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DUALKLONZ

Owner's manual



 **JOYO**

FEEL JOYO ENJOY MUSIC

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 **JOYO**

FEEL JOYO ENJOY MUSIC

Thank you for purchasing JOYO's "DUALKLONZ" tube guitar amplifier, please read this owner's manual carefully before operating the amplifier. You can gain the best performance if you follow those operating instructions. Please keep the owner's manual for future reference.

Disclaimers :

Bluetooth is a trademark owned by the Bluetooth SIG, Inc. The Bluetooth trademark is used merely to identify the function character of the product.

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App Store is a digital distribution platform, developed and maintained by Apple Inc., for mobile apps on iOS.

Android and Jelly Bean are trademarks of Google, Inc.

Google Play is a digital distribution service, including a digital media store, the Google Play Store (originally the Android Market), operated and developed by Google.

Accessory:



Footswitch



Power cord



2 Speaker cables:
55cm×1 and 150cm×1



Owner's manual



Vacuum tubes
EL84 x 2 EL34 x 2

Table of contents

Product overview 3

Important safety notes 6

Front, back, right, left panels 7

Footswitch 9

Typical setup and Cable Connections 9

Amplifier Operation 10

App and MIDI Operation 12

Changing power tubes 13

Technical specifications 14

Product overview

KLONZ

BY JOYO

THE FIRST ALL-TUBE, MULTIPATH GUITAR AMPLIFIER

The DUALKLONZ is unlike any other amplifier you know, and it is also exactly like many amps you know.

“What are they guys at JOYO smoking?”

.....Would be a justified reaction to this claim.



For years, the digital community has tried to bring us flexible amplifiers that use software to model the behavior of tube amps. The technology is getting better and less and less distinguishable from “the real thing”, but sadly, it is not real tubes, real analog signal paths. And there is no physical interaction between the amp and the player.

To many players the difference is still very apparent and they still love their all-tube amps. Those amps sound great, but they don't offer you the choice of different amps on stage or in the studio, unless you bring many of them. It is that convenience that drives us to look into the digital world.

The DUALKLONZ can bring you this convenience and still be 100% all tube.

Imagine you had the circuits of some of the most iconic amps all on one circuit board and you could use relays to switch between them. You'll get the drive behavior, the breakup, the compression, everything just like those amps you always dreamed of having in your collection.

Now imagine you can switch between them with a phone or tablet by using an app. Or using a simple USB connection, or even MIDI for live applications.

Don't imagine. It's here.

The JOYO “DUALKLONZ” features a Vintage channel, with some of the most iconic amp circuits of the last 60 years, and a Modern channel that can give you the tones of the amps that came after them. Here you can find some of your rock and metal favorites and high-gain lead sounds from amplifiers that made history, but also more modern voiced low gain sounds.



YOU CAN ALSO CONTROL EVERY RELAY INDEPENDENTLY FOR THOUSANDS OF NEW COMBINATIONS.

Oh, did we mention that the power amp also features all the circuits of those classic amps? Yes, it does. All you have to do to get closer to the original is follow the tube guide in the app, turn off the amp, change the tubes (no need for matched pairs tubes or biasing) and enjoy a different side of the DUALKLONZ amp.

The amp accepts EL84, EL34, 6L6, 5881, 6V6, KT66, KT88 and many more.

We encourage you to experiment. One amp's preamp with another type of power amp circuit and tubes that have never been used in that configuration. You might just find the amp you've always been looking for, the one that no one has built yet.

Imagine a studio session where you show up with one amp, a few other tubes and a bucket full of ideas. You can take out your phone, which will connect with Bluetooth automatically as soon as you open the app, and dial in some sounds to express your ideas.



For a live show, just set up your amp as a dual channel blues amp one night and a metal monster for a different gig the next.

You can also use a MIDI controller to switch Circuits in between songs (takes about 1-2 seconds) to have all these sounds available during the set.



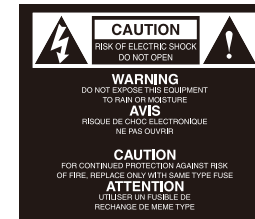
Of course we didn't forget about an FX Loop. The amp also has a BOOST switch to make the Modern Preamp even more flexible.

We added a second speaker output section which can be switched remotely. This enables you to use one cab for the clean/overdrive sounds and another for the heavier sounds and always have the perfect speaker for the "amp" of your choice.



