

PowerSwap

1000 Watt Musical Instrument Speaker Swapper



2 Year Limited Warranty

Sound Sculpture Musical Instrument Products (Sound Sculpture) warrants the PowerSwap to the original purchaser to be free of defects in material and workmanship under normal use for a period of 2 year from the date of purchase from an authorized Sound Sculpture dealer or directly from Sound Sculpture Musical Instrument Products.

Sound Sculpture's liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, and only if the product is returned for repair directly to Sound Sculpture or to the authorized Sound Sculpture dealer from which the unit was purchased.

Sound Sculpture reserves the right to make changes in design or make additions or improvements on the product without incurring any obligation to install the same on products previously manufactured.

Sound Sculpture shall not be liable for any consequential damage or loss of profits as a result of the use of this product even if Sound Sculpture is advised of the possibility of such damages or loss. In no event will Sound Sculpture's liability exceed the price paid for the product.

No other warranties are expressed or implied and Sound Sculpture neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of this product. In no event shall Sound Sculpture or its dealers be liable for special or consequential damages due to the use of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you.

In Case of Difficulty

In the unlikely event that you experience problems with the PowerSwap, please refer to the section in this manual pertaining to the operation you are having difficulty with. Very often the difficulty is simply a result of improper setup or programming and can be resolved by studying this manual.

If, after reading this manual, you are unable to resolve the problem email us at info@soundsculpture.com or call Sound Sculpture at (303) 442-1954 during normal business hours. If we are unable to resolve your problem over the phone and determine that the unit needs repair, you will be given a return authorization number and further procedures for returning the unit. **UNAUTHORIZED REPAIR OF THE PowerSwap BY ANYONE OTHER THAN THE FACTORY VOIDS THE WARRANTY. NO UNITS WILL BE ACCEPTED FOR REPAIR WITHOUT FIRST CONTACTING THE FACTORY FOR A RETURN AUTHORIZATION NUMBER.**

Precautions and safety notes

To reduce the risk of fire or electric shock, do not expose this unit to rain or operate this unit in a wet environment.

Use only the power module supplied with the unit unless you are qualified to use a substitute power supply. Use of another module or supply with incompatible specifications will void the warranty if damage occurs.

If the unit becomes physically damaged due to dropping or for other reasons, it should be returned to the factory for repair to avoid the risk of further damage to the unit or to attached units.

To avoid damage due to lightning, the power supply should be unplugged during an electrical storm.

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Introduction

The PowerSwap is a versatile accessory for electric musicians offering the ability to swap a single amp head power signal between two speaker cabinets. The PowerSwap inserts between the amplifier speaker connection and the speaker cabinets to be swapped.

The PowerSwap can be controlled 3 ways.

- Via MIDI using pre-assigned Program Change commands.
- Via MIDI using pre-assigned Control Change commands.
- Via a push/push or momentary style mechanical footswitch.

The PowerSwap incorporates a high quality double pole relay to swap both the ground and signal connections of the speakers. Up to 1000 watts of audio signal can be swapped using the PowerSwap.

Panel Features

The back panel of the PowerSwap has a MIDI IN jack, a MIDI THRU jack, and power connector. The front panel has three mono (tip-ring) ¼" jacks labeled "A", "B" and "COM" and 2 indicators. The "PWR" indicator illuminates whenever power is applied to the unit. The "B" indicator illuminates whenever the relay is activated to connect the "B" and "COM" circuits together.

Setting the PowerSwap MIDI Channel

The PowerSwap is factory set to MIDI channel 16. If this is an acceptable MIDI channel for your use than you do not need to do anything more. If you wish to set the unit to respond to another MIDI channel, then you will need to change the switch setting inside the unit.

To access the switch use a Phillip's head screwdriver to remove the 2 screws on the front panel. Slide the insides partially out by pulling the front panel away from the case. Inside you will find a 4 position switch that can be used to set the channel. If the switch is turned on then this indicates a "1" otherwise it indicates a "0". Use the following chart to determine the switch setting

for the channel you need.

