



1224 MkII User Manual

Congratulations on the purchase of your new 1224 MkII amplifier.

Your new amplifier has the following features:

- Full / Half Power Switch
- Pentode / Triode Switch
- 28 Watts (nominal output – this is based on a totally clean output)
- Switchable valve configurations (1, 2 or 4 valves)
- Switchable Class A / Class A/B operation
- Voice (footswitchable)
- Overdrive (footswitchable)
- Effects loop
- Reverb (footswitchable)
- Several Power Valve options are available eg EL34, 6CA7, 5881

Safety

There are no user serviceable parts inside your amplifier. There are lethal voltages inside the case and you need to ensure that the mains lead has been disconnected for at least 5 minutes before opening it in order for the voltages to dissipate.

Due to the extreme voltages within the case, it is imperative that no moisture is allowed to enter the case.

Rear Panel



Mains input

Your amplifier should only be connected to the mains using a power cord with an earth connection.

Power Switch (The thin switch)

Using this switch you can reduce the output of the amplifier by half. It achieves this by reducing the plate voltage on the power valves. This allows power stage overdrive to be achieved at lower volume levels.

Pentode / Triode Switch (The fat switch)

This switch allows the user to further reduce the output of the amplifier by switching the power valve(s) from pentode (5 anodes) operation to triode (3 anodes) operation. This has the effect of cutting the output almost by half. This will again allow for power stage overdrive to be achieved at lower volume levels.

NB Care should be taken to reduce the volume setting on the amp before changing the setting as there will be a "thump" when the switch is operated.

Footswitch Sockets



There are three footswitch sockets at the rear of the amplifier. In the "standard" form of the 1224, they control Voice, Reverb and Overdrive.

NB In order for the Reverb and Overdrive to be operated via the footswitch, they must first be turned on via the push switch at the front of the 1224.

Sometimes, if a modification of the 1224 has been added (eg a Master Volume Defeat), one of the footswitch sockets will be a stereo socket (in red) allowing a double pedal to be plugged in.

Speaker Sockets

These allow you to connect your 1224 amplifier to your speaker cabs. Due to the nature of valve amplifiers, you should NEVER turn on your amplifier without it being connected to a speaker cab of the correct impedance – irreparable damage to the output transformer can result from you failing to ensure this.

You should also only use high quality speaker cables to connect to your cabs, as high voltages are present and instrument cables are NOT suitable for this purpose.

Matamp amplifiers have only one of each socket as Matamp cabs have extension sockets built into them to allow extra cabs to be added.

If your cabs do not have extension sockets, a high quality “Y” cable can be used instead to provide a parallel connection.

4Ω Socket – this should be used to connect to a 4Ω cab or to a pair of 8Ω cabs

8Ω Socket – this should be used to connect to an 8Ω cab or to a pair of 16Ω cabs

16Ω Socket – this should be used to connect to a 16Ω cab.

Front Panel



Inputs

The top socket is the Low input – use this to connect single coil and low output guitars.

The bottom socket is the High input – use this to connect higher output and humbucker equipped guitars.

Voice Control

This is a five position rotary switch. It allows the user to alter how the amplifier is voiced. Its aim is to allow the user to achieve the sounds of several different guitars whilst only needing to use the one. It will not make a humbucker guitar sound exactly like a single coil guitar, but it will come close enough for a live performance thus removing the need for constant guitar changes.

In position 1, the sound is thick and “bassy”. The sound gradually becomes thinner as the control is turned to the right. There is also a noticeable drop in volume level as the control is turned to the right – this again is consistent with switching from a humbucker-equipped guitar to one with a single coil. The footswitch allows the user to toggle between whatever the dial is set to and position 1 (i.e. fully left), this will not only make the sound “thicker”, but will also increase the output of the amp thus producing a useful boost for solos etc.

Gain

This dial controls the initial preamp gain stage of the amplifier. Turning the dial to the left will produce a cleaner, quieter sound, while turning to the right will provide a

louder sound that will stay clean for about the first two-thirds of the dial, but then produces a wonderfully warm and gentle break up finally ending up with a glorious “crunch” towards the far right of the dial.

Overdrive

This controls the second preamp stage of the amplifier. This is turned on and off using the footswitch connected to the socket at the rear of the amplifier or via the push switch at the front of the 1224.

NB The footswitch will only function if the push switch has been depressed first. Turning this dial to the left reduces the level of overdrive to a soft “crunch” sound, while turning the dial to the right produces a more overdriven sound.

