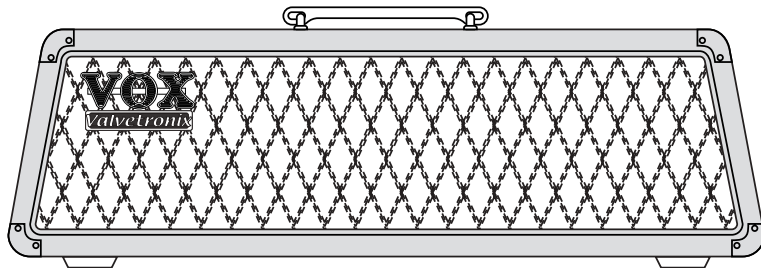


# Valvetronix

## Amplifier Heads

# AD60VTH & AD120VTH



~~Manual~~

~~"A Guitarist's Guide"~~

## Addendum



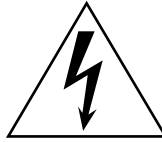
# IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Mains powered apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- Clean only with dry cloth.
- Do not block any ventilation openings, install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. (for U.S.A. and Canada)
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Turning off the power switch does not completely isolate this product from the power line so remove the plug from the socket if not using it for extended periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Do not install this equipment on the far position from wall outlet and/or convenience receptacle.
- Do not install this equipment in a confined space such as a box for the conveyance or similar unit.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with this apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



**WARNING:**  
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT  
EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>AVERTISSEMENT:</b> RISQUE DE CHOC ÉLECTRIQUE—NE PAS OUVRIR.		
<b>注意</b> 感電の恐れあり、キャビネットをあけるな		



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## THE FCC REGULATION WARNING (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

## CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).

Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

## IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

**WARNING:** Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty.

Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

# Introduction

## WELCOME ABOARD AGAIN!

**M**any thanks for adding a VOX Valvetronix head to your sonic arsenal. We're sure it'll give you countless hours of great guitar tones that will *feel* as good as they sound! You may have noticed that this is an addendum to the Combo Manual. This addendum will cover speaker connections and impedance settings for your AD60VTH or AD120VTH head. Everything else, and I mean everything else is already covered in the Combo Manual...I mean ***Guitarists Guide!*** So if you're sitting down, rocking out and have a few questions, crack open the "Guide" man! It's all there...except for what's here.

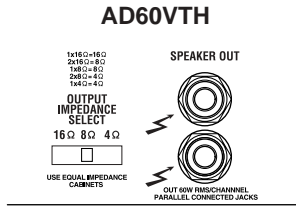
Right. Moving on. You'll notice that almost all the functions of these heads are identical to their combo brothers. So what's different and why am I reading this addendum do you ask? Did you read the above? Speaker connections and impedance settings, that's why! Let's move on shall we? ~~Footproof~~ er... guitarist friendly chart below, check it out...

**IMPORTANT NOTE:** Do NOT use a speaker cabinet with a Wattage rating of less than 60 Watts, or less than the output power you've selected with the POWER SELECT control (see page 20 in *A Guitarists Guide*). If you ignore this, you could end up blowing a speaker— and that's not recommended.

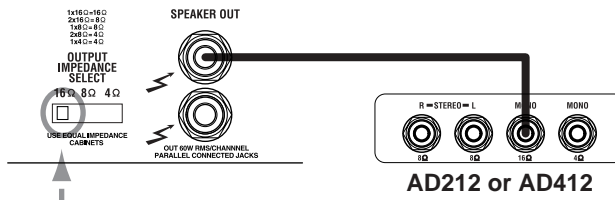
**ANOTHER IMPORTANT NOTE:** ALWAYS use speaker cables (unshielded) to connect speaker cabinets. NEVER use guitar (shielded) cables.

Do not connect or disconnect speaker cables whilst the amplifier is operational. Ensure that the amplifier is turned off before doing this.

# AD60VTH SPEAKER CONNECTION CHART

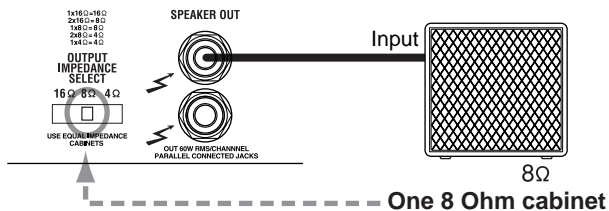


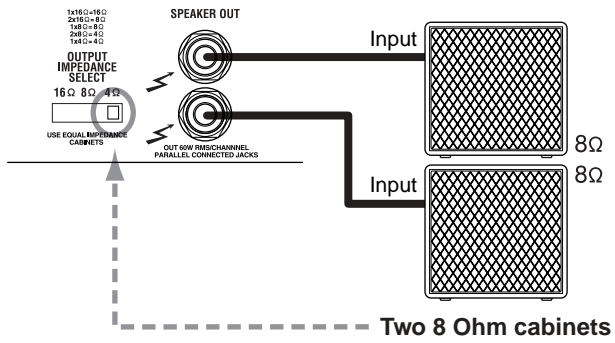
If you use:	Set Output Impedance Select to:	Use Speaker Jack:
AD212/AD412 mono	16 Ohms	Either one