Channel, Boost and Speaker Out can be switched with standard 1/4" cables so that it will be easy to incorporate this amp into a setup that uses a looper/switcher with Switch/Trigger Outs (Like the JOYO PXL Line)

But you know what? Forget about all of that! Just play it and find out for yourself what the real thing sounds like. After that, everything else is just icing on the cake!



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.



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 to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



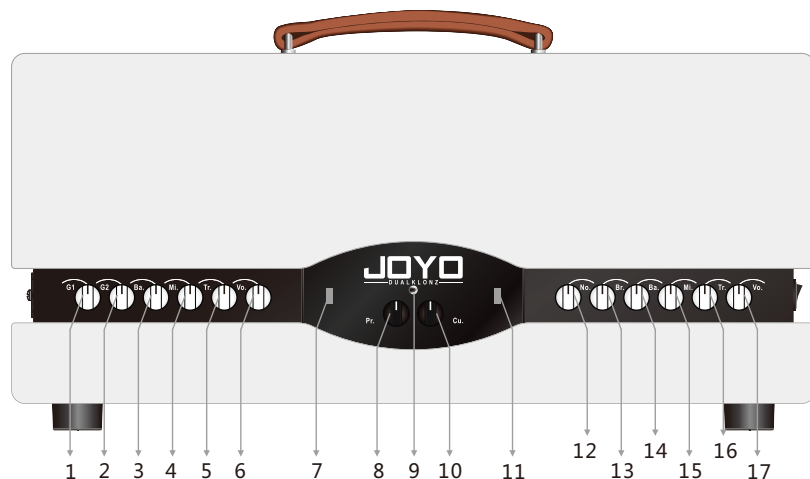
This symbol is intended to alert the user---Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Safety instructions ⚠

Please read this manual.

- Read this manual before operating the amplifier. The manufacturer will not be liable for any damage occurred to this equipment or other equipment connected to it, resulting from misuse.
- Heed all warnings.
- Check that the mains voltage selector on the back of the amp is set to match your mains voltage.
- Check that both the On/Off switch and the STANDBY switch are set to OFF position, before connecting it to the mains outlet.
- Check that whether the DUALKLONZ amplifier is connected with the cabinet. Never operate the amplifier without a cabinet connected.
- Don't use this amplifier near water or damp areas.
- Clean only with a dry cloth.
- Don't block any ventilation openings nor cover it with cloth and the like.
- Don't use it near heat sources, such as radiator, heater, electrothermal oven and more.
- Use the attached 3 pin power cord.
- Protect the power cord from being walked on and pinched particularly at plugs, convenience receptacles and at the point where they exit from the unit.
- Please unplug the power socket during thunderstorm, lightning or if it is not in use for a long time.
- Please contact professional maintenance men if it malfunctions.
- Don't move the amplifier during use.
- If you need to change input voltage, please make sure to slide the Mains Voltage Selector to the correct position and change the matching fuse accordingly.

Front, back, right, left panels



Front Panel

- 1.**G1** : Gain control for the first stage of Modern Preamp
- 2.**G2** : Gain control for the second stage of Modern Preamp
- 3.**Ba.** : Bass control for Modern Channel
- 4.**Mi.** : Mid control for Modern Channel
- 5.**Tr.** : Treble control for Modern Channel
- 6.**Vo.** : Master Volume control for Modern Preamp
- 7.**Red LED indicator for Modern Channel**
- 8.**Pr.** : Presence control – common to both channels
- 9.**Channel switch**(When the footswitch is connected, the channel switch is excluded)
- 10.**Cu.** : Cut control – common to both channels
- 11.**Green LED indicator for Vintage Channel**
- 12.**No.** : Normal input level for Vintage preamp
- 13.**Br.** : Bright input level for Vintage preamp
- 14.**Ba.** : Bass control for Vintage Channel
- 15.**Mi.** : Mid control for Vintage Channel
- 16.**Tr.** : Treble control for Vintage Channel
- 17.**Vo.** : Master Volume control for Vintage Preamp

