speaker.

! CONFIGURING STANDARD MODE

The product can operate in two different modes: Demo mode, and Standard mode. By Default the unit operates out-of-box in Demo mode. To change this behavior ensure the speaker is powered 'Off', then push and hold the “REF” button on the front panel while powering on the speaker on the speaker, and keep holding the REF button until the light around the volume knob is lit.

BLUETOOTH® AUDIO INPUT

- Press and hold front panel Bluetooth® button until it starts to flash blue.
- From your Bluetooth® audio source device, look for SM505 or SM508 and select it.
- See rear panel instructions for using a pair of SM505s or SM508s for Stereo Bluetooth® from the same Bluetooth® audio source.
- See below for Bluetooth® Troubleshooting in case of difficulty.

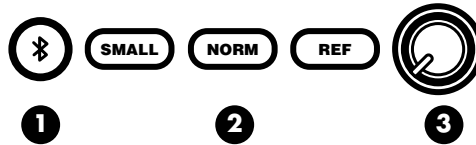
BLUETOOTH® TROUBLESHOOTING

These steps should resolve any Bluetooth® trouble you may encounter:

- Power off the SM505 or SM508 and leave it off

- On your Apple iOS device
 1. Open Settings app, select Bluetooth®
 2. If SM505 or SM508 is listed under MY DEVICES, touch info button, tap to Forget This Device
 3. Turn off Bluetooth®, wait 10 seconds, turn on Bluetooth®
- On your Android device
 1. Open Settings, select Bluetooth®
 2. If SM505 or SM508 is listed under Paired Devices, touch gear Icon, and tap to Unpair
 3. Turn off Bluetooth®, wait 10 seconds, turn on Bluetooth®
- Then power on your SM505 or SM508
- Hold the front panel Bluetooth® button until it flashes blue
- You should now be able to connect to SM505 or SM508 via Bluetooth®
- See rear panel instructions for using a pair of SM505s or SM508s for Stereo Bluetooth from the same Bluetooth audio source

CONTROLS & CONNECTIONS



FRONT PANEL

1 BLUETOOTH BUTTON

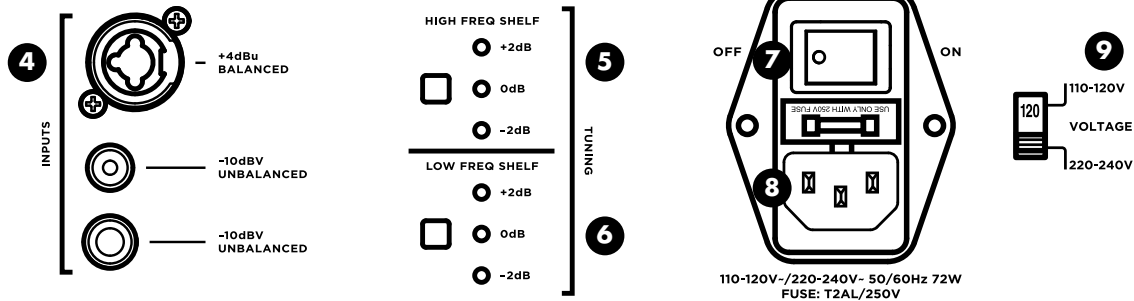
- To enable Bluetooth pairing, hold button until it starts to flash blue.
- When paired, hold button to disable Bluetooth.
- For stereo operation with 2 VARIs, first pair to left speaker, then enable Bluetooth on right speaker and after some seconds it will join to complete stereo pair.

