

# EARTHQUAKE

Earthquake 5.1 Overdrive Head

Earthquake 9.1 Overdrive Head

by



.....PLAY GUITAR.....SHAKE THE PLANET.....

**VINTAGE VACUUM TUBE AMPS, INC.**

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# Wel come To The Famil y

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Congratulations and thank you for choosing your Earthquake Model amplifier. At VVT we know you are constantly searching for new sounds and new ways to improve your existing sound. We understand the constantly evolving nature of artistic creativity and the search for the perfect sound to complement your ever-widening musical vision. Providing the tools to help you to create your own sonic signature is our primary mission.

As with all VVT amplifiers, Earthquake Overdrives beautifully accentuate the inherent qualities of any instrument. They breathe and dynamically respond to your playing technique exactly the way a great amplifier should. The VVT Earthquake Overdrive models are all tube designs: no clipping diodes or transistors are used in any part of the signal path. The preamp section has a broad dynamic range which accounts for its extra touch sensitivity, tonal shaping characteristics, and excellent guitar volume control response. In addition, overdrive voicing can easily be dialed up using the unique DRIVE/LEVEL structure and can be tweaked to perfection for any guitar/pickup combination. The presence control adds dimension of an in your face sparkle to a smoother jazzy tone. From there, the boost switch lifts the mid frequencies in the 500-1K Hz range. Just a little tweaking on your guitar volume and tone controls will yield a surprising amount of control. All VVT Overdrive amps are designed for big round tone and dynamic response at low to medium guitar volumes and provide a rapid but smooth transition into saturation - turning rich and thick at full guitar volume. The combination of preamp voicing and power amp response will enhance the unique character of any guitar and pick-up combination.

The specially designed, precision wound, power and output transformers from Mercury Magnetics produce optimum performance, reliability, and stability delivering excellent power tube response and just the right amount of natural output transformer saturation and compression.

Getting familiar with the Earthquake Overdrive is easy, so don't be too surprised when you find yourself up and running in no time; although, we highly recommend you spending some quality time with your amp due to it's chameleon like qualities. You may find yourself dialing in tones you thought might never be possible or find some tones unique to your playing style. First hand experience and real world application will yield the ultimate satisfaction. Finding your own path of comprehension and self-expression can only be achieved by mastering your instrument in combination with your new amp.

First, we need to stress a few important cautionary notes.

## Important Information:

1. Please read all of the information contained in this document.
2. **HUM** - Some hum or amplified noise is normal. As the volume is increased some amplified noise may be noticeable and will be more apparent in a quiet room. Additionally, tubes have inherent noise as do resistors. However, excessive hum (noise) can be caused by electronic devices such as neon signs, light dimmers, fluorescent lights, aquariums, etc. located near the amp or your guitar. Hum can vary with different outlets, rooms, buildings and guitar pickups.
3. Do not operate this amp without a speaker load
4. We recommend JJ 6L6GC or JJ EL34 power tubes for the 5.1 and 9.1 models.
5. Output tube current is controlled with fixed bias. If you change the output tubes, bias must be checked and adjusted for the new tubes by a qualified technician. Failure to follow this advice could result in premature tube failure or catastrophic transformer failure.

# CAUTION!

## RISK OF ELECTRIC SHOCK

**WARNING:** This guitar amplifier contains lethal HIGH VOLTAGE. To avoid risk of injury or death from electric shock, do not open the enclosure or remove the chassis from the cabinet. Refer all service work to qualified personnel.

**WARNING:** This amplifier contains Vacuum Tubes. Vacuum tubes are heated to produce electrical currents and they get HOT. Touching this surface could result in bodily injury. To reduce the risk of injury from a hot component, allow the surface to cool before touching. DO NOT touch or attempt to remove vacuum tubes until they have had time to cool.

### **IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:**

**WATER AND MOISTURE:** This amplifier should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

**POWER SOURCES:** The amplifier should only be connected to a 120VAC 60Hz household power source.

**GROUNDING OR POLARIZATION:** Precautions should be taken so that the grounding or polarization is not defeated. Do not remove the ground from the power cord.