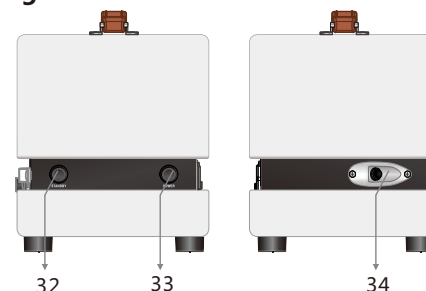
Back Panel



- 18. **Mains Voltage Selector for 110-120V and 220V-240V input AC.** Please note that, if you need to change input voltage, please change the matching fuse accordingly.
- 19. **Mains Fuse:** Please use T2AL fuse when it' s 110-120V~60Hz; please use T1AL fuse when it' s 220-240V~50Hz
- 20. **AC Input Jack:** Please use the attached power cord, the power cord must be compatible to the local plug and voltage. Be sure not to damage the ground pin in the power cord, otherwise there will be strong electric shock.
- 21. **Send: Effects loop output jack**
- 22. **Level: Effects loop output level**
- 23. **Return: Effects loop input jack**
- 24. **Chan Fsw:** Channel select footswitch jack
- 25. **Cab Fsw:** Cab select Footswitch jack
- 26. **B:** Secondary cab 16 Ohm or 8 Ohm Outputs
- 27. **A:** Primary cab 16 Ohm or 8 Ohm Outputs
- 28. **B:** Secondary cab 8 Ohm or 4 Ohm Outputs
- 29. **A:** Primary cab 8 Ohm or 4 Ohm Outputs
- 30. **MIDI In/Out connectors**
- 31. **USB Connector**

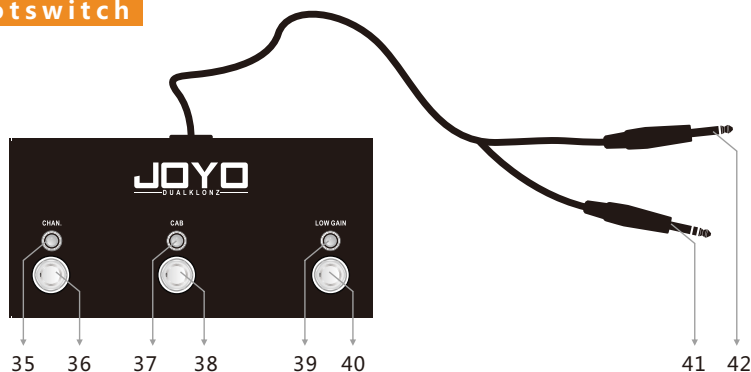
Right Panel

Left Panel



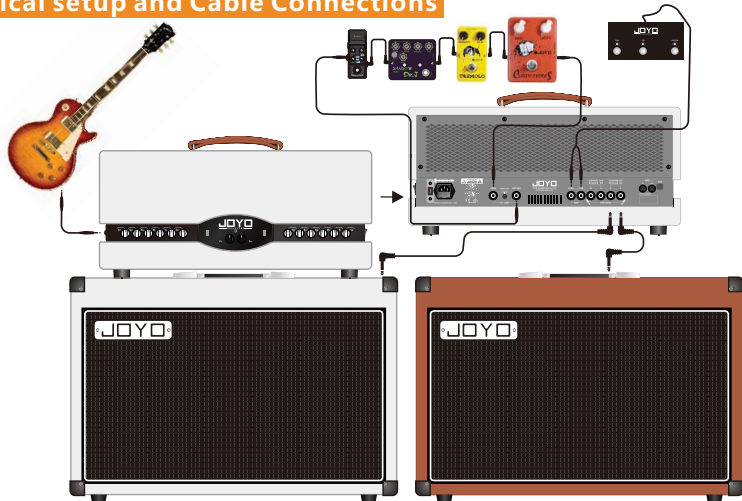
- 32. **STANDBY switch**
- 33. **POWER switch**
- 34. **Guitar Input Jack**

Footswitch



35. **Channel switch indicator:** when the Channel switch indicator is ON, it means the Modern channel is active, when the indicator is OFF, the Vintage channel is active.
36. **Channel footswitch**
37. **Cabinet switch indicator:** when the Cabinet switch indicator is ON, it means the "A" output cab is active, when the indicator is OFF, the "B" output cab is active.
38. **Cabinet footswitch**
39. **LOW GAIN indicator:** when in Modern channel and the amps with LOW GAIN function, if the LOW GAIN indicator is ON, it means the LOW GAIN is active, if it's OFF, then not active. (In Vintage channel, LOW GAIN is not active)
40. **LOW GAIN footswitch**
41. **Channel switch plug**
42. **Cabinet switch plug**

