

# VHT SPECIAL 12/20

12-20 Watt Hand-Wired Vacuum Tube Guitar Amplifier

User Manual



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## IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this amplifier near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) 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.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the amplifier.
- 12) Unplug this amplifier during lightning storms or when unused for long periods of time.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the amplifier 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 amplifier, the amplifier has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 14) The amplifier shall not be exposed to dripping or splashing and no objects filled with liquids, shall be placed on the amplifier.
- 15) This amplifier shall be connected to a mains socket outlet with a protective earthing/ground connection.
- 16) The mains/power plug or amplifier coupler is the disconnect device which must remain readily operable.

**WARNING** To reduce the risk of fire or electric shock, do not expose this amplifier to rain or moisture.

## VHT SPECIAL 12/20

The Pedal-Friendly Amp with Selectable Power Ranges

Building on the success of the popular VHT Special 6 and Special 6 Ultra, the VHT Special 12/20 features increased power (with two power ranges), a unique preamp specifically designed to excel with pedals and multi-effects units, a convenient built-in 9-volt DC pedal power supply, an all-tube buffered effects loop with send and return level controls, variable Watts control, plus VHT's unique Depth and Texture controls.

To optimize the amp for a wide range of output tubes, the VHT Special 12/20 offers two output-power ranges; safely located behind the rear panel, a special voltage range switch provides the proper voltages for 6V6 or EL84 output tubes (in 12-watt low-voltage/low-power mode). The high voltage 20-watt setting provides the ideal voltages for higher-power 6L6 or EL34 output tubes. The Special 12/20 ships from the factory with a pair of 6V6 output tubes (VHT 6V6-to-EL84 socket adapters are required for operation with EL84 tubes). In addition, the Special 12/20's variable Watts control can reduce the maximum output power to less than one watt for whisper-quiet volume levels.

The Special 12/20 preamp was designed to bring the most out of every effects pedal and multi-effects unit with enhanced clarity, detail, and controlled tube compression. Its low-impedance buffered effects loop send — with variable send level — can effortlessly drive the most difficult pedals without tone or signal loss. Thanks to its variable send and return level controls, the 12/20's effects loop can accommodate a wide range of pedal or rack effects. Those seeking the shortest signal path to the output stage can plug their pedals or multi-effects units directly into to effects return jack — the 12/20's unique output stage Depth and Texture controls are post-effects loop, so the output stage characteristics can always be fine-tuned to accommodate a wide range of instruments, speakers, playing styles and environments.

As an added convenience for pedal users, the VHT Special 12/20 also features a built-in, regulated 9-volt DC pedal power supply.

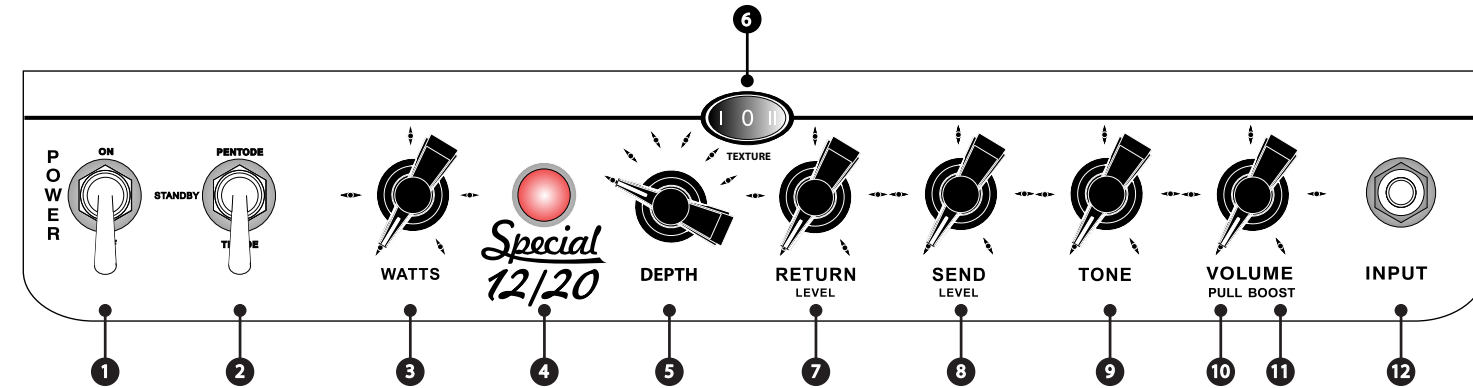
Hear your pedals like never before — with the VHT Special 12/20.