**POWER CORD PROTECTION:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the amplifier.

**SERVICING:** You should not attempt to service this amp beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

**FUSING:** Your amplifier is equipped with a marked fuse receptacle, replace only with the same type fuse.

# It All Starts Here

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## **Independent Channels:**

Unlike other high gain amps, the Clean Channel and the Overdrive Channel of the EQ 5.1 and 9.1 are completely independent. They are two separate discrete channels each with their own equalization and voicing characteristics. Since the Overdrive channel does not depend on the gain of the clean channel to achieve overdrive characteristics, it is much easier to balance the volume levels between the two channels. Since the Channels respond differently to single coil pickups and humbuckers and, we recommend that you experiment with several of your guitars to determine the optimum settings for your playing style.

## **The Clean Channel:**

The Clean Channel of your amp is very simple and much like other amplifiers in this respect. The Clean Level control determines the volume/gain, the top row of tone controls set the equalization, and the Master Volume determines the output level. This doesn't mean it's a One-Trick-Pony; you can set the Clean Channel to achieve sparkling clean tones for rhythm, jazz, chickin' pickin', or add a little hair to the notes for blues and rock. Then, switch to the Overdrive Channel for a singing solo.

## **The Overdrive Channel:**

The input level of this channel determines how much drive and sustain your guitar will produce. Tonal balance, which we refer to as VOICING, determines how the amp will respond to your playing style and how it will sound with a particular guitar. Like all amplifiers, the Earthquake Overdrive amps have tone and gain controls. But, unlike any other amplifiers, these amps give you total control over VOICING and GAIN. This LEVEL/DRIVE/ MASTER VOLUME configuration is the key to dialing in great overdriven tone and volume for your specific requirements.

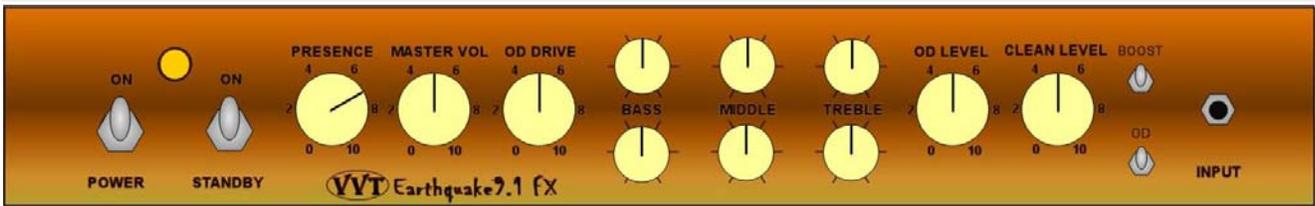
The LEVEL control increases preamp gain as you rotate the knob clockwise. As the gain increases, the tonal balance is shifted from treble and upper mid frequency emphasis which produce up front sparkling tone, to a lower mid and bass emphasis, which produces a thick meaty tone. In order to achieve a smooth, saturated, overdrive tone the OD LEVEL control needs to be set at least the 12 o'clock position.

The DRIVE Control increases the gain in overdrive. As you rotate the knob clockwise you will notice an increase in drive as well as a certain amount of compression, though the sonic qualities will shift as well; as the gain increases the tone will become brighter with more bite.

The CLEAN LEVEL and OD LEVEL control settings determines the overall balance between the clean and overdrive channels. The tonal effects while increasing the OD LEVEL provide a meatier fuller tone. This is where balancing both DRIVE and OD LEVEL controls is key to achieving the desired tone while at the same time keeping the amps volume at just the right level with the MASTER VOLUME.

Different combinations of OD LEVEL, DRIVE, and Master Volume settings, will have a dramatic effect on the response of the amplifier and the personality of your instrument. It is easy to get familiar with the action of these controls and you'll be amazed with your ability to make any guitar sound mellow, fat, soulful, or aggressive.

