



Richie Kotzen

VICTORY RK50C

All Valve 50 Watt Guitar Combination Amplifier



User Guide

Thank you, and congratulations on acquiring a Victory Amplification RK50C. This amp was proudly designed in conjunction with Richie Kotzen and built by our committed team of engineers and craftsmen in the UK. The facilities and tonal characteristics are exactly as Richie has specified and he has been involved at every stage in the design process.

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 & warnings, especially those in **RED**
- 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.

What's included?

Your new Victory RK50C Combo comes with the following:

1 x Dual Latching Footswitch for Tremolo, (TIP) & Reverb, (RING).

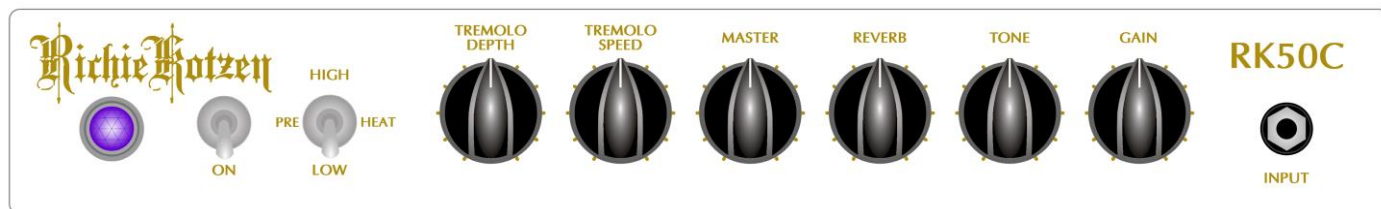
1 x Single Latching Footswitch for Boost On/Off

A mains lead for your country

A Vinyl Dust Cover

This User Guide

FRONT PANEL



Power Lamp with Jewel

When lit, this indicates that mains power has been applied to the amplifier. It houses a 6.3V 10mm bayonet filament bulb which can be replaced by unscrewing the jewel from the front.

Mains Power Switch

Please ensure this is in the UP position, (OFF) before connecting the amplifier to a mains supply and the HIGH-PREHEAT-LOW switch is set in the middle, (PRE-HEAT). When ready, activate this switch downwards and the purple jewel will light if you have been successful.

High – Preheat – Low Switch,

Ensure this switch is in the centre, (PRE-HEAT) position before applying mains power. Then apply mains power. The amplifier is now in 'PREHEAT' or '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 40-60 seconds, the amp can be switched to either HIGH or LOW power. Due to recent EU regulations on the use of Standby functions and their associated low-power requirements, we are replacing the name of this function with PREHEAT to avoid any legal confusion. There will be no difference in operation of the amplifier. When switching the amplifier ON or OFF please ensure the Master Volume is turned down and you leave at least 30 seconds before switching from PREHEAT to Off. This will ensure extended valve life and avoid any power-down noise. This is especially relevant if you're running through a large PA system as any small pop may become amplified to audience damaging levels, which may limit your music career.

Tremolo Depth.

This controls the Amplitude Modulation of the Tremolo effect, turning the volume of the output stage up and down continuously to varying degrees depending on where the control is set. Basically, it controls the amount of Tremolo effect.

Tremolo Speed.

This controls the speed of the Tremolo effect. Please experiment in conjunction with the Depth control to find the most pleasing settings for your desired sound.

Master

The Master Volume control is used to set the stage or overall volume of the RK50C. If this is turned to maximum, then the RK50C 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.

Reverb

The RK50C has a built-in full-length Spring Reverb and this control varies the amount of Reverb added to the guitar signal. The effects return stage drives the Reverb circuitry so the Reverb is always the last effect in the chain which is the most suitable position for it. Take care when using high Master Volume settings in High Power mode as the feedback from the Reverb tank may occur. Careful setting of Reverb level in conjunction with the Master Volume should be observed. During the design process, higher Reverb levels were specified on the Low Power setting which does mean that the level of Reverb can be overwhelming in High Power mode.

If you experience any feedback from the Reverb, then please decrease the Reverb or Master Volume levels. This is particularly relevant in combos as the output valves are extremely close to the speaker and there is a complex pattern of magnetic waveforms interacting with each other.

