
S T E I N W A Y L Y N G D O R F

MODEL SP-1 STEREO PROCESSOR

INSTALLATION MANUAL

April 21, 2021

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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. Model A1/A2 amplifier and Model P200 processor contain TX FCC ID: TYOJN5139M0.

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.

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Pre-Installation

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

Unpacking the Product

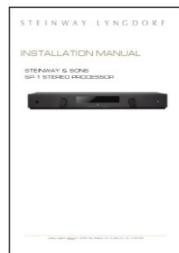
Carefully remove the unit and accessory kit from the carton and visually check for shipping damage. Contact both the shipper and your Steinway Lyngdorf representative immediately if the unit bears any sign of damage from mishandling. Note: Keep shipping carton and packing material for future use or in 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 Steinway Lyngdorf representative immediately.



SP-1



Installation Manual



Power Cord



Link Cable



Standard Operating Remote

Rack Mounts (Optional Accessory)



USB Key

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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.



RoomPerfect™ Calibration Microphone



Microphone Cable



Microphone Stand

Model SP-1 Rear Socket Panel

1. Analog audio inputs
2. Microphone input for RoomPerfect™ calibration
3. Digital audio inputs (6 x Optical & 4 x Coaxial)
4. USB streaming audio input
5. Steinway Link outputs
6. USB service connection (SW updates)
7. Input connector for infrared communications
Trigger input connector
8. RS232 control interface
9. Mains input and on/off switch



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Model SP-1 Front Panel

1. Power - Switches the system on and off
2. Left knob
 - a. Rotate left and right to toggle between audio sources and browse while in the menu.
 - b. Press and hold to access the menu, press to select a menu item, press and hold to cancel.
3. Display
4. Right knob
 - a. Rotate left and right to adjust the volume.
 - b. Press to mute and restore the sound.
5. LED indicator
 - a. Red: Stand By
 - b. Orange: Loading
 - c. Green: On / Ready

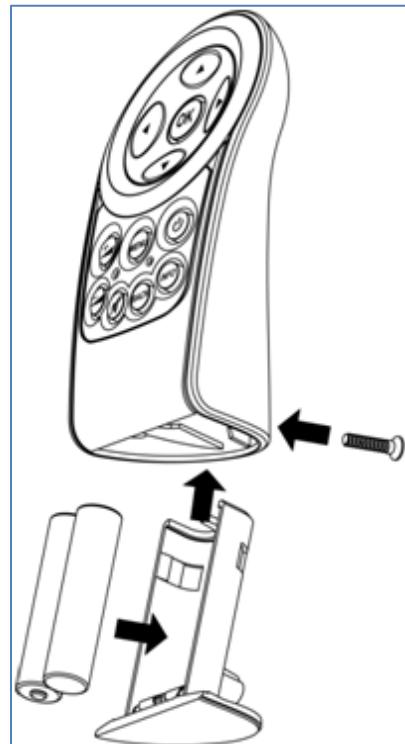
Note: The volume is displayed with 0.0dB to indicate full gain on an input with maximum level. You can turn the volume to +12dB, which allows full gain on inputs with lower levels.



Changing the Batteries

The remote is shipped with two AAA batteries. If the SP-1 Stereo Processor does not respond to remote control commands, it may be because the remote control batteries need to be replaced. To change the batteries, use a Phillips Head screwdriver (PH1) to remove the locking screw from the battery compartment.

The locking screw is at the base of the remote control. When you have removed the locking screw, the battery compartment is automatically ejected from the bottom of the remote control. Remove the used batteries and replace them with two AAA-size alkaline batteries. Insert the battery compartment and tighten the locking screw.



Cable Connections

Cables and Plugs

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.

Cable Connections

This cable carries both the digital audio signal as well as the control signals. 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.

The Standard Remote

The SP-1 comes with a standard remote control, which can operate all daily functions using the following buttons:

 Toggles through RoomPerfect™ options and browses the menu

 Toggles through voicing options and browses the menu

OK Selects a menu item

 Adjusts the volume

 Switches the system on and off

 Mutes and restores the sound

MENU Accesses the menu system

SRC+/SRC Toggles between audio sources



Home Automation System Integration

The SP-1 Stereo Processor is compatible with home automation systems via the RS232 connector on the rear socket panel.

Installation

Using a Rack System

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.

Reminder: The SP-1 Stereo Processor 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 Stereo Processor 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 Stereo Processor.

Installing the USB Streaming Audio Driver on a Computer

To stream audio from a PC or Mac to the SP-1, you need to install the driver for the SP-1 on your computer. The driver can be found on the USB key from the accessory kit.

Mac users:

Go to the “Drivers USB for SP-1” folder

Select the Mac folder and double-click the SL-AUDIO file.

Windows users:

Go to the “Drivers USB for SP-1” folder

Select the Windows XP or Windows 7 folder, depending on your Windows installation.

Double-click “Setup32” if you have a 32 bit systems and “Setup64” for 64 bit systems.

Using the USB Streaming Audio Input

To stream music to the SP-1, connect your computer and SP-1 with a USB cable, select “USB” as input on the SP-1, and start playing music / video* files on your computer.

*To stream audio and video with the SP-1 Stereo Processor, the video must be streamed to the video display and the audio streamed to the SP-1 through the “USB Streaming audio input.” In the instance that the streaming audio and video are not synchronized correctly,

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delays need to be corrected in the video display or on the computer. Delays for video cannot be set in the SP-1.

Set Up

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 on page 19 for how to set this up.
- Connect speakers to the Steinway Lyngdorf amplifier(s).
- Connect Steinway Lyngdorf amplifier(s) to SP-1 Stereo Processor and to each other as shown in Speaker Routing on page 19.
- Connect audio sources to the SP-1 Stereo Processor.
- Connect power to the SP-1 Stereo Processor, the amplifiers, and all connected audio and video sources. The SP-1 Stereo Processor will automatically detect the voltage and does not have a mains voltage switch.
- 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.

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Menu Hierarchy

RoomPerfect™

Select Focus or Global settings

Voicing

Select between enabled voicings

Setup

Speaker

Distance

Distance unit

RoomPerfect™

Guided setup

Add focus position

Add room measurements

RoomPerfect™ status

Bypass enabled

Input

Input name

Input enable

Input sensitivity

Voicing setup

Default voicing

Voicing enable

Volume

Maximum volume

Default volume

Advanced

Software info

Lock setup

Factory reset

Software update

NOTE: Some menus will appear only when relevant. For example, “Add Focus Position” depends on a guided setup being performed.

Setup / Speaker

The Speaker menu allows you to select a configuration from a stored list of speakers. You initially select front speakers then bass speakers. Select NONE for bass speakers if you are running a pair of Model D speakers only.

Setup / Distance Unit

Select the unit of measure and subsequently enter the distances to the front speakers (and, if connected, for the woofers). The best results are obtained by using a laser-equipped

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measuring device. Before starting, place the RoomPerfect™ microphone at listening height in the main listening position. 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 the distance to the top back edge of the woofer. If in doubt, contact your Steinway Lyngdorf representative for guidance.

Do not measure distances at floor level, as these measurements will not give acoustically accurate results.

Setup / RoomPerfect™

Enter the Guided Setup for doing a RoomPerfect™ calibration. See RoomPerfect™ section on next page for a guide to setting up RoomPerfect™.

Setup / Input Name

Enter a unique reference for the source connected to the input selected. To select the letters, use 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 Enable

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

Setup / Input Sensitivity

Adjust the sensitivity from 0 to +24dB for the selected source to be at uniform level. Note: This is not volume-gain, it is volume-offset. For example, if an input is set to +12dB then the maximum volume for that input will be 87.9 on the SP-1 display. Going beyond 87.9 will increase the number on the display but not the volume.