2 PERFECT MIX DSP BUTTONS

- Press SMALL to hear what your mix will sound like on smaller speaker systems
- Press NORM to hear entertaining, full-range, hi-fi sound
- Press REF to hear the most accurate reproduction of your mix
- A mix that sounds well-balanced on all 3 of these voicings should translate well to any reproduction system

3 LEVEL KNOB

- Turn down the knob to reduce the output volume
- Ring lights to indicate when power is on



REAR PANEL

4 INPUT CONNECTORS

- All inputs, including Bluetooth, can be used simultaneously.
- The top connector accepts XLR or 1/4-inch TRS connectors, and is intended for balanced +4dBu sources.
 - The middle connector accepts RCA connectors, and is intended for unbalanced -10dBv sources.
 - The bottom connector accepts 1/4-inch TS connectors, and is intended for unbalanced -10dBv sources

5 HIGH FREQUENCY FILTER

- Press the button to adjust the high frequency response of the speaker
- +2dB LED: increased high frequencies
 - 0dB LED: unaltered high frequencies
 - -2dB: decreased high frequencies

6 LOW FREQUENCY FILTER

- Press the button to adjust the low frequency response of the speaker
- +2dB LED: increased low frequencies
 - 0dB LED: unaltered low frequencies
 - -2dB: decreased low frequencies

- 7 Switches the power on and off. If the speaker will not power on and you suspect its fuse may have blown, turn off the power switch, and open the fuse compartment using a small flat blade screwdriver. If metal strip in fuse is broken, replace with T2AL/250V.

- 8 Connect power cable here.

- 9 This switch is included on SM508 only, to configure SM508 for your territory's voltage. 100-120V is the standard in the USA. (SM505 automatically adapts to input voltage.)

CONTROLS & CONNECTIONS

SPECIAL CONTROLS CONFIGURE STANDARD MODE:

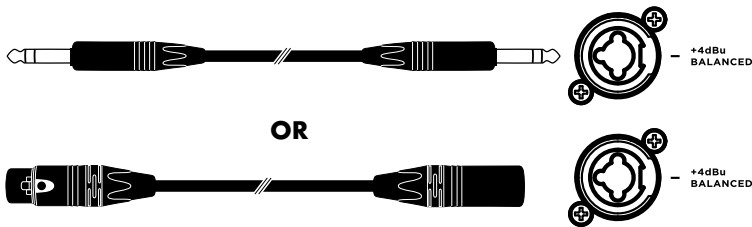
The product can operate in two different modes: Demo mode, and Standard mode. By Default the unit operates out-of-box in Demo mode. To change this behavior ensure the speaker is powered 'Off', then push and hold the "REF" button on the front panel while simultaneously powering on the speaker until the front panel is illuminated. (IMPORTANT: if Standard Mode is not configured your Perfect MIX DSP button setting will change back to the "NORM" setting after 5 minutes without audio.

SETUP

In this section we'll look at the general procedure for connecting and setting up a monitor speaker system. This is just an example though, so feel free to set up your own system in the way that best serves your personal listening needs.

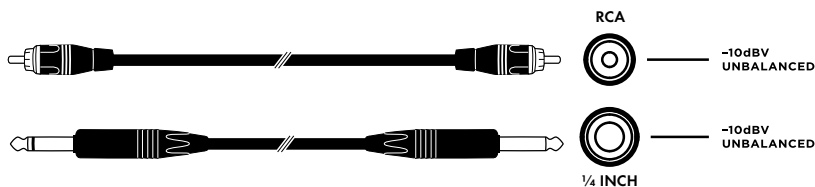
BALANCED CABLES

Balanced cables are more resistant to noise than unbalanced cables, and are best used for longer cable runs, or when the best fidelity is desired for interconnecting equipment.



