



VICTORY BD1

All Valve 28 Watt Guitar Head



User Guide

Thank you, and congratulations on acquiring a Victory Amplification BD1. This amp is proudly designed and built by our committed team of engineers and craftsmen in the UK.

We value simplicity in operation, flexibility in use and absolutely no compromise in tone. Our aim is simple: to create amplifiers that inspire you ever onwards in your playing and never let you down.

SAFETY FIRST

We want you to enjoy your amplifier to the best of its potential. So please...

Before you go any further, take a moment to read these **SAFETY INSTRUCTIONS**

- Read these guidelines & keep them
- Follow all instructions & guidelines
- Do not use this amplifier near water or any other liquid
- Do not block any openings
- Do not attempt to clean the amplifier with any fluids: use only a dry cloth
- Do not attempt to modify or service this product yourself
- Removing covers could mean you are exposed to dangerous voltages that may result in severe injury or death
- Refer all servicing to qualified service personnel
- Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - (a) When the power-supply cord or plug is damaged;
 - (b) If liquid has been spilled, or objects have fallen into the product;
 - (c) If the product has been exposed to rain or water;
 - (d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation;
 - (e) If the product has been dropped or damaged in any way;
 - (f) When the product exhibits a distinct change in performance - this indicates a need for service.
- Replacement Parts: When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

So, what do you get?

Your new Victory BD1 comes with the following:

A mains lead for your country

A heavy duty Gig Bag/Travel Bag

This User Guide

Unlimited technical support via service@victoryamps.co.uk

FRONT PANEL



Input

Plug your guitar in here!

Gain

This adjusts the input sensitivity. Use low settings for maximum clean headroom and higher settings when you want to introduce more natural valve overdrive to your tone.

Balancing your input Gain level with your Master volume level is crucial in delivering the tone and feel that works best for you. In addition, careful use of the volume control on the guitar will also provide tonal variations to the sound.

Bright switch

For switching between two pre-set levels of treble response.

Contour

Controls the bass and midrange frequency response simultaneously: turning clockwise increases bass and decreases midrange response and anti-clockwise, it does the opposite.

Deep switch

Increases low frequency response of the power amp section and can be used in conjunction with the Contour control for a sound with extended midrange and low frequency response simultaneously.

Master

The Master Volume control is used to set the stage or overall volume of the RD1. If this is turned to maximum, then the RD1 becomes a non-master volume amplifier where the Input Gain control in conjunction with the Volume control on the guitar allows for a wide range of Volumes & Gains to be achieved. This can be very powerful for tone shaping.

Power switch

HIGH – STANDBY – LOW Switch

The BD1 should always be switched on, (Power switch on front of amplifier), with this front panel toggle switch in its centre position. The amplifier is now in 'STANDBY' mode with just the valve heaters and low voltages on. This allows the valves to heat up before they get 100s of volts up them, (it's less of a shock). After around 60 seconds, the amp can be switched to either HIGH, (around 28 Watts rms) or LOW, (around 2 Watts rms). When switching the amplifier ON or OFF please ensure the Volumes are turned down and you leave at least 30 seconds before switching from Standby to Off. This will ensure extended valve life and avoid any power-down noise. This is especially relevant if you're miked up and running through a large PA system as any small pop may become amplified to audience death levels, which may limit your music career.

REAR PANEL



Mains inlet (IEC Socket)

Please only use the correct mains cord for your territory! Ensure the front panel Power toggle switch is in the up, (OFF) position before inserting the mains lead.

Voltage selector

This selects the correct mains voltage for your territory. Please refer to a qualified technician before even thinking about moving this switch. If you do find yourself in foreign climes where the mains voltage is different to home, (and the water tastes funny), it will be necessary to switch this selector. The mains fuse must always be changed at the same time. Failure to do this will result in either the mains fuse blowing as soon as the amp is turned on or the amp running with a fuse that is of too higher value to provide adequate safety protection. Generally, the fuse value will double if the mains voltage is halved, (i.e. if it's a 0.5A fuse in the UK @ 230V, it will needs to be a 1A fuse for the USA @ 115V).