One 16 Ohm cabinet	16 Ohms	Either one
One 8 Ohm cabinet	8 Ohms	Either one
One 4 Ohm cabinet	4 Ohms	Either one
Two 16 Ohm cabinets	8 Ohms	Both
Two 8 Ohm cabinets	4 Ohms	Both
<b>Two 4 Ohm cabinets</b>		

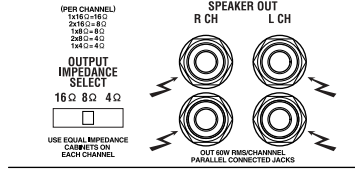
**DO NOT DO THIS. YOU WILL CAUSE DAMAGE!!!!!!**





# AD120VTH SPEAKER CONNECTION CHART

## AD120VTH

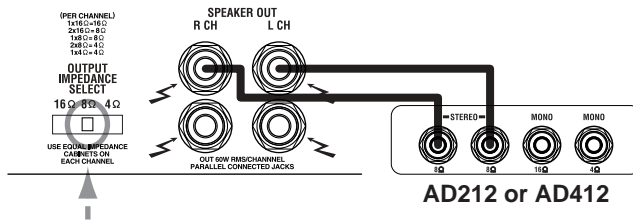


If you use: **Set Output Impedance Select to:** **Use Speaker Jack:**

\*\*AD212/AD412 Stereo

8 Ohms

One from L & R ch.

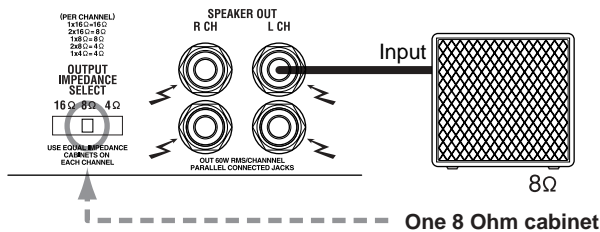


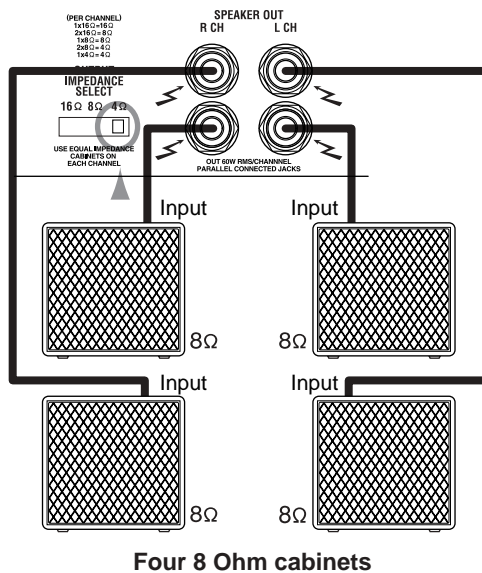
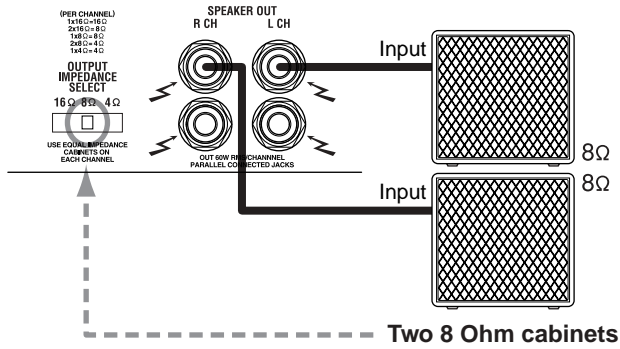
One 16 Ohm cabinet  
 One 8 Ohm cabinet  
 One 4 Ohm cabinet  
 Two 16 Ohm cabinets  
 Two 8 Ohm cabinets  
 Two 4 Ohm cabinets  
 Four 16 Ohm cabinets  
 Four 8 Ohm cabinets  
**Four 4 Ohm cabinets**

16 Ohms  
 8 Ohms  
 4 Ohms  
 16 Ohms  
 8 Ohms  
 4 Ohms  
 8 Ohms  
 4 Ohms

One from L or R ch\*  
 One from L or R ch\*  
 One from L or R ch\*  
 One from L & R ch.  
 One from L & R ch.  
 One from L & R ch.  
 All four. One for each cabinet  
 All four. One for each cabinet

**DO NOT DO THIS. YOU WILL CAUSE DAMAGE!!!!!!**





\*Because the AD120VTH is a stereo head running at 60 Watts per side, when you hook up a single cabinet to one side, you will only get 60 Watts in mono. You will not get the full effect of running this head at 120 Watts in stereo. We recommend stereo!!!!

