STEINWAY LYNGDORF

Steinway & Sons SP-1

INSTALLATION MANUAL

2023

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COMPLIANCE

WEEE

The European Parliament and the Council of the European Union have issued the Waste Electrical and Electronic Equipment Directive. The purpose of the Directive is to prevent waste of electrical and electronic equipment and to promote reuse, recycling, and other forms of waste recovery. Steinway Lyngdorf products and the accessories packed with them are subject to the WEEE Directive. Please dispose of any waste materials in accordance with your local recycling regulations. Products and equipment which must be collected for reuse, recycling, and other forms of recovery are marked with the icon of the crossed-out waste receptacle.

FCC

Steinway Lyngdorf products and accessories comply with parts 15 and 68 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference; and (2) this device must accept any interference received, including any interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed.

PRE-INSTALLATION

Please read all material carefully prior to installation. If you need additional assistance, contact your local Steinway Lyngdorf representative first, or email contact@steinwaylyngdorf.com

Unpacking

Carefully remove the unit and accessory kit from the carton and visually check for shipping damage. Contact both the shipper and your Steinway Lyngdorf representative immediately if the unit bears any sign of damage from mishandling. Note: Keep shipping carton and packing material for future use or in the unlikely event that the unit needs servicing. If this unit is shipped without the original packing, damage could occur and void the warranty.

Inventory

Check the list below to ensure that all necessary product components have been delivered. Report all discrepancies to your local Steinway Lyngdorf representative immediately.

SP-1 Stereo Processor

SP-1 Remote Control

USB Memory

SP-1 Installation Manual

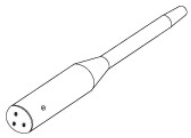
Steinway Link Cable

Power Cord

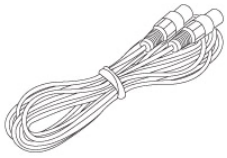
Optional RoomPerfect™ Installer Kit

An Installer Kit is available for setting up the SP-1 Stereo Processor. The Installer Kit is identical for all Steinway Lyngdorf systems and should be ordered individually as needed.

Microphone Stand



RoomPerfect™ Microphone



Microphone Cable

SYSTEM INSTALLATION

Rack Installation

The SP-1 Stereo Processor is, depending on the order, shipped with foot rails for free- standing placement or rack mounts. To install the rack mounts, turn the SP-1 Stereo Processor upside down and place it on a stable, even surface. Take care to place it on a soft surface to avoid scratches. Using a TORX 10 screwdriver, fasten the rack brackets in the designated holes.

The SP-1 should be installed with at least one inch of free space on all sides, and it should be placed in an environment free of excessive heat. When placed in a rack system, the SP-1 should be placed at the bottom of the rack, with the Steinway Lyngdorf amplifiers above it. This allows for proper dissipation of the heat generated by the amplifiers without adverse effects on the SP-1.

CABLE CONNECTIONS

Power Cable Connections

Use only the power cables included with the product. Using other cable and/or plug types will void the warranty and may cause damage to the system.

Interconnect Cable Connections

This Steinway Link cable carries both the digital audio signal as well as the control signals.
If using other cables for cabling between the processor and amplifiers, please use cables with standard RJ45 to RJ45 B connectors. All RJ45 connectors should be shielded. For cable lengths less than 1 meter, use CAT5E/shielded or CAT6 cable. For cable lengths in excess of 1 meter, use double- shielded CAT5E cables. Poor quality cables and plugs may violate safety and EMC regulations, as well as cause significant noise and interference. Only use cables and connectors approved by Steinway Lyngdorf.

Please refer to the wiring diagram supplied by Steinway Lyngdorf to determine which cables you need.

Using the USB Audio Input

To play sound from a computer to the SP-1, connect your computer to the USB-B input using a USB cable. Select “USB” as input on the SP-1, and start playing on your computer. If the audio signal is part of a video or movie, synchronizing might be necessary. Video delays have to be set in the computer; audio delays can be set in the SP-1’s input settings (“Lipsync delay”).

SOFTWARE UPDATE

Updating the SP-1

- Save the new software on a USB stick.
- Switch off the SP-1 using the mains switch on the back.
- Insert the USB stick in the appropriate connector on the back of the SP-1.
- Press and hold the standby button on the front of the SP-1.
- Switch on the SP-1 using the mains switch on the back, while holding the standby button.
- Wait until the SP-1 has loaded the software, updated the software, and powered off to standby. Do not remove the USB stick before the SP-1 has powered off, as this will cause the software in the SP-1 to be corrupted.

CONNECTIONS AND FRONT PANEL

SP-1 Rear Panel

1 Analog audio inputs (4 x Stereo)
2 Microphone input for RoomPerfect™ calibration
3 Digital audio inputs (6 x Optical, 4 x Coaxial)
4 USB audio input (USB-B)
5 Steinway Link outputs (3)
6 USB service connection (SW updates)
7 Input connector for infrared communications (1), Trigger input connector (1)
8 Network control interface
9 Mains input (100 - 240V, 50/60 Hz) and on/off switch

SP-1 Front Panel

1 **Power button**
   a. Switches system on from stand-by mode
   b. Switches system off into stand-by mode

2 **Left knob**
   a. Rotate left or right to toggle between audio sources and browse while in the set-up menu
   b. Press and hold to access the set-up menu, press to select a menu item, press and hold to cancel

3 **Display**

4 **Right knob**
   a. Rotate left or right to adjust the volume level
   b. Press to mute and unmute the sound
   Note: The volume is displayed with 0.0dB to indicate full gain on an input with maximum level. You can turn the volume to +12dB, which allows full gain on inputs with lower levels.

