

Hughes & Kettner[®]
TECHNOLOGY OF TONE



deutsch

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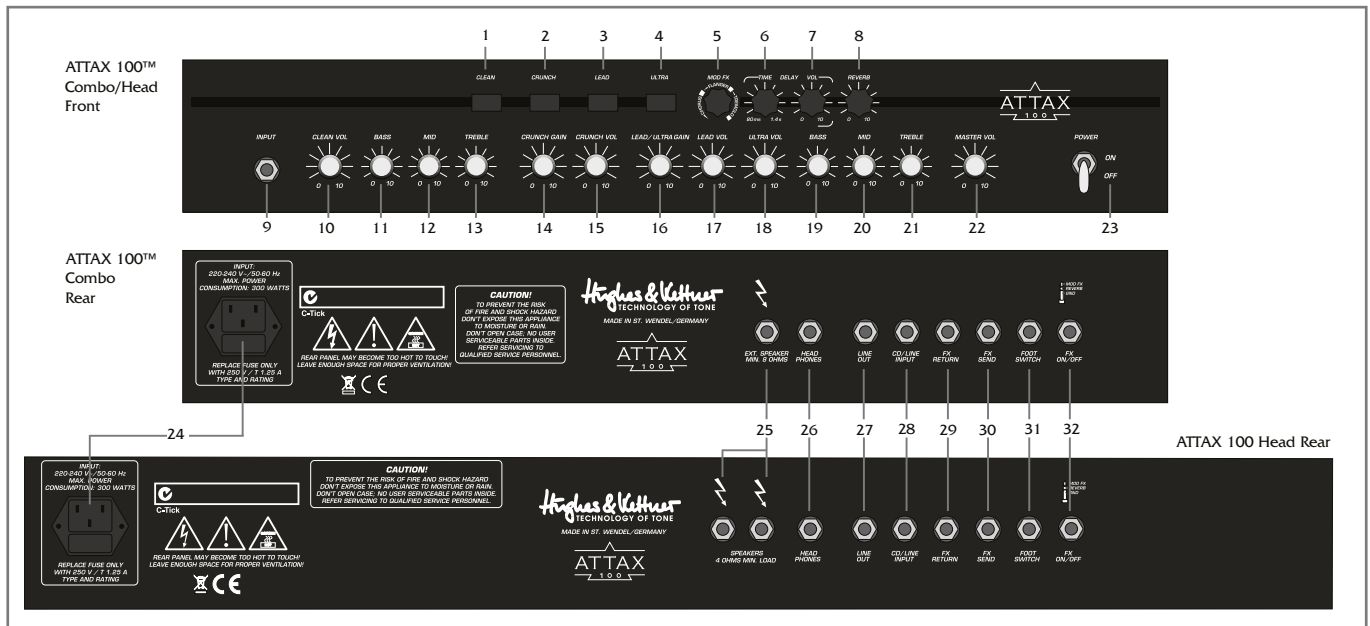
español

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ATTAX 100 Head
ATTAX 100 Combo

Manual 1.2



1 Overview of Control Features and Connectors

1.1 Selecting channels and effect parameters

Use buttons 1 to 4 to select the ATTAX 100™'s four channels, CLEAN, CRUNCH, LEAD and ULTRA. These buttons correspond to the buttons on the included footswitch. When the footswitch is connected, buttons 1 to 4 serve display purposes only, and the footswitch switches channels.

Use knobs 5 to 8 to adjust the effect for the given channel. The FX MATRIX Autostore function automatically saves the edited effect settings for every channel. You do not need to store settings separately. Even if the amp is suddenly switched off or power fails, the FX MATRIX will recall your settings.

1.2 Instrument inputs, channels and master volume

Connect your guitar to input 9. Please use high-quality shielded cords only.

Use knobs 10 to 21 to shape the sound and determine the volume of individual channels. You'll find a detailed description of the channels in section 2. Knob 22 determines the amp's overall volume level. Always turn the MASTER knob all the way down – that is, counterclockwise as far as it will go - before powering your amp up.