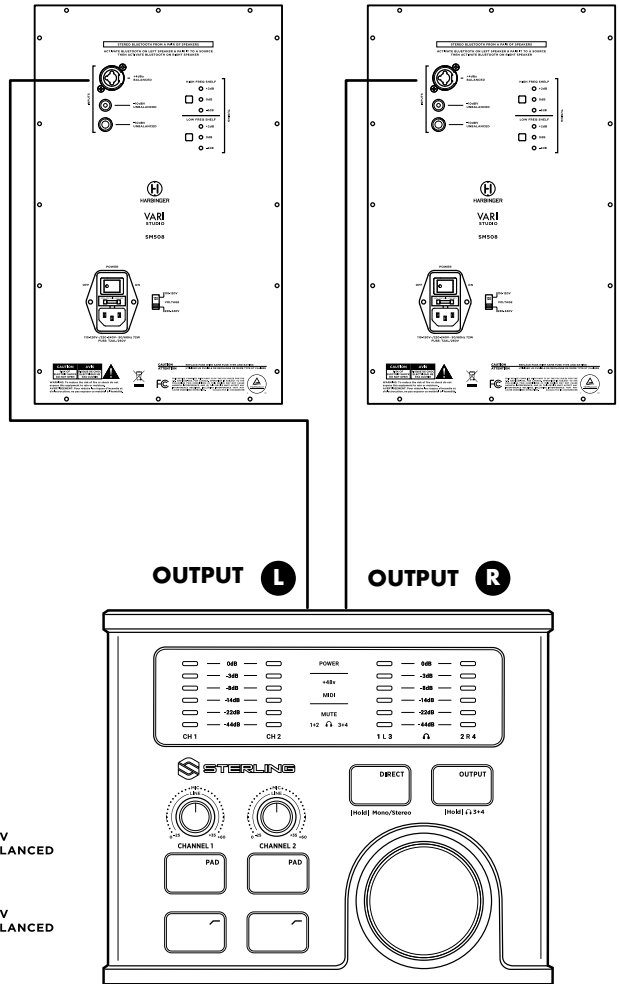
UNBALANCED CABLES

Use high-quality cables of the shortest practical length. The longer the cable, the more chance that noise will creep in to degrade your sound.



CONNECTING TO AN AUDIO INTERFACE

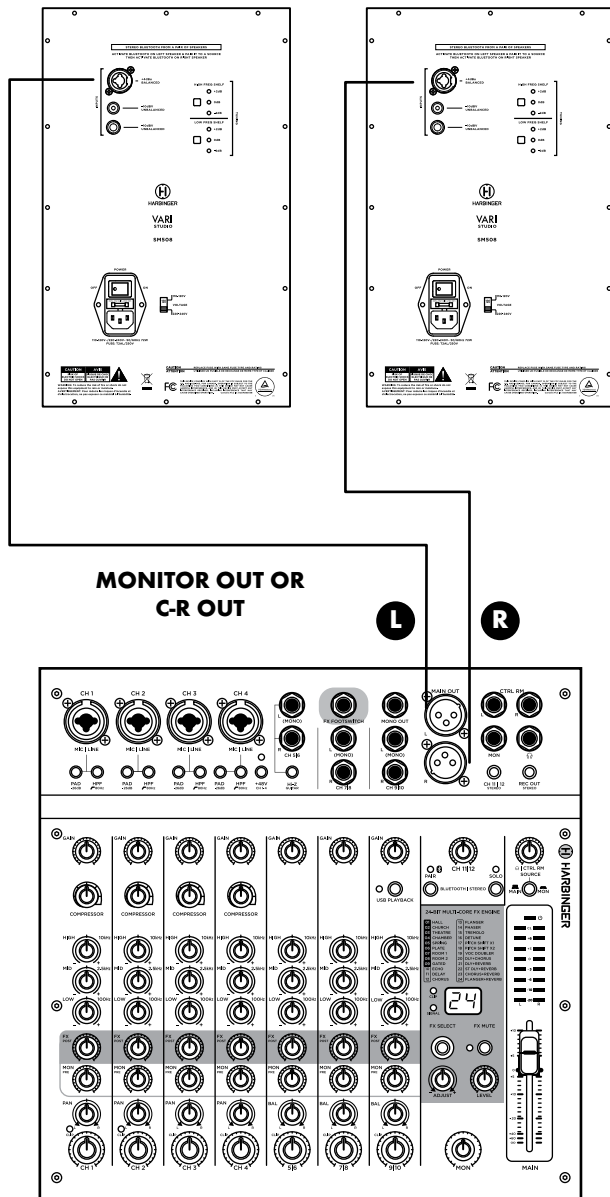
You can connect an audio interface's outputs directly to the desired input connectors. Normally you'll connect to the LINE OUT 1 and 2, although that might depend on the specific audio interface and DAW (Digital Audio Workstation) settings used.



