

# MAGMA57

AMP VIBRATO & DRIVE

## OWNER'S MANUAL



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PLEASE READ ALL INSTRUCTIONS, PAY SPECIAL ATTENTION TO SAFETY WARNINGS.

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### **IMPORTANT:**

**This product is designed to be powered from a 9VDC, >100mA power supply with 2.1mm centre-negative barrel connector.**

**The voltage is boosted internally for optimised headroom. Powering from more than 9V will not increase headroom further and may cause damage if connected for prolonged periods of time. Do not exceed 9V.**

**An isolated, regulated, linear power supply is recommended to minimise power-related noise and avoid damage from voltage surges and other over-voltage conditions.**



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## Introducing the **MAGMA57**

The MAGMA57 Amp Vibrato and Drive pedal accurately captures the legendary overdrive and pitch-shifting vibrato effect found in vintage Magnatone® amps.

MAGMA57 houses a complete valve amp-style signal path, built on the same platform as our ground-breaking RevivalDRIVE. We've used all-analogue components to recreate this unique amplifier at circuit level, complete with its sought-after vibrato effect. Inspired by the original Magnatone® amps, the pedal's amp circuitry delivers complex clean and overdriven tones dripping with vintage vibe.

We've also added a three-way Blend switch that combines the vibrato's wet and dry signals in different ways to deliver three distinct modulation modes: pure Magnatone® pitch modulation, Uni-Vibe-style phasing and a unique chorus effect, as well as a range of modern features like tap tempo, rhythmic subdivisions and effects switcher integration.

Finally, the powerful Post-Drive EQ section will make sure that the MAGMA57's stunning range of tones sound their best whether it's plugged into an amp, flat-response power amp, mixer or recording interface.

## Key features

- Complete valve amp-style signal path recreated in all-analogue electronics
- True two-stage pitch-shifting vibrato, as found in the Magnatone® 260/280
- Switchable blend modes to combine wet and dry signals in- and out-of-phase
- Powerful tone-shaping Post-Drive EQ
- Footswitch input for tap tempo and effects switcher integration
- High-current, low-noise electronics
- High-quality buffered bypass
- Advanced power supply filtering and protection
- Premium components throughout
- Designed and built in England

## The MAGMA57's vibrato effect

The MAGMA57's vibrato circuit is modelled on the two-stage vibrato found in the Magnatone® Custom 260 and Custom 280 models. First introduced in the late 1950s, these top-of-the-range combos featured a unique vibrato circuit that was more advanced than anything seen before.

In contrast to the tremolo effect (confusingly sometimes labelled “vibrato”), built into contemporary amps from Fender® and others, the Magnatone® effect was capable of true pitch modulation. For many, it remains the benchmark for lush, organic vibrato.

We've taken the original valve-driven circuit and recreated its topology and behaviour exactly, using all-analogue, discrete solid-state components. Going one step further, the MAGMA57 allows you to combine the wet and dry signals both in- and out-of-phase.

When these signals are blended together in phase, the two waveforms reinforce each other at certain frequencies and cancel each other out at others, creating a comb filter that sweeps up and down to produce the effect we know as phasing. In the MAGMA57, the 0° (in-phase) setting on the Blend switch is almost identical to the 'Chorus' mode on the original Uni-Vibe, a pedal that works on the same principle as the Magnatone's® vibrato circuit and was most likely heavily influenced by its design.

We also decided to include a 180° (out-of-phase) mode, which recreates the effect of bridging the Magnatone's® normal and vibrato channels (which are out of phase with each other) together. Combining the pitch-shifted signal with a phase-inverted dry signal not only creates a comb-filtered 'phaser' effect but also adds some amplitude modulation (or 'tremolo'), delivering a chorus-type effect that's unique to the MAGMA57.

## The MAGMA57's amp circuitry

In designing the MAGMA57's amp section, we decided to turn to a different vintage Magnatone® amp – the Model 213 'Troubadour'. While this smaller amp features a more basic single-stage vibrato, it's capable of some truly excellent overdriven sounds.

A cathode-biased, dual-6V6 amp, the 213 is largely based on the Fender® Tweed Deluxe, with a couple of key differences. While the Fender® amp has a passive tone control that simply rolls off high frequencies, the Troubadour's tone control is built into the second preamp gain stage, allowing it to actively boost treble as well as cut.

This unusual feature, together with an output stage that gives a little less gain to the bass frequencies, helps to tighten up the low end, delivering the same rich, organic overdrive as the Deluxe but without that amp's tendency to turn fuzzy and lose definition when pushed hard.

By combining this hidden gem of an amp circuit with the lush, two-stage vibrato of the larger 260/280 models, we've designed the MAGMA57 as the ultimate distillation of very best tones to be found in vintage Magnatone® amps.

