



CHOPPER

Operating Manual

PATENTS PENDING WORLDWIDE

Safety first.

Electrical faults can kill you.

In the music world, the most common form of electrical shock is when the musician forms a path for an electrical current between two different circuits where one of them is faulty. Usually this is precipitated by holding a guitar plugged into one circuit and touching a microphone which is plugged into a different circuit. If one of the circuits (or a piece of equipment in the path) is faulty, there is a real danger of electrical shock.

gig-fx pedals offer the possibility of working in stereo using two amplifiers. If one of your amplifiers is connected to one electrical circuit, and the other is connected to another circuit, you need to make sure that both circuits are wired correctly. Use a 'mains

tester' from an electrical or hardware store. It should show you that the 'Live' (Hot), Neutral and Ground are all present on the correct pins. DO NOT USE outlets which are not wired correctly. If in doubt, call an experienced electrician.

In addition to the above, make sure your amplifiers are wired correctly and have not been modified by inexperienced personnel. Beware of amplifiers that have switches that reverse polarity or lift ground connections.

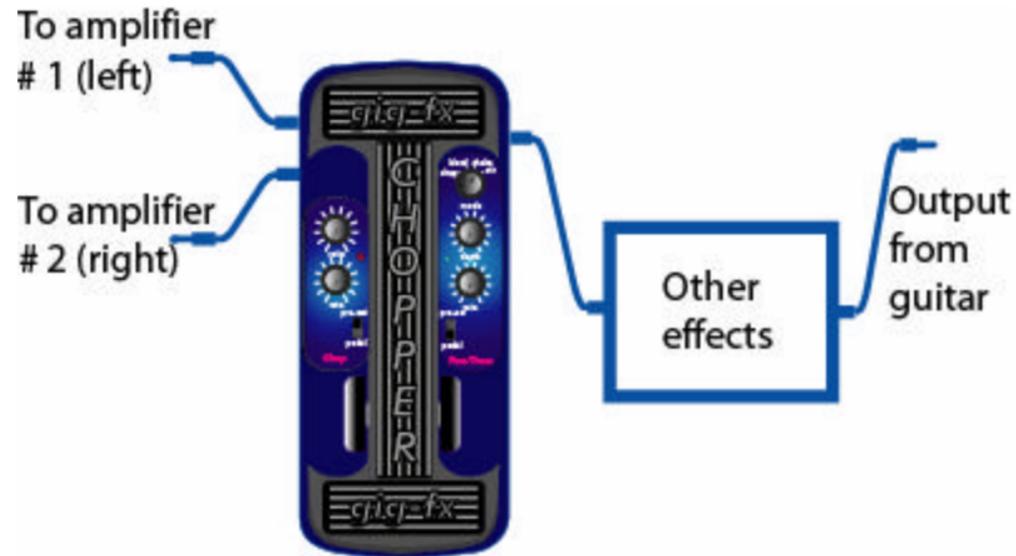
What to expect

The *CHOPPER* will challenge your imagination and creativity. Unlike the myriad of 'me too' effects out there, the Chopper can produce TOTALLY ORIGINAL sounds. For example, the *CHOPPER* can generate a sound that captures the richness and texture of a multi-tracked delay sound but without the repeated note hanging on. Given the infinite variety of settings, you can achieve sounds that will define your song or signature sound.

Of course, the capabilities of the *CHOPPER* can also be adapted to reproduce classic sounds such as a tremolo, Leslie or the chopped sounds hitherto associated with synthesizers, but on top of all this, the *CHOPPER* can produce never-heard-before sounds that will inspire you to write the effects into your original compositions. The Chopper is 100% analog.

Hooking it up

Put the *CHOPPER* LAST in the chain of effects. This will retain the signal-to-noise ratio should you use a lot of gain. HOWEVER the *CHOPPER* can be followed by note-triggered effects to create some amazingly funky sounds.



Ground loops (the kind of buzz you don't want)

Sometimes, when working in stereo, an annoying hum or buzz will appear when two amplifiers are used. This can occur when the amplifiers are plugged into two separate circuits or if either of the amplifiers has some internal wiring issues, or the large ground loop forms an antenna. Test the mains outlets using a mains tester as described in the safety warning in this manual or call an electrician to test the outlets.