5 **LED indicator**
   a. Red: Stand-by mode
   b. Orange: Loading
   c. Green: On / Ready

REMOTE CONTROL

SP-1 Remote Control Commands

⏻	Switches system on and off to stand-by mode
Setup	Accesses the SP-1 setup menu
0 - 9	Enters numbers in the setup menus Select RoomPerfect positions 1-8 (Focus), 9 (Global)
Audio	Shows audio input format on display (sample rate / bit depth)
▶II	Select and play CDP-1 (if CDP-1 is connected to the SP-1)
▲▼	Toggles through RoomPerfect™ options and browses menu
OK	Selects a menu item
◀▶	Toggles through Voicings and browses menu
Back	Back in menu
Menu	Accesses the SP-1 main menu
SRC	Toggles through sources (inputs)
+ -	Adjusts the volume level
🔇	Mutes and unmutes the sound
SRC + -	Toggles up and down between audio sources (inputs)

SP-1 Additional Remote Control commands

when CDP-1 is connected to the system and playing

Setup	Toggles through Shuffle Play
0 - 9	Selects CD tracks directly
Audio	Toggles through Repeat Play
PiP	Sets CDP-1 Display Mode
▶II	Play / Pause
I◀◀ ▶▶I	Press for Previous / Next track, hold down for Rewind / Forward

Pairing the Remote Control

The remote control is paired to the SP-1 at the factory, and you only need to pair it again if you have a new SP-1 or new remote. To pair the RF remote control to an SP-1:

1. Turn on the SP-1
2. Press and hold down Play and OK buttons until the remote control´s green LED flashes.
3. Point the remote control at the SP-1 and hold it within 30 cm / 1 foot of the front panel; when the green LED stops blinking, the remote is connected via Zigbee.
4. The remote will be paired to the SP-1

To reset the pairing of the remote control, press Back and OK until the red LED flashes twice.

Switching Remote to RF and IR Mode

To switch the remote from RF to IR mode, hold down OK and 1. The LED will flash red twice.
To switch the remote from IR to RF mode, hold down OK and 2. The LED will flash green twice.

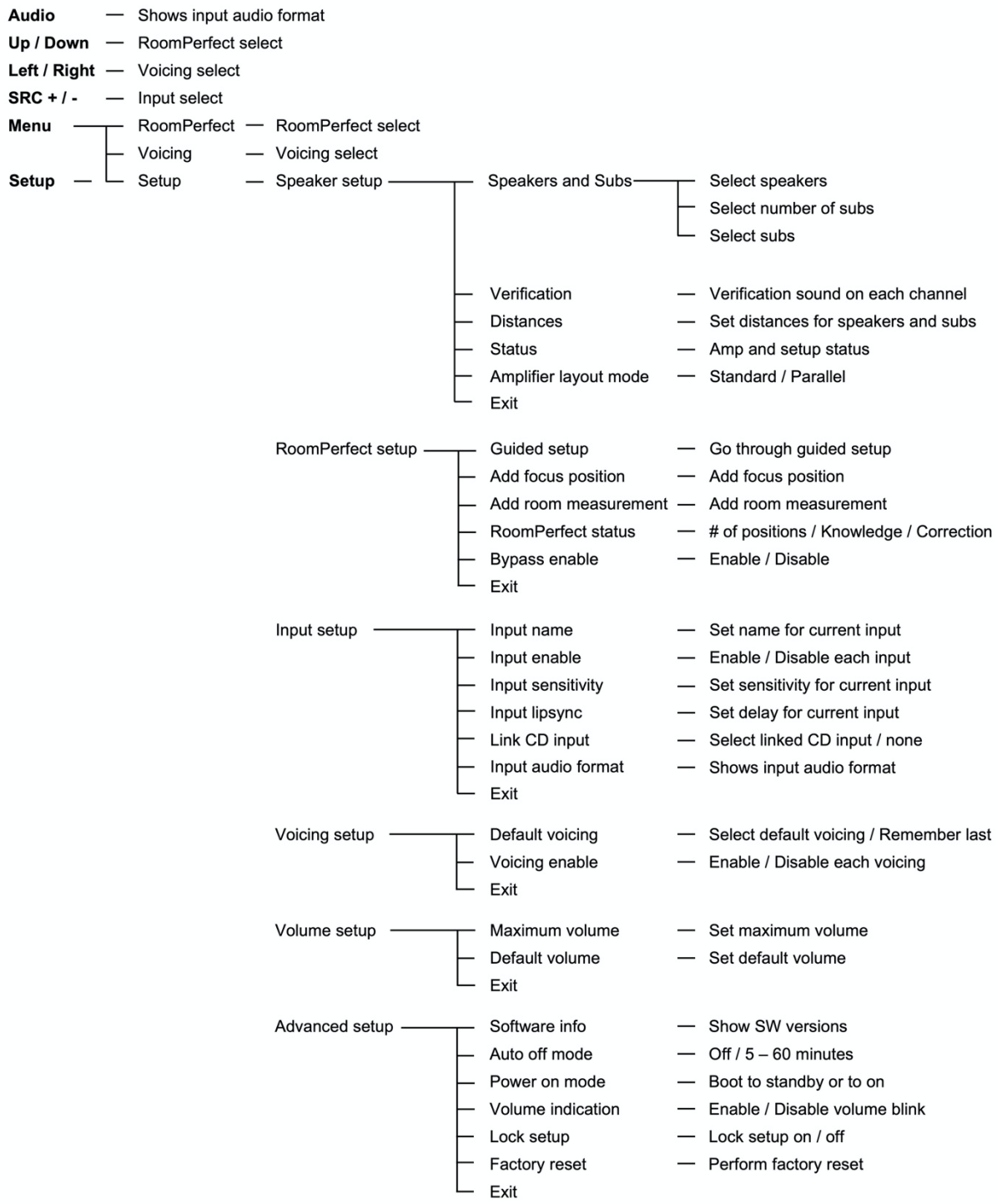
FIRST SETUP

Set up your Steinway Lyngdorf system in the following order:

- ID-assign the Steinway Lyngdorf amplifier(s) via dip-switches on socket panels. See Speaker Routing chapter in this manual.
- Connect speakers to the Steinway Lyngdorf amplifier(s).
- Connect Steinway Lyngdorf amplifier(s) to SP-1 Stereo Processor and to each other
- Connect audio sources to the SP-1 Stereo Processor.
- Connect power to the SP-1 Stereo Processor, the amplifiers, and all connected sources.
- Switch on the SP-1 Stereo Processor.
- Access Setup menu.
- Set up your speakers as explained in SETUP in this document.
- Run RoomPerfect™ Guided Setup.
- Set up inputs.

These steps complete the basic SP-1 Stereo Processor setup.

SETUP MENU OVERVIEW



Setup / Speaker Setup / Speakers and Subs

The Speaker and Subs menu allows you to select a configuration from a stored list of speakers. You first select front speakers, then (if used) the number of woofers, then type of woofers.

Setup / Speaker Setup / Verification

A verification signal will be played through each output channel, to verify each speaker or woofer input has been connected the the correct amplifier output.