Setup / Voicing

Select one voicing to be a default when the unit is turned on or select “Store Previous Voicing” to have the same voicing when powered on as when the SP-1 Stereo Processor is powered off. See page 23 for an overview of the voicing curves.

Setup / Volume / Maximum Volume

Set the maximum volume for daily volume control.

Setup / Volume / Default Volume

Set the default volume when you power on.

Setup / Advanced / Software info

Find the release versions of the software for the operating system and RoomPerfect™.

Setup / Advanced / Lock setup

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

Setup / Advanced / Factory Reset

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

Setup / Advanced / Software update

Save the new software on a USB stick and position the USB stick in the appropriate connector on the back of the SP-1. Enter the menu and select YES for updating the software. 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. In case of corrupted software, restart the SP-1 while the USB stick is still inserted. In case this doesn't resolve the problem, press and hold the standby button while turning on the power with the USB stick still inserted. In the unlikely event that problems persist, contact your local Steinway Lyngdorf representative for further assistance.

How to Set Up RoomPerfect™

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

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.

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.

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. The equalizer settings of a given voicing can be seen on the display of the amplifier.

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.

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.

Volume Setting

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.

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 – Clipping.” Reduce the volume and try again.

RoomPerfect™ Preparations

Place the RoomPerfectTM calibration microphone on the stand. Be sure to fasten the screws properly so the microphone does not move during a measurement.

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Plug the supplied microphone cable into the microphone.

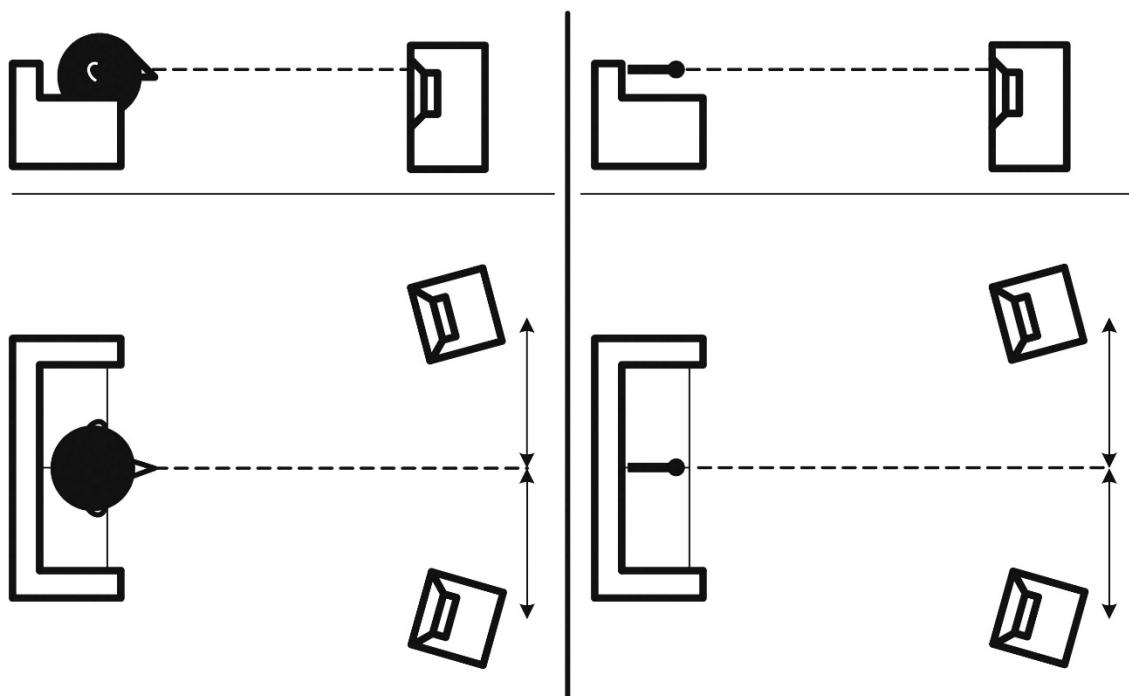
Connect the microphone cable to the microphone terminal on the rear panel of your processor.

Placing the Microphone in the Focus Position

When you are prompted to place the microphone in the focus position, connect the microphone to the microphone input on the back panel and 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.

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.

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.

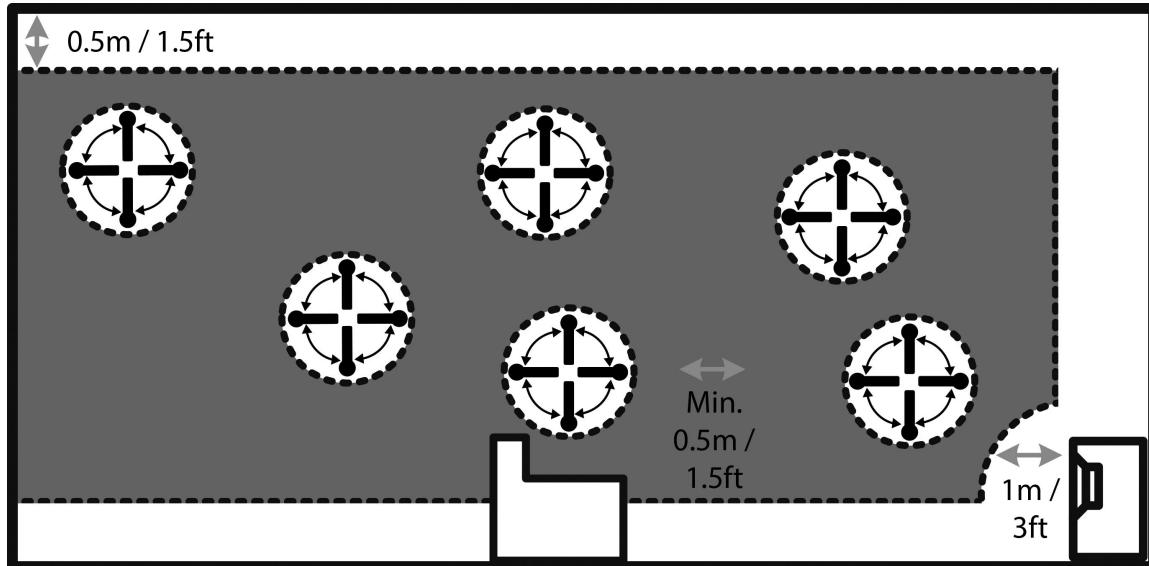
Measuring Random Room Positions

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 RoomKnowledge 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.

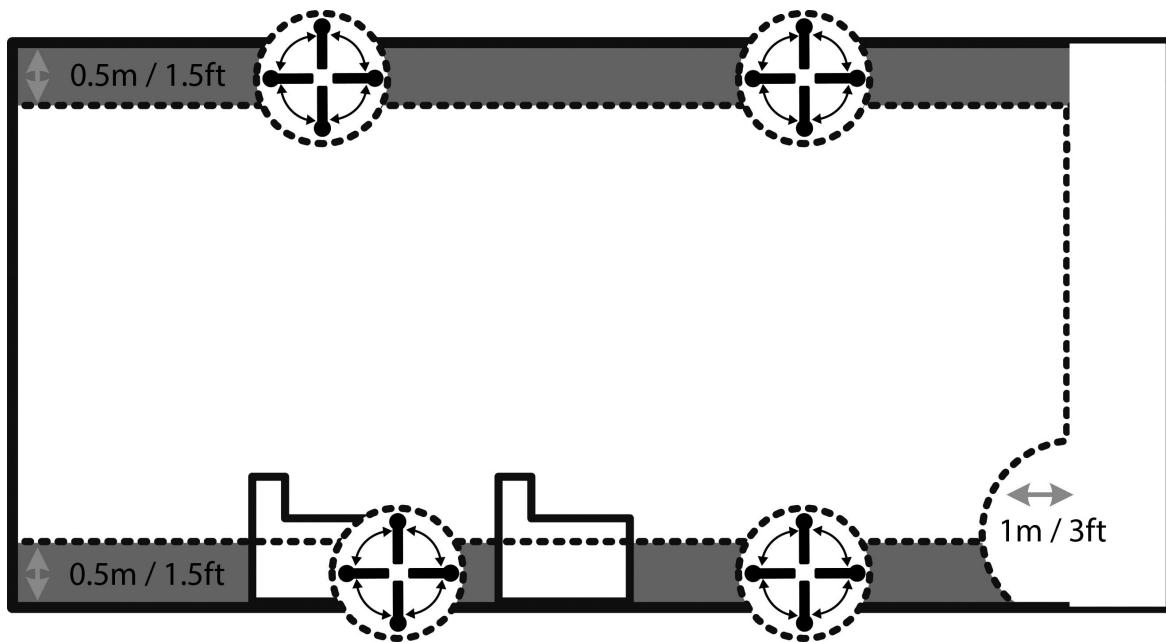
Room Measurements Above 90% RoomKnowledge