Knobs 10 to 22 work in the same tried-and-true manner as the controls on a classic amp. These settings are not stored. This means that the actual position of the knob determines the amp's sounds.

1.3 Mains switch and mains socket

Use switch 23 to turn the ATTAX 100 on and off. Make a habit of checking to make sure that the switch is set to the OFF position before you connect the power cable to a mains power supply. The ATTAX 100 ships with a separate power cord that connects to socket 24. Please

ensure that the mains voltage matches the value indicated on the back panel of the ATTAX 100™. Get in touch with your Hughes & Kettner® dealer immediately if this is not the case or the included mains cord's plug does not fit into the wall outlet.

1.4 Speaker out

Use jack or jack pair 25, EXTERNAL SPEAKER or SPEAKERS, to connect speakers. All speakers are connected in parallel for both the combo and the head.

ATTAX 100™ COMBO

EXTERNAL SPEAKER: Connect cabinets with 8 ohms minimum impedance to this jack. The impedance of connected speakers must never be lower than 8 ohms!

ATTAX 100™ HEAD

SPEAKERS: You can connect two cabinets to the head. The minimum impedance is 4 ohms; ensure your rig's impedance never drops below 4 ohms! If you plug cabs into both jacks, each cabinet's impedance must be 8 ohms or higher. If you plug a cab into just one jack, its impedance must be 4 ohms or higher.

1.5 Headphones out

Connect standard stereo headphones to jack 26, HEADPHONES. Adjust the volume via the MASTER knob. Always plug in a stereo 1/4" jack when connecting headphones. The headphones output may be damaged if you insert a mono plug into the jack. The ATTAX 100™ speaker output is deactivated when a plug is inserted into this jack.

1.6 LINE OUT

Use jack 27, LINE OUT, (mono 1/4" jack) to patch out the amp's signal, including all effects, to another power amp or a DI box (for example, the Hughes & Kettner® RED BOX®).

1.7 CD/LINE INPUT

Use jack 28, CD/LINE INPUT, to patch in any type of line signal. For example, you could plug in a CD player to play along with a recorded track. Use a cord equipped with stereo 1/4" jack plugs to do this. Adjust the level using knob 22, MASTER VOLUME.

1.8 FX SEND/RETURN

Connect an effect device's output to jack 29, FX RETURN; connect an effect device's input to jack 30, FX SEND. The effects loop is a serial circuit, so adjust the effect amount (or wet-to-dry balance) at the effect device. The entire preamp signal is routed through the inserted effector and processed there. Please note that your rig's sound quality depends to a considerable extent on the quality of the employed effect device. A poor-quality signal processor can have an adverse effect on the ATTAX 100's sound quality.

- Use high-quality patch cords only to prevent signal loss, background noise and drop-outs.
- Ensure that the effect device is not being overdriven. Be sure to keep an eye on whatever type of level meter, gain indicator or overload lamp the effects device is equipped with, and adjust its input and output controls accordingly.
- Fuzz boxes, overdrives and distortion units don't belong in an FX loop. Plug them into the amp's input.

1.9 FOOTSWITCH

Your ATTAX 100™ comes with a four-way footswitch that plugs into jack 31. The buttons on the footswitch correspond to buttons 1 to 4 on the ATTAX 100's front panel. When the footswitch is plugged into the amp, buttons 1 to 4 serve display purposes only, and the footswitch switches channels.

1.10 FX ON/OFF

Especially for live performances, the ATTAX 100™ enables you to turn the internal effects on and off individually, in addition to the 4 switchable channels. To do this, you need to connect a footswitch to the stereo 32 FX ON/OFF jack. Using a simple footswitch (such as the Hughes & Kettner® FS-1) will enable you to switch the modulation effects and DELAY at the same time, leaving REVERB unaffected. You can use a double footswitch (such as the Hughes & Kettner® FS-2) to switch the modulation effects and DELAY, and REVERB separately.