Always use the correct rating and type of fuse. Victory amplifiers exclusively use UL-approved 20x5mm glass 'T' or 'Timed' fuses. If you have difficulty acquiring the correct fuses, please contact Victory using service@victoryamps.co.uk.

HT fuse

The HT or 'High Tension' fuse protects the high voltage for the valve supply. If this fuse blows, the first step is to replace it with an identical T250mA 20x5mm fuse. The HT fuse may sometimes blow due to 'flash-over' inside an output valve. This is where during the manufacturing process, not all of the gas is removed from the glass envelope and the 'getter' inside the valve, usually made from barium or magnesium oxide, will burn or evaporate these remaining gasses resulting in the common silvered internal surface of the valve. This process, which is more likely to happen with new equipment, draws high current momentarily and can blow the HT fuse. It will rarely cause any damage so just replacing the fuse is sufficient to get the amp running normally again.

However, if the HT fuse blows again, it may indicate a serious valve failure where internal parts of a valve are shorted and in this case the amplifier needs to be checked by a qualified engineer to assess the problem.

Speaker outputs

PLEASE NOTE: 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. Terminals labelled as "Speaker Outputs" must be connected to a speaker cabinet of the designated load rating using an un-shielded two conductor cable for speaker use at all times during operation. Never use a guitar cable to connect the amplifier to a speaker as this presents the amplifier with a 'capacitive load'. This can cause instability or oscillation which may seriously damage valves and/or the expensive output transformer.

The output transformer in the BD1 has 2 separate secondary windings; a 16 Ohm and an 8 Ohm. This makes it easy to connect different combinations of speakers. There are three speaker output jacks: 2 x 8 Ohms, (wired in parallel) and 1 x 16 ohms.

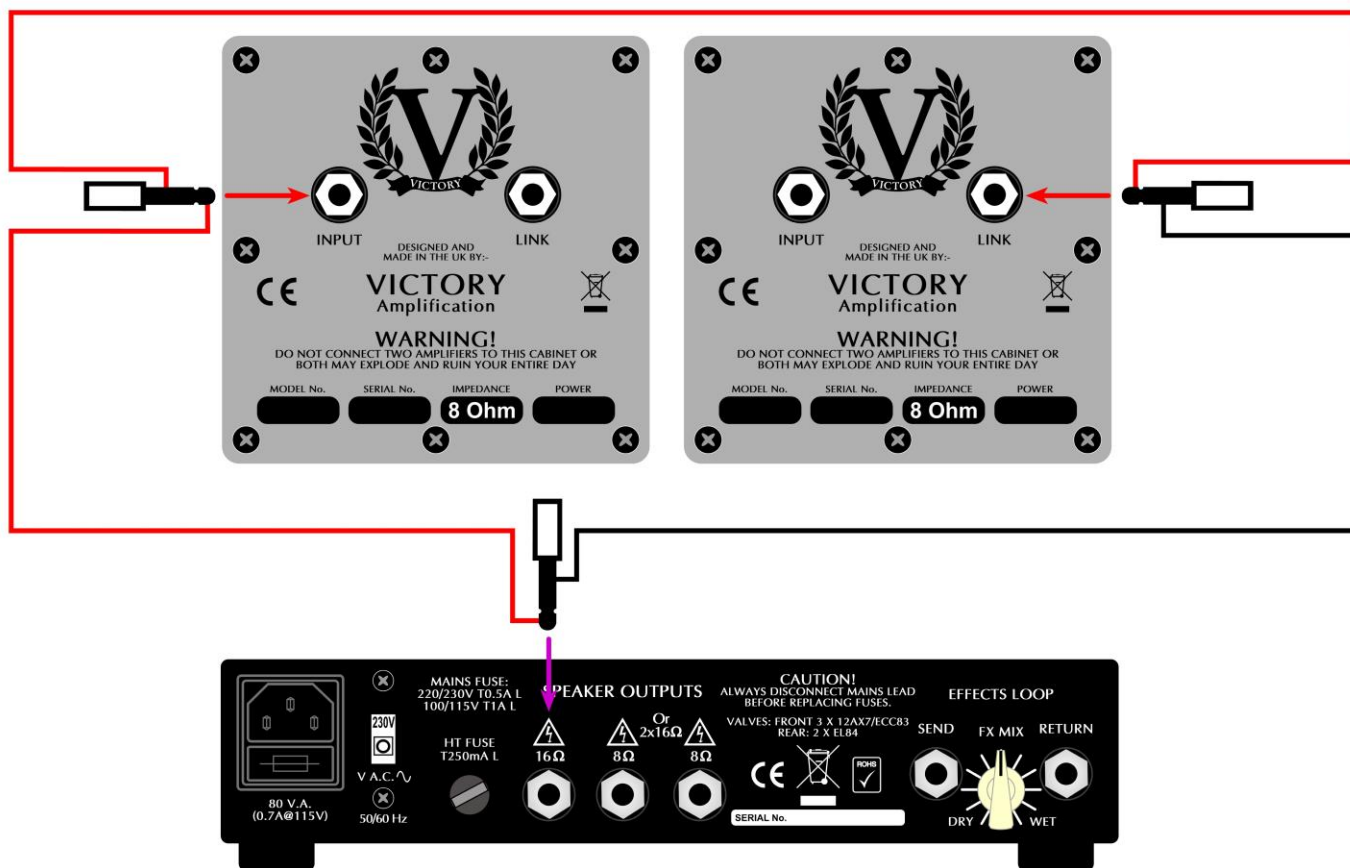
So here are the possible combinations:

1. For a single 8 Ohm cabinet, use either of the 8 Ohm sockets.
2. For a single 16 Ohm cabinet, use the 16 Ohm socket.
3. For a pair of 16 Ohm cabinets, use both of the 8 Ohm sockets.

It is possible to use a pair of 8 Ohm cabinets with the RD1 but a special series lead needs to be used.

Over the page is a diagram of how this is achieved:

**Wiring up 2 x 8 Ohm cabs for use with a Victory BD1 Amplifier.
This is a series lead making a combined impedance of 16 Ohms.**



Effects Loop

The BD1 has an effects loop, which is a simple, low impedance, series loop.

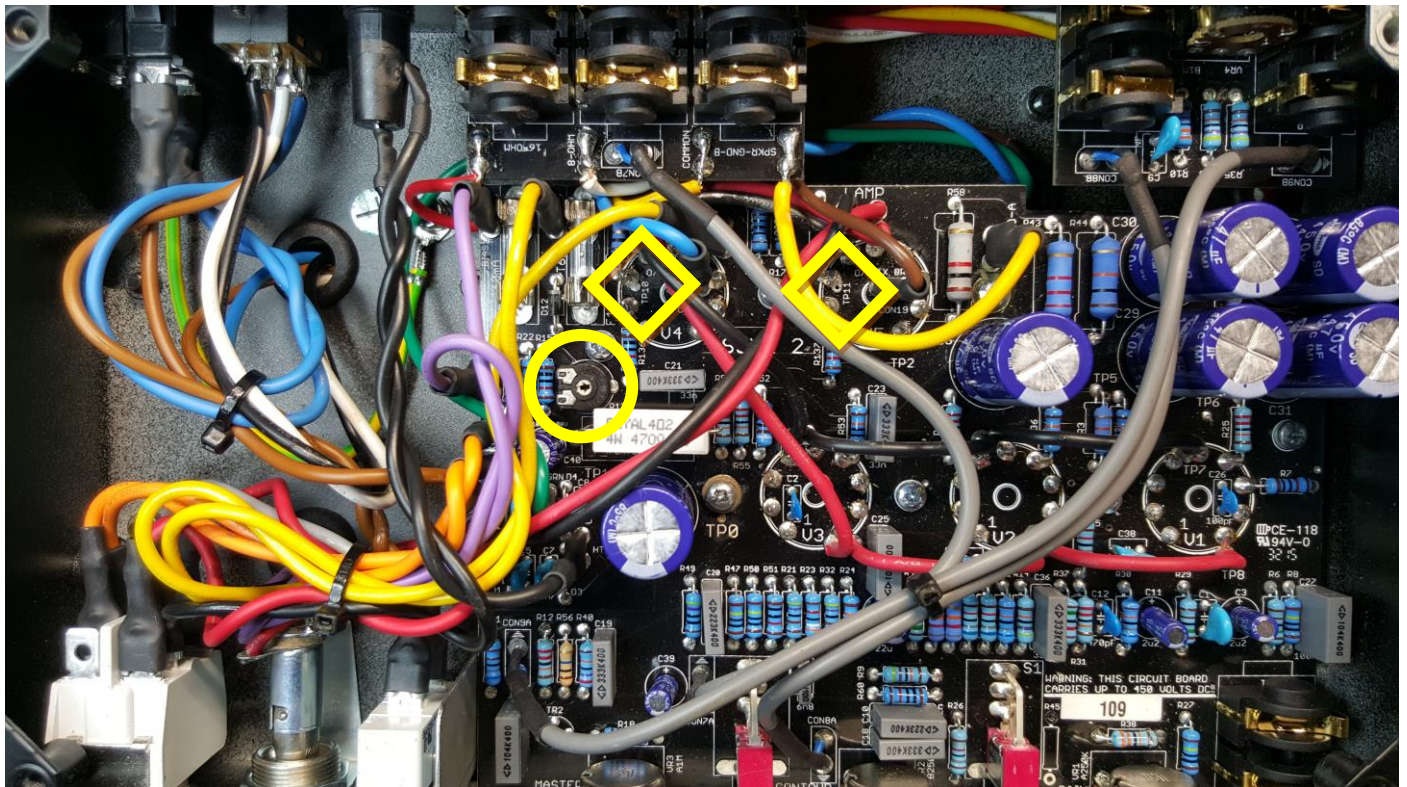
The SEND socket is for connection to the input of effects units. On the BD1 it is a lower impedance version of the signal that appears at the INPUT. Use the send to connect to floor pedals or rack effects such as Delay, Chorus and Reverb etc. Effects such as Overdrive, Fuzz, Wah Wah and Tuners often give better results plugged into the Instrument Input on the front panel. The Send socket can also be used on its own to send a signal to another amplifier, a PA system, mixing desk, recording console, power amp, computer etc.

The FX Loop also incorporates a Mix control which allows you to vary the amount of effects signal that is returned to the amplifier from any external pedals or effects processors plugged into the FX Loop. This can be varied between 'Dry' (no effects in the signal) and 'Wet' (fully effected signal).

The RETURN socket is for connection to the output of effects units. When not used it is internally connected to the SEND, therefore the EFFECTS LOOP can be ignored if not in use. It can also be used as a small signal 'Slave' input from another amplifier but DO NOT plug an amplifier's speaker output into the Return socket or very bad things will happen.

The RETURN socket is also very useful for fault diagnosis. If your BD1 doesn't produce any sound, (or makes some weird noises) when played, plug the guitar directly into the RETURN socket and play. This bypasses the entire pre-amplifier section and sends the guitar signal through just the output stage. If sound is now heard then the problem is in the pre-amp section and is likely to be a faulty pre-amp valve.