When RoomKnowledge has reached 90%, you can decide to add room measurements or do it at a later time. We recommend taking a couple of measurements within 50cm/.5ft of the walls and ceiling when above 90% RoomKnowledge.

To fully optimize RoomPerfect™'s understanding of the room's acoustical properties, we recommend you keep doing measurements until the RoomKnowledge is above 95%. The higher the RoomKnowledge, 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.



Advanced Setup

This menu is available only when Guided Setup has been completed.

RoomPerfect™ Information.

This menu shows how much the correction system knows about the room, and how much correction has been employed. RoomKnowledge 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 RoomCorrection index is a measure of how much processing is being employed in the room correction filters. To some extent, the RoomCorrection 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

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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 eight more Focus positions for the room, repeating the Focus 1 measurement procedure. You can also add room measurements to approach 100% RoomKnowledge.

Troubleshooting

RoomPerfect™

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 – No signal

This error message can 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, request a replacement microphone from Steinway Lyngdorf.

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 – Low Signal

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.

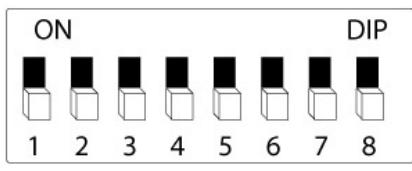
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Speaker Routing

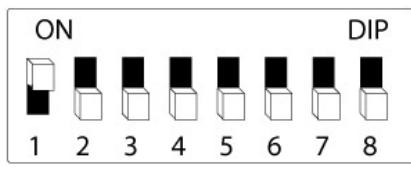
Assign ID Codes to the Steinway Lyngdorf Amplifier(s)

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 speaker. Each unit must have a sequential ID in the network.

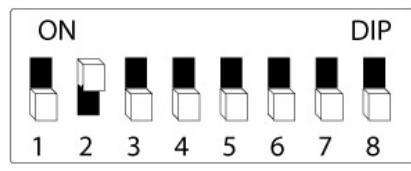
This is how daisy-chained amplifiers are setup correctly:



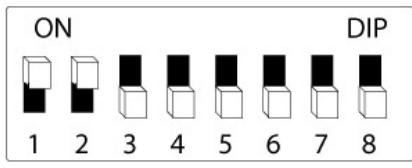
Amp. ID 0



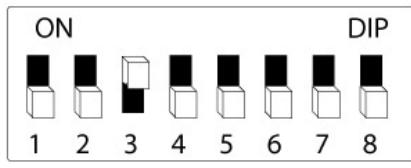
Amp. ID 1



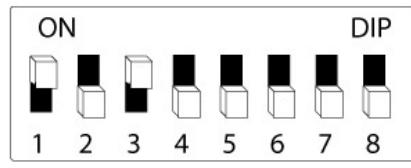
Amp. ID 2



Amp. ID 3



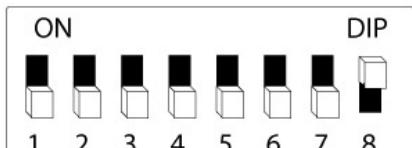
Amp. ID 4



Amp. ID 5

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.

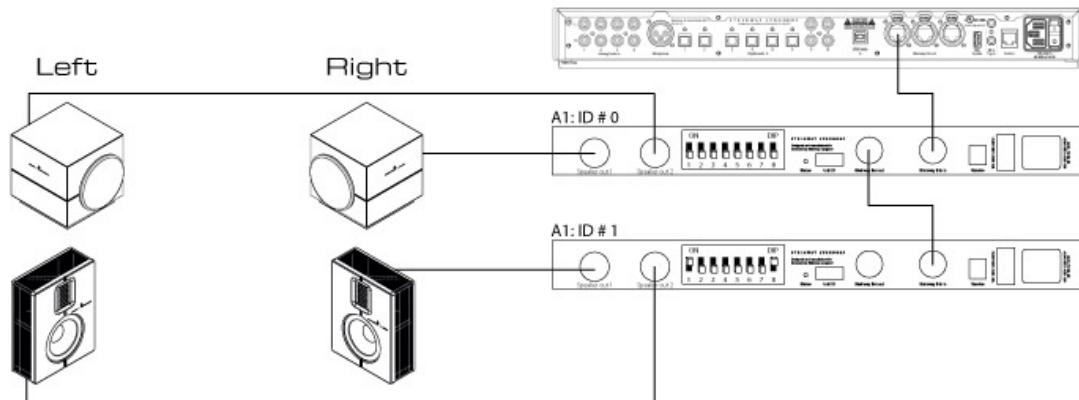


ID 0 with termination

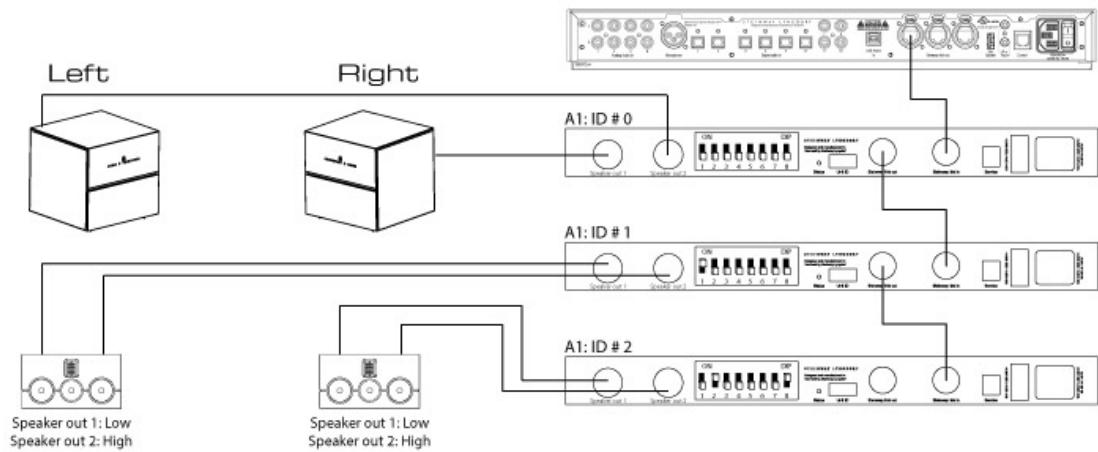
See the following pages for typical SP-1 speaker routing setups.