1.11 FX-ON/OFF Programming

The switching function of the stereo socket FX-ON/OFF on the back of the ATTAX 100 can be programmed by turning the MOD FX knob and holding CLEAN and LEAD pressed down. The following configurations show which effects blocks are assigned in this way to switch 1 and switch 2 of the double foot switch:

- 1) MOD FX knob is in 6–9 o'clock position
switch 1: MOD+DLY, switch 2: REV (factory preset)
- 2) MOD FX knob is in 9–12 o'clock position
switch 1: MOD, switch 2: DLY (reverb is not connected)
- 3) MOD FX knob is in 12–15 o'clock position
switch 1: MOD, switch 2: DLY + REV
- 4) MOD FX knob is in 15–18 o'clock position

switch 1: MOD+DLY+REV, switch 2 remains free (as "global bypass when single footswitch is used")

After switching-on, the ATTAX 100 confirms the selected configuration by making all four channel selecting switches blink on and off a corresponding number of times. For example, once for combination 1, and twice for combination 2, etc.. As soon as the LEDs are flashing, you can let go of CLEAN and LEAD.

ATTENTION: If CLEAN and ULTRA are kept pressed down at the same time, the entire AMP (all sounds and the FX-ON/OFF configuration) is reset to the factory presets.

2 The ATTAX 100's four Channels

2.1 CLEAN

The Clean channel is tweaked to sound sweet when driven by single-coil as well as humbucking pickups.

2.1.1 CLEAN VOL

Adjusts the CLEAN channel's volume level. Players who opt for this class of amp demand a clean channel with enough head-room to ensure it remains clean. This amp certainly does that. Depending on the pickups' output power, you may also be able to dial in a touch of grit. For single-coils, we recommend that you turn the knob well up. Do this, and the amp will reward you with tight & punchy midrange response that is both crisp and fat. If your axe sports humbuckers, set this knob somewhere around the 12 o'clock position for crystal-clear clean tone.

2.1.2 Clean Voicing Section: BASS, MID and TREBLE

knobs. MID and TREBLE controls influence each other, as is standard and desirable in the tube amps that this voicing section is patterned on. If you boost the high end, mids are cut and vice versa. This sound-shaping feature lets you dial in a wide variety of subtle tonal variations. We recommend that you go easy on the bass for the CLEAN channel. Generally, the more mids you dial in, the more assertive your clean tone in the band's soundscape. Note that the TREBLE knob shapes your guitar signal's bell-like overtones.

2.2 CRUNCH

Overdriven sounds à la carte! This channel covers a diverse tonal spectrum ranging from squeaky clean to gritty overdrive. It responds to every nuance in your picking attack, granting you precise control over the amount of overdrive via your guitar's volume knob. Higher CRUNCH knob settings elicit warm sustain that is ideal for singing leads with breathy dynamics.

2.2.1 CRUNCH GAIN

Controls the CRUNCH channel's input sensitivity and thus the amount of saturation. You can dial in anything from tone that is just sweet enough to pass for clean to throaty tones that are distinctly rough around the edges. Again, crank the knob for single-coils; back it off a bit for humbuckers.

2.2.2 CRUNCH VOL

Controls the CRUNCH channel's level; use it to determine the balance between it and the other channels.

2.3 LEAD

Yields hard-hitting, snarling British rock tone.

2.3.1 LEAD/ULTRA GAIN

Controls the LEAD and ULTRA channel's input sensitivity and thus the amount of saturation, with distortion option ranges from creamy smooth to British grit and chunky NuMetal thunder.

2.3.2 LEAD Vol

Controls the LEAD channel's level; use it to determine the balance between it and the other channels.

2.4 ULTRA

Beware! The ATTAX 100's heart of darkness, this channel offers fierce high-gain sounds of a flavor favored by popular NuMetal bands. This brand of distortion is best described as an angry roar. Depending on this channel's settings, you can dial monster NuMetal tone, grinding post-grunge and alternative sounds, and thunderous death and Gothic metal noise.

2.4.1 ULTRA VOL

Controls the ULTRA channel's level; use it to determine the balance between it and the other channels.