# Earthquake Controls



## FRONT PANEL, RIGHT TO LEFT:

1. INPUT - GUITAR INPUT. Plug your guitar in here.
2. BOOST Switch – Turns the Boost ON or OFF for the overdrive channel only
3. OVERDRIVE Switch – Turns the Overdrive Channel on or off.  
Note: The OD and BOOST Switches provide the same functions as the footswitch. If this switch is in the ON (UP) position the footswitch WILL NOT WORK. Likewise, if the footswitch for this function is ON the front panel switches WILL NOT WORK.
4. CLEAN LEVEL – Sets the amount of volume/drive for the Clean Channel.
5. OD LEVEL: Sets the amount of volume/drive for the OD Channel. This first gain control also serves as a tone shaping control, counter-clockwise for crisp and articulate, clockwise for thick and saturated.
6. EQUALIZATION SECTION – Passive / Interactive tone controls.
  - TOP – Clean Channel Tone Stack
  - BOTTOM – OD Channel Tone Stack
    - a. TREBLE – High frequency equalization.
    - b. MIDDLE – Mid frequency equalization.
    - c. BASS – Low frequency equalization
7. OD DRIVE – Sets the amount of drive/gain for the OD channel only
8. MASTER VOLUME - Power amp output control – Loudness
9. PRESENCE – High frequency variable feedback in power amp section.
10. STANDBY Switch - Turns ON/OFF DC voltage to the amp.
11. POWER Switch – Turns AC power ON or OFF.
12. POWER Indicator - Lights when the POWER Switch is ON



## REAR PANEL, RIGHT TO LEFT:

1. AC INPUT – 120VAC 60Hz Power Inlet. Use only the factory supplied AC cord set or a UL approved equivalent type.
2. AC Power FUSE – 2 Amp (5.1) 3 Amp (9.1) Slo-Blo Fuse – Only replace with same type and rating.
3. SPEAKER Jacks – 4/8/16 Ohm Outputs. Total speaker load impedance should not exceed 16 Ohms or the minimum rating of 4 Ohms. Two 8 Ohm cabs = 16 Ohms, two 16 Ohm cabs = 8 Ohms. Use a speaker cable to connect to your speaker cabinet. DO NOT use a guitar/audio cable; they cannot handle the current necessary to drive your speakers and may damage the amplifier.
4. TUBE SELECT SWITCH (**EQ-5.1 ONLY**) - Select 6L6 or EL4 Output tubes.
5. TUBE BUFFERED EFFECTS LOOP – (Optional) See Next Section
6. FOOTSWITCH Jack – Tip/Ring/Shield jack. Plug the supplied footswitch in here.

**FOOTSWITCH: See Front Panel BOOST and OVERDRIVE Switches**

# TUBE BUFFERED EFFECTS LOOP



If your amp has the built in tube buffered parallel effects loop follow instructions carefully. The tube buffered Send section provides a high impedance output to minimize signal loss and loading of effects units. The Return amplifier is a standard tube voltage amplifier to amplify the signal from effects units. This effects loop is parallel to the Overdrive section of the amp so that effect units are not driven to saturation when you are using the Overdrive. The result is that the amount of “wet” effects that you set for the Clean Channel will remain constant even when you are using the Overdrive.

**SEND Jack - ¼” Jack: Connects to the INPUT of your EFFECTS**

**RETURN Jack - ¼” Jack: Connects to the OUTPUT of your EFFECTS**

**Send Control:** Adjusts signal level going to the effects unit. Adjust the send control so that the unit receives the maximum amount of signal before distorting/clipping.

**Return Control:** Adjusts the amount of signal coming from your effect to the amp. Adjust for optimum sonic quality

## Using the Loop:

For maximum signal purity and sound quality, effects like digital reverb, echo, or tape delay, should be run fully “wet” (no non-processed signals sent through the loop). The send and return of the loop should be set for proper balance of the dry signal and the effect. The controls on the effect can be used to trim the wet signal. This method assures the clean (dry) non processed signal will remain in the amplifier and not be degraded by the outboard effect.