Biasing:



Whenever any output valves are changed, the amplifier will need to be re-biased. This must be done by a qualified or competent person as there are lethal voltages inside the BD1 and getting killed by a guitar amplifier is a rubbish way to die. Also take care as valves may still be very hot from use. Use a cloth to remove valves if possible. Take care when removing any valve as the pins can easily be bent. We recommend a slow circular motion known as a 'dweezling' while lifting the valves from their bases as this will free them with the least amount of effort and stress. Ensure that as you remove them that they are never more than a few degrees from vertical to avoid bending or breaking pins etc. Please always try to buy matched pairs of output valves as they will be easier to Bias and give longer service.

Unplug the BD1 from the mains and remove the bottom chassis plate using a No.2 Posidrive screwdriver. Note that the rubber feet fixings are also used to secure the base plate to the chassis. Remove 4 x M4 screws from the side of the top grill using a No. 2 Posidrive and remove it. Carefully place the BD1 on a clear and secure surface upside down so all its soft bits are exposed. Ensure that nothing is plugged onto the input socket and all controls are turned to zero to avoid any signal or circuit noise at all interfering with the Bias setup.

Plug the amp back into the mains; ensure a speaker or dummy load is connected to the correct speaker output and switch the amp on from the front panel switch. After 30 seconds, switch the front panel switch from Standby to High. Do not be tempted to poke fingers anywhere inside the amp; lethal voltages are present.

The 22K BIAS pre-set resistor is found in the power supply section on the PCB, (yellow circle on photo). The Bias voltage measurement is performed between the chassis, (use the unpainted corner bush as seen in the top right of the above photo) and the test point TP10 & TP11, (yellow squares on photo).

Using a multimeter set on the 200mV range, measure these test points and adjust the BIAS preset so the meter reads approx. 21mV. This translates into 21mA of current per output valve as we're measuring across a 1 Ohm resistor. From Ohms law $V = I \times R$, (Voltage 21mV = Current (I) 21mA Ohms x 1 Ohm). Check both Test Points a few times and try to balance the Bias voltage so it is as close as possible between the 2 valves. We don't recommend a difference of greater than 4mV between the 2 valves.

Amplifier Dimensions:

SIZE (mm): 263(w) x 170(h) x 195(d) Unboxed. 405(w) x 315(h) x 305(d) Boxed.

Weight: 6Kgs Unboxed. 7.85Kgs Boxed

Output Power

The following measurements were taken at 240V mains input into an 8 Ohm load using a 1 KHz Sine Wave with the output waveforms set just before clipping:

High Power: 28 Watts

Low Power: 2 Watts

Please be aware that even in low power mode at 2 watts the output power can still be very loud into a sensitive speaker so be aware of who you may be affecting. Victory takes no responsibility for any physical abuse that may result from your playing.

Valve Complement, (looking at the BD1 from the front left to right).

Pre-Amp:

V1 ECC83/12AX7 Input Gain stages.

V2 ECC83/12AX7 Provides 2 further Gain stages and drives the Contour Tone control.

V3 ECC83/12AX7 Is the phase splitter to drive the output stage

V4 & V5 EL84s Are the valves which make up the output stage in a Class A/B fixed Bias push-pull configuration.

Warranty

All Victory products come with a 5 year limited warranty. This covers any defects in manufacturing or faulty components. Valves and speakers are warrantied for 90 days from the purchase date but replacement parts will be at our discretion. Please contact your local dealer if you have any issues with your Victory product.

A note from Team Victory

We've built your Victory Amplifier as a professional, no-compromise musical instrument, with a great deal of pride and an absolute commitment to tone. We encourage you to learn to get to know it by experimenting with all the controls, in order to discover its vast array of tonal combinations.

Thank you for making your tones with us: we wish you many years of achieving inspiring sounds to push your playing ever onwards.

Now I'll shut up; you go play yer guitar.

Contact info: service@victoryamps.co.uk

Web: www.victoryamps.co.uk

www.youtube.com/user/VictoryAmps

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www.facebook.com/groups/508554529270876/

Issue 1 14.01.2016