## VHT SPECIAL 12/20 FEATURES

12-20 Watts Maximum Output Power  
 High/Low Tube Voltage Switch  
 Two 6V6 Output Tubes  
 Accepts EL84 Output Tubes\*  
 Also Accepts 6L6 or EL34 Output Tubes  
 Three 12AX7 Preamp Tubes  
 Volume and Tone Controls  
 Footswitchable Boost Mode  
 Effects Loop Send and Return Level Controls  
 Tube-Driven Effects Loop  
 Tube-Driven Preamp Line Out  
 6-Position Depth Control  
 3-Position Texture Switch  
 Pentode/Standby/Triode Switch  
 Watts Control  
 9V DC Out Power Supply  
 12" VHT ChromeBack Speaker, 60-watt, 16 ohm (Combo Only)  
 Switchable 4, 8, or 16 Ohm Speaker Output  
 Mod-Friendly Eyelet-Type Board  
 Hand-wired

\*With VHT 6V6-to-EL84 Socket Adapters

## CONTROL PANEL FEATURES



**1. Power Switch:** This switch turns the amplifier on or off.

**2. Pentode/Standby/Triode:** The Triode setting reduces the amplifier's maximum output power to approximately one-half of the Pentode setting. Triode setting produces a richer and smoother tone, with earlier breakup than the Pentode setting. The middle position is Standby mode.

**3. Watts Control:** The Watts control adjusts the output tube's operating voltage and maximum output power. Maximum output power ranges from less-than 1 watt (fully counterclockwise) to 12 or 20 watts (fully clockwise).

**4. Jewel Light:** This light will be illuminated when the Power Switch is in the On position; the jewel light will be off when the Power switch is in the Off position.

## CONTROL PANEL FEATURES CONTINUED

**5. Depth Control:** This 6-position rotary switch selects the output tube's low-frequency roll-off point. Set fully clockwise for the deepest low-frequency extension. Lower settings (counterclockwise) expose more midrange texture and detail; the lowest settings emphasize more presence and bite. The three clockwise settings are voiced for single-coil pickups, and the three counterclockwise settings are voiced for humbucking pickups.

**6. Texture Switch:** This 3-position rocker switch selects the output's high-frequency roll-off point. The middle position provides maximum top-end extension and the most harmonically complex texture; the left position provides subtle high-frequency roll-off for a slightly smoother texture; the right position rolls-off more high frequencies for the smoothest texture.

**7. Send Level:** A pedal-friendly low-impedance tube-buffered effects send level control. Normal settings are between half and fully clockwise.

**8. Return Level:** A pedal-friendly high-impedance tube input effects return. Normal settings are between half and fully clockwise.

**9. Tone Control:** This control adjusts the balance of the high and low frequencies.

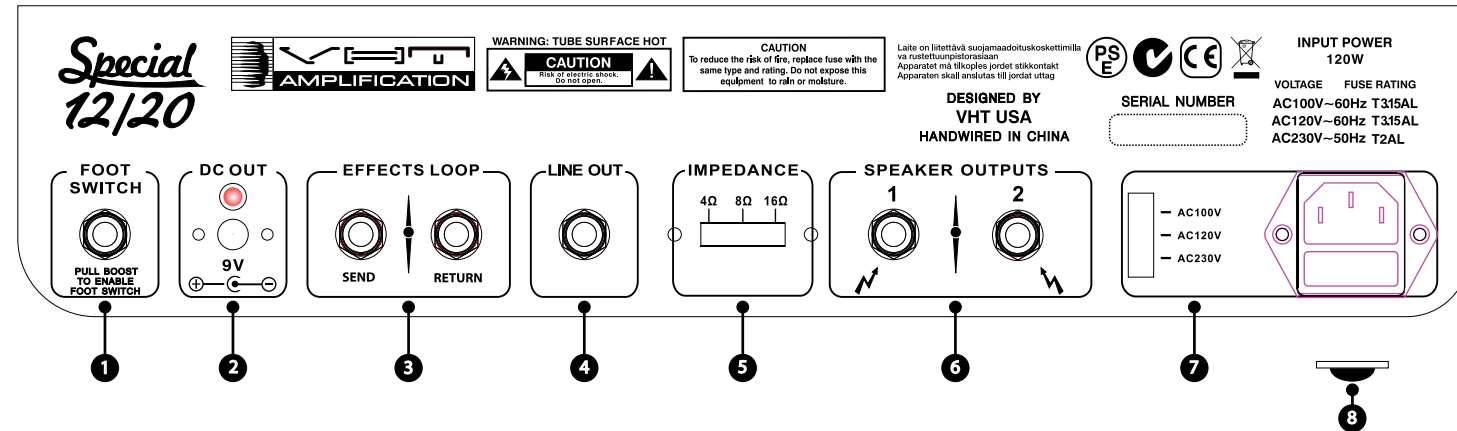
**10. Volume Control:** Turning this knob clockwise increases the preamp drive and overall sound level.

**11. Pull Boost:** Pull this knob to partially bypass the internal tone shaping/voicing circuitry, which boosts the preamp gain and increases the midrange emphasis. This feature can also be accessed by the footswitch.