Setup / Speaker Setup / Distances

If a combination of speakers and woofers is used, select the unit of measurement, and enter the distances to the front speakers and woofers. The best results are obtained by using a laser-equipped measuring device.

- Place the RoomPerfect™ microphone at listening height in the main listening position as reference point.
- For each channel, measure the straight-line distance through the air from the tip of the RoomPerfect™ microphone to the center of the tweeter unit in the loudspeaker in question.
- When measuring distances to boundary woofers, measure to the top back edge of the woofer.
- Do not measure distances at floor level, as these measurements will not give acoustically accurate results.

Setup / Speaker Setup / Status

Shows the amplifier and setup status.

Setup / Speaker Setup / Amplifier layout mode

Select between Standard and Parallel mode. The purpose of parallel mode is to enable physically separate stacks of amplifiers for right and left speakers/woofers respectively. Read following chapter Speaker Routing.

Setup / RoomPerfect setup / Guided setup

Enter the Guided Setup for doing a RoomPerfect™ calibration, or see and edit settings for an existing RoomPerfect™ calibration. See Setup Menu Overview and following chapter Setting up RoomPerfect™.

Setup / RoomPerfect setup / Add focus position

After the guided setup, up to 7 more focus positions in the room can be added, which can be selected by pressing the numbers on the remote control.

Setup / RoomPerfect setup / Add room measurement

After the guided setup, more room measurements can be added, for example to approach 100% Room Knowledge.

Setup / RoomPerfect setup / RoomPerfect status

Shows the number of focus positions, Room Knowledge index, and Correction index.

Setup / RoomPerfect setup / Bypass enable

Enables or disables that Bypass mode (no RoomPerfect calibration) is selectable in the main menu. It is recommended to always listen with RoomPerfect calibration.

Setup / Input setup / Input name

Enter a unique reference for the source connected to the input selected. To select the letters, use the left knob on the front panel or the buttons on the remote to scroll through the alphabet. Press enter to select the letter. After completing the name, select the END character at the bottom of list. Press OK to store the name.

Setup / Input setup / Input enable

Select DISABLE for all inputs not connected to sources and the sources will be removed from the selectable list.

Setup / Input setup / Input sensitivity

Adjust the sensitivity from 0 to +24dB for the selected source, so that all sources are at a uniform level.

Setup / Input setup / Input lipsync

Sets an audio signal delay (0 to 500ms) for the current input.

Setup / Input setup / Link CD Input

If a CDP-1 CD-Player is part of the system, select the digital audio input where the CDP-1 is connected to.

Setup / Input setup / Input audio format

Shows the current input audio format.

Setup / Voicing setup / Default voicing

Select one voicing to be the default setting when the unit is turned on. Select “Store Previous Voicing” to have the same voicing when powered on as when the SP-1 was last time powered off.

Setup / Voicing setup / Voicing enable

Enable or disable voicings to only show preferred voicings. Also see following chapter Voicings.

Setup / Volume setup / Maximum volume

Set a maximum level for the volume control.

Setup / Volume setup / Default volume

Set a default volume for every time when the SP-1 is powered on.

Setup / Advanced setup / Software info

Shows the software version (SW) for the SP-1, the RF module, and the DSP.

Setup / Advanced setup / Auto off mode

Select “Off” for no auto stand-by, or set a time when the SP-1 automatically switches off after 5 – 60 minutes of no audio signal or user activity.

Setup / Advanced setup / Power on mode

Boot to stand-by or to on.

Setup / Advanced setup / Volume indication

Enable or disable display numbers blinking to indicate a volume level change.

Setup / Advanced setup / Lock setup

Lock the menu system to avoid unintentional changes of advanced functions. Unlock the menu system by entering the code 7800.

Setup / Advanced setup / Factory reset

Return to factory defaults. Please note that all settings and RoomPerfect™ calibrations will be erased.

SETTING UP ROOMPERFECT™

Introduction

RoomPerfect™ is designed to analyze and correct for the negative effects that the listening room has on the speaker sound.

To correct for the way the room acoustics affect sound reproduction, RoomPerfect™ must map the acoustical properties of your listening room. For this purpose, a microphone with stand is included in the Installer Kit. The Guided Setup menu allows you to initiate a new set of RoomPerfect™ room measurements.

After the RoomPerfect™ calibration, further settings can customize the sound:

Focus Listening
The focus filter improves the sound quality at a specific listening position. This makes the focus filter the best solution for optimal sound quality at a single listening position. You can have up to eight Focus positions for the room.

Global Listening
The global filter improves sound quality across the whole room. When you are moving around a room, the global filter gives the best result.

Voicings
A voicing is an equalizer filter that can be activated to amplify or attenuate certain frequencies according to your personal preferences. This equalization is an addition to the RoomPerfect™ corrections.

