



Amplification for the Discriminating Musician™

# ValveTrain 416

## User Guide

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# Thank You!

We would first and foremost like to thank you for purchasing your amplifier from ValveTrain Amplification. Your selection means a great deal to us.

Just so you know where we stand on things...

We are committed to providing the most discriminating guitarists in the universe the best possible products in amplification.

We build a limited portfolio of hand wired amplifiers based off the most sought after circuits in history using the best parts available.

## Getting Started

There are several things you should know to get started with your new amplifier.

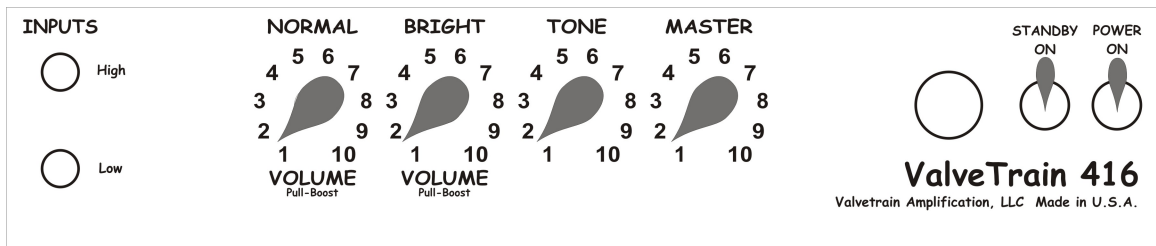
- There are no user serviceable items inside the chassis of this amplifier. For your own safety contact us directly, or take it to a qualified technician.
- ValveTrain Amplification is not responsible for your safety when using this device. We give you these basics to protect you and well as ourselves.
- Use Common Sense.
- Do not use the amplifier, or leave it plugged in when it is exposed to liquids. (This includes rain, water, soft drinks and beer.)
- Do not change tubes or fuses without first unplugging the amplifier.
- Use the correct replacement fuse in the event that it needs to be changed.
- Tubes can get extremely hot when the amplifier is in use. Please keep your children away from them, along with anyone else. They will get severely burned if they come in contact with the tubes when the amplifier is in operation or recently powered off.
- Do not use the amplifier when it is near drapery, furnishings, paper or anything else flammable. The heat from the tubes may possibly cause them to ignite. Maintain at least 6 inches of space around the unit while it is in operation.
- Instrument amplifiers by nature are intended to get loud. Respect your hearing and the hearing of others. Permanent damage may result.
- This amplifier comes with a grounded power cord (3 prong). Do not alter this and always make sure the unit is connected to properly grounded power of the correct voltage. (United States 120VAC, Europe 240VAC)
- Never run the amplifier without speaker(s) connected. You may cause major damage (not under warranty by the way) to the amplifier.

We've tried to do our part, you do yours...

Don't take chances.

# Operating the Amplifier

The control panel of the ValveTrain 416 looks like this:



There is a great deal of tonal flexibility in the controls of this amplifier.

There are 2 input hacks on the amplifier marked High and Low. These marking reflect the gain characteristic of each input.

There are 4 rotary controls and 2 pull switches on the control panel.

Master Volume – Controls the overall loudness of the amplifier. Using reduced setting on this control along with high settings of the Normal and Bright Volumes may be used to produce an overdrive sound.

Tone - Controls the overall brightness (Treble response) of the amplifier. Lower settings are darker and higher numbers are brighter.

Volume Controls - Probably the most interesting aspect of the 416 is the design of the initial gain stages. There are 2 volume controls, one for the Normal channel and one for the Bright channel. The two channels are internally isolated and “jumped”. This means that the player is able to blend the tonality of each channel into the overall mix. Because the channels are both active, the preamp tube is running in parallel operation producing more gain than is normally found in an amp of this style. Turning either volume control down, which eliminates that channel, returned the tone of the amp back to single voice operation. There are also two boost switches that activate a gain and low frequency boost on each channel. These act similar to a “Loudness” switch that you would find on a stereo receiver.

By controlling the boost on one channel or the other (as well as using neither or even boosting both at the same time), blending of the two distinct voices of the channels really opens up the tonal palette of this amp.

## Technical Info

Power Requirement:	120 or 240 Volts A.C. (Alternating Current) – Grounded Outlet
Power Output:	Approximately 16 Watts R.M.S.
Tuber Order:	Numbered 1 through 5 from RIGHT to LEFT as you look at the back of the amplifier.
Preamp Tubes:	12AX7 – This tube is located in position 1. 12AT7 – This tube is located in position 2.  Acceptable Alternatives: 12AY7 5751 ECC83 (Equivalent to 12AX7)
Power Tubes:	6V6GT Duet These are located in positions 3 and 4.
Rectifier Tube:	5Y3GT This is located in position 5.
Speaker Load:	The total recommended load for the amplifier is either 4 or 8 Ohms. The amps should operate without damage at 4, 8 or 16 Ohms. Do not run the amp with speaker loads above 16 Ohms or below 4 Ohms.
Speaker Outputs:	There are 2 Speaker jacks located on the underside of the chassis between Tubes #2 and #3. Please use the correct jack for the speaker load that you are using.
Speakers:	Eminence Patriot Series Red, White & Blues 12” This speaker is rated for: 8 Ohms and 120 Watts

## Tricks & Recommendations

### #1

Our Favorite Setting... (For Stratocasters, Telecasters and other Single Coil Guitars)

Set all 4 Controls between 7 and 8 and let it rip!!

### #2

Learn to use the Volume control on your guitar...

Back it down to cleanup the signal and get clean, shimmering tones.

Open it up to get the distortion that is normally associated with this amps forefather...

(The Fender 5E3 Deluxe)

### #3

Enjoy!!

# Warranty Information

Please be sure you understand the information on this page, we do our best, but we've got to have a few rules...

## **Our Warranty:**

We stand behind our products. We warrant our products to the original purchaser for a period of 1 year from the date of purchase.

If you send us the registration card within 30 days of purchase (proof of purchase required), we will extend the warranty 1 additional year.

The warranty covers parts and labor for our workmanship and all components except transformers, tubes and speakers, which are covered for 60 days.

For warranty service, send us the amp and we'll fix it. You pay the shipping costs both ways.

If the amp has been modified, abused or repaired by someone else, the warranty is void.

Any abused or damaged items are not eligible for warranty claims.

# Hardwood Cabinet Care

If your ValveTrain 416 comes with one of our hardwood cabinets, the care of it is just what you would expect to do for a fine piece of hand-crafted furniture (because that's exactly what it is!!).

The finish on the cabinet is hand rubbed nitro-cellulose lacquer.

You can use paste waxes, spray waxes or any other top quality furniture polish. We also recommend the Fender Instrument Care kit from Meguiar's.

Use a soft cloth and follow the instructions on whatever product you choose.

We do recommend keeping any of these products away from the control panel. Getting wax in the switches and controls is not a good thing!!