

**Basic Description**

The SPA-3 is an externally mounted two-channel precision attenuator accessory for DataPort-equipped QSC amplifiers. With pushbutton programming and digital gain control, it offers precise, secure, and repeatable attenuation settings from 0 to 32 dB. It features optional input isolation transformers custom-made for QSC by Jensen, providing superb common-mode noise rejection for high-performance sound systems.

The SPA-3 mounts directly to the rear panel of two-channel CX, DCA, and PowerLight 2 Series amplifiers. For use with four-channel models or with PowerLight amplifiers, the accessory can be mounted on an accessory rack-mount panel and connected to the amplifier via a VGA-type extension cable (with pin 9). See below for a more detailed list.

**Compatible amplifier models**

- Two-channel CX, DCA, and base PL2 models
- Four-channel CX and DCA models (via connecting cable)
- ISA models
- PowerLight models (via DPX-2 connecting cable and with DPX-1 external power supply; use DPX-4 accessory mounting bracket)

**Features**

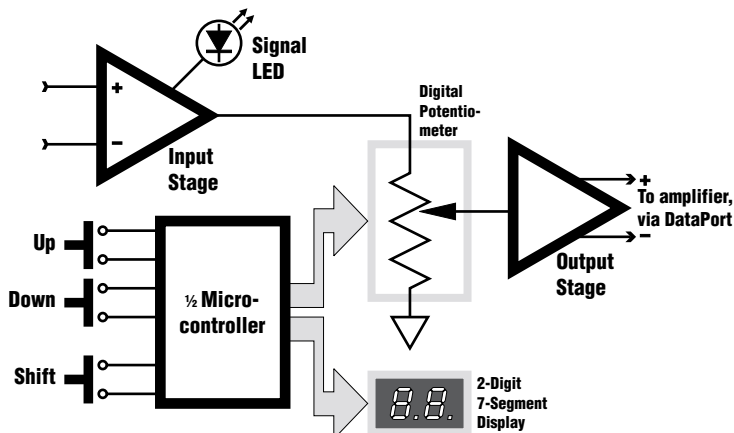
- Precisely attenuates signal up to 32 dB in increments as small as 0.5 dB
- Selectable increment scaling: 0.5 or 1 dB
- Low-noise, low-distortion, high-performance digital gain controls
- DataPort connectivity
- Balanced "Euro-style" inputs
- Optional high-performance input transformers to precisely balance and isolate amplifier inputs for superb noise rejection
- Channels can be independently muted, bypassed, or locked
- Easy to install



**SPA-3, shown with optional XF-1 transformers installed**

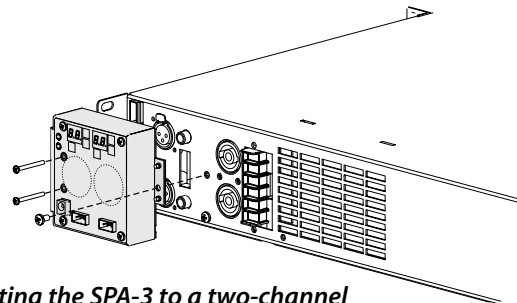
SPA-3 SPECIFICATIONS	SPA-3
<b>GENERAL INFORMATION</b>	
Operating temperature	0–70° C
Input type, each channel	Differential balanced (transformer balancing optional)
Input impedance	28.4 k $\Omega$ balanced, 14.7 k $\Omega$ unbalanced
Output impedance, main	95 $\Omega$ , quasi-balanced
Maximum RMS output voltage	+18 dBu
Noise (0 dBr = maximum output)	-116 dBr
THD @ +4 dBu out	<0.01% @ 1 kHz
Frequency response	20 Hz–20 kHz, $\pm 0.2$ dB
Common-mode rejection	>50 dB minimum; >60 dB typical
Power requirements	+15V @ <300 mA, via external power jack, or from amplifier via pin 9 of DataPort
<b>CONTROLS</b>	
Programming	Pushbutton switches for incremental programming: Shift, Up, and Down
<b>INDICATORS</b>	
Attenuation (each channel)	2-digit 7-segment LED display
Signal presence (each channel)	Green LED
0.5 dB indicator (each channel)	Decimal point
<b>CONNECTORS</b>	
Input (two channels)	5-pin "Euro-style" detachable terminal block
DataPort	HD15 male (to amplifier); HD15 female (to QSControl system)
External power	Coaxial jack
<b>PROGRAMMABLE OPERATING PARAMETERS</b>	
Attenuation	0 to 32 dB in 0.5- or 1.0-dB increments
Bypass, Mute, or Lock	Either channel

Specifications subject to change without notice.



Block diagram of SPA-3 (one channel shown)

Operation	Press ( $n$ = Channel #)
Increase signal (decrease attenuation)	<b>UP<sub>n</sub></b>
Increase signal (scroll)	Hold <b>UP<sub>n</sub></b>
Decrease signal (increase attenuation)	<b>DOWN<sub>n</sub></b>
Decrease signal (scroll)	Hold <b>DOWN<sub>n</sub></b>
Bypass/engage attenuation (toggle)	<b>SHIFT<sub>n</sub> + UP<sub>n</sub></b>
Increment step toggle (1 or 0.5 dB)	<b>SHIFT<sub>n</sub> + DOWN<sub>n</sub></b>
Display firmware version	<b>SHIFT1 + SHIFT2</b>
Mute/unmute Channel 1	<b>SHIFT2 + UP1</b>
Mute/unmute Channel 2	<b>SHIFT1 + UP2</b>
Lock/unlock Channel 1	<b>SHIFT2 + DOWN1</b>
Lock/unlock Channel 2	<b>SHIFT1 + DOWN2</b>



Mounting the SPA-3 to a two-channel CX, DCA, or PL2 amplifier