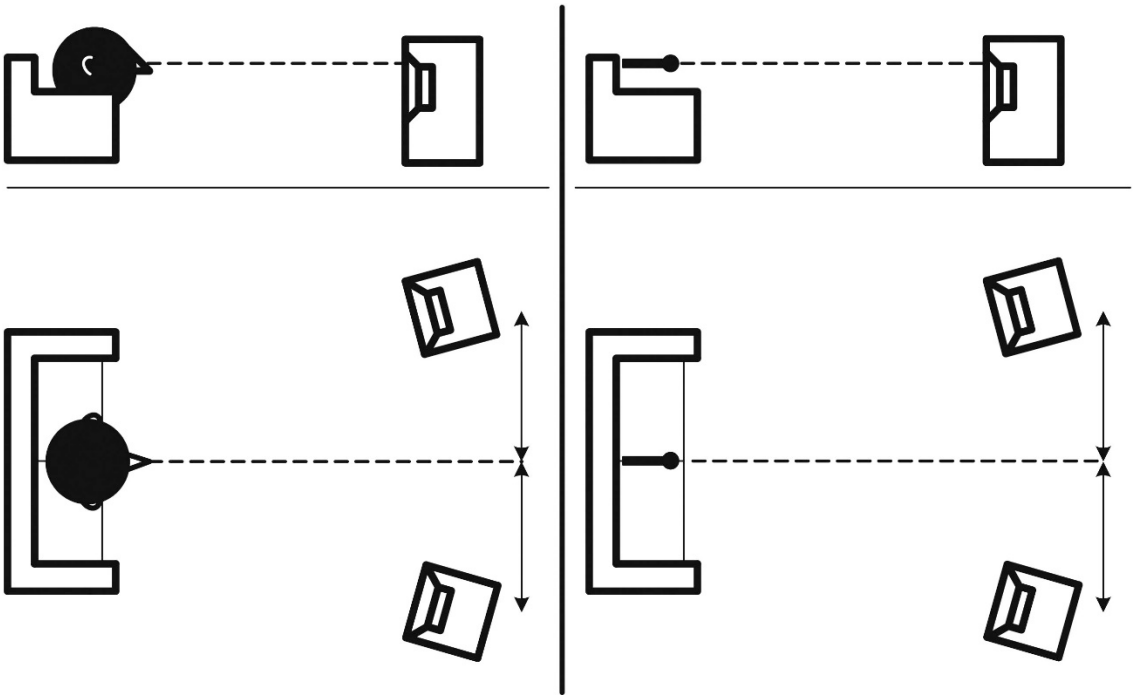
RoomPerfect™ Preparations

- Place the RoomPerfect™ calibration microphone on the stand. Be sure to fasten all handles and clamps properly so the microphone does not move during a measurement.
- Plug the supplied microphone cable into the microphone.
- Connect the microphone cable to the microphone terminal on the rear panel of the SP-1.

WARNING: The microphone is a very sensitive and finely calibrated device which must be treated with utmost care. If the microphone has been dropped on the floor, it may be damaged. If this is the case, obtain a new microphone from your Steinway Lyngdorf representative before performing the system calibration.

Placing the Microphone in the Focus Position

When you are prompted to place the microphone in the focus position, place the microphone using the microphone stand in your primary listening position. The height and the orientation of the microphone should correspond to your head's height and direction.



Setting the Volume Level

The system guides you through the selection of a proper calibration volume level. Follow the instructions on the display to find the optimal volume setting for doing the calibration.

Press enter and a test signal will start from the left speaker. The system will give an estimated optimal volume for calibrating the system or will accept the current volume. Adjust the volume if required and retry the measurement.

You can choose to use a volume setting other than the one requested by the system by choosing "Use Current." The calibration will not be inferior in quality, but the time required for an exact measurement will be longer. If the volume setting is too high, the system will display "Error – Signal Clipping." Reduce the volume and try again.

The calibration volume should not be so loud that it is inconvenient to you, or that it causes damage to your loudspeakers. If this is the case, set it to a lower and more appropriate level. A low volume can result in a longer calibration time or a measurement time out. A low volume and long measurement will not affect the quality of the end result.

Measuring the Focus Position

When the calibration volume has been set, RoomPerfect™ will send a range of tones to measure the focus position.

If there is noise in the room, the measurement may take longer. This will not affect the quality of the end result.

See RoomPerfect™ troubleshooting if the measurement stops prematurely, and then retry the measurement.

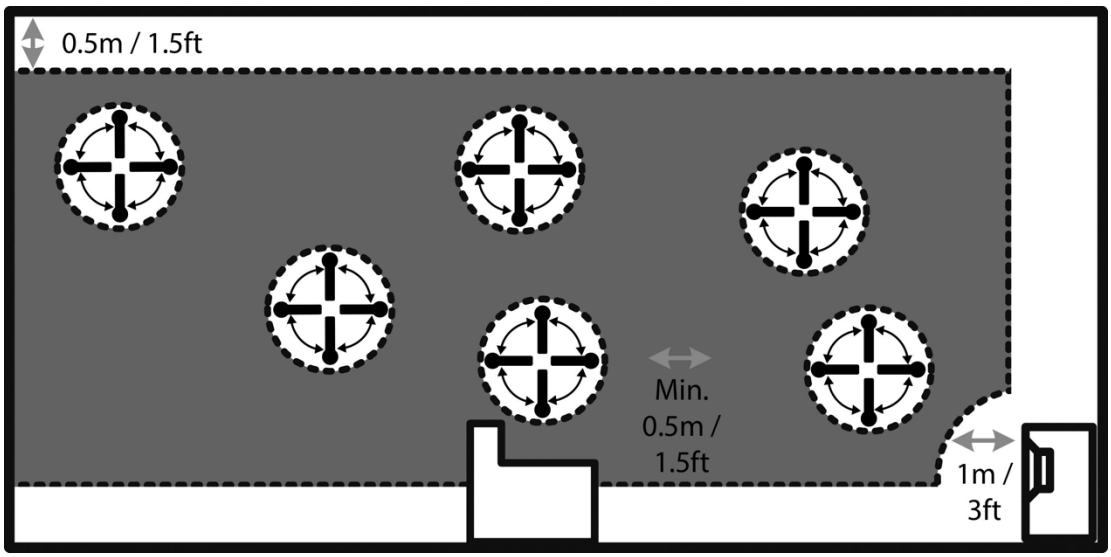
Measuring Random Room Positions

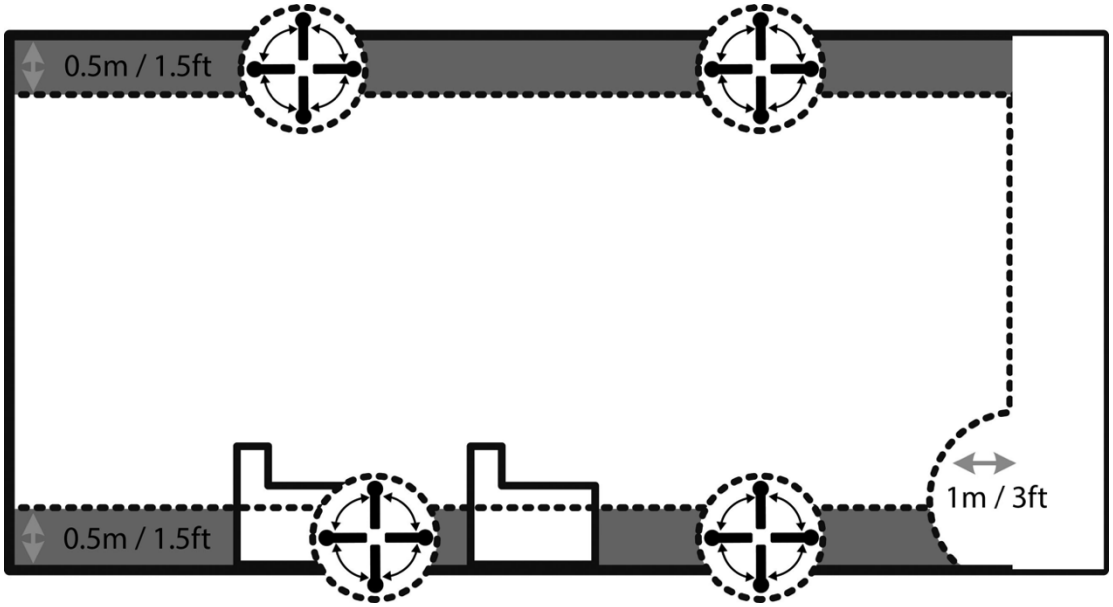
When the focus position has been measured, the next step is to measure the acoustical properties of the room. It is important to perform well spaced measurements to get a comprehensive image of the acoustical properties of the room. See RoomPerfect™ troubleshooting if the measurement stops prematurely.