\*\*This option is highly recommended! This will make you a rock star. OK, maybe not a rock star but you will sound great. If you don't have this cabinet...you need it. If you have it...stop reading and get on with playing your guitar!!!

## NERDY IMPEDANCE INFORMATION AHEAD

The following is some information that you'll find useful for hooking up your Valvetronix AD60VTH or AD120VTH head. When you're done with this, you'll be a smarter and better person! Plus you'll know the correct way for hooking up speaker cabinets in series or parallel.

In multiple speaker cabinet configurations, you will have to use a little mathematics (Ohm's law) in order to figure out the correct setting. Don't worry though; it's easier than you might think! The formula will depend on whether you are hooking the cabinet(s) up in series or parallel. Parallel is more common which is how the AD60VTH and AD120VTH work.

### Parallel

When using two cabinets of the same impedance in parallel, just divide the impedance of one cabinet by 2. For example, when using two 8 Ohm cabinets in parallel, set the impedance selector on the amp for 4 Ohms (8 divided by 2 equals 4). When using two cabinets and each is 16 Ohms set the amp for 8 Ohms. Here is the Ohm's Law formula for connecting two speakers (or cabinets) in parallel:

Let's take two 16 Ohm cabinets for this example:

$$R3 = \frac{16 \times 16}{16 + 16} = \frac{256}{32} = 8 \text{ Ohms}$$

### Series

In a series configuration, all you do is add the individual impedances of the cabinets. For example, if you hook up two cabinets, where each is 8 Ohms (8 plus 8), the result is 16 Ohms. If one cab is 8 Ohms and the other is 4 Ohms, the total impedance is 12 Ohms. There are no 12 Ohm settings on amps, so set your amp to 16 Ohms.

R1 is the impedance of our first cabinet; R2 is the impedance of the second one and R3 is the resulting impedance when they are hooked-up together.

$$R3 = \frac{R1 \times R2}{R1 + R2}$$

Using two cabinets of different impedance is a bit more complicated. Check it out...

Let's take one 16 Ohm cabinet and one 8 Ohm cabinet for this example:

$$R3 = \frac{16 \times 8}{16 + 8} = \frac{128}{24} = 5.33 \text{ Ohms}$$

If the minimum impedance of your amp is 8 Ohms do not use it with a 16 and 8 Ohm cabinet in parallel. If the minimum impedance of your amp is 4 Ohms, you are OK to go.



# Specifications

Number of amp types: 16

Number of effects:

Drive types: 10

Modulation types: 5

Delay types: 3

Reverb types: 3

Noise reduction: 1

Number of programs: 32 (8 bank x 4 channel)

Number of inputs:

AD60VTH

Top panel: 2 (High & Low)

Rear panel: 1 x Loop return

1 x Foot controller jack

AD120VTH

Top panel: 2 (High & Low)

Rear panel: 2 x Loop return

1 x Foot controller jack

Number of outputs:

AD60VTH

Rear panel: 1 x Loop send

1 x Phone out

1 x Line out

2 x Speaker out (Parallel connection)

AD120VTH

Rear panel: 2 x Loop send

1 x Phone out

2 x Line out

4 x Speaker out

L ch: 2 x Speaker out (Parallel connection)

R ch: 2 x Speaker out (Parallel connection)

Power output

AD60VTH: 60 Watts RMS @8 ohm

AD120VTH: 60 Watts RMS x 2 (L/R) @8 ohm

Tuning range: A0–C7 (27.5 Hz–2093 Hz)

Tuner calibration: A = 438–445 Hz

#### Signal processing

A/D Conversion: 20 bit

D/A Conversion: 20 bit

Sampling frequency: 48 kHz

Power supply requirements: AC local voltage

#### Power consumption

AD60VTH: 90 W

AD120VTH: 175 W

#### Dimension (W x D x H) (including protrusions)

AD60VTH: 690 x 272 x 250 (mm) / 27.17" x 10.71" x 9.84"

AD120VTH: 690 x 272 x 250 (mm) / 27.17" x 10.71" x 9.84"

#### Weight (including protrusions)

AD60VTH: 16 kg / 35.27 lbs.

AD120VTH: 18 kg / 39.68 lbs.

#### Accessories

Included: Power cable, Speaker cable (AD60VTH x 1 / AD120VTH x 2)

Optional: VC-4 Foot controller, AD212/AD412 Extension speaker cabinet

\*Specifications and features are subject to change without notice

*FOR MORE INFORMATION ON VALVETRONIX AMPLIFIERS PLEASE VISIT*  
**WWW.VALVETRONIX.COM**



# AD60VTH & AD120VTH

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