CONNECTIONS

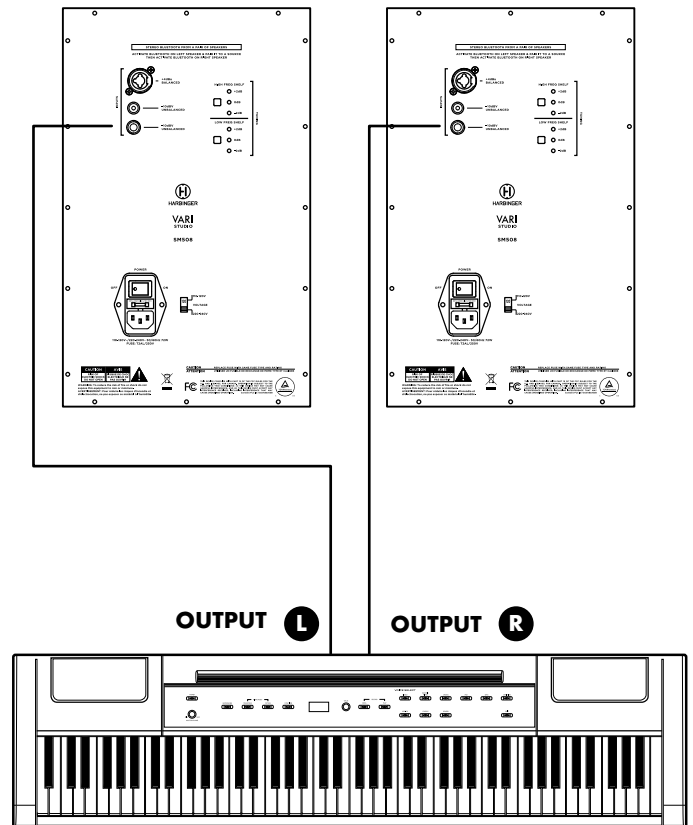
CONNECTING TO A MIXER

Check your mixer's owner's manual for information on its output levels. A +4dBu balanced mixer output should be connected to the top input jack on an SM505 or SM508, using a balanced (TRS) cable, or XLR cable. A -10dBv unbalanced mixer output should be connected to the bottom input jack on an SM505 or SM508 using an unbalanced (TS) cable.



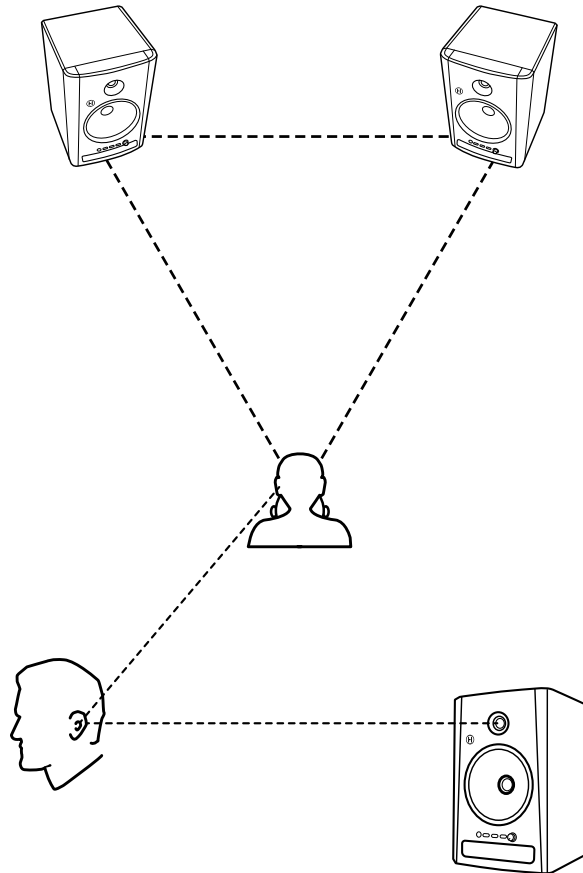
CONNECTING TO A SYNTHESIZER OR OTHER ELECTRONIC MUSICAL INSTRUMENT

Most instruments have unbalanced outputs, and should be connected to the -10dBv inputs on your SM505 or SM508.