## Connecting the MAGMA57



**INSTR:** Insert your guitar, other instrument or signal source here.

**AMP:** Connect to your amp, power amp, mixer or recording interface. If you're playing through something other than a guitar speaker (e.g. PA speakers, studio monitors, headphones or direct recording), we strongly recommend using a speaker simulator after the MAGMA57.

**9VDC:** Connect a 9V DC 2.1mm centre-negative mains power adaptor that can supply at least 100mA.

**F/SWITCH:** The F/SWITCH input allows you to connect an external footswitch or effects switching system to remotely control the following parameters:

- **Tap tempo:** Remotely sets the speed of the modulation effect. The F/SWITCH input detects tap rate by sensing the time between any two taps/pulses. The rate you set will then be multiplied according to the position of the MULTI switch.
- **Vibe on/off:** Remotely switches the modulation effect on or off, overriding the pedal's own VIBE footswitch.

**Effects switching systems:** When connecting effects switching systems such as the Boss ES-8 or TheGigRig G2 using a TRS lead, the tip should be configured for momentary operation to send tempo pulses, while the ring should be set for latching operation. Both functions are activated by shorting the respective pin to the sleeve (ground) pin. The F/SWITCH input is wired as follows:

CONNECTOR PIN	FUNCTION
Tip	Tap Function
Ring	Vibrato Enable
Sleeve	Ground

## Main controls



**ON footswitch:** Toggles between BYPASS (“off”) and EFFECT (“on”) modes. When in BYPASS mode, the jewel light is off.

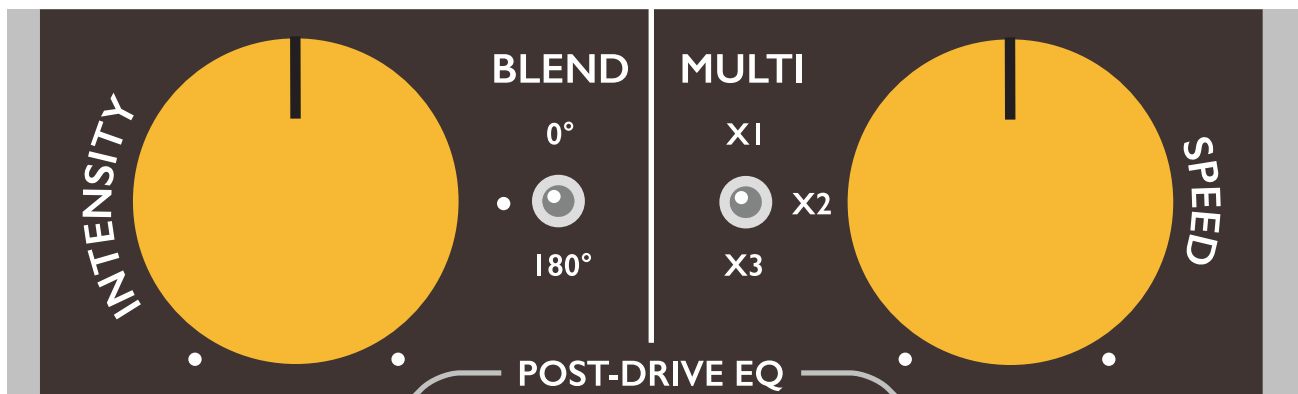
**VIBE footswitch:** Switches the modulation effect on and off. When VIBE is turned on, the jewel light turns yellow and will pulse to indicate the rate of the effect. When VIBE is turned off, the jewel light is red. The pedal’s simulated amp section remains active, just without any modulation.

**DRIVE:** The DRIVE control behaves like the Volume knob on a vintage non-master-volume amplifier. Set anticlockwise for clean sounds or turn it up for more overdrive.

**TONE:** Turn the TONE knob clockwise for a brighter sound. Turn counter-clockwise to tame highs. The MAGMA57’s tone control reflects the unusual design of the Magnatone® Model 213 Troubadour, which featured a partially passive, partially active tone control. Turned anticlockwise, it pulls out highs like a conventional passive tone knob. However, turned up past around 2 o’clock, it starts to actively boost treble, making for a very powerful, wide-ranging control and adding to the overdrive character of the pedal.

**OUTPUT:** The output control sets the pedal’s overall output level. Situated after the pedal’s simulated valve amp circuitry, it allows you to adjust output level without affecting the tone or character of the overdrive.

## Main controls (continued)



**SPEED:** Turn clockwise to increase the rate of the modulation effect. The range of the SPEED control is set by the three-position MULTI switch.