SP-1 with Model A1 Amplifiers

2 x 1-channel speakers and 2 x Woofers

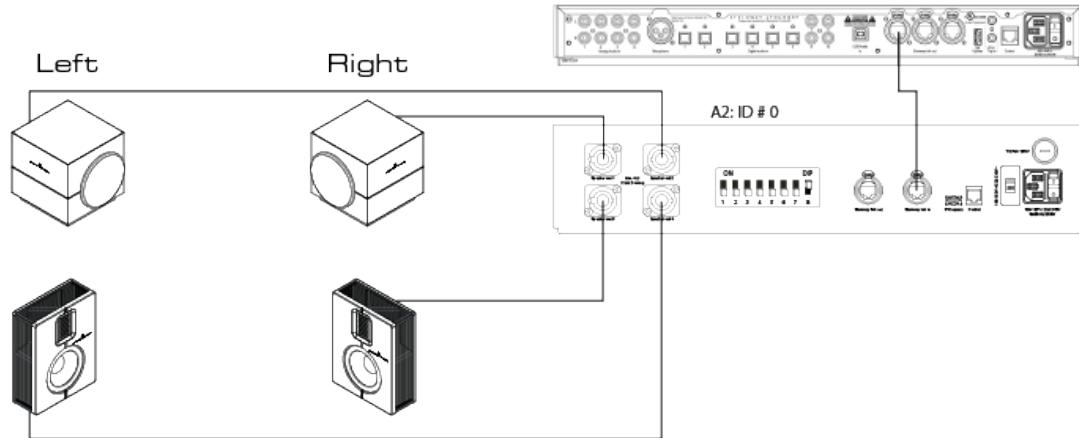


2 x 2-channel speakers and 2 x Woofers

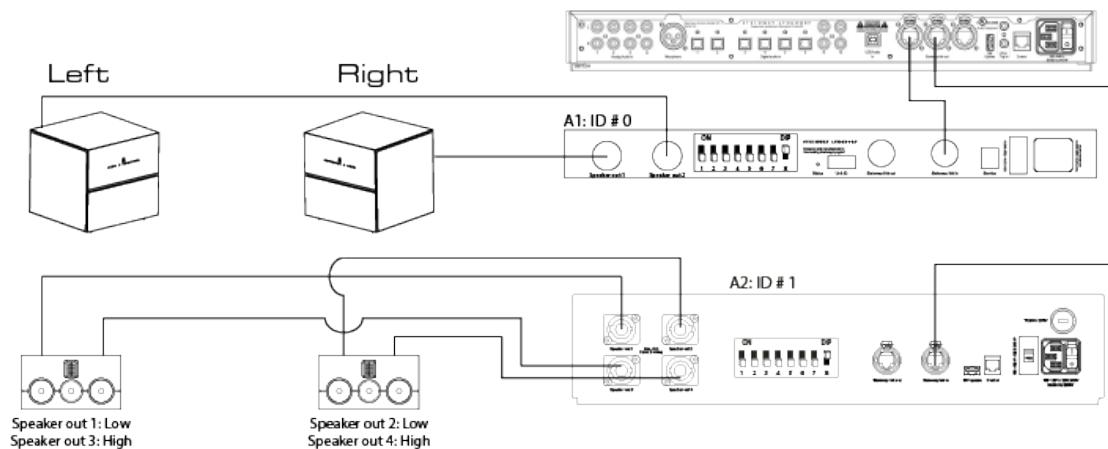


SP-1 with Model A2 Amplifiers

Speaker setup for two 1-channel speakers and two woofers

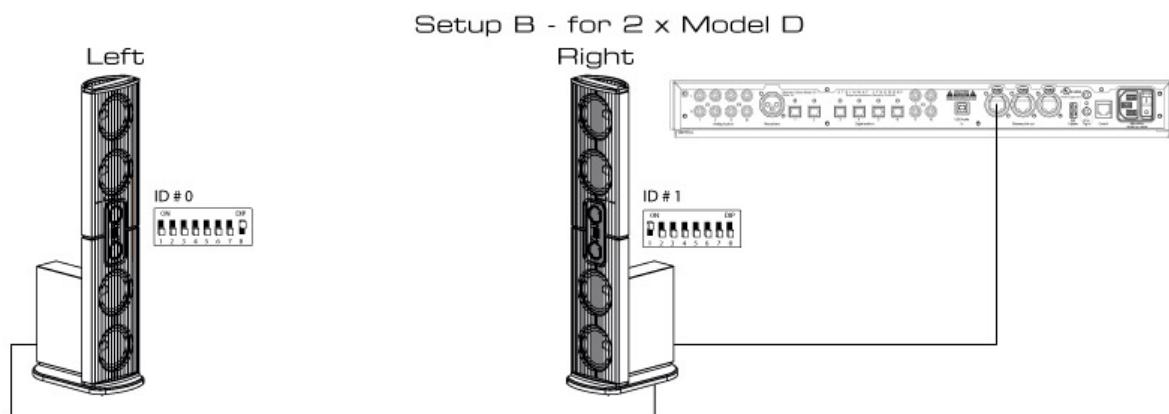
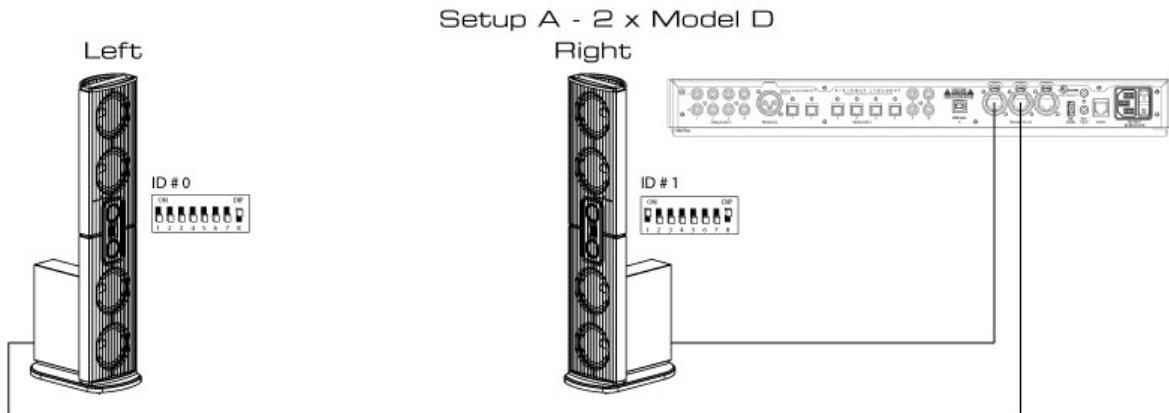