# Tube Function and Location Chart

Tube locations are indicated in the diagram below. All tubes are factory selected for superior performance, consistent tone quality, and reliability. While substituting other brands may not cause damage to the amplifier, this may affect amplifier performance in unpredictable ways. For best performance, replace only with factory recommended tubes. Substituting other tube types is not recommended.

**Warning!** This amp operates with fixed bias.

If the output tubes are changed, the bias **MUST** be set to operate with the new tubes. Failure to properly set bias **WILL** affect tone, may ruin your new tubes, or **DAMAGE** your amplifier. If you do not know how to adjust output tube bias please take your amp to a qualified tube amp technician. We recommend setting the bias between 50% and 70% of maximum plate dissipation by monitoring cathode current. Failures caused by improper output tube bias are not covered by your warranty

Factory recommended tubes are listed under each location. Numbering sequence is left to right **looking at back of amp** starting with V1 to the far left side.

V1 (shielded tube) - JJ ECC83S (12AX7), Clean Channel Preamp

V2 (shielded tube) - JJ ECC83S (12AX7), Overdrive Preamp 1

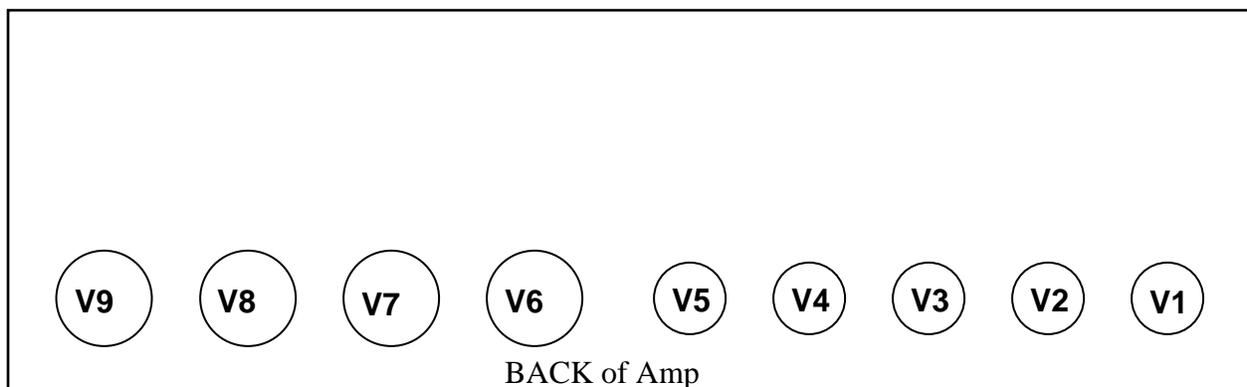
V3 (shielded tube) - JJ ECC83S (12AX7), Overdrive Preamp 2

V4 (shielded tube) - JJ ECC83S (12AX7), Buffered Effects Loop

V5 (shielded tube) - JJ ECC83S (12AX7), Phase Inverter

V6-V9 – JJ 6L6GC, Output Tubes (EQ-9.1)

V6/V9 – JJ EL34, V7/V8 JJ 6L6GC Output Tubes (EQ-5.1)