**MULTI:** The MULTI switch applies a preset multiplier to the speed of the modulation effect, whether it is set by the pedal's SPEED knob or by an external tap tempo footswitch. When setting the rate using the SPEED knob, the MULTI switch shifts the range of the SPEED control, providing precise adjustment over a wide range of speeds. When using the tap tempo function (see F/SWITCH, above), the tempo you enter will be multiplied according to the setting of the MULTI switch. The X1, X2 and X3 settings can be thought of as quarter-note, eighth-note and triplet modes respectively.

**INTENSITY:** The INTENSITY knob controls the depth of the modulation effect – in other words, the amount of variation in pitch, phase and/or amplitude that occurs. Turn clockwise to increase the intensity of the effect.

**BLEND:** The BLEND switch offers three distinct flavours of modulation:

- **BLEND off:** With the BLEND switch in the centre position, the pedal delivers pure vibrato (pitch modulation) modelled on the Magnatone® 260/280.
- **0°:** The dry and wet signals are combined in phase, creating a phase-cancelling or phaser effect similar to the 'Chorus' mode found on the classic Uni-Vibe.
- **180°:** The dry and wet signals are combined out of phase, creating our own unique chorus effect.



## POST-DRIVE EQ controls



The POST-DRIVE EQ ensures compatibility with a wide range of amplifiers.

Instead of altering your amp or its tone controls to suit the MAGMA57, set your amp for the desired clean sound then use the EQ controls to adjust the pedal's output accordingly.

**MODE switch:** This switch offers a choice of three different output filters.

- **P/AMP:** Use this setting when plugging into a flat-response power amp, mixer or recording interface. Selecting the P/AMP setting disengages the ADJ variable filter control (see below).
- **EQ1:** Designed to suit the response of a Blackface Fender-style amp, EQ1 applies a low-pass filter to roll off excessive highs. Use this setting when plugging into a bright-voiced guitar amp.
- **EQ2:** Voiced for connecting to a Marshall-style amp, EQ2 applies a high shelf cut to gently rein in high frequencies. Use this setting when plugging into a fuller-sounding, mid-rich amp.

**ADJ:** When EQ1 or EQ2 is selected, the ADJ knob lets you fine-tune the pedal's output to suit the individual response of your amp and the way its controls are set. As you turn the ADJ knob counterclockwise, this proprietary filter design gradually rolls off bass and adjusts the high shelf response. The end result is a very powerful and intuitive control.

If your amp sounds too bright or thin with the MAGMA57 engaged, turn the ADJ control clockwise. If it sounds too dark and wooly, turn the ADJ control counterclockwise.

## POST-DRIVE EQ controls (continued)

Use the tables below to help you set up the MAGMA57 for the first time with a new guitar amplifier or flat-response device. Working through Steps 1 and 2 allows you to “set-and-forget” the POST-DRIVE EQ controls and move on to having fun dialling in your ideal tone with the main controls.

Step 1: Set POST-DRIVE EQ switch for the connected amp or device

AMPLIFIER OR CONNECTED DEVICE	POST-DRIVE EQ SWITCH POSITION
Power amp & guitar speaker Mixing desk & cabinet simulation Recording interface & cabinet simulation	P/AMP
Bright, mid-scooped guitar amplifier	EQ1
Dark or Mid-rich guitar amplifier	EQ2

Step 2: Fine-tune the POST-DRIVE EQ with the ADJ control\*

HOW IS THE MAGMA57'S TONE?	TURN THE ADJ CONTROL...
Too bright or thin	Clockwise
Too dark or woolly	Counterclockwise
Just right!	Leave in this position and enjoy using the pedal!

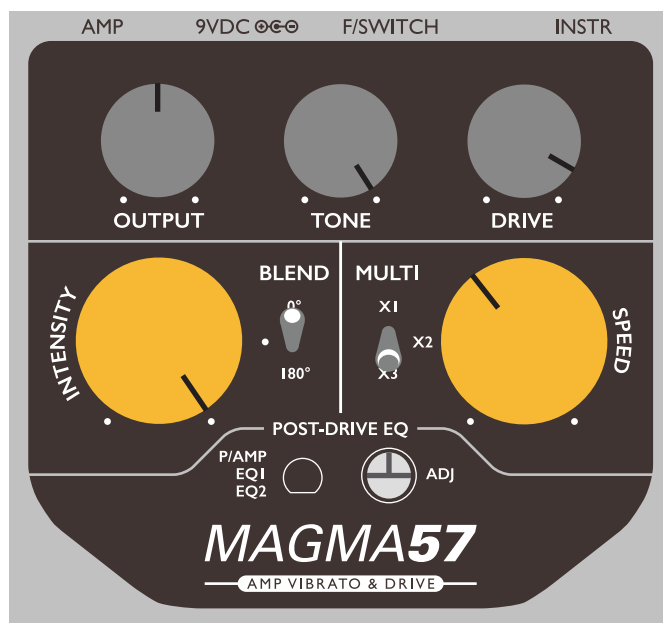
\*Please note: the ADJ control is not active when the POST-DRIVE EQ switch is in the P/AMP position.