Speaker setup for two 2-channel speakers and two woofers



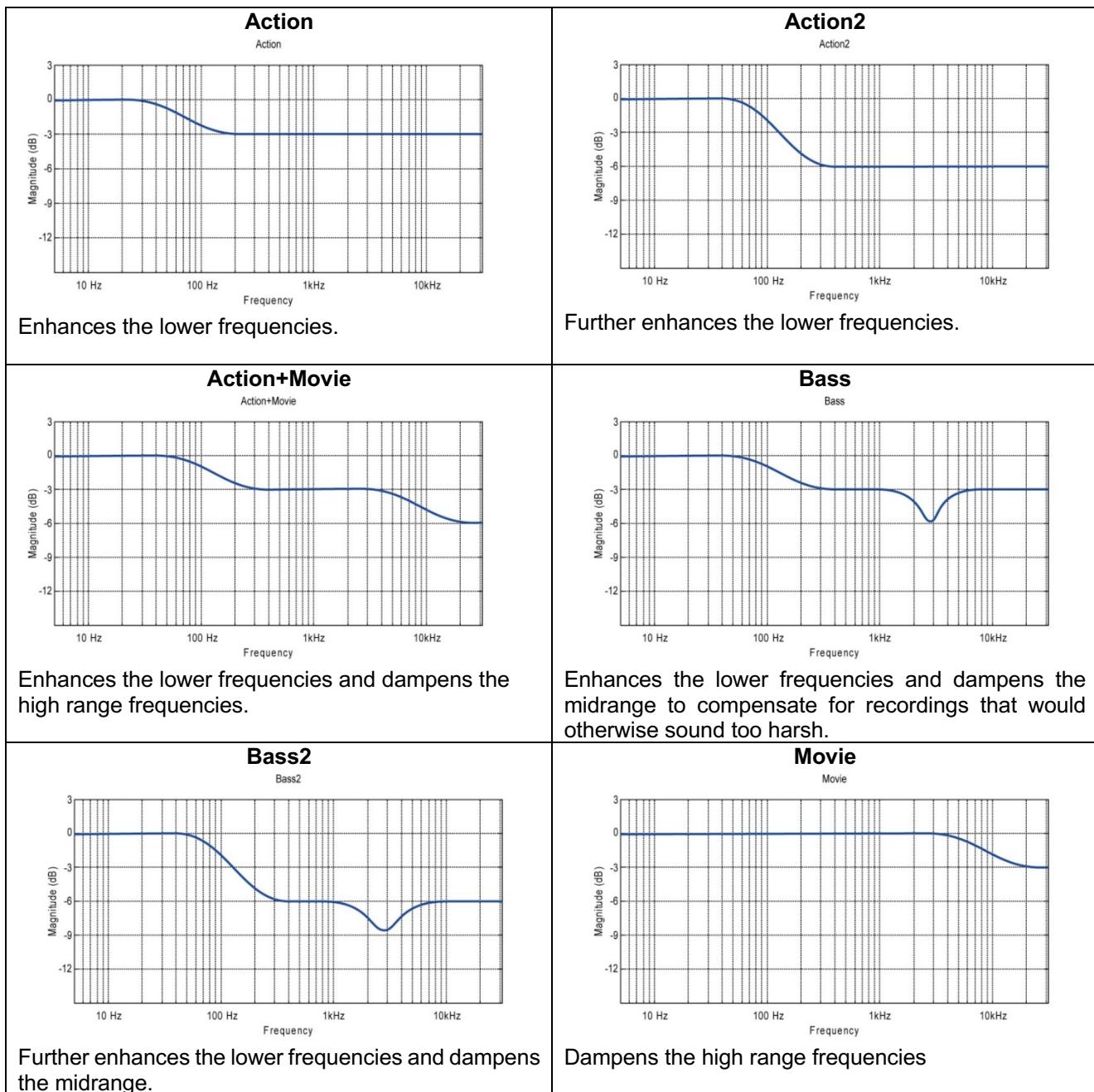
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SP-1 with Model D Speakers

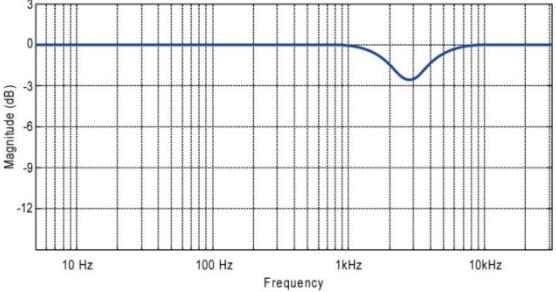
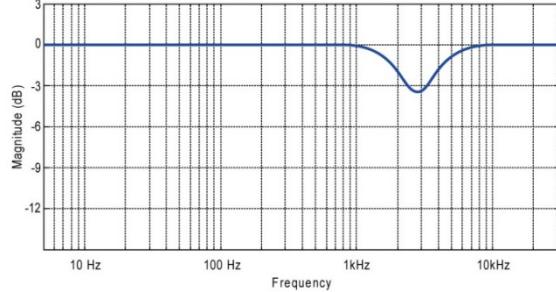
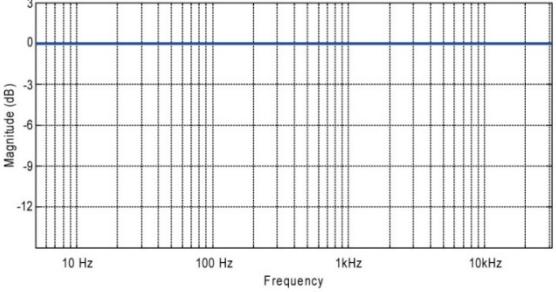
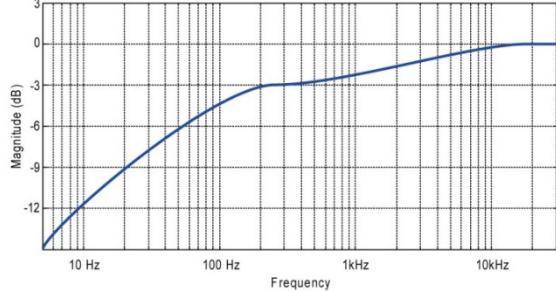
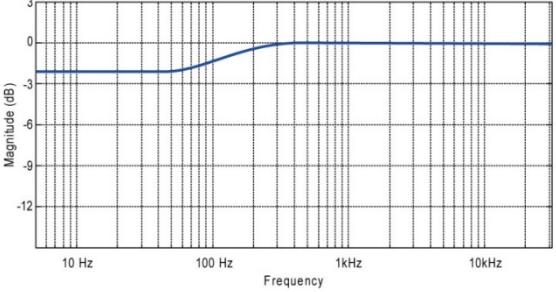
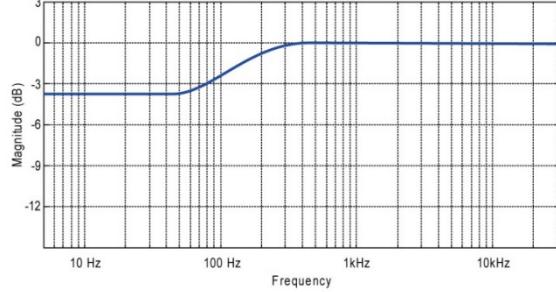
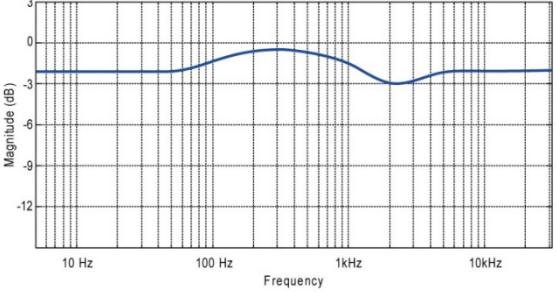
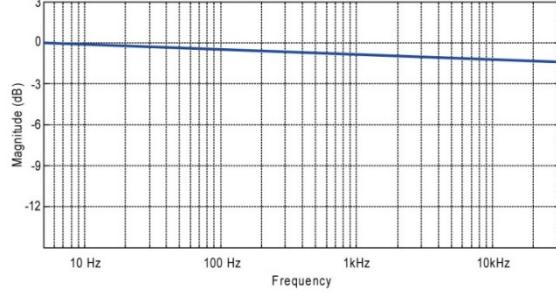


Voicing Curves

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.”