SETTING UP YOUR LISTENING ENVIRONMENT

A number of points should be observed when laying out a monitor speaker system.



POINT 1

The left and right speakers should be positioned as symmetrically as possible in relation to the room. In other words, the left and right speakers should be the same distance from the rear wall and the respective left and right walls.

POINT 2

For the most accurate sound and balance, position yourself at the apex of an equilateral triangle formed by the left and right speakers and yourself, with the speakers angled inward so that they're facing you.

POINT 3

High frequencies are quite directional, so for the most accurate monitoring the speakers should be set up so the tweeters are at approximately the same height as your ears when you're seated at the listening position.

POINT 4

If possible, it is best to position your speakers on individual speaker stands with the included foam feet installed on the speaker bottoms. This approach helps to decouple speakers from the stands or other hardware such as furniture which may place reflective and/or resonant surfaces between you and the speakers. Avoid having any hard, reflective surfaces between you and the speakers, that can reflect off-axis sound from the speakers back toward your ears, because this will give you a less accurate impression of the sound from the speakers.

POINT 5

Be aware of your room's physical properties to ensure the best positioning of your speakers. Ideal listening environments consist of non-parallel walls with an appropriate amount and positioning of acoustic treatment such as absorptive fiberglass, fabric or foam panels and bass "traps" to help prevent build-up of low frequency energy in corners. Small changes in the positioning of your speakers can make a big difference in the final sound of your listening environment. Reference commonly available material about acoustic design or consult an expert if you are unsure.



SM505 SPECIFICATIONS

Active Monitor Speaker		
Amplifier	Frequency Response	47Hz - 20kHz
	Power Output	Tweeter: 20W RMS (35W Peak) Woofer: 40W RMS (60W Peak)
	Amplifier Class	Class D
	Sensitivity	93dB -10dBV@1kHz - 1M
	Maximum SPL	102dB 6.1dBV@1kHz - 1M
	Signal-Noise Ratio	85.2dB (A-Weighted)
	Total Harmonic Distortion	0.62% 1W @1kHz
	Crossover Frequency	2.3kHz
Control	Power Switch	Rocker
	Level	Potentiometer, 21 steps
	Input (Balanced)	XLR/TRS Combination
	Maximum Input Level (Balanced)	+22dBu
	Input (Unbalanced):	RCA X 1 1/4" TS X 1
	Maximum Input Level (Unbalanced)	+7.3dBV
	Shelving Filters	-2dB, 0dB, +2dB @4kHz -2dB, 0dB, +2dB @150Hz
	Bluetooth Protocol	V5.2
Enclosure	Dimensions	W: 7.09" X W:11.54" X D: 9.96" (W: 180mm X H:293mm X D: 253mm)
	Weight	9 lbs. (4.1 kg)
	Material	MDF Box with Plastic Facia
	Acoustic Mode	Front Ported Cabinet
	Tweeter	1" / 4 ohm
	Tweeter Magnetic Type	Neodymium
	Woofer	5" / 4 ohm
	Woofer Magnetic Type	Ferrite
Mains Power	Line Voltage	100-240VAC 50/60Hz
	Power Draw	60 Watts
	Fuse	T2AL/250V
	Line Cord Receptacle	DB-14