Typical setup and Cable Connections

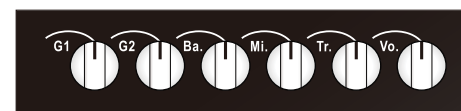


1. Connect a speaker cab to Speaker outputs, following the Cab's specified impedance. If only one cab is used, always connect it to the "A" outputs. Only if a second cab is used, connect it to the "B" outputs. If you use two cabs, a footswitch must be connected to the CAB SW input. If no footswitch is connected, only the "A" output will be active.
(IMPORTANT NOTE: When you are using different types of power tubes, the output impedances may change. Please pay attention to the back panel to find out which output to use.)
2. If used, connect your effects input to the Send output Jack, and the effects output to the Return input Jack. If necessary, adjust the Level control to adapt the Send output level to the effects input sensitivity. Typical setting is to adjust the Level control to STANDARD.
3. If you use two cabs, a footswitch must be connected to the CAB SW input. If no footswitch is connected, only the "A" output will be active. When connecting the footswitch, please put the Cabinet switch plug with "CAB" mark in the Channel switch Jack, and Channel switch plug with "CHA" mark in the Channel footswitch Jack, then the Channel switch of the front panel is excluded.
4. Please make sure that Mains Voltage Selector for 110-120V and 220V-240V input AC matches your local mains voltage. Check that both On/Off and STANDBY switches on the amplifier right side are both in OFF position, connect the mains cable. Turn on the Power switch. Allow at least 2 minutes for the tubes to warm up. Connect your instrument to the guitar input jack on amplifier left side, and turn down the Vo: Master Volume control for Modern Preamp and Vo: Master Volume control for Vintage Preamp to the minimum. Turn on the STANDBY switch and complete cable connections.

Amplifier Operation

The DualKlonz is a two-channel amplifier. Switching between channels can be operated via the Channel switch on the front panel, or via the footswitch.

Modern Channel:

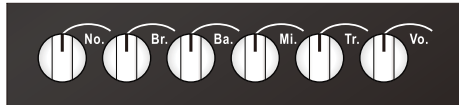


This channel is optimized for High Gain tones. The gain is controlled by the G1 and G2 knobs. These are part of two cascaded preamp stages. The output of G1 stage goes to the input of the G2 Stage. Think of it as a boost pedal (G1) going into the input (G2) of an amp.

The selection of different Modern models is done through the app or MIDI control (Please refer to the help file embedded into the app for full features and details.)

This second G2 stage is also bypassed when selecting low-gain models from the app or MIDI control. In this case the LOW GAIN footswitch won't be active.

Adjust the Bass, Mid, and Treble controls to taste. Adjust the Vo: Master Volume control for Modern Preamp for the required output level.

Vintage Channel:

This channel is optimized for recreating the tone and feel of vintage amplifiers, from 50's and 60's. Their gain is moderate so this channel is the best choice for tones spanning from totally clean to moderate crunch.

The selection of different Vintage models is done through the app or MIDI control (Please refer to the help file embedded into the app for full features and details.)

The No. and Br. knobs, control two separate input preamps. The Normal preamp has a flat frequency response, while the Bright preamp has a treble boost.

These two controls can be adjusted separately to obtain the desired tonal balance. For settings starting from 12 o'clock upwards, the preamps start to saturate, introducing some overdrive.

Adjust the Bass, Mid, and Treble controls to taste.

Adjust the Vo: Master Volume control for Vintage Preamp control for the required output level.

Power Amplifier:

The Pr. Presence and Cu. Cut controls are linked to the power amplifier.

They can be active or bypassed, depending on the Amplifier Model that has been selected via the app or MIDI control.

The Presence control acts by introducing a resonant low-pass filter. Turning it clockwise introduces a boost in the upper mids.

The Cu. Cut control introduces a low pass filter in the high frequencies. It acts like the tone control of a guitar. Turning it clockwise increases the cut frequency, giving more highs.

App and MIDI Operation

The DUALKLONZ amplifier is equipped with 2 pre-amplifiers (Modern, Vintage) plus a power-amplifier, with built-in Bluetooth IC control module, delivering a total of 27 remotely controlled relays, with which is possible to change circuit configurations, signal paths and components value.

The DUALKLONZ amplifier provides MIDI, USB-OTG and BLE (Bluetooth Low Energy) interfaces. (Please use USB-OTG or MIDI connection when you perform on the stage, so as to avoid Bluetooth interference.)

For Bluetooth and USB-OTG connection, you need to install an easy-to-use app, which is available for iOS (BLE), Android (BLE), Android (USB-OTG platform). Please note that USB-OTG doesn't support iOS platform, but Android platform only.

To install it into your device simply launch the App Store (iOS) or Play Store (Android) and search for DUALKLONZ. After you install the app, please refer to the help file embedded into the app for full features and details.

Refer to the help file contained into the app for MIDI details as well.

MIDI Program Change message 0..127 is used to select specific patterns.