STEINWAY LYNGDORF

<p>Music Music</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Dampens the midrange to compensate for recordings that would otherwise sound too harsh.</p>	<p>Music2 Music2</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Further dampens the midrange.</p>
<p>Neutral Neutral</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>No change in tonal balance.</p>	<p>News News</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Cuts low frequencies for live broadcasting and sports events.</p>
<p>Open Open</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Dampens the low range frequencies</p>	<p>Open Air Open Air</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Further dampens the low range frequencies</p>
<p>Relaxed Relaxed</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Dampens the low and midrange frequencies.</p>	<p>Soft Soft</p>  <p>Magnitude (dB)</p> <p>10 Hz 100 Hz 1kHz 10kHz Frequency</p> <p>Dampens upper tones slightly, making bright tracks warmer and more balanced.</p>

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)
OUTPUT	ANALOG: 4 x single-ended; Input for microphone 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

Serial Control Manual

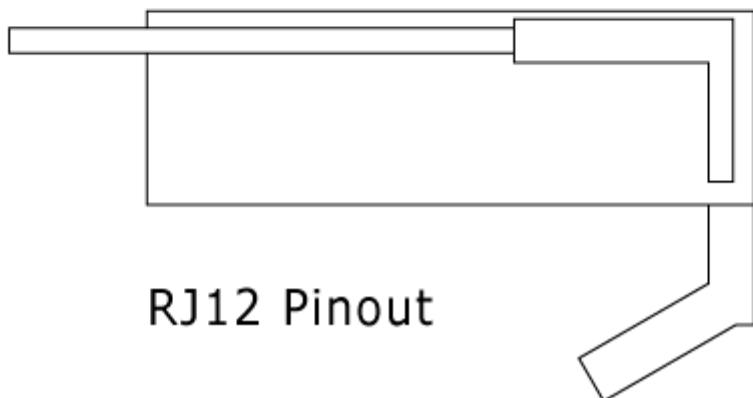
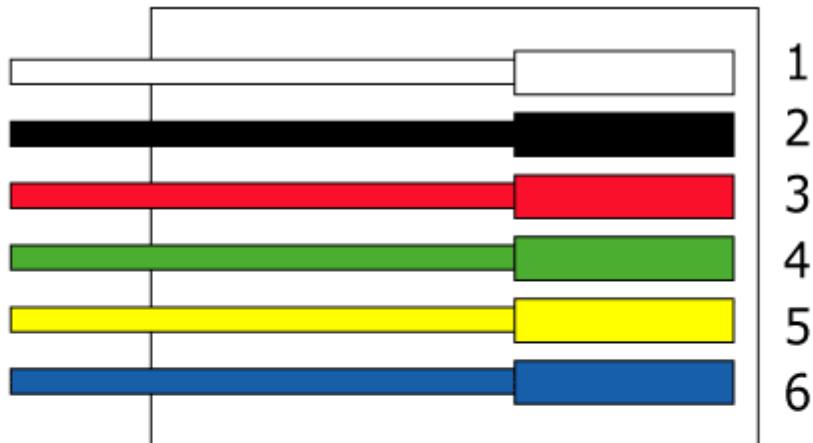
IP Control Settings

Open a TCP connection to port 50042 on the MCB-1 and then use the same text-based protocol for control as is used on the RS-232 port on the SP-1.

Serial Settings

The serial port settings are always 8 data bits, no parity and one stop bit with a baud rate of 115200.

Pin Out Diagram for RS232 CABLE



Pin 4 = GND

Pin 5 = Rx

Pin 6 = Tx

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Command and Request Formatting

All commands and requests start with the ‘!’ character.

Commands end with a combination of the Carriage Return character (ascii 0x0D, referred to as <CR> in this document) and Line Feed (ascii 0x0A, <LF>). Often, a single <CR> is used, but because different systems handle these characters differently, it is also allowed to end with <LF>, <CR><LF> or even <LF><CR>. In this document, it is expected to be <CR><LF>, but all of these combinations are allowed.

Requests end with the character ‘?’ and <CR><LF> (or any <CR><LF> combination as above).

Both commands and requests can have parameters; these are enclosed in parentheses.

Replies to a request are formatted as the request with the reply values as parameters. Replies always use the <CR><LF> combination of line-end characters.

Commands and requests are not case sensitive.

In addition, it is possible to subscribe to status changes from the device. In this situation, whenever a status has changed (new source, new voicing etc.) the device will send a status. This status is formed exactly like a reply to a request, except it is followed by the character ‘!’ before the <CR><LF> to indicate that this is an asynchronous message, not a reply.

!COMMAND<CR><LF>	Command
!COMMAND(param)<CR><LF>	Command with parameter
!REQUEST?<CR><LF>	Request
!REQUEST(param)?<CR><LF>	Request with parameter
!REQUEST(reply)<CR><LF>	Reply to a request
!REQUEST(status)!<CR><LF>	A status which has changed

Commands and requests which are malformed or have invalid parameters will be ignored. If a command or request is correct but followed by garbage before the line end character(s), the command or request will be executed and the garbage ignored.

Requests

The following requests are available on the SP-1:

Request name	Action	Reply
!VER?<CR><LF>	Requests the SW version in the SP-1	!VER(1.23a)<CR><LF> If the version is 1.23a
!DEVICE?<CR><LF>	Requests the type of device	An SP-1 will reply with: !DEVICE(SP-1)<CR><LF> Unless a CDP1 is connected on the link, then the reply will be: !DEVICE(SP-1,CDP-1)<CR><LF>
!PWR?<CR><LF>	Requests the current power state.	!PWR(OFF)<CR><LF> or !PWR(ON)<CR><LF>
!VOL?<CR><LF>	Requests the current volume.	!VOL(v)<CR><LF> Where the value of v is the volume ranging from -980 to 120 in steps of 0.1 dB.
!MUTE?<CR><LF>	Requests the mute status.	!MUTE(ON)<CR><LF> or !MUTE(OFF)<CR><LF>
!SRC?<CR><LF>	Requests the currently selected input source.	!SRC(n)<CR><LF> Where n is the currently selected source. For possible values see Input Source Numbering on page Fejl! Bogmærke er ikke defineret..
!SRCNAME(n)?<CR><LF>	Requests the name of input source number n. For legal values of n see the table in Input Source Numbering on page Fejl! Bogmærke er ikke defineret..	!SRCNAME(n,Name)<CR><LF> Where n is the number of the input source and "Name" is a string with the name of the requested input source.
!SRCENABLED?<CR><LF>	Requests the list of input sources which are enabled by the user.	!SRCENABLED(b)<CR><LF> Where b is a bitmask (16 bits) indicating which source inputs are enabled by the user. Bit0 (LSB, rightmost bit in the string) indicates the status for source input 0 etc.
!VOI?<CR><LF>	Requests the currently selected voicing.	!VOI(n)<CR><LF> Where n is the selected voicing. For possible values see Voicing Numbering on page Fejl! Bogmærke er ikke defineret..

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!VOINAME(n)?<CR><LF>	Requests the name of voicing number n. For legal values of n see Voicing Numbering on page Fejl! Bogmærke er ikke defineret..	!VOINAME(n,Name)<CR><LF> Where n is the number of the voicing and "Name" is a string with the name of the requested voicing.
!VOIAVAILABLE?<CR><LF>	Requests the list of which voicings are available in the device.	!VOIAVAILABLE(b)<CR><LF> Where b is a bitmask (16 bits) indicating which voicings are available in the system. Bit0 (LSB, the rightmost bit in the string) indicates the status for Voicing 1, Bit1 for Voicing 2 etc. Voicing 0 (Neutral) is always available.
!VOIENABLED?<CR><LF>	Requests the list of which voicings are enabled in the device.	!VOIENABLED(b)<CR><LF> Where b is a bitmask (16 bits) indicating which voicings are enabled by the user. Bit0 (LSB, the rightmost bit in the string) indicates the status for Voicing 1, Bit1 for Voicing 2 etc. Voicing 0 (Neutral) is always enabled.
!RP?<CR><LF>	Requests the currently selected RoomPerfect™ position.	!RP(n)<CR><LF> Where n is the currently selected position. 0 = Bypass 1-8 = Focus positions 1-8 9 = Global
!RPSTATUS?<CR><LF>	Requests the status of filters in the RoomPerfect™ module.	!RPSTATUS(b)<CR><LF> Where b is a bitmask (8 bits) indicating which focus positions are present. Bit0 (LSB, the rightmost bit in the string) indicates whether Focus1 is present, Bit1 indicates Focus2 etc. If any Focus positions are present, the Global filter will also be available. <u>Example:</u> !RPSTATUS(00000101) In this example Focus 1 and Focus 3 are present, and since there are focus positions, the global position will also be present.