SM508 SPECIFICATIONS

Active Monitor Speaker		
Amplifier	Frequency Response	36Hz - 20kHz
	Power Output	Tweeter: 30W RMS (65W Peak) Woofer: 70W RMS (100W Peak)
	Amplifier Class	Class D
	Sensitivity	101dB -10dBV@ 1kHz - 1M
	Maximum SPL	110dB 6.1dBV@ 1kHz - 1M
	Signal-Noise Ratio	86.6dB (A-Weight)
	Total Harmonic Distortion	1.27% 1W @1kHz
	Crossover Frequency	2.2kHz
Control	Power Switch	Rocker
	Level	Potentiometer, 21 steps
	Input (Balanced)	XLR/TRS Combination
	Maximum Input Level (Balanced)	+22dBu
	Input (Unbalanced)	RCA X 1 1/4" TS X 1
	Maximum Input Level (Unbalanced)	+7.3dBV
	Shelving Filters	-2db, 0dB, +2dB @4kHz -2dB, 0dB, +2dB @150Hz
	Bluetooth Protocol	V5.2
Enclosure	Dimensions	W: 10.32" X W: 15.75" D: 11.42" (W:262mm H:400mm D:290mm)
	Weight	18.5 lbs. (8.4 kg)
	Material	MDF Box with Plastic Facia
	Acoustic Mode	Front Ported Cabinet
	Tweeter	1" / 4 ohm
	Tweeter Magnetic Type	Neodymium
	Woofer	8" / 2 ohm
	Woofer Magnetic Type	Ferrite
Mains Power	Line Voltage	110-120VAC 60Hz or 220-240VAV 50Hz
	Power Draw	72 Watts
	Fuse	T2AL/250V
	Line Cord Receptacle	DB-14

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use the attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. When the MAINS plug, or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
17. Protective Ground Terminal: The apparatus shall be connected to an AC main socket with a protective earth ground connection.



HANDLING AND MAINTENANCE

- Using a cell phone near the speaker system can induce noise. If this occurs, move the cell phone further away from the speaker system.
- Air blowing out of the rear bass reflex ports is normal, and often occurs when the speaker is handling program material with heavy bass content.
- Always turn the power off when the device is not in use.
- Avoid touching or allowing objects to come in contact with the speaker diaphragms.
- These speakers should be used vertically, not laid on their side.
- Keep these speakers away from magnets other electronic devices containing magnets, such as Cathode Ray Tube (CRT) monitors.

FCC STATEMENTS

1. Caution: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, uses, and can radiate radio frequency energy and , in not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful

interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help



TROUBLESHOOTING

If you're having trouble, check out these tips...

If there is no power, check to see if...

- The power cord is plugged into both the IEC socket on the rear panel of the monitor and into the AC mains. The ring around the volume knob will illuminate when the monitor is powered on.
- The AC main voltage is matched to the operating voltage requirements. If the AC mains voltage is higher than the selected voltage on the monitor, it is possible that the fuse needs to be replaced.
- The Harbinger SM505 and SM508 have illuminated voicing buttons as well as an illuminated ring around the volume knob. If these are not illuminated, turn the power switch off and check the AC mains fuse(s). NEVER USE A LARGER AMPERAGE FUSE THAN IS SPECIFIED! Turn the power switch back on. The ring around the volume knob should illuminate.
- Note: If a fuse change is required, please check that the AC mains voltage is set correctly. If the fuse blows again when the monitor is turned on, please contact the dealer you purchased it from, or contact Harbinger Customer Service (page 12).

If you can't hear any sound...

- Repeat the steps in the Troubleshooting section above before continuing to the next steps.
- Check to see if all other audio devices using the same AC outlet are still operating.
- Make sure that:
 - The audio source cable is plugged into both the source output and the monitor input.
 - The volume knobs of the monitors are turned up.
 - The signal source (e.g. mixing console, work station, CD player, etc.) is turned up to a level that can properly send a signal to the monitors.
 - Check to see if one of the monitors is working. Exchange the audio input cable from the non-working monitor to the working unit. This will determine whether it's really the monitor, a faulty cable, or some other glitch in the audio chain.
- If the monitor is still not responding, it should be returned to the dealer that you purchased it from, or to Harbinger, for servicing.

If the monitor suddenly stops working...

- Turn the outputs of your sound system down or off.
- Repeat the steps in the Troubleshooting sections above before continuing to the next steps.
- Carefully check to see if the amplifier's back plate is hot. If the monitor has been running at its highest power output for an extended period of time, it could be that the unit has become overheated and the protection circuitry has shut the system down momentarily. Your Harbinger SM505 and SM508 provide maximum circuitry protection against AC power surges, amplifier overdrive, and overheating of the amplifiers. Turn the monitor off then wait 30 minutes to allow the back plate to cool down.