Keep taking measurements until Room Knowledge reaches 90%.

These are the rules of thumb when measuring the room:

- The microphone should be in random and varying positions, heights, and orientations.
- Point it up/down/sideways, the more random positions the better.
- The measurements should cover the entire room, not only your listening area.
- Do not take measurements behind plants, furniture, etc.
- The microphone should not be closer than 0.5m/1.5ft from the floor, ceiling and walls.
- The microphone should be at least 1m/3ft from the front of the loudspeakers.
- There should be at least 50cm/1.5ft between each measurement.
- Do not take symmetrical measurements in the room.





Room Measurements Above 90% Room Knowledge

When Room Knowledge has reached 90%, you can decide to add room measurements or do it at a later time. To fully optimize RoomPerfect™'s understanding of the room's acoustical properties, we recommend you keep doing measurements until the Room Knowledge is above 95%. The higher the Room Knowledge, the more accurate the room correction filters will be.

Calculation of Focus and Global Filters

When room measurements are complete, the system will calculate the focus and global filters automatically.

RoomPerfect™ Status.

This menu shows how much the correction system knows about the room, and how much correction has been employed. Room Knowledge is an index showing how many of the acoustical properties in a room have been mapped. The higher degree of knowledge in the system, the greater the accuracy of the room correction filters. The Room Correction index is a measure of how much processing is being employed in the room correction filters. To some extent, the Room Correction index reflects how audible the correction is. For low values (below 10%) of the room correction index, only subtle correction is needed to the original sound in the room. With high room correction index values, more extensive processing is employed.

Add Focus Position/Add Room Position.

You can add up to seven more Focus positions for the room, repeating the Focus 1 measurement procedure. You can also add more room measurements to approach 100% Room Knowledge.

RoomPerfect™ Troubleshooting

Error: Noise on signal!

The calibration microphone is very sensitive and may pick up unwanted noise, including subsonic signals and background noise, which disturbs the measurements. If the signal is disturbed, it will take longer for the system to make a correct measurement. A measurement that has been disturbed by noise but completed will always be correct; it is not necessary to redo the measurement.

Error: Microphone not found!

No microphone is connected to the SP-1 or the microphone cable is not working. Check that the microphone cable is connected to the microphone socket on the back panel. If the problem continues, test the microphone cable by connecting the microphone directly to the Microphone socket and select Retry. If the microphone is detected, replace the microphone cable and retry the measurement.

Error: Signal clipping!

There are two possible causes of this error. Either the incoming signal has been classified as too loud, resulting in clipping or distortion, or a loud noise in the immediate environment has corrupted the measurement results. If a loud noise has in fact occurred, such as the sound of a closing door, reduce noise levels inside and in the immediate vicinity of the room and repeat the measurement. If no loud noise has occurred, reduce the volume of the signal and repeat the measurement.

Error: Signal too low!

This error message is displayed when the measurement has lasted more than 5 minutes for the low-frequency signal or more than 2 minutes for the high-frequency signal. This happens most often when using a low level measuring signal compared to the background noise in the listening environment, which results in prolonged measuring times. Raise the measuring signal volume or reduce the noise from the environment before continuing with the measurement.

This error message can also arise due to a signal classification of “no sound.” This happens if the sound volume has been muted or a cable is disconnected.

- Check the sound volume.
- Check all cable connections.
- Check the measuring signal volume.

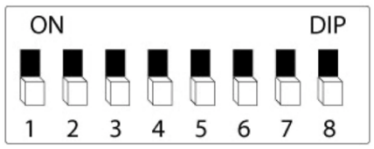
If none of these measures solve the error, contact your Steinway Lyngdorf representative.

SPEAKER ROUTING

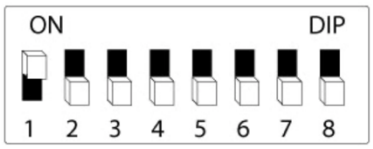
Overview: Assign ID Codes to the Steinway Lyngdorf Amplifier(s)

The DIP switchboard on the back of the amplifier must be encoded in order to make it possible for the SP-1 Stereo Processor to identify the amplifier. Each unit must have a sequential ID in the network.

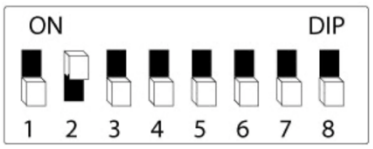
This is how amplifiers are setup correctly (example: 1 - 6 amplifiers):



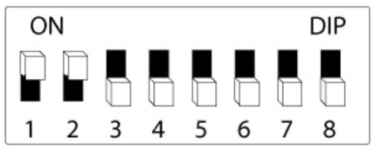
Amp. ID 0



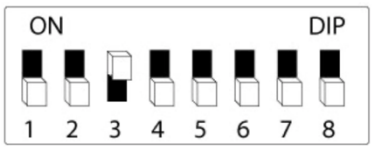
Amp. ID 1



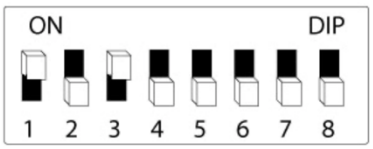
Amp. ID 2



Amp. ID 3



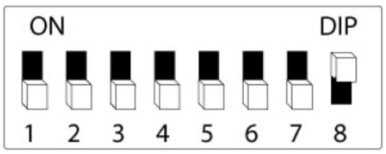
Amp. ID 4



Amp. ID 5

Overview: Link Termination or Daisy-Chaining

DIP 8 must be adjusted for either termination or transmission. Switch DIP 8 to lower position if you want to connect more amplifiers to the Steinway Link output. Switch to upper ON position if there are no further amplifiers in the chain.