Requests for CDP-1

The following requests are available if a CDP-1 is connected on the link:

Request name	Action	Reply
!CDVER?<CR><LF>	Requests the SW version in the CDP-1	!VER(1.23a)<CR><LF> If the version is 1.23a
!CDSTATE?<CR><LF>	Requests the current state.	One of: !CDSTATE(OFF)<CR><LF> !CDSTATE(OPENING)<CR><LF> !CDSTATE(OPEN)<CR><LF> !CDSTATE(CLOSING)<CR><LF> !CDSTATE(NODISC)<CR><LF> !CDSTATE(DISCERROR)<CR><LF> !CDSTATE(READING)<CR><LF> !CDSTATE(PLAY)<CR><LF> !CDSTATE(STOP)<CR><LF> !CDSTATE(PAUSE)<CR><LF> !CDSTATE(WIND)<CR><LF> !CDSTATE(REWIND)<CR><LF>
!CDTRACK?<CR><LF>	Requests the number of the track currently being played.	From !CDTRACK(1)<CR><LF> to !CDTRACK(99)<CR><LF> or !CDTRACK(-)<CR><LF> if no track is currently being played
!CDNOFTRACKS?<CR><LF>	Requests the number of tracks on the current disc.	From !CDNOFTRACKS(1)<CR><LF> to !CDNOFTRACKS(99)<CR><LF> or !CDNOFTRACKS(-)<CR><LF> if there is no current disc.
!CDTIME?<CR><LF>	Requests the elapsed time of the playing track.	Reply format: !CDTIME(1:23)<CR><LF> or !CDTIME(-0:01)<CR><LF> where the '-' indicates, that the CDP-1 is currently in the pause between tracks, counting down to start.
!CDREMTIME?<CR><LF>	Requests the remaining time of the current track.	Reply format: !CDREMTIME(3:21)<CR><LF> or !CDREMTIME(-0:01)<CR><LF> where the '-' indicates, that the CDP-1 is currently in the pause between tracks, counting down to start.

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!CDPLAYMODE?<CR><LF>	Requests the current play mode.	!CDPLAYMODE(m) , where m is one of: 0 = Normal play mode 1 = Repeat disc 2 = Repeat track 3 = Random play
!CDTRACKNAME?<CR><LF>	Requests the trackname from cd-text info for the current track.	!CDTRACKNAME(Name Of Track)<CR><LF> or !CDTRACKNAME()<CR><LF> if no data is present for the track name.
!CDTRACKARTIST?<CR><LF>	Requests the trackartist from cd-text info for the current track.	!CDTRACKARTIST(Artist Name)<CR><LF> or !CDTRACKARTIST()<CR><LF> if no data is present for the track artist.
!CDDISCNAME?<CR><LF>	Requests the discname from cd-text info for the current disc.	!CDDISCNAME(Name Of Disc)<CR><LF> or !CDDISCNAME()<CR><LF> if no data is present for the disc name.
!CDDISCARTIST?<CR><LF>	Requests the discartist from cd-text info for the current disc.	!CDDISCARTIST(Artist Name)<CR><LF> or !CDDISCARTIST()<CR><LF> if no data is present for the disc artist.

Commands

The following commands are available on the SP-1.

Command name	Action
!OFF<CR><LF>	Turns the SP-1 off.
!ON<CR><LF>	Turns the SP-1 on.
!PWR<CR><LF>	Toggles power on the SP-1. Same functionality as the standby button on the front.
!VOLDN<CR><LF>	Decreases the volume 1 step (0.5 dB).
!VOLUP<CR><LF>	Increases the volume 1 step (0.5 dB).
!VOLCH(d)<CR><LF>	Changes the volume by the deltaxvalue d. An example to turn down the volume by 3.2 dB: !VOLCH(-32)<CR><LF> Note: This function will handle volume in steps of 0.1 dB!
!VOL(n)<CR><LF>	Sets the volume to the value n, where n is between -980 and 120. If n is higher than the maximum volume, volume will be set to the maximum volume. Note: This function will round the volume to steps of 0.5 dB.
!MUTEON<CR><LF>	Mutes the SP-1.
!MUTEOFF<CR><LF>	Demutes the SP-1.
!MUTE<CR><LF>	Toggles mute.
!MAXVOL(n)<CR><LF>	Sets the maximum volume to n, where n is between -600 and 120. If the maximum volume requested is less than the default volume of the system, the maximum volume will be set to the default volume.
!DEFVOL(n)<CR><LF>	Sets the default volume to n, where n is between -980 and the current value of the maximum volume.
!SRCNDN<CR><LF>	Selects the previous enabled input source. Same functionality as rotating the input selector on the front counter clockwise.
!SRCUP<CR><LF>	Selects the next enabled input source. Same functionality as rotating the input selector on the front clockwise.
!SRC(n)<CR><LF>	Selects the source n if it is enabled. For valid values of n refer to Input Source Numbering on page Fejl! Bogmærke er ikke defineret..
!SRCALL(n)<CR><LF>	Selects the source n even if it is not enabled. For valid values of n refer to Input Source Numbering on page Fejl! Bogmærke er ikke defineret..

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!SRCDIS(n)<CR><LF>	Disables source n. For valid values of n refer to Input Source Numbering on page Fejl! Bogmærke er ikke defineret..
!SRCEN(n)<CR><LF>	Enables source n. For valid values of n refer to Input Source Numbering on page Fejl! Bogmærke er ikke defineret..
!SRCNAME(n,Name)<CR><LF>	Sets the source name of input source number n to the string "Name". For valid values of n refer to Input Source Numbering on page Fejl! Bogmærke er ikke defineret.. Name can be a maximum of 15 characters.
!RPDN<CR><LF>	Selects the previous RoomPerfect™ position.
!RPUP<CR><LF>	Selects the next RoomPerfect™ position.
!RPBP<CR><LF>	Selects the RoomPerfect™ bypass position, if it is enabled.
!RPFOC(n)<CR><LF>	Selects RoomPerfect™ focus position n, where n is between 1 and 8.
!RPGLOB<CR><LF>	Selects the RoomPerfect™ global position.
!VOIDN<CR><LF>	Selects the previous voicing.
!VOIUP<CR><LF>	Selects the next voicing
!VOL(n)<CR><LF>	Selects voicing number n. For possible values see Voicing Numbering on page Fejl! Bogmærke er ikke defineret..
!VOIEN(n)<CR><LF>	Enables voicing number n if it is available. For possible values see Voicing Numbering on page Fejl! Bogmærke er ikke defineret..
!VOIDIS(n)<CR><LF>	Disables voicing number n. For possible values see Voicing Numbering on page Fejl! Bogmærke er ikke defineret..
!SUBSCRIBE<CR><LF>	Activates subscription mode. After sending this command, status changes in the device will cause a status information to be sent. The following status changes will cause a status information: Input changed RoomPerfect™ position changed Voicing changed Device has powered on or off Device has been muted or demuted Subscription mode is active until power has been removed from the device or unsubscribe command has been received.
!UNSUBSCRIBE<CR><LF>	Deactivates subscription mode. No more status information will be received.
!SUBSCRIBEVOL<CR><LF>	Activates subscription mode for volume information. After receiving this command, the device will send information whenever the volume has been changed on the device. Volume subscription mode is active until power has been removed from the device or unsubscribevol command has been received.
!UNSUBSCRIBEVOL<CR><LF>	Deactivates volume subscription mode.