Once you have verified that the outlets are wired correctly, you can usually solve the problem by disconnecting ('lifting') ONE of the grounds on the amplifiers (NOT BOTH). In the US, you can do this by using a 'ground lifting' plug which eliminates one ground connection. In Europe or elsewhere that uses three-pin plugs, you may need to disconnect one of the grounds by means of disconnecting the ground connection inside the mains plug, but consult an electrician first and make sure it is done professionally.

Providing that one of the amplifier grounds is still present throughout the circuit, it should be safe to lift one of the grounds and the buzz should buzz off.

Powering it up - AC Adapter

Preferred adapter is a smoothed 9V DC supply class 2 adapter with minimum 50mA output current capability. Most commercially available 9V adapters designed for pedal effects will work (2.1mm diameter plug)). No harm will come to the unit if the power supply jack has the wrong polarity, but double check that the center-pin of the power jack is negative polarity.



Battery Power

The unit can be operated on a single 9V battery and will be 'on' and drawing current as long as there is a ¼" jack plug inserted in the input jack socket. To replace battery, unscrew smaller base panel as indicated underneath the unit.

The *CHOPPER* draws less than 10mA when giving a long battery life. Be aware that if your power supply does not supply enough current to power all your effects, power supply noise can increase substantially or cause other unwanted sound defects.

To preserve battery life, always unplug the input jack when pedal is not in use.

Pedal Board Mounting

Attach strips of self-adhesive Velcro sufficient to cover the rubber pads on the base plate of the pedal. Cover your pedal board with the other side of the Velcro and, Voilà!

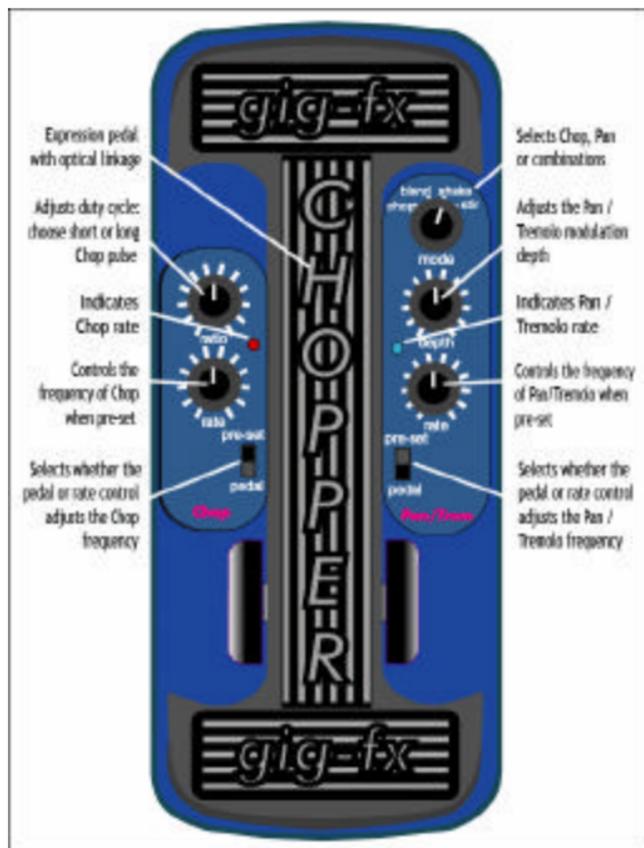
By-Passing the unit

The unit is by-passed if the pedal is in the full-back position. You will not feel any switch as it is a noiseless, wear-free optical switch. The effect will turn on when the pedal is depressed. When bypassed, neither the Chop nor Pan LED will be illuminated. Please note, even when by-passed, the pedal will draw current as long as there is a jack plug inserted in the input jack socket so to preserve battery life, remove jack plug when pedal is not in use. The nature of the bypass is a silicon switch which has an open bandwidth and will not affect the integrity of your signal.

Stereo v. Mono

The *CHOPPER* can be used as a mono device or a stereo device, however, the *CHOPPER*'s sound effects are much more entertaining in stereo. It is HIGHLY recommended to use the device in a stereo set up either by using a stereo amplifier, two amplifiers or by using two channels in a PA, stereo preamp, or mixer - each panned alternately to the left and the right.