ID 0 with termination

SP-1 Speaker Setups and Wiring Rules

Wiring of the amplifiers and speakers connected to an SP-1 is determined by a set of rules, depending on how many channels are used for the main speakers and which types of amplifiers are used.

There are a generic set of rules for 1-way speakers and one for 2-way speakers. Then there are specific rules for Model B, Model C and Model D.

There is also a special “Parallel Mode” which can be enabled in the settings used for setups where amplifiers for left and right are physically separated, this is described in its own chapter later. For all standard setups, rules are as follows.

Amplifier Wiring

Amplifiers can be placed on any of the link outputs on the SP-1 and can be daisy-chained from the link output of one amplifier to the link input of the next amplifier as is suitably for the layout.

1-Way Speakers

Speakers requiring only one amplifier channel pr speaker are:

S-15, IW-15, IW-16, IW-26V, IC-16, IC- 26, X-261, X-261C, Model M L/R, Model O, Model C (passive version).

Model O can be used with or without woofers, all others must have woofers present.

The amplifier with ID #0 will drive the speakers with the right speaker connected to output 1 and the left speaker connected to output 2. If this amplifier is an A2, the first right woofer (if any) will be on Output 3 and the first left woofer on output 4.

The next amplifiers (ID #1 etc.) will drive the rest of the subwoofers (if any).

Any A1s will drive a right woofer on output 1 and a left woofer on output 2.

A2s will drive a right woofer on output 1, left on output 2, right on output 3, left on output 4.

Outputs will be assigned in this way continuing until all subwoofers have been assigned.

In the case of a mono woofer, this will be driven by the output that would normally be assigned to the first right woofer.

2-Way Speakers

Speakers requiring 2 amplifier channels pr speaker are:

IW-26H, IW-66, Model M Center, Model LS, Model LS Concert, Model A, X-262, X-262C, Marine Speaker.

Model A and the Marine Speaker can be used without woofers, all others must have woofers present.

If the amplifier with ID #0 is an A2 it will drive the two front speakers with right mid on output 1, left mid on output 2, right high on output 3 and left high on output 4.

If the amplifier with ID #0 is an A1, then it will drive right mid on output 1 and left mid on output 2. The amplifier with ID #1 will then drive right high on output 1 and left high on output 2.

After this, all subwoofers will be allocated in the same way as for 1-way speakers with right first, then left for the following amplifiers until the requested number of woofers have been assigned.

Model D

Active Model Ds are wired with ID #0 for the left Model D amplifier and ID #1 for the right Model D amplifier.

Passive Model Ds driven by two A1s have ID #0 for the Left speaker with the low part on output 1 and the high part on output 2. Then ID #1 drives the right speaker with the same output assignments. Any woofers are then assigned to the remaining amplifiers with A1s driving a right woofer on output 1 and a left woofer on output 2 while A2s drive a right woofer on output 1, left on output 2, right on output 3, left on output 4.

If passive Model Ds are driven by a single A2, they will be routed as a standard 2-way setup.

Model B

Model B requires 4 amplifier channels pr speaker. They will be driven by the first amplifiers on the link, so these must be either 2 A2s or 4 A1s.

In the case of 2 A2s, the A2 with ID #0 will drive the right speaker with outputs 1 and 2 for the low part, then mid on output 3 and high on output 4. The A2 with ID #1 will drive the left speaker with same output-assignments.

In the case of A1s, ID #0 will drive the right low parts on outputs 1 and 2 wile ID #1 will drive the mid part on output 1 and the high part on output 4. ID #2 will drive left low parts and ID #3 will drive left mid/high with same output assignments as right.

After this, any woofers will be assigned to the remaining amplifiers with A1s driving a right woofer on output 1 and a left woofer on output 2 while A2's drive a right woofer on output 1, left on output 2, right on output 3, left on output 4.

Model C

The passive Model C is wired as any other 1-way speaker, see section above.

The active version of Model C is wired with ID #0 for the left Model C amplifier and ID #1 for the right Model C amplifier.

Advanced Setting: Parallel Mode

Parallel mode can be enabled in the speaker setup menu. This must be done before the speaker setup; it will not affect an already stored setup. This setting is not stored by itself but will always default to what the current speaker setup is using.

The purpose of parallel mode is to enable physically separate stacks of amplifiers for right and left speakers/woofers respectively. This isn't possible for all setups, however, since it will require the amplifier layout to be symmetric, this means:

- If any A1 amplifiers are present, there must be an even number of A1 amplifiers.
- If any A2 amplifiers are present, there must be an even number of A2 amplifiers.
- It is not possible to use a mono sub (since it cannot be split)

1-Way Speakers

A setup with 1-way speakers will assign output 1 of the amplifier with ID #0 to drive the right speaker, then output #2 drives the first right woofer (if any). If the amplifier is an A2, outputs 3 and 4 will drive the next right woofers (if any).

If the amplifier with ID #0 is an A1 and more than one right woofer is present, the next right woofers will be driven by the amplifier with ID #1 starting with output 1 and continuing like this until all right woofers have been assigned.

The algorithm will then jump to the next amplifier, which should be the same type of amplifier as ID #0 and use output 1 on this amplifier for the left speaker, then continue with the left woofers in the same manner as for the right side.

2-Way Speakers

The amplifier with ID #0 will drive the mid part of the right speaker on output 1, then the high part of the right speaker on output 2. If the amplifier is an A2, outputs 3 and 4 will drive the right woofers (if any).

In the case of an A1 or if more than 2 right woofers are present, they will be allocated on ID #1 starting with output 1 and continue until all right woofers have been allocated.

The algorithm will then jump to the next amplifier, which should be the same type of amplifier as ID #0 and use output 1 on this amplifier for the mid part of the left speaker, output 2 for the high part of the left speaker, then it will continue with the left woofers in the same manner as for the right side.

Model C and D

The active versions of Model C and D are already allocated in parallel.

In the case of Model D with additional woofers, if the Model Ds are driven by A1s, they will be allocated with left on ID #0 and right on ID #1 as usual, then woofers are allocated with all left woofers first and all right woofers next, starting from the first amplifier not used for the Model Ds.