# Warranty

## Earthquake 5.1 and 9.1 LIMITED WARRANTY

This amp is guaranteed against failure. Vacuum tubes are guaranteed for 90 DAYS from the date of purchase. If a tube fails within the 90 day period, VVT Amps will replace the tube at no charge. All other electronic components are guaranteed for FIVE YEARS. VVT Amps will service your amplifier and supply all parts at no charge providing the unit is under warranty. Any shipping costs associated with repairs are your responsibility. VVT Amps DOES NOT PAY FOR PARTS OR SERVICE OTHER THAN OUR OWN. A COPY OF THE ORIGINAL SALES RECEIPT IS REQUIRED TO VERIFY YOUR WARRANTY. VVT Amps assumes no responsibility for external speakers or other equipment damaged by this guitar amplifier. This warranty does not cover, and no liability is assumed, for damage due to: natural disasters, accidents, abuse, loss of parts, lack of reasonable care, incorrect use, or failure to follow supplied instructions. Accidental damage to the amplifier, cabinet, or vinyl is not covered. This WARRANTY does not apply to VVT amplifiers that have been tampered with, damaged by shipping carriers, reverse engineered, or modified. This warranty is void if the amplifier is used with power attenuator type devices (Power Soaks, Air Brakes, Hot Plates etc.). VVT Amps, Inc. reserves the right to suspend or terminate the Warranty at our sole discretion, should damage from any of the above limitations and or exclusions be detected upon examination. This warranty is in lieu of all other warranties, expressed or implied. No representative or person is authorized to represent or assume for VVT Amps any liability in connection with the sale or servicing of VVT Amp products. VVT Amps SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. If service is required you may contact VVT Amps at 301-396-4100 or vvtamps@vvtamps.com. We will respond as soon as possible and make arrangements to repair your amplifier. If your unit is out of warranty, VVT Amps will repair your amplifier but you will be charged the current RATE for parts and labor.

Keep the information on this page for your records.

MODEL

\_\_\_\_\_  
SERIAL NUMBER

\_\_\_\_\_  
OPTIONS INCLUDED

\_\_\_\_\_  
PRODUCTION DATE

\_\_\_\_\_  
TESTED BY

\_\_\_\_\_  
Vintage Vacuum Tube Amps  
2580B Old Washington Rd  
Waldorf MD 20601  
(301)396-4100  
[www.vvtamps.com](http://www.vvtamps.com)

## Specifications: Earthquake 5.1

Model Name	Earthquake 5.1 - Guitar Amplifier
Product Number	505551051
Model Number	07211950-0001
Series	Earthquake Series
Type	All Tube Amp
Audio Output	50 Watts into 8 ohms
Output Impedance	4, 8, 16 ohms
Speakers	N/A
Channels	Two Channels – Normal/Overdrive – One Input
Features	100% Handmade Amplifier Hardwood Accents Voidless Plywood Cabinet, Heavy Duty Handle,
Controls	Front Panel: Right to Left Input Jack, OD Switch, Boost Switch, Clean Level, OD Level, (Clean/OD) Treble, Middle, Bass, Drive, Master Volume, Presence Standby Switch, Power Indicator, Power Switch  Back Panel: Right to Left AC Power Inlet Fuse Speaker Jacks Output Tube Select Switch Effects Loop Jacks Footswitch Jack
Covering	Ivory, Blonde, or Black Vinyl
Weight	33 ½ lb.
Dimensions	Height: 9 ¾” with feet Width: 20 ¼” Depth: 8 ¼”
Tube Complement	2 X JJ 6L6GC 2 X JJ EL34 3 X JJ ECC83S/12AX7 Preamp Tubes 1 X JJ ECC83S/12AX7 FX Loop 1 X JJ ECC83S/12AX7 Phase Inverter
Accessories	Footswitch – Included with amp P/N - EQOD0001
Options	N/A
Introduced	1/2007
Notice	Product Prices, Features And Specifications Are Subject To Change Without Notice