Factory presets start at PC 0 for the Vintage Channel; at PC 24 for the Modern Channel.

Hardware & System Requirements**iOS**

- iOS 8.0 or later
- iPhone 4s or later
- iPad with Retina display (3 Gen) or later
- iPad Mini or later
- iPad Pro or later
- iPod Touch 5 Gen or later

Android

- Android 4.3 (Jelly Bean) or later
- Devices that support BLE (Bluetooth Low Energy)
- Devices that support USB-OTG (On The Go)

Additional remarks for android devices:

- It's mandatory that the android device supports BLE, "Basic" Bluetooth (prior to 4.0) is not supported.
- The USB interface in the app is disabled by default to speed up the BLE connection: in order to use USB, be sure to activate it into the app.
- Always connect the android tablet/phone to the amp using an OTG adapter plus an USB cable.

Changing power tubes

One of the key features of the DUALKLONZ is the possibility to use many different power tubes, without the need of any setting.

The following tubes can be used:

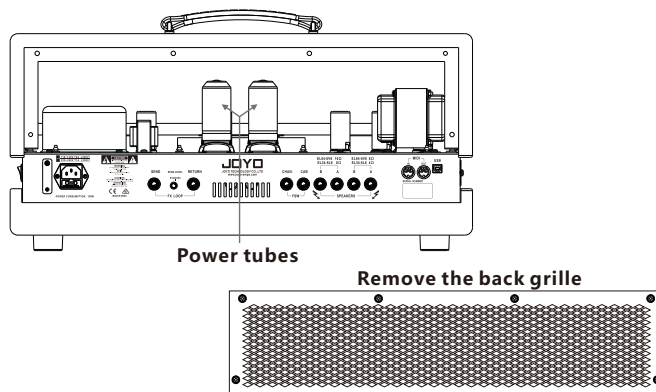
Tube	Output power W	Cab Impedance
6L6	25	8 Ohm or 4 Ohm
EL34	25	8 Ohm or 4 Ohm
KT66	25	8 Ohm or 4 Ohm
KT88	25	8 Ohm or 4 Ohm
5881	25	8 Ohm or 4 Ohm
EL84	15	16 Ohm or 8 Ohm
6V6	15	16 Ohm or 8 Ohm

Please note that, when using 6V6 or EL84 tubes, the rated impedance of the speaker outputs is doubled.

The stock tubes are 2 6L6s. 2 EL84 and 2 EL34 power tubes will be included, therefore you can change power tubes according to different amp tones.

TO CHANGE THE POWER TUBES, FOLLOW THESE INSTRUCTIONS CAREFULLY:

1. Switch off the STANDBY switch and the main On/Off switch. Remove the mains power cord from the back of the amp. Let the tubes cool down for at least 10 minutes. (Please make sure the tubes are not too hot to hold)
2. Remove the back grille.
3. Push the metal clamps down with two fingers and remove the power tubes by gently pulling and tilting them.
4. Insert the new tubes: first check the alignment of the pins, then gently push the tube in place. DO NOT force the tubes. If you encounter some resistance, re-check the pins straightness and alignment.
5. Re-install the back grille.
6. Proceed with the standard switch-on procedure according to the typical setup and cable connections.



Technical Specifications

Preamp Tubes-Vintage Preamp	1x ECC83S/12AX7 ; 1x 12AY7
Preamp Tubes-Modern Preamp	3x ECC83S/12AX7
Power Amp Tubes (factory standard)	1x ECC83S/12AX7 ; 2 x 6L6
Output Power	from 15 to 25 W RMS, depending on power tubes
Power consumption	150W
Mains voltage tolerance	+/- 10%
Operating Temperature	From 10° to 35° C
Mains fuse	110-120V~60Hz: T2AL 220-240V~50Hz: T1AL
Input	6.3mm Unbalanced, 1 MOhm
Send/Return	6.3mm Unbalanced, 1 KOhm / 1MOhm
Speakers Out	6.3mm 8 Ohm and 4 Ohm
Speakers Out with 6V6 and EL84 Tubes	6.3mm 16 Ohm and 8 Ohm
Cab Footswitch	6.3 mm Mono Jack
Channel Footswitch	6.3mm Stereo Jack. Tip: Boost. Sleeve: Channel
Dimensions	60 L *25 W *31 H cm
Weight	14.63kg

JOYO Technology is committed to guarantee the highest quality standards. All Technical Parameters or pictures are only for your information, subject to the actual products.

FCC Radiation Exposure Statement:

The transmitter must not be co-located or operated in conjunction with any other antenna or transmitter. This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.