Turn the power switch back on.

- Increase the volume to check for normal operation.
- If the monitor is still not responding, please contact the dealer you purchased it from or Harbinger Customer Service (page 12).

The sound quality changes...

- Repeat the steps in the Troubleshooting section above before continuing to the next steps.
- Disconnect the signal cable at the input of the monitor. With power on, place your ear close to each driver (tweeter/woofer) and listen for noise (i.e. a slight hiss or hum). If there's absolutely no sound whatsoever, it could be that one or more of the drivers (woofer, tweeter or both) is at fault. It's also possible that the problem lies somewhere in the electronics.
- Play some non-distorted source material at a low volume. Carefully cover the tweeter (to block the sound) without touching the diaphragm. Is the woofer producing a clean sound? If there is not a clear tonal quality, or any sound at all, then the woofer probably needs to be replaced.
- Cover the woofer so you can hear mostly the tweeter. Is the tweeter producing a clear sound? If there is not a clear tonal quality, or any sound at all, then the tweeter probably needs to be replaced.
- Once you have a better idea of what may be at fault please call our customer service department. We will help you determine the best solution to correct your monitors. Harbinger Customer Service (page 12).

The monitor hisses, hums or makes other loud noises...

- Here are some suggestions that will help you eliminate these undesirables from your system:
 - Ensure that the AC power is matched to the operating voltage requirements.
 - Make sure that the power cord is plugged snugly into the IEC socket on the rear of the monitor.
 - Check the connections between the signal source and the monitor. The Harbinger SM505 and SM508's XLR and TRS connectors offer completely balanced connectivity. Make sure the output of your audio system is balanced and that you are using balanced cables. While unbalanced RCA connections are also available, this connection format is more susceptible to noise.
 - All audio equipment should use the same ground point. If parts of your audio system are connected to different AC outlets in your room, this may result in an audible hum as a result of small differences in voltage between different connected circuits. Check all other devices using the same AC output in the building such as dimmers, neon signs, TV screens, and computer monitors. These devices should not be using the same circuit.



WARRANTY/CUSTOMER SUPPORT

2 YEAR HARBINGER LIMITED WARRANTY

Harbinger provides, to the original purchaser, a two (2) year limited warranty on materials and workmanship on all Harbinger cabinets, loudspeaker and amplifier components from the date of purchase.

For warranty support, please visit our website at www.HarbingerProAudio.com, or contact our Support Team at **888-286-1809** for assistance. Harbinger will repair or replace the unit at Harbinger's discretion.

This warranty does not cover service or parts to repair damage caused by neglect, abuse, normal wear and tear and cosmetic appearance to the cabinetry not directly attributed to defects in materials or workmanship. Also excluded from coverage are damages caused directly or indirectly due to any service, repair(s), or modifications of the cabinet, which has not been authorized or approved by Harbinger. This two (2) year warranty does not cover service or parts to repair damage caused by accident, disaster, misuse, abuse, burnt voice-coils, over-powering, negligence, inadequate packing or inadequate shipping procedures.

The sole and exclusive remedy of the foregoing limited warranty shall be limited to the repair or replacement of any defective or non-conforming component. All warranties including, but not limited to, the express warranty and the implied warranties of merchantability and fitness for a particular purpose are limited to the two (2) year warranty period. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. There are no express warranties beyond those stated here. In the event that applicable law does not allow the limitation of the duration of the implied warranties to the warranty period, then the duration of the implied warranties shall be limited to as long as is provided by applicable law. No warranties apply after that period.

Retailer and manufacturer shall not be liable for damages based upon inconvenience, loss of use of product, loss of time, interrupted operation or commercial loss or any other incidental or consequential damages including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, reprogramming, or reproducing any program or data stored in equipment that is used with Harbinger products. This guarantee gives you specific legal rights; you may have other legal rights, which vary from state to state.

Harbinger
P.O. Box 5111, Thousand Oaks, CA 91359-5111

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OR VISIT OUR WEBSITE AT: HARBINGERPROAUDIO.COM