The *CHOPPER* produces many original and melodic effects in stereo. Think about it ... on a recording, your instrument is rarely confined to one side or another, it is always in stereo, and many productions require panning or other effects which sound much better in stereo, now your live performance need not be limited to mono and you have control of the sounds live with a foot pedal.



CONTROLS

Mode Selector Switch (top right)

CHOP MODE

- Put the *CHOPPER* in CHOP mode and the unit produces unique chopped sounds by modulating a signal from an 'off' state to an 'on' state at various frequencies (rate) using a variable on / off duty cycle (ratio)
- In mono, the chop signal is a dramatic sound that can be used as a rhythmic musical 'chant', or a groove, or when the rate is varied by the pedal, the chop can be sped up or slowed down to produce dramatic effects such as a helicopter, motorbike, machine gun, or spacey sounds like no other.
- In CHOP mode, in stereo, the left side is on at the same time as the right side is off so the signal alternates left

and right seamlessly. The ratio controls the pulse length on either side according to the direction you turn the knob.

BLEND MODE:

- In this mode, the *CHOPPER* combines the chop sound with a PAN cycle. Both the Chop wave and the PAN wave work independently. The chop rate and 'ratio' and the PAN frequency and depth can all be varied independently to produce a variety of effects.
- In this mode, the *CHOPPER* can be combined with other effects such as a wah or synth wah to produce some startlingly original effects. The sound in the blend mode can be used to emulate the intro to the Who's famous song, ***You Won't Get Fooled Again***, which was the inspiration for the *CHOPPER*.

SHAKE MODE:

- In this mode, the chopped signal and PAN cycle are combined with some out of phase trickery to produce
- Some original sounds, such as delay emulation. The chop rate, ratio, PAN rate and depth can all be varied independently to produce stunning never-heard-before effects.

STIR MODE:

- This is the PAN wave by itself, which, when used in mono, produces a tremolo effect.
- The **tremolo** goes where other tremolos do not go...all the way from zero sound to full on, and down as low as 0.3Hz. like a repeated swell sound. Control the rate either by the pedal or a preset. Adjust the depth to suit.

- When used in stereo, the STIR mode becomes an **AUTO-PANNER**. The signal will gradually PAN from left to right at the rate set either by the pedal or a preset rate.
- A **LESLIE rotating speaker** emulator can be achieved by putting a chorus pedal in front of the Chopper and using the pedal in stir mode to vary the 'speed of rotation' to produce a startlingly realistic Leslie effect.

SLIDE SWITCHES

- There are two slide switches, one on the left side of the Chopper and one on the right. The switch on the left controls the CHOP parameters, whereas the switch on the right controls the PAN parameters
- If either slide switch is in the 'Pedal' position, the chop or PAN rates (frequency) can be varied by the pedal being moved up and down. By putting the slide switches to

'Preset', the frequencies are adjusted by means of the 'rate' controls on each side. Either the Chop or the PAN effects are independent and therefore the rates can either be preset or adjusted by the pedal. Usually, the preset knobs can give a little extra range, so, for example, if you want a really slow pan, use the pre-set rather than the pedal.

RATE CONTROLS

- There are two rate controls, one on the left side of the *CHOPPER* and one on the right. The control on the left controls the CHOP frequency, whereas the control on the right controls the PAN frequency. The rate controls are operative if the relevant slide switch is set to 'preset' and by-passed if the slide switch is set to 'Pedal'

RATIO CONTROL (Chop only)

- In mono, the ratio control adjusts the ratio of the Chop 'ON' time to 'OFF' time. If turned to the left, the pulse becomes very short, giving a dramatic Chop sound. As the knob is turned to the right, the pulse gets longer and the interval gets shorter.
- In stereo, if one pulse is long, the other is short.

DEPTH CONTROL (PAN or tremolo only)

- The depth control adjusts the modulation depth of the PAN (stereo) or Tremolo (mono). The *CHOPPER* modulation depth goes all the way to 'off' giving a 100% PAN effect or a very deep tremolo pulse.