The drive stages of Matamps are “daisy chained”, i.e. there are not two separate signal paths, but the overdrive preamp is added to the gain stage when the footswitch is used. This means that when the overdrive is engaged, the overall gain level is a combination of both the “gain” setting AND the “overdrive” setting. This allows for a huge amount of fine-tuning of the resulting sound.

Reverb

The 1224 is fitted with a valve driven, spring reverb unit. It is activated by the push switch at the front of the amplifier or via the footswitch plugged in to the rear panel.

NB The footswitch will only function if the push switch has been depressed first.

The level of the reverb is controlled via the dial on the front panel of the 1224 and varies the effect from a very subtle "shimmer" to a thick and warm reverb.

As the reverb on the 1224 is valve driven, an interesting effect is created when both the gain and the overdrive dials are turned fully to the left with only the reverb valve driving the signal. By doing this you get only the "wet" signal giving a very unusual sound.

Tone Controls

In the 1224, there are four basic tone controls.

Bass – controls the level of the bass frequencies

Middle – controls the level of the middle frequencies

Treble – controls the level of the higher frequencies

Presence - adds more "sparkle" to the sound. The 1224 is a single channel amplifier, so the Presence control is operational all of the time and not only when the overdrive is active.

The Tone controls of Matamps are not “stand alone” i.e. turning the bass control fully to the right will not only increase the level of bass in the signal, it will also reduce the level of higher frequencies. This means that the best way to adjust these controls is to use small increments until the desired sound is achieved. Many Matamp users have found it useful to keep notes of favourite tone settings for future reference.

In addition to the dials, there are two push button tone controls:

212/412 - this will change the output of the 1224 very subtly allowing a 2x12 cab to sound "fuller" to emulate the tone you would get from a 4x12 cab.

Mid up - this gives a slight boost to the middle band of frequencies resulting in a "fatter" tone.

Valve Controls

The "Crowning Glory" of the 1224 is that, in addition to the wide variety of sounds available from the amplifier, it is possible, via a series of push switches to alter the configuration of the power valves. This is why the 1224 is referred to as the "switching" amp.

The possible configurations are:

Class A / Class AB - Using this control allows the user to toggle between Class A and Class AB operation.

Class A is sometimes referred to a single ended operation and will result in a cleaner, brighter, more "American" sounding tone.

Class AB is sometimes called push-pull operation and results in a fuller, more "British" tone - particularly when overdriven.

The remaining two buttons act as follows:

Out 1 / In 2	Out 2 / In 4	Result
Out	Out	1 power valve (7 Watts)
Out	In	1 power valve (7 Watts)
In	Out	2 power valves (14 Watts)
In	In	4 power valves (28 Watts)

Older versions of the 1224 have biasing points in the rear of the amplifier as they need to be biased whenever the valve configuration is changed. Newer models do not need these points as they are auto biasing. Please check with the factory if you have any doubts over which model you have.

Due to the auto biasing nature of the newer MkIIs, they are capable of operating with several different European octal valves - eg EL34, 5881, 6CA7.

Some users have had issues regarding the use of the 1224 with JJ E34L valves. These are biased differently from EL34s and are NOT suitable for the 1224.

Before changing the valves, check with the factory to ensure the new ones are suitable. ALWAYS get a properly trained amp technician to carry out the work for you (or preferably get the factory to do it) as there are lethal voltages inside your 1224 and irreparable damage can result if incompatible valves are used.

At lower volumes, these switches will have less of an effect than they will at higher volumes as, the more valves that are running, the greater the headroom of the 1224 will be. Reducing the number of valves means that the user can achieve power stage overdrive at more manageable volume levels.

Master Volume

The design of the 1224 means that remarkably warm tones are available even at moderately low volume settings. The 28 Watt rating of the amplifier is taken at the point before any distortion occurs. Overdriven, the power rating is much louder and you will find that the 1224 will comfortably sit alongside most 50 Watt amplifiers. At higher volume levels, the 1224 will start to achieve power stage overdrive which many feel has a warmer, more dynamic feel than preamp stage overdrive.

FX Loop

The 1224 utilises a single stereo socket for its FX loop. In order to connect your effects loop, you need to use an insert cable (a single stereo jack plug on one end and two mono jacks on the other). These are available from most quality music stores.

Mute

This switch mutes the amplifier's output. It is sometimes useful to be able to keep the amplifier warmed up and on standby, you can do this by flicking the switch to the upwards position.

Power

This turns the power on and off for the amplifier. Due to the nature of valve amplifiers, they need to warm up for several minutes before they produce their normal output. When the power is on, the neon light on the front of the amplifier will glow. Many people prefer to have the amplifier in the "Mute" position during this warm up process, but it is not entirely necessary.