Commands for CDP-1

The following commands are available if a CDP-1 is connected on the link:

Command name	Action
!CDEJECT<CR><LF>	Opens or closes the tray. Same functionality as the eject button on the front.
!CDPLAY<CR><LF>	Play.
!CDPAUSE<CR><LF>	Pause.
!CDPLAYPAUSE<CR><LF>	Toggles between play and pause. Same functionality as pressing the rotary button on the front.
!CDSTOP<CR><LF>	Stop.
!CDPREV<CR><LF>	Requests the previous track. If the disc is currently at track 1, the last track on the disc will be selected. Same behavior as turning the front rotary knob counter-clockwise.
!CDNEXT<CR><LF>	Requests the next track. If the disc is currently at the last track, the first track on the disc will be selected. Same behavior as turning the front rotary knob clockwise.
!CDREWIND<CR><LF>	Start scanning backwards.
!CDWIND<CR><LF>	Start scanning forwards.
!CDSTOPWIND<CR><LF>	Stop the scanning started by one of the above commands.
!CDDIGIT(d)<CR><LF>	Corresponds to pressing the digit d on the remote in order to select a specific track.
!CDPLAYMODE(m)<CR><LF>	Select playmode, where m is one of: 0 = Normal play mode 1 = Repeat disc 2 = Repeat track 3 = Random play
!CDDISPMODE(m)<CR><LF>	Selects display mode, where m is one of: 0 = Elapsed time, no CD-Text info. 1 = Remaining time, no CD-Text info. 2 = Elapsed time, CD-Text info active. 3 = Remaining time, CD-Text info active.

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!CDSAMPLERATE(r)<CR><LF>	Selects a new samplerate for the output, where r is one of: 1 = 48 kHz 2 = 96 kHz 3 = 192 kHz
!CDSUBSCRIBESTATE<CR><LF>	Start subscription mode for the state of the CDP-1. Will send information whenever the state changes.
!CDUNSUBSCRIBESTATE<CR><LF>	Deactivates state subscription mode.
!CDSUBSCRIBETRACK<CR><LF>	Start subscription mode for track numbers. Will send information whenever a new track number is available
!CDUNSUBSCRIBETRACK<CR><LF>	Deactivates track subscription mode.
!CDSUBSCRIBETIME<CR><LF>	Start subscription mode for time. Will send information whenever new time info is available. If the current display mode displays remaining time, then the time send from the CD will also be remaining time.
!CDUNSUBSCRIBETIME<CR><LF>	Deactivates time subscription mode.
!CDSUBSCRIBEDISCTEXT<CR><LF>	Activates disc text subscription mode. Whenever a new disc is inserted, the disc name and disc artist will automatically be sent.
!CDUNSUBSCRIBEDISCTEXT<CR><LF>	Deactivates disc text subscription mode.
!CDSUBSCRIBETRACKTEXT<CR><LF>	Activates track text subscription mode. Whenever a new track is being played, track artist and track name will automatically be sent.
!CDUNSUBSCRIBETRACKTEXT<CR><LF>	Deactivates track text subscription mode.

Input Source Numbering

The following table shows which numbers corresponds to which inputs.

Number	Source Input
0	Optical Digital 1
1	Optical Digital 2
2	Optical Digital 3
3	Optical Digital 4
4	Optical Digital 5
5	Optical Digital 6
6	Coax Digital 7
7	Coax Digital 8
8	Coax Digital 9
9	Coax Digital 10
10	USB Digital 11
11	Analog 1
12	Analog 2
13	Analog 3
14	Analog 4

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Voicing Numbering

This table shows which numbers corresponds to which voicings. This is a total list of all voicings available in all systems. Not all systems are able to use all of these voicings.

Number	Voicing
0	Neutral
1	Music
2	Music 2
3	Relaxed
4	Open
5	Open Air
6	Soft
7	Action 1
8	Action 2
9	Movie
10	Action Movie
11	News
12	Bass
13	Bass 2

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IR Code Overview

Parameters for IrTool:

Carrier:006b
0:0015 0015
1:0015 0042

Lead In: 015a 00ae

Lead Out: 0015 00ae

NEC system 55
NEC nr - Function - Pronto CCF

1 BUTTON_UP

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 00ae

2 BUTTON_DOWN

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 00ae

3 BUTTON_LEFT

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 00ae

4 BUTTON_RIGHT

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 00ae

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5 BUTTON_OK

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0042 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

6 BUTTON_VOL_UP

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0042 0015 0042 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

7 BUTTON_VOL_DOWN

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

8 BUTTON_STANDBY

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0042 0015 0042 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

9 BUTTON_SRC_UP

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

10 BUTTON_MUTE

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0042 0015 0042 0015 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0042 0015 00ae

11 BUTTON_MENU

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015 0042
0015 0042 0015 0042 0015 0015 00ae

12 BUTTON_SRC_DOWN

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 00ae

128 BUTTON_DIG1

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 0015 00ae

129 BUTTON_DIG2

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 0015 00ae

130 BUTTON_DIG3

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015
0015 0015 0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042
0015 0042 0015 0042 0015 0015 00ae

131 BUTTON_DIG4

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0015 0015 0015 0015 0042 0015 0015 0015 0015 0042 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

132 BUTTON_DIG5

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

133 BUTTON_DIG6

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

134 BUTTON_DIG7

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

135 BUTTON_DIG8

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

136 BUTTON_DIG9

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

137 BUTTON_DIG10

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0015 0015 0015 0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

138 BUTTON_DIG11

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

139 BUTTON_AN1

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

140 BUTTON_AN2

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

141 BUTTON_AN3

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

142 BUTTON_AN4

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

144 BUTTON_BYPASS

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015 0042

S T E I N W A Y L Y N G D O R F

0015 0015 0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

145 BUTTON_FOCUS1

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0015 0015 00ae

146 BUTTON_FOCUS2

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

147 BUTTON_FOCUS3

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

148 BUTTON_FOCUS4

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

149 BUTTON_FOCUS5

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

150 BUTTON_FOCUS6

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0015 0015 0042

S T E I N W A Y L Y N G D O R F

0015 0015 0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

151 BUTTON_FOCUS7

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 0015 00ae

152 BUTTON_FOCUS8

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015
0015 0042 0015 0042 0015 0015 00ae

153 BUTTON_GLOBAL

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0042 0015 0042 0015 0015 00ae

160 BUTTON_NEUTRAL

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015
0015 0042 0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0042 0015 0042
0015 0015 0042 0015 0015 0015 00ae

161 BUTTON_VOICING1

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015
0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0042 0015 0042 0015 0042
0015 0015 0042 0015 0015 0015 00ae

162 BUTTON_VOICING2

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0042 0015 0015 0015 0042 0015 0042 0015 0015 0042 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

163 BUTTON_VOICING3

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

164 BUTTON_VOICING4

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

165 BUTTON_VOICING5

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

166 BUTTON_VOICING6

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

167 BUTTON_VOICING7

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0042
0015 0015 0015 0042 0015 0015 00ae

168 BUTTON_VOICING8

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0042 0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

169 BUTTON_VOICING9

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

170 BUTTON_VOICING10

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

171 BUTTON_VOICING11

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

172 BUTTON_VOICING12

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

173 BUTTON_VOICING13

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042
0015 0015 0015 0042 0015 0015 00ae

174 BUTTON_VOICING14

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0042 0015 0015 0042 0015 0015

S T E I N W A Y L Y N G D O R F

0015 0042 0015 0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0015 0015 00ae

175 BUTTON_VOICING15

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015
0015 0042 0015 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042
0015 0015 0015 0042 0015 0015 0015 00ae

240 BUTTON_ON

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 00ae

241 BUTTON_OFF

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 00ae

242 BUTTON_MUTE_ON

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 00ae

243 BUTTON_MUTE_OFF

0000 006b 0022 0000 015a 00ae 0015 0042 0015 0042 0015 0042 0015 0015 0015 0042
0015 0042 0015 0015 0015 0015 0015 0015 0015 0015 0015 0015 0042 0015 0015
0015 0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0015 0042
0015 0042 0015 0042 0015 0042 0015 0015 0015 0015 0015 0042 0015 0042 0015 0015
0015 0015 0015 0015 0015 0015 00ae

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