**NOTE: THE BOOST FOOTSWITCH WILL ONLY FUNCTION WHEN THE VOLUME KNOB IS IN THE PULLED POSITION.**

**12. Input:** Pedal-friendly tube input, 1 megohm input impedance.

## REAR PANEL FEATURES



**1. Footswitch Jack:** Plug the Boost footswitch into this jack.

**NOTE: THE BOOST FOOTSWITCH WILL ONLY FUNCTION WHEN THE VOLUME KNOB IS IN THE PULLED POSITION.**

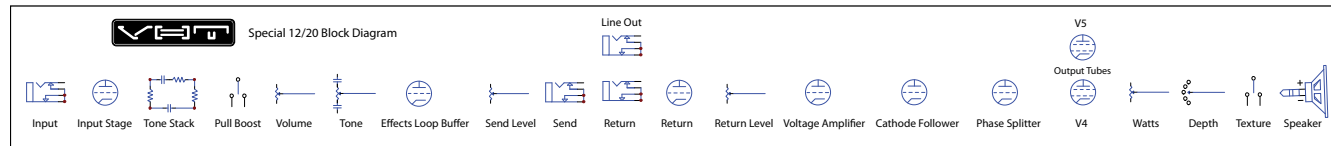
**2. 9V DC Out:** Plug the included 9V DC power supply cable into this jack to power your 9V DC pedal(s) or pedal board. The light will illuminate at all times when powered on, unless the internal 9V DC fuse has blown. Maximum current draw = 1,000 mA.

**3. Effects Loop Send and Return Jacks:** The post-preamp Effects Loop can accommodate a wide range of effects. The send level is dependent on the preamp gain. High preamp gain levels may overdrive some sensitive guitar-level effects pedals. Adjust the Effects Loop Send and Return levels for best pedal sound and lowest noise.