Safety, EMI

This unit is compliant with:

FCC requirements for conducted and radiated emissions

EMI as described in CISPR 22

EMI requirements as described in EN55013

UL listing not required if used with class 2 (limited current) power supply or 9V battery

CE norms

Wear earplugs at loud gigs and don't let substances abuse you.

PATCHES

How to get the sounds...

Tremolo / Autopan / Leslie

Tremolo (mono) or use stereo to get auto-pan. Auto pan sounds like a Leslie if used with a chorus pedal before the Chopper.

Notes

Set frequency either by rate (pre-set) or vary by pedal to get Leslie effect. Use a slow PAN setting to soar like JH!

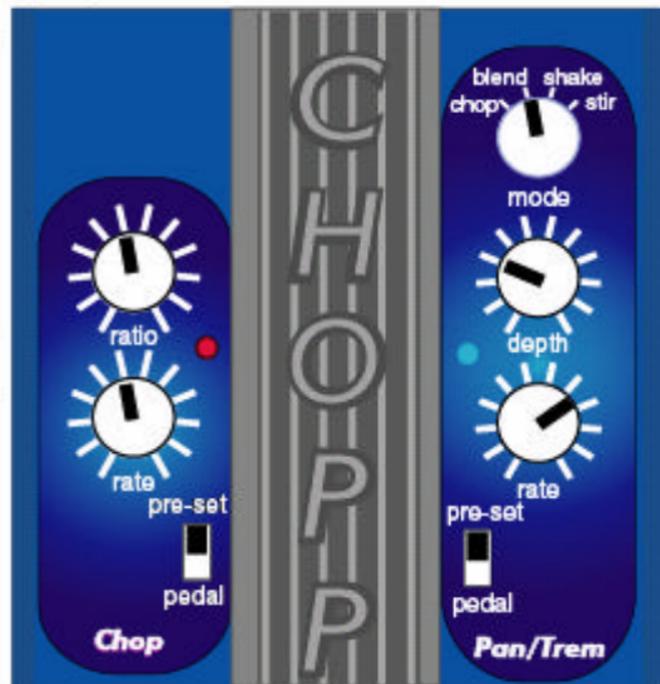


Funky Synth Wah

This is a stereo patch. Follow the Chopper with a 'synth wah' pedal or similar auto-wah, preferably note-triggered

Notes

Add a low octave for some really deep synth sounds. Try a slow flange to add more intrigue



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Teenage Wasteland

Stereo only. Can use an organ or a guitar. Sounds like the intro to that WHO song.....

Notes

Use a capo on the 7th fret....play a D shape.. and hammer-on the notes....



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You won't get fooled again

This is a stereo patch.
One of the most entrancing sounds used in any rock song. Use a slow WAH front of the Chopper.

Notes

Use a capo on the 7th fret and play a D shape. Add a chorus to produce an organ - like sound



Delay but isn't

Stereo only. Play some arpeggios and hear this patch come to life

Notes

Add a real delay for more intrigue...take it easy though.



Left-Right Shuffle / Bouncing Ball

This is a stereo patch.
The note flies from left to right in interesting patterns.
Play with the ratio and rates to get interesting variations

Notes

For bouncing ball, set the CHOP switch to 'pedal' and press the pedal down after striking the note.



Your own patch - mark the positions

Notes



Your own patch - mark the positions

The image shows a synthesizer interface with two main sections: 'Chop' on the left and 'Pan/Trem' on the right. The 'Chop' section features two rotary knobs labeled 'ratio' and 'rate', a 'pre-set' button, and a 'pedal' slider. The 'Pan/Trem' section features a rotary knob with three positions labeled 'blend', 'shake', and 'stir', a 'mode' knob, a 'depth' knob, another 'rate' knob, a 'pre-set' button, and a 'pedal' slider. The word 'CHOP' is written vertically in the center. To the left of the interface are two empty rectangular boxes labeled 'Notes'.

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Your own patch - mark the positions

The image shows a synthesizer interface identical to the one on slide 27. It features the 'Chop' and 'Pan/Trem' sections with their respective knobs and sliders, and the vertical 'CHOP' text. To the left of the interface are two empty rectangular boxes labeled 'Notes'.

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Your own patch - mark the positions



Notes



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Your own patch - mark the positions



Notes



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Your own patch - mark the positions



Notes



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