Tone.

The RK50C has a single Tone control which adjusts the high frequency content of the signal. Please experiment to get the desired tone.

Gain

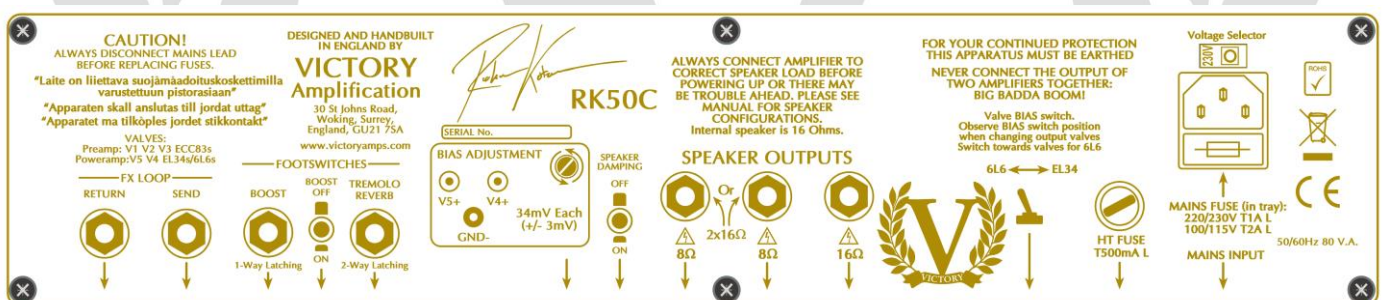
This controls the amount of Gain and works after the first and second gain stages in the preamplifier to allow for a wider range of Clean to Overdrive settings.

Input

Plug your guitar in here!

REAR PANEL

The RK50C has a screened plate on the rear that mirrors exactly what is written on the chassis itself. This is to make it much easier to locate sockets & switches. We recommend you familiarize yourself with the various sockets & switch functions to minimise the fumbling around on a dark stage.



Effects, (FX) Loop

The RK50C has an effects loop, which is a simple, low impedance, series loop.

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 RK50C doesn't produce any sound 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.

The SEND socket is for connection to the input of effects units. On the RK50C 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.

Footswitches

BOOST: Connect the supplied single latching footswitch here to select BOOST On/Off.

BOOST ON/OFF: This switches a pre-set internal Boost of approx. 18dB to the preamp gain. Experiment with this control at various Volume & Gain levels.

TREMOLO/REVERB. Connect the supplied dual latching footswitch here to select TREMOLO ON/OFF and REVERB ON/OFF.

VERY IMPORTANT WARNINGS!!

In certain countries, (specifically, Nordic countries), is it totally forbidden to open up any electronic equipment or to work on them at all unless you are a fully qualified and approved technician. Please check the laws in your country and do not attempt to change valves/tubes or re-bias the amplifier if the law forbids this. In this case, please take your amplifier to a qualified and approved electronics technician.

In certain countries it is also totally forbidden to keep or place any liquids on top of the amplifier, (e.g. beer, water bottles, glass, drinks etc). This may cause serious electric shocks and/or dangerous situations.

Also it is totally forbidden to use the amp in the event of rain splatters/water drops getting into or onto the amp.

Even if it is not a law in your country, you should never allow liquids near the amplifier or attempt to use the amplifier if it has been subjected to any moisture as this could result in a fatal electric shock.

Biasing:

Biasing needs to be done each time the output valves are replaced and should be checked periodically to make sure they are working at their optimum for sound quality & valve life.

Ensure the toggle switch on the top of the chassis is in the correct position for the selected output valves, (either EL34s or 6L6s). The RK50C ships with EL34 output valves fitted but is available with 6L6s as a special order, (no extra cost).