If Model Ds are driven by an A2, the setup will be as a parallel 2-way setup.

Model B

If the amplifier with ID #0 is an A2, it will drive the right speaker with outputs 1 and 2 for the low part, then the mid part on output 3 and high on output 4.

In the case of two A1's, ID #0 will drive the right low parts on outputs 1 and 2 wile ID #1 will drive the mid part on output 1 and the high part on output 4.

If any woofers are used, the left woofers will be assigned on the next amplifiers first output and onwards.

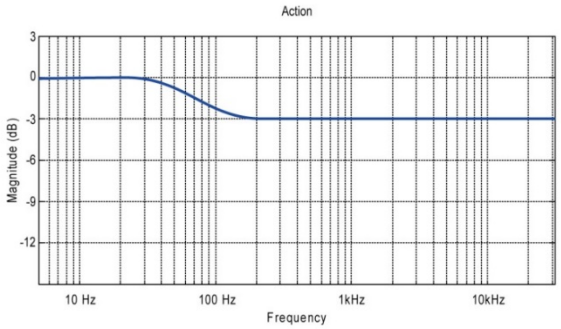
The algorithm will then jump to the next amplifier, which should be the same type of amplifier as ID #0 and repeat the same assignments for the left side.

VOICINGS

The Voicing setting is an EQ filter that can be used to gently amplify or attenuate certain frequencies according to personal preferences and/or to compensate if a given recording sounds too “bright” or too “dark.”

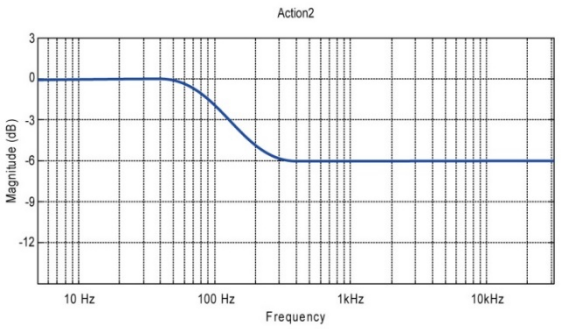
Action

Enhances the lower frequencies.



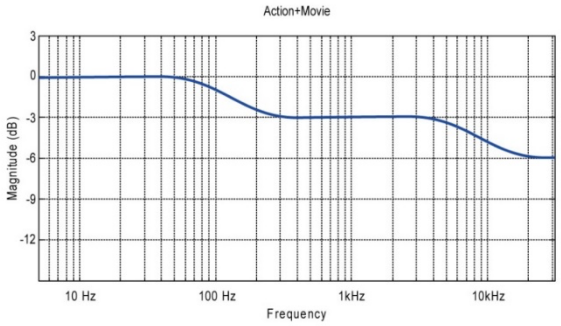
Action2

Further enhances the lower frequencies.



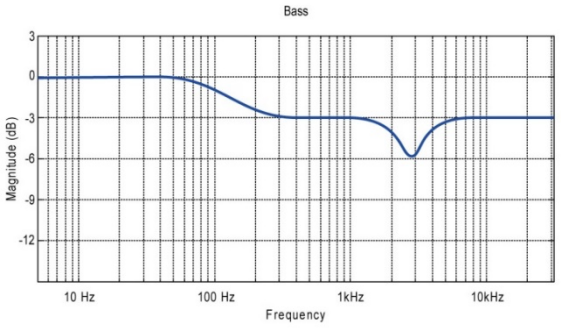
Action+Movie

Enhances the lower frequencies and dampens the high range frequencies.



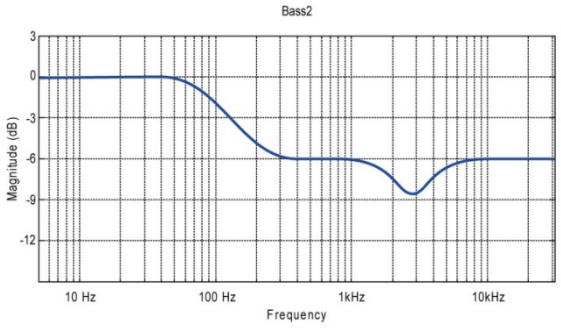
Bass

Enhances the lower frequencies and dampens the midrange to compensate for recordings that would otherwise sound too harsh.



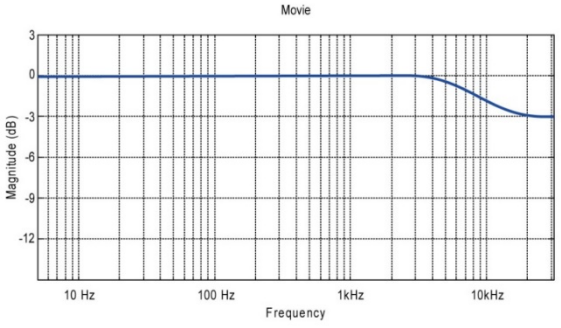
Bass2

Further enhances the lower frequencies and dampens the midrange.



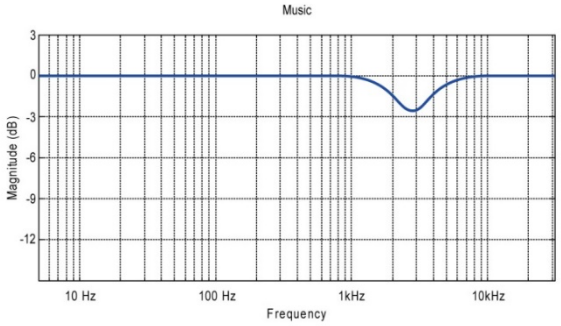
Movie

Dampens the high range frequencies



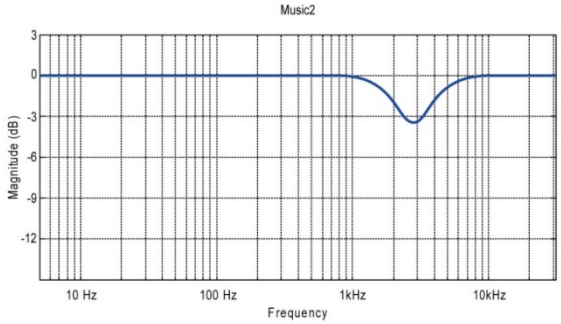
Music

Dampens the midrange to compensate for recordings that would otherwise sound too harsh.