## Example settings



### '57 VIBRATO

Inspired by sought-after Magnatone® amplifiers from the 1950s, this setting combines edge-of-breakup amp tone with classic pitch-modulating vibrato to add thickness and movement to your sound.



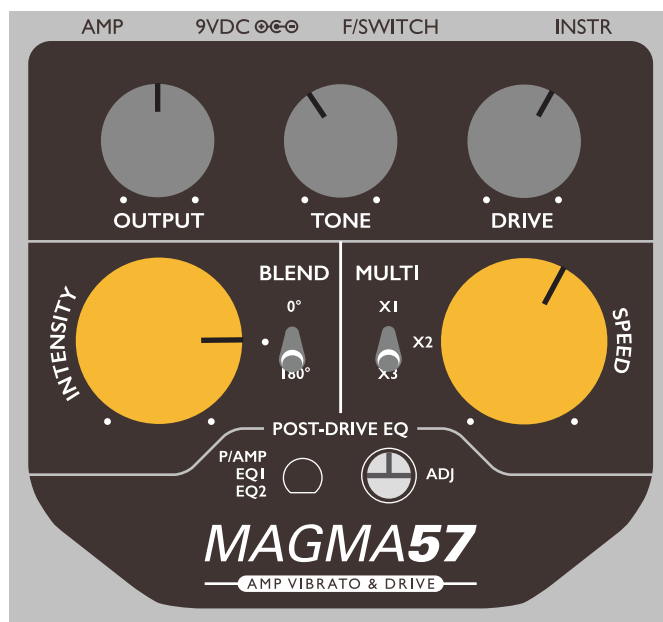
### WOODSTOCK VIBES

Experience psychedelic overdrive that's perfect for soaring solos. Switch the BLEND to 0° for instant '60s Uni-Vibe sounds, and use a tap tempo footswitch to control the modulation speed on the fly.



### INTERSTELLAR VIBE-DRIVE

Take a trip through the cosmos with this raw overdrive tone that's inspired by early British psychedelia. Switch the BLEND control to 180° for a spaced-out phasing effect.



### GRITTY ROTARY

Achieve a great rotary speaker sound with mid-range punch and true pitch modulation. Turn up the DRIVE control for more saturation, or flick the MULTI switch to shift gears and really make the room spin!

## Appendix A: Physical specification

Measurement	Unboxed	Boxed
Weight	866g (30.5oz)	1000g (35.2oz)
Length	147mm (5.7")	160mm (6.2")
Depth	93mm (3.6")	115mm (4.5")
Height	60mm (2.3")	95mm (3.7")

## Appendix B: Performance specification

Measurement	Value
Input impedance	1M $\Omega$
Output impedance	1k $\Omega$
Current draw	100mA
Power supply requirements	9VDC 2.1mm centre negative connector

## Appendix C: Connector pin outs

Footswitch 1/4" TRS socket:

Pin	Description
Tip	Tap Function
Ring	Vibe Enable
Sleeve	Ground

Instrument & Amplifier 1/4" TS sockets:

Pin	Description
Tip	Signal
Sleeve	Ground

## Appendix D: Safety notices

### General safety

Keep these instructions and heed all warnings. Do not use this apparatus near water. Clean only with a dry cloth. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat. Refer all servicing to qualified service personnel. No user serviceable parts inside.

When using an external power supply, use only attachments/accessories specified by Origin Effects. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. Unplug this apparatus during lightning storms or when unused for long periods of time.

**WARNING** - Any changes or modifications not expressly approved by Origin Effects Limited could void the user's authority to operate the equipment.

## Appendix D: Safety notices (continued)



The crossed out wheeled bin symbol indicates this product is classified as Waste Electrical and Electronic Equipment (WEEE) in the European Union and should not be discarded with household waste. Other territories may vary. Contact your local authority or Origin Effects for more information.



**WARNING:** This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



Evaluation of apparatus based on altitude not exceeding 2000m. There may be some potential safety hazard if the apparatus is operated at altitude exceeding 2000m.



Evaluation of apparatus based on temperate climate conditions only. There may be some potential safety hazard if the apparatus is operated in tropical climate conditions.

## Appendix E: warranty

This product is covered by a 2-year manufacturer's warranty from the date of purchase. This applies only to original purchasers who have bought their product from an authorised Origin Effects dealer or directly from Origin Effects.

All returns or servicing should be arranged through the original dealer. Proof of original ownership may be required in the form of a purchase receipt.

For full warranty details visit [www.origineffects.com/warranty](http://www.origineffects.com/warranty).