To set the Bias on the RK50C you need a multimeter set to the 200mV DC range. Biasing is carried out externally but the amplifier section will still need to be removed from the combo cabinet. To do this, firstly unplug the internal speaker from the 16 Ohm socket and the 2 Phono Connectors from the Reverb Tank taking careful note of which one goes where. Then carefully lay the cabinet on its front and using a No.2 point Posidrive screwdriver, remove the 4 outer Raised Countersunk Woodscrews securing the wooden amplifier panel to the cabinet. The amplifier section can then be removed attached to the

wooden panel. There is no need to remove the wooden panel from the amplifier or the screened back plate from the panel. To replace the output valves, carefully slide off the valve spring retainers. We recommend the use of a soft cloth or protective gloves to remove valves if possible. The valves can then be pulled out using a slow rotational movement, (dweezling) to ease them from their sockets. This will free them with the least amount of effort and stress. Ensure that the key on the replacement valves lines up with the keyway on the socket before carefully pushing them home. Take care when removing any valve as the pins can easily be bent and the plastic locating key on the output valves can be snapped off. Make sure that they are never more than a few degrees from vertical to avoid bending or breaking pins etc.

Always buy matched pairs of output valves or Biasing may be difficult if not impossible.

To Bias the new valves, make sure the amplifier is connected to a speaker cabinet, (or dummy load resistor). Turn all controls to zero and remove the guitar input as any signals may interfere with the Bias settings. Switch to PREHEAT and ON using the 2 front toggle switches and then after 60 seconds, switch to HIGH.

Now put the black meter probe, (-ve) into the Black centre GND Bias socket and the red meter probe, (+ve) into the V5+ Bias socket. Using a small flat blade screwdriver in the Bias adjustment POT, turn this so you get 34mV on the multimeter. This equates to 34mA of current per valve as we are measuring the voltage across a 1 Ohm resistor.

Now put the red meter probe into the V4+ Bias socket and measure the voltage. Try to balance the 2 measurements around 34mV with a maximum of 6mV between them. For example, an extreme but perfectly acceptable case would be 31mV for V5+ & 37mV for V4+.

All Victory amplifiers are constructed using Posidrive Screws & Machine Bolts. These are an improvement on the Phillips type of fixing which uses a 4-blade screwdriver. The Posidrive uses an 8-Blade screwdriver which allows for more precision and higher torque. Please try to use Posidrive Screwdrivers when working on a Victory amplifier. These are readily available from all good tool suppliers. We recommend having a No.1 and a No.2 point Posidrive screwdriver.

Speaker Damping ON/OFF

This switches the negative feedback loop of the power amp stage in & out of circuit to increase the low end resonance. With this switched out, you will experience more bass and poweramp gain. Please experiment at various settings.

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 RK50C has 2 separate secondary windings; a 16 Ohm, and an 8 Ohm. This makes it easy to connect many different combinations of speakers. There are three speaker output jacks: 1 x 16 ohms & 2 x 8 ohms, (wired in parallel)

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, (internal speaker).
3. For a pair of 16 Ohm cabinets, use both of the 8 Ohm sockets.

The speaker fitted in your RK50C is a 12" G12H-65 Celestion Creamback rated at 65Watts and 16 Ohms impedance. Please take note of this impedance and take it into consideration when adding an extension speaker. You can disconnect the internal speaker if you wish to add multiple extension cabinets, but:-

Always ensure a speaker is connected to the amplifier before powering up or damage to the output transformer may result. Never unplug a speaker when the amplifier is ON as this is even more likely to damage the transformer and the output valves.

It is possible to use a pair of 8 Ohm cabinets with the RK50C but a series cable would be required to wire the cabs up in series for a total of 16 Ohms. This is a messy solution but a low cost and reliable alternative is to use a cabinet impedance matcher. For example, here is the Palmer Cabinet Merger, available from many retailers:

<https://www.andertons.co.uk/p/PCABM/misc-guitar-accessories/palmer-cab-m-passive-cabinet-merger>



You will need a couple of extra standard Jack to Jack speaker leads to use this box but it is a more elegant solution than a series lead.

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 T500mA 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 or the Mains 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 or Mains 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.

Mains Inlet, (IEC Socket) & Mains Fuse

Please only use the correct mains cord for your territory! Ensure the RK50C is switched to the OFF and PREHEAT positions using the front toggle switches before plugging the mains lead in this socket.

The mains fuse is located in a small tray under the inlet which can be removed using a small flat blade screwdriver. Please note where this fuse is located in the tray before replacing it with the correct type and value for your territory.