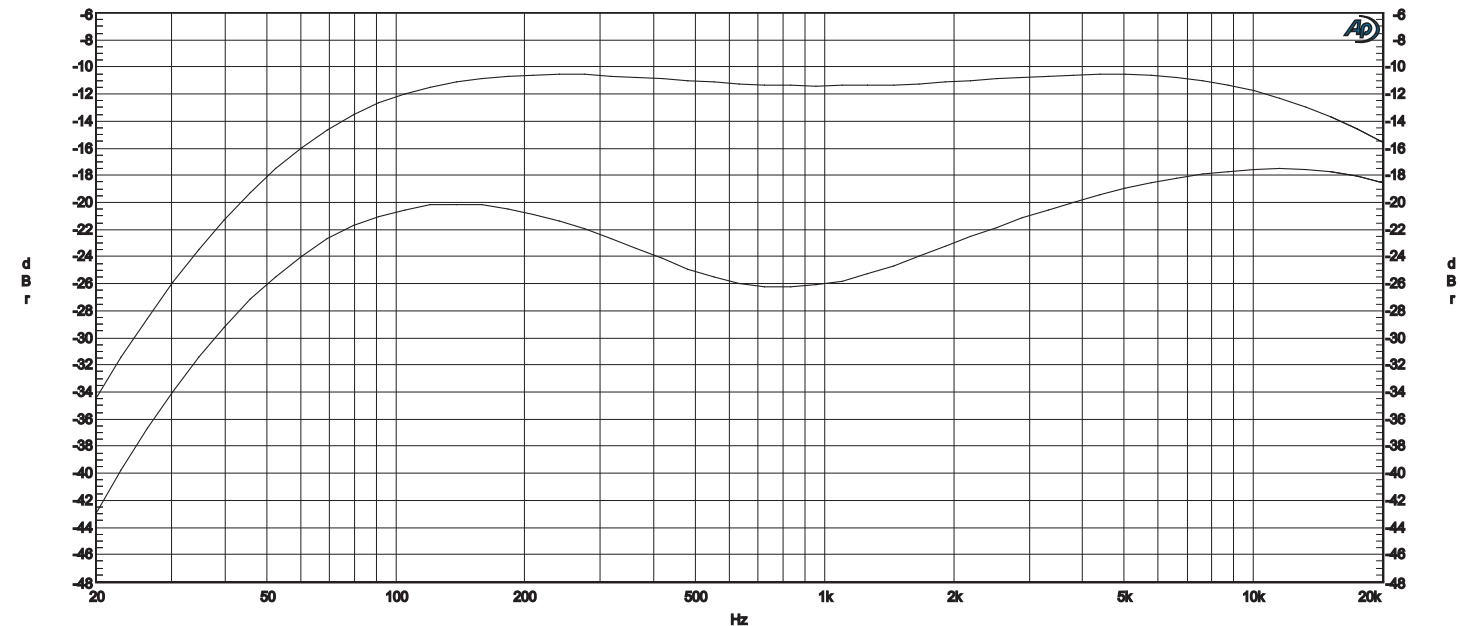
## REAR PANEL FEATURES CONTINUED

- 4. Line Out Jack:** The preamp Line Out is in parallel with the Effects Loop Send and Return jacks, it can be used to send a tube-buffered low-impedance (unbalanced) signal to other equipment such as mixing consoles or other amplifiers. Multiple Special 12/20 amplifiers can be linked by connecting the Line Out jack to the Effects Return of the second amplifier. Several Special 12/20's can be linked in this manner, with the first amplifier's preamp serving as the master preamp for all additional amplifiers.
- 5. Impedance Selector:** This 3-position slide switch selects the appropriate output impedance to match your speaker cabinet's impedance.
- 6. Speaker Output Jacks:** These two jacks are wired in parallel. The Special 12/20 combo has a 16-ohm speaker that is connected to the internal speaker jack. The combo's speaker remains connected when using the external Speaker Output jacks. When using the combo with an additional speaker cabinet, switch the Impedance selector to 8 ohms.
- 7. Power IEC Receptacle/Line Voltage Selector:** Your amplifier will ship with the correct voltage setting, fuse and AC plug type for your region. When traveling to different countries, remove the plastic protector and select the appropriate voltage. For lowest noise and safest operation, always use the correct plug type for your region/country, and always provide the amplifier with proper AC grounding.
- 8. 12/20-Watt High/Low Power Voltage Selector:** Located behind the rear panel, this switch selects the appropriate maximum voltage for each output tube type. Set it to the 20-watt High Volt position when using 6L6 or EL34 output tubes. Set it to the 12-watt Low Volt position when using 6V6 or EL84 output tubes. (EL84 output tubes require 6V6-to-EL84 adapters.)