CHANNEL	SWITCH	CHANNEL	SWITCH	CHANNEL	SWITCH	CHANNEL	SWITCH
1	0000	5	0100	9	0100	13	1100
2	0001	6	0101	10	0101	14	1101
3	0010	7	0110	11	0110	15	1110
4	0011	8	0111	12	0111	16	1111

After you have selected the MIDI channel slide the board back inside the case taking care that the board slides all the way in (you may need to push the bottom of the plastic bezel on the rear panel downward a slight amount while pushing the board in so the board goes all the way in). When the board is all the way in, attach the screws and lightly tighten the screw only enough to make contact with the panel. Do not overtighten the screw to avoid scratching the panel.

Connecting the PowerSwap to the Amp and Speakers

Connect the "speaker" jack of the amplifier to the "COM" jack using a standard 1/4" instrument cable and connect each of the two speakers to the "A" and "B" jacks on the PowerSwap using standard 1/4" instrument cables.

Connecting MIDI to the PowerSwap

Connect a standard MIDI cable between your MIDI foot controller MIDI OUT jack and the PowerSwap MIDI IN jack. Connect an additional cable between the MIDI THRU jack on the PowerSwap and the MIDI IN jack of the next MIDI device in your chain as you normally would. The PowerSwap does not interfere with the MIDI signal and simply passes through all data seen on the MIDI IN jack directly to the MIDI THRU jack. Power must be applied to the PowerSwap in order for MIDI data to pass through to the next device.

Connecting a Mechanical Footswitch to the PowerSwap

You may control the PowerSwap without MIDI by connecting either a push on/push off or a momentary mechanical footswitch to the MIDI IN port. In order for the unit to determine which style switch you are using a switch inside the unit must be set accordingly. Since most mechanical footswitches for musical instrument use are connected to a standard 1/4" jack, the jack will

have to be removed and wired instead to a standard 5 pin MIDI plug. The two wires going to the switch should be connected to the two outer most pins on the MIDI plug. The order does not matter.

When used with a push on/push off type switch, when the switch is in an off state, then the relay is turned off and the “A” jack is connected to the “COM” jack. When the switch is turned on, then the “B” jack is connected to the “COM” instead. **In order to use a push/push type switch with the PowerSwap, the right most switch (the switch labeled “0”) of the 4 position switch inside the unit must be turned to the “OFF” position.** The switch is factory set to the “ON” position, so must be changed if this style switch is used.

When used with a momentary footswitch, the relay will toggle to the alternate position each time the footswitch is pressed. **In order to use a momentary type switch with the PowerSwap, the right most switch (the switch labeled “0”) of the 4 position switch inside the unit must be turned to the “ON” position.** The switch is factory set to the “ON” position, so does not need to be changed when used with a momentary footswitch.

Connecting Power to the PowerSwap

Attach the supplied modular power supply to the power input on the PowerSwap. If you will be using a power substitute then it should supply 9V DC at 100ma using a 2.1mm connector with center pin positive. You can operate the unit safely with up to 12V DC supplies without damage. Operation beyond this voltage may cause damage to the unit and void the warranty if damage occurs. If you are unfamiliar with power supply substitutes then only use the supplied module.

Programming Your Foot Pedal to Operate the PowerSwap

To control the PowerSwap, you will need to program your MIDI foot pedal to send out either Program Change commands or Control Change commands when you press a switch on the pedal. Whether you use Program Change commands or Controller commands will depend on the foot pedal that you use and what you are trying to achieve. Every operation in the PowerSwap has a pre-assigned Program Change number and Controller number associated with it. There are a total of 3 Program Change commands and 1 Controller number that the unit will respond to, but in actual use you will only select some of these to achieve the desired result.

If your foot pedal only transmits Program Change commands, then these commands are what you will use to control the

PowerSwap. You can have a single switch toggle the unit or separate switches to go to either an on or off state. If your foot pedal has additional switches that send out two value Controller commands, sometimes referred to as “Instant Access” switches, you may use one of these switches as well to control the PowerSwap. Refer to the charts in the next sections to determine which Program Change commands or Controller numbers to use for your setup.

Refer to the chart to determine which Program change or Controller you should use.

Program number if using Program Change commands

Function	Program (0-127 range)
Toggle between speaker A or speaker B using a single switch	0
Connect amp to the speaker A	1
Connect amp to the speaker B	2

Controller number if using Control Change commands

Function	Controller Number
Toggle between speaker A and speaker B (0=speaker A 127=speaker B)	0