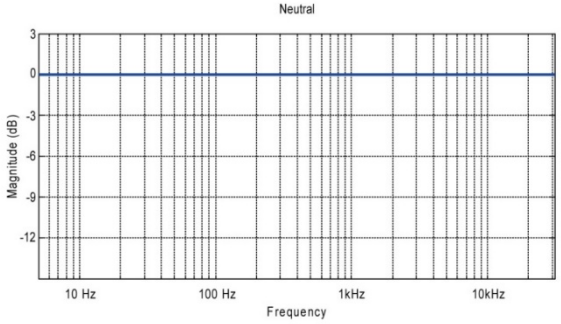
Music2

Further dampens the midrange.



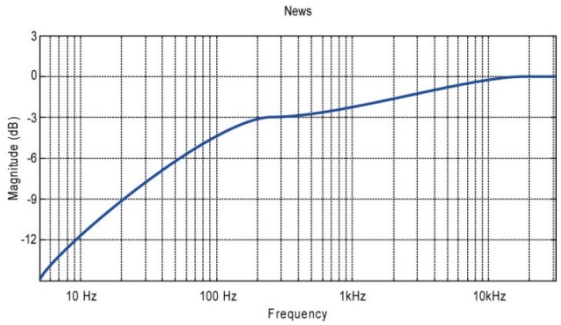
Neutral

No change in tonal balance.



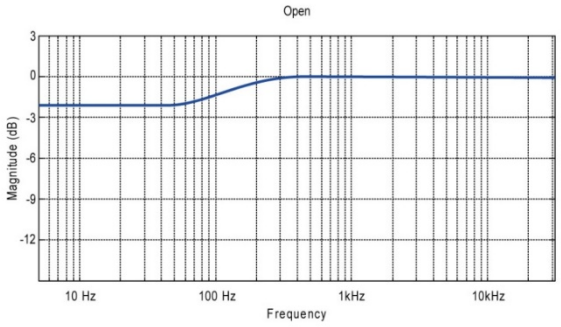
News

Cuts low frequencies for live broadcasting and sports events.



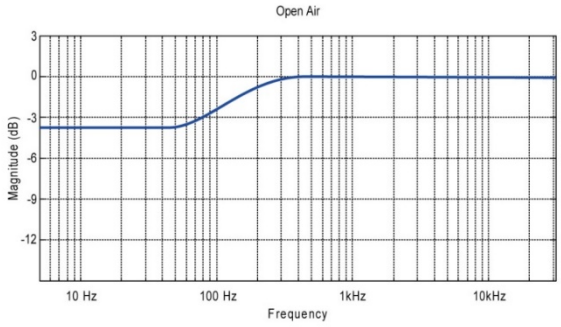
Open

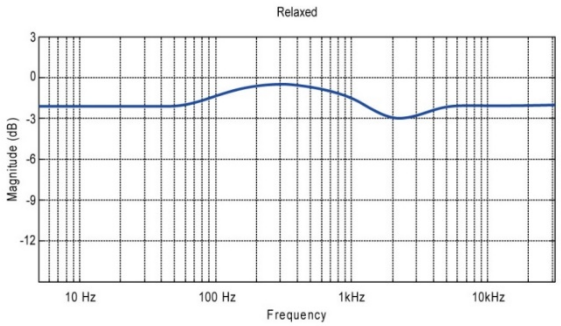
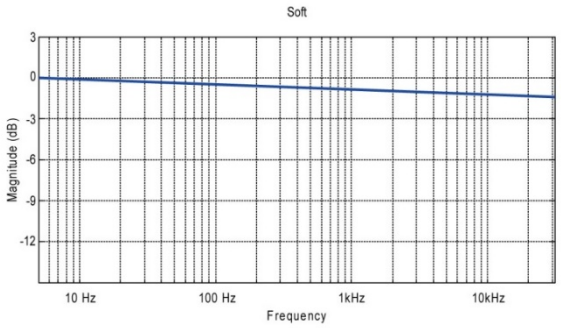
Dampens the low range frequencies



Open Air

Further dampens the low range frequencies



Relaxed Dampens the low and midrange frequencies.  	**Soft** Dampens upper tones slightly, making bright tracks warmer and more balanced. 

SPECIFICATIONS

MODEL	**MODEL SP-1**
DESCRIPTION	Stereo Processor (Pre-amplifier)
FEATURES	2 channel RoomPerfect™; Digital delay, Voicings; Graphic display; 1 unit high
INPUT	DIGITAL: 4 x S/PDIF (coax); 6 x Toslink (optical); 1 x USB (audio input)
	ANALOG: 4 x single-ended; Input for microphone
OUTPUT	3 x Steinway Lyngdorf Digital Link
MISCELLANEOUS	1 x Trigger input; 1 x IR sensor input; 1 x USB (software update); 1 x RJ 12 (RS 232 control)
PLACEMENT OPTIONS	Rack mount or freestanding
DIMENSIONS (H x W x D)	Freestanding 4.9 x 45.0 x 26.5/31.5 cm* 1.9 x 17.7 x 10.4/12.4 in*
	Rack mount 4.4 x 45.0 x 26.5/31.5 cm* 1.7 x 17.7 x 10.4/12.4 in*
WEIGHT	5 kg / 11 lb
CONFIGURATION OPTIONS	Stereo
COMMENTS	Rack mounting brackets or feet included * incl/excl cables

SERVICE INFORMATION

In order to obtain warranty service or any other product support, you must contact your original dealer or the Steinway Lyngdorf distributor of the region or country where you are located. If you have trouble locating an authorized representative, please email **contact@steinwaylyngdorf.com** or use the form on our website **www.steinwaylyngdorf.com**

SL Audio A/S, Steinway Lyngdorf
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Denmark

In some cases, the Customer Service Department may solve a service problem without the need of repair or any other measures, thereby avoiding further inconvenience or delay. In some cases, it may be necessary to return the equipment to Steinway Lyngdorf or an authorized service provider for repair; therefore, it is recommended that you save your original packing materials. Steinway Lyngdorf will not be responsible for any damage due to unauthorized packing or shipment in non-original packing materials. If return is made in authorized packaging, risks are borne by Steinway Lyngdorf. Additional charges may occur if new packing materials are required for return shipment.

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