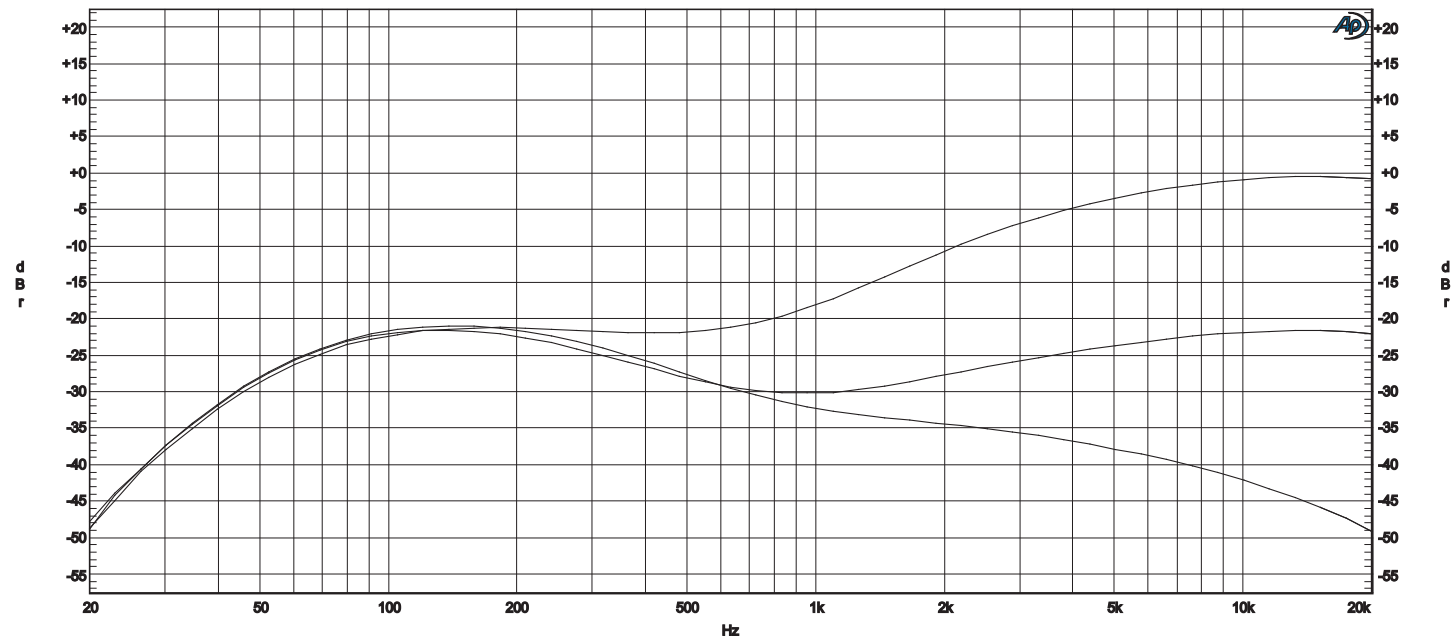
## BLOCK DIAGRAM



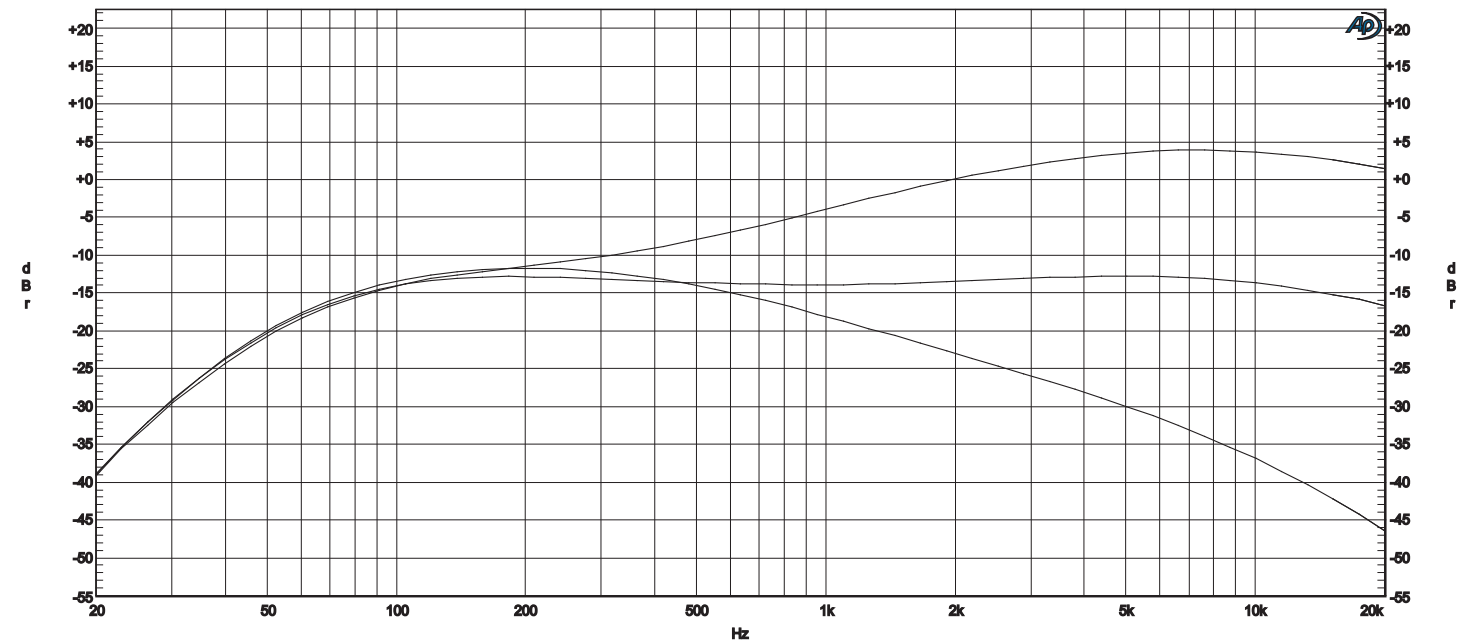
## BOOST — ON/OFF



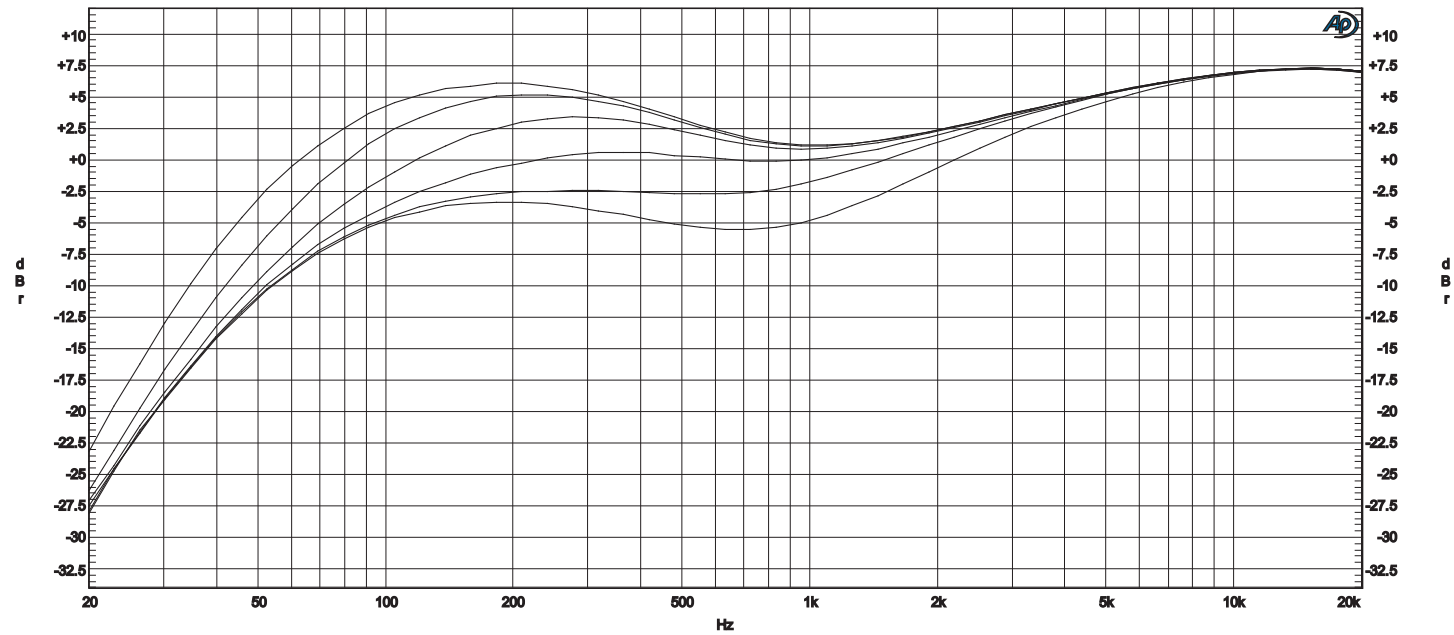
## TONE CONTROL — NO BOOST



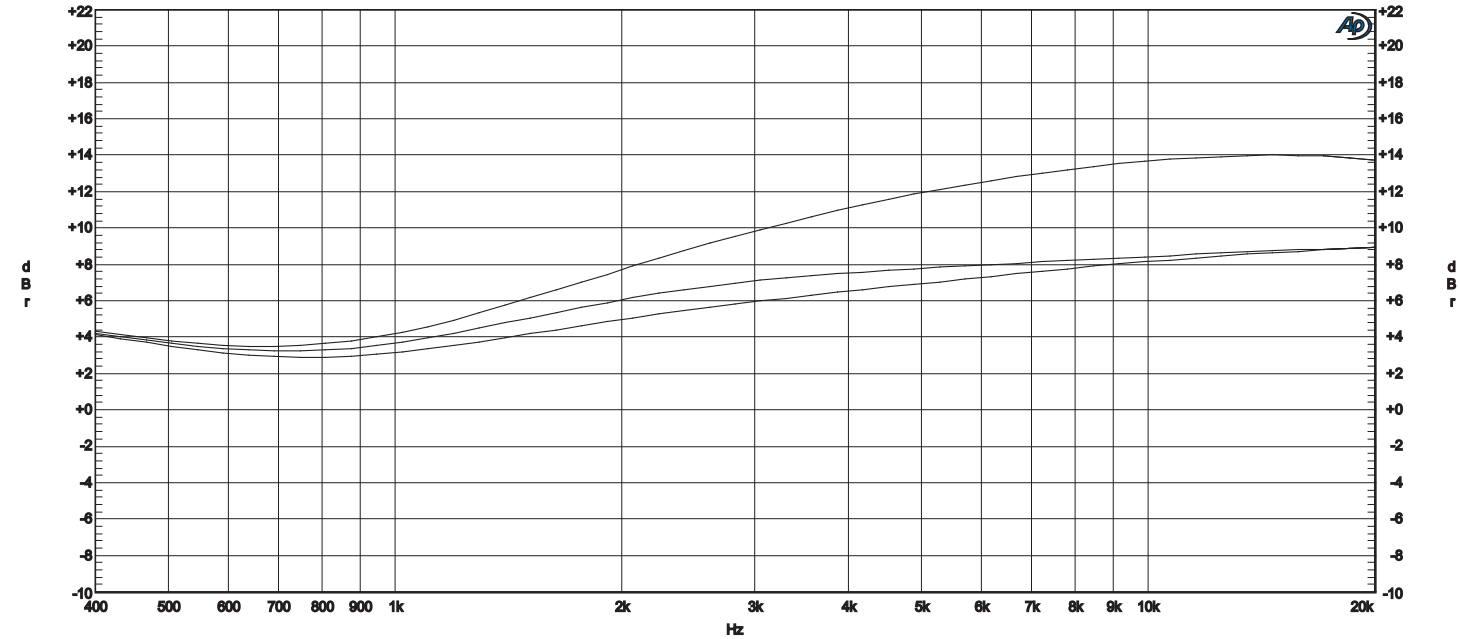
## TONE CONTROL — PULL BOOST



## DEPTH CONTROL — PREAMP INPUT (NO BOOST)

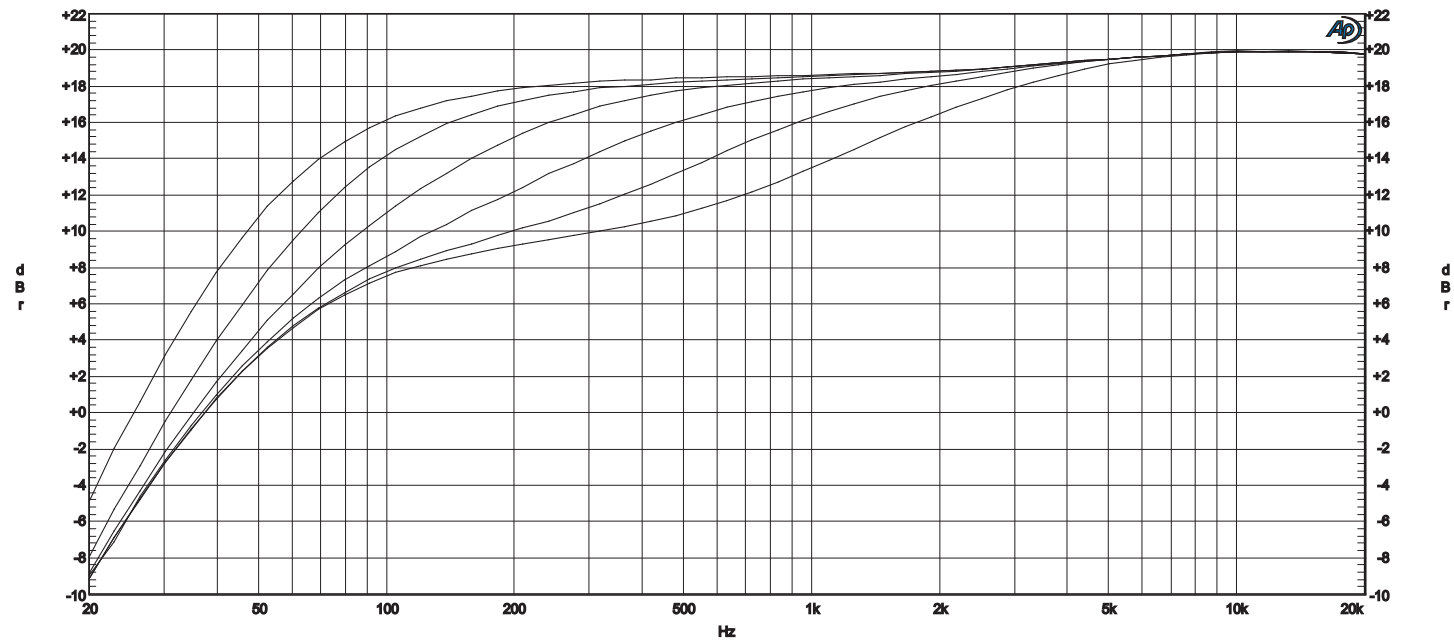


## TEXTURE SWITCH — PREAMP INPUT (NO BOOST)

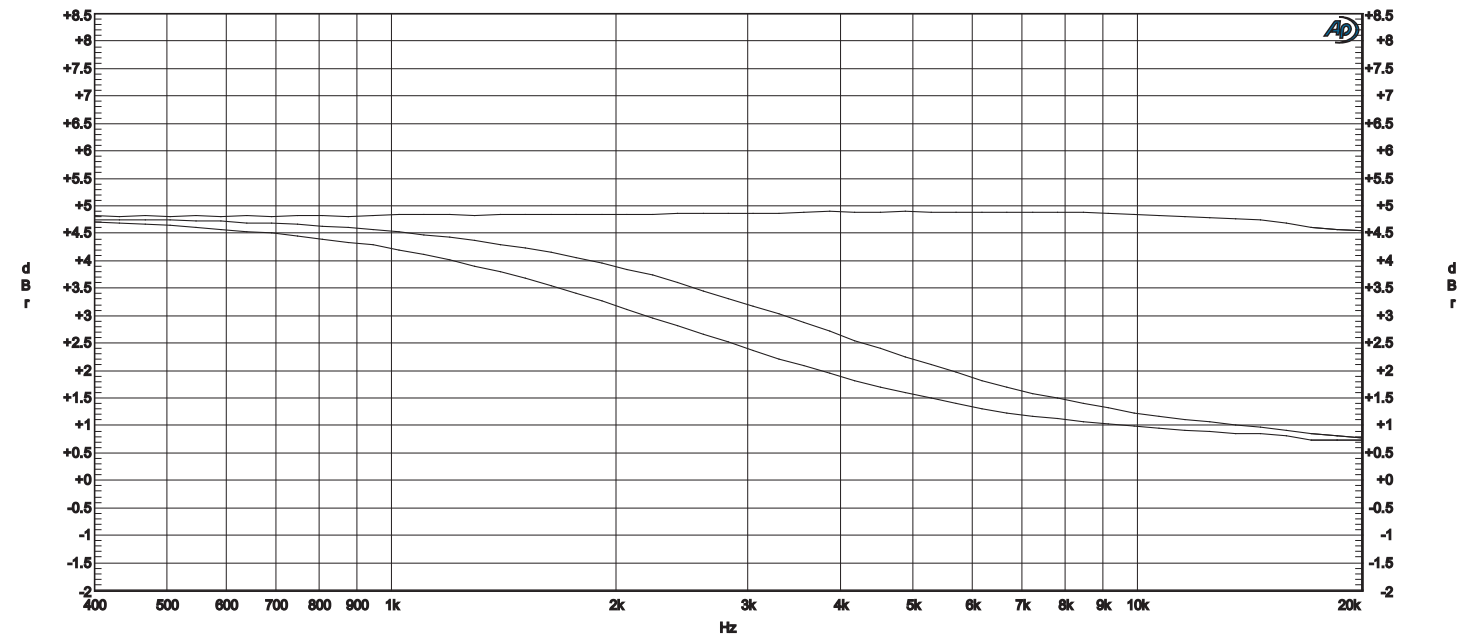


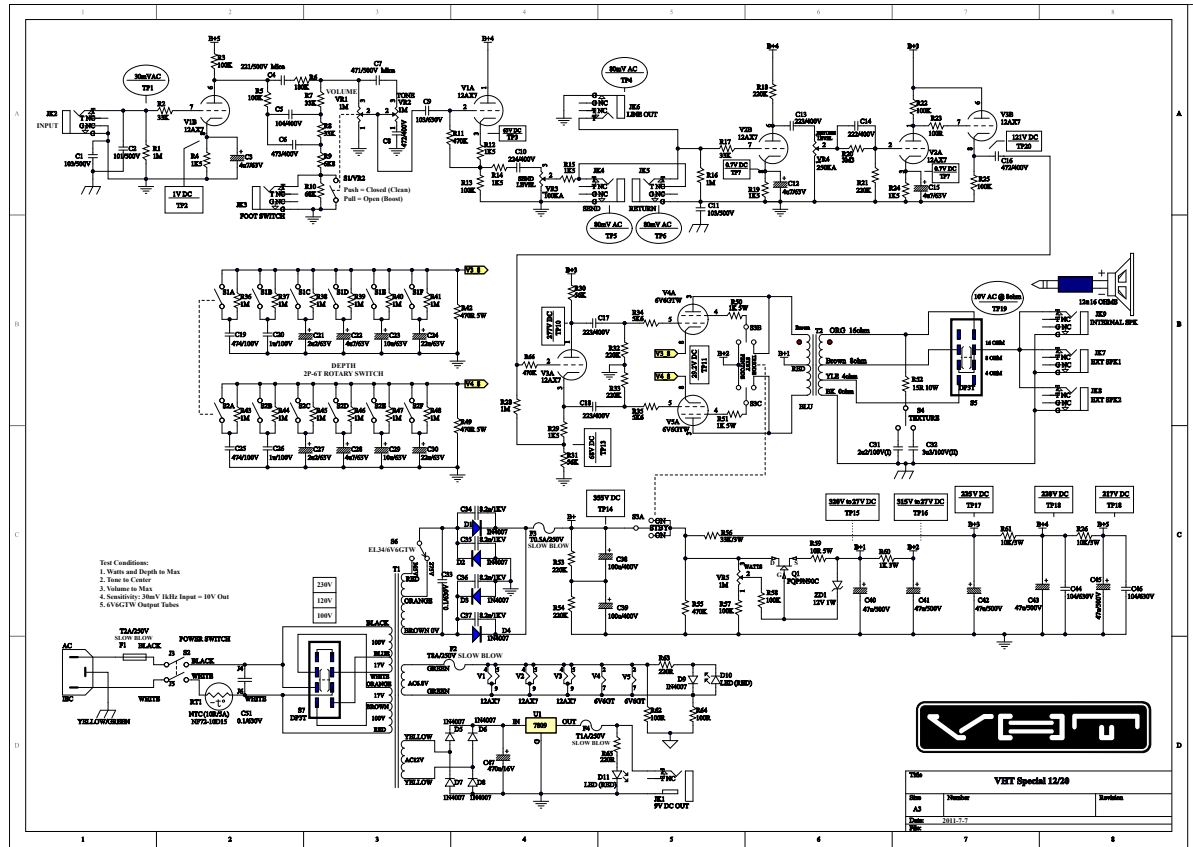


## DEPTH CONTROL — EFFECTS RETURN INPUT



## TEXTURE SWITCH — EFFECTS RETURN INPUT





## TECHNICAL SPECIFICATIONS

Name/Model:

VHT Special 12/20 — 12-20 watt hand-wired vacuum tube guitar amplifier

Power Requirements & Consumption:

100/115VAC, 50/60Hz; 120VAC, 60Hz; 220VAC/230VAC240/VAC, 50/60Hz