Voltage selector

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 1A fuse in the UK @ 230V, it will need to be a 2A 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.

Amplifier Dimensions:

The height includes the feet but not the top strap handle:

SIZE (mm): 600(w) x 473(h) x 253(d) Unboxed. 700 (w) x 573(h) x 353(d) Boxed.

Weight: 22.3Kgs Unboxed. 24.8Kgs 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: 50 Watts

Low Power: 9 Watts

Valves: V1: ECC83, (12AX7), V2: ECC83, (12AX7), V3: ECC83, (12AX7), V4 & V5: EL34ss or 6L6s.

The RK50C is fitted as standard from the factory with EL34 valves but these can be swapped for 6L6s, (see previous notes on BIASING).

Notes on output volume and speaker attenuation:

Victory amplifiers are designed to be played loud with gigging and rehearsal in mind. It can be difficult to get suitable volumes and tones from the RK50C at home or 'bedroom' levels even in the lower power settings. The nature of valve amps and the POTs used to control the signal are such that they only really start to work properly when turned up. However, many Victory users have had great success with speaker power-soaks and simulators. The simplest ones are low-cost attenuators such as the Jet City 'Jettenuator' which simply soaks up the output power of the amplifier allowing only some of the signal to reach your speaker(s). This allows you to really crank the amplifier up into output valve distortion to get big-stage overdrive without disturbing anyone.

Victory takes no responsibility for any physical or verbal abuse that may result from your playing.

https://www.thomann.de/gb/jet_city_amplification_jettenuator.htm?glp=1&gclid=CKjxmLe-ktlCFeqc7QodK6lInA

For home studio recording and speaker attenuation, at the top end of the market, we have the Two Notes Torpedo range of attenuators & simulators. These are really excellent devices and are what my colleague Rabea Massaad uses for home recording:

<https://www.andertons.co.uk/search?query=torpedo>

There are many others out there with Palmer being one of the first companies to offer such devices. These are tried and tested solutions and also recommended by Victory:

<https://www.andertons.co.uk/b/139/palmer>

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. Footswitches are covered for 1 year from date of purchase and aftermarket UK made, heavy-duty ones are available from the Victory online store which come with a lifetime warranty: www.victorystore.co.uk. Please contact your local dealer if you have any issues with your Victory product. Victory are setting up Official Service Centres around the world so please check on the Victory website to see where your nearest centre is located. These will have original Victory spare parts including the recommended valves for your amplifier direct from the Victory factory. They also have all technical details for your product and have been carefully selected to ensure you get the best possible service for warranty and non-warranty work.

Notes on what to do if your amplifier experiences any strange behavior:

May 2018: over 5500 amplifiers have now been shipped out of the factory and from 5 years answering service queries, the only real issues that come up are valve-related. These are either premature valve failure, (minimal), valves that have worn out through extended use or have become microphonic or noisy over time.

Many issues relating to valves can be cured simply by re-tensioning the valve bases. Over time, the valve sockets, which are constantly heating up, cooling down, expanding and contracting may become a bit 'loose' and not hold the valve pins as tight as they should. This can lead to noise and more commonly, sudden drops in volume or complete lack of sound.

It is an easy task to re-tension the valve sockets and this can be done with a small flat blade screwdriver such as this:



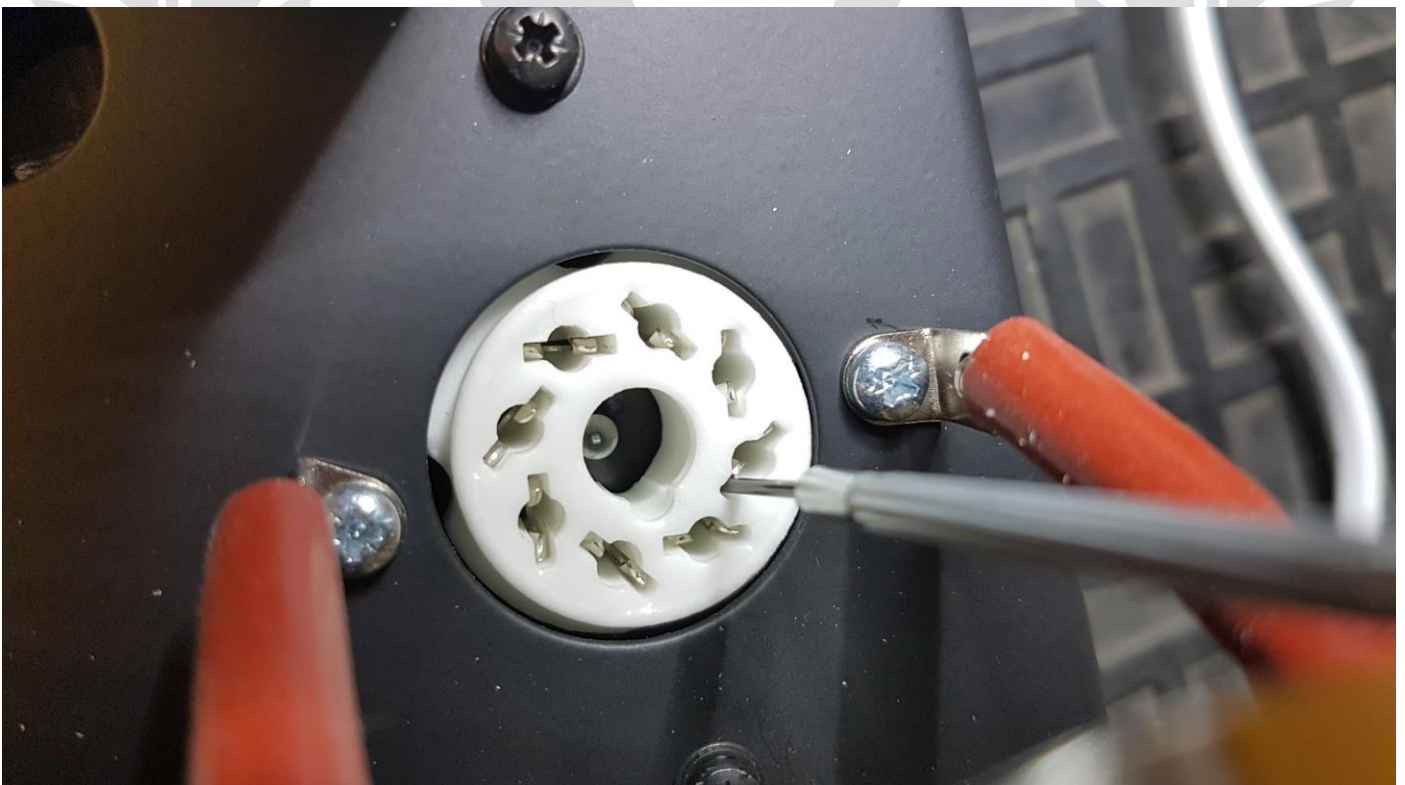
Important! Please ensure the amplifier is not plugged into the mains and has been off for at least 30 minutes before removing any valves so all of the high voltages have dissipated. Carefully remove each valve in turn. The pre-amp valves have a sprung-loaded screening can fitted over each one so turn this through 90 degrees or so until it pops off. Then using the slow circular motion, pull the valve from the socket. The output valves are retained by spring clips which can just be slid off the top of the valves. Please ensure that the valves go back into the same sockets as they are optimized at the factory for best position relating to gain, noise, & microphony. This is easily achieved if you just do one at a time; take it out, re-tension then re-insert and go to the next one.

You will see that the valve bases have small 2-part metal clips in each hole and these need to be pushed together to make a tight connection on the valve pins.

Pre-amp valves:



Poweramp Valves:



Please make sure you don't close these pins up fully or it will be difficult to replace the Valves.

Replacement valve kits including tools for biasing such as a Multimeter and Terminal Screwdrivers are available directly from the Victory shop. Please visit www.victorystore.co.uk for spares, accessories and clothing.

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 we'll shut up; you go play yer guitar.

Contact info for sales enquiries:

sales@victoryamps.co.uk

For any service or technical issues:

service@victoryamps.co.uk

Web:

www.victoryamps.co.uk

www.youtube.com/user/VictoryAmps

www.facebook.com/VictoryAmpsUK





Handmade in England

Issue 4 30.07.2018