## Specifications: Earthquake 9.1

Model Name	Earthquake 9.1 - Guitar Amplifier
Product Number	909991091
Model Number	07211951-0001
Series	Earthquake Series
Type	All Tube Amp
Audio Output	90 Watts into 8 ohms
Output Impedance	4, 8, 16 ohms
Speakers	N/A
Channels	Two Channels – Normal/Overdrive – One Input
Features	100% Handmade Amplifier Hardwood Accents Voidless Plywood Cabinet, Heavy Duty Handle,
Controls	Front Panel: Right to Left Input Jack, OD Switch, Boost Switch, Clean Level, OD Level, (Clean/OD) Treble, Middle, Bass, Drive, Master Volume, Presence Standby Switch, Power Indicator, Power Switch  Back Panel: Right to Left AC Power Inlet Fuse Speaker Jacks Effects Loop Jacks Footswitch Jack
Covering	Ivory, Blonde, or Black Vinyl
Weight	37 ½ lb.
Dimensions	Height: 9 ¾” with feet Width: 20 ¼” Depth: 8 ¼”
Tube Complement	4 X JJ 6L6GC 3 X JJ ECC83S/12AX7 Preamp Tubes 1 X JJ ECC83S/12AX7 FX Loop 1 X JJ ECC83S/12AX7 Phase Inverter
Accessories	Footswitch – Included with amp P/N - EQOD0001
Options	N/A
Introduced	1/2007
Notice	Product Prices, Features And Specifications Are Subject To Change Without Notice

# Settings & Notes

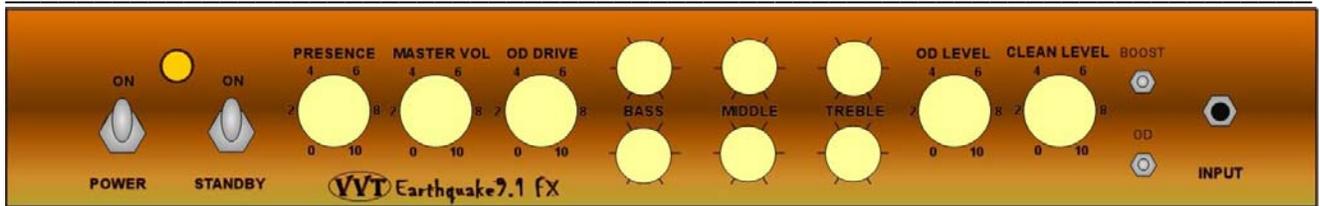
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Clean Channel

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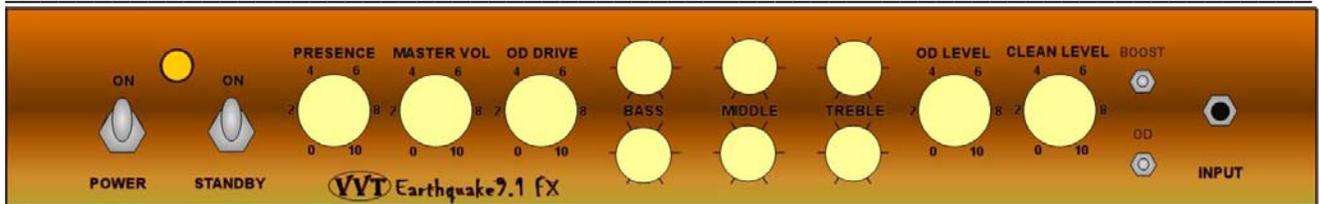


Clean Channel

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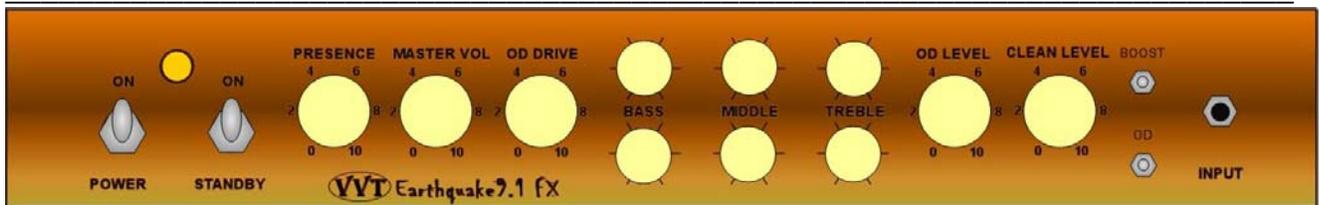


OD Channel

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OD Channel

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