Maximum Output Power:

12-20 watts (depending on output tube type and Volt setting)

Speaker (combo only):

One 12" VHT ChromeBack (60-watts, 16 ohms)

Amp Type:

All-tube hand-wired push/pull cathode biased output stage

Tubes:

Three 12AX7; two 6V6

Controls:

Input, Volume (with Pull-Boost), Tone, Effects Send & Return, Texture, Depth, Watts, Pentode/Standby/Triode, High/Low Tube Voltage

Cabinet:

Finger jointed birch plywood

Cosmetics:

Black vinyl, white piping, and black grille cloth

Dimensions (H x W x D):

Combo: 19" x 19.5" x 10.5" (475mm x 495mm x 265mm)

Head: 11" x 19.5" x 8.5" (280mm x 495mm x 215mm)

Net Weight:

Head: 28 lbs. (12.5 KG)

Combo: 43 lbs. (19.5 KG)

## LIMITED WARRANTY INFORMATION

This amplifier is warranted, to the original Purchaser, to be free from defects in material and workmanship for a period of five (5) years, excluding the tubes and speaker, which are warranted for ninety (90) days, from the original date of purchase.

The manufacturer shall, at its option, either repair or replace the defective product if the product is returned to the original place of purchase. If any product returned is not defective within this warranty, the manufacturer shall so advise the Purchaser and thereafter shall dispose of said product in accordance with the Purchaser's instructions and at the Purchaser's cost. This warranty is not transferable by the Purchaser.

The warranty shall not apply to wearable parts, these items include, but are not limited to, amplifier knobs, feet, and handles.

The warranty shall not apply, if the product has been misused or damaged as a result of neglect, abuse, alteration, improper handling, unauthorized repair or modification, accident or causes external to the product, such as, but not limited to, excessive heat or humidity.

The manufacturer's sole and exclusive maximum liability for any claim by the Purchaser shall not exceed the wholesale value of the product. In no event shall the manufacturer be liable for any indirect, incidental, collateral, exemplary, or consequential damages of losses arising out of the Purchaser's purchase of the product. The above limitations may not apply in some states (U.S.), international regions or countries.

# VHT AMPLIFICATION

HANDWIRED IN CHINA