2.5 CRUNCH, LEAD, ULTRA Voicing Section

For handling ease, the ATTAX 100's three overdrive channels share common voicing controls. However, behind these tone controls are three different EQ circuits that are automatically switched along with the channel. This is why an EQ setting that you have dialed in for the LEAD channel works so well with the CRUNCH and ULTRA channels.

3 The ATTAX 100's Effects

The ATTAX 100 features three independent effects - modulation, DELAY and REVERB. All three effect models may be used simultaneously and adjusted independently. The FX MATRIX automatically stores settings for each channel.

3.1 MOD FX

The ATTAX 100 puts at your disposal the three most sought-after modulation effects: A CHORUS, FLANGER and TREMOLO are all assigned to one knob. CHORUS is assigned to the first third of the knob's control range, FLANGER to the second, and TREMOLO to the final third. You can sweep the knob within each third to adjust the effect's characteristics. We staked out the parameters so that you can swiftly and easily dial in settings that elicit good-sounding, useful variations of the desired effect. To switch off modulation effects, simply twist the knob to the far left. Twisting the knob clockwise adjust the

modulation effect's rate. Modulation depth is adjusted automatically according to the rate setting so that every knob position yields a hip effect sound offering real-world utility.

3.1.1 CHORUS

Low CHORUS settings yield a slow throb for thick, underwater sounds that work great with ballads. Courtesy of automatic effect depth adjustment, higher CHORUS settings do not evoke that dreaded "seasick" tone.

3.1.2 FLANGER

Slow FLANGER settings yield a stately sweeping whoosh effect, while faster settings give you swirly effects often heard in contemporary rock and pop tunes.

3.1.3 TREMOLO

Though the classic TREMOLO effect is great for recreating the sounds of '60s, it also serves up some hip effects that work wonders for contemporary tunes.

3.2 DELAY

DELAY is controlled via two knobs: TIME is an infinitely variable knob that sweeps smoothly to the next repetition from 80 ms to 1400 ms. Feedback is adjusted accordingly and automatically. Short DELAYs with minimal feedback conjure great slap-back rockabilly sounds, while medium-length DELAYs are perfect for U2-style jangle. Long DELAY times let you come up with cascading, Queen-style licks. The VOLUME knob determines the level of repetitions, with a control range sweeping from off to as loud as the original signal.

3.3 REVERB

The REVERB is an authentic-sounding emulation of a classic spring reverb. It handles and responds just like the original: Simply twist the REVERB knob to adjust the spring REVERB's volume.

4 Technical Specifications

Safety-related Data

Primary fuses:	220 – 230 V	T 1.25 A
	120 V	T 2.5 A
	100 V	T 3.15 A
Secondary fuses:	T 2.5 A (2 each)	
Max. power consumption:	300 watts	
Continuous power:	100 watts	
Minimum impedance:	4 ohms	
Operational temperature range:	-10°C – +35°C	

Inputs

INPUT:	Jack type:	1/4"
	Input impedance:	1 Mohms
	Sensitivity:	- 16 dBV
	Max. input level:	+ 4 dBV
FX Return:	Jack type:	1/4"
	Input impedance:	6 Kohms
	Sensitivity:	+ 3 dBV
	Max. input level:	+ 14 dBV
CD INPUT:	Jack type:	1/4"
	Input impedance:	22 Kohms
	Sensitivity:	- 2 dBV
	Max. input level:	+ 14 dBV

Outputs

FX Send:	Jack type:	1/4"
	Output impedance:	500 ohms
	Output level:	3 dBV
	Max. output level:	+ 10 dBV
LINE Output:	Jack type:	1/4"
	Output impedance:	220 ohms
	Output level:	6 dBV
	Max. output level:	+ 20 dBV
External Speaker ATTAX 100:	Jack type:	1/4"
	Circuit:	parallel
	Impedance:	8 to 16 ohms
Speakers: (HEAD only)	Jack type:	Two 1/4"
	Circuit:	parallel
	Impedance:	1x4 to 2x16 ohms
Headphones:	Jack type:	1/4" stereo
	Output impedance:	550 ohms
	Output level:	100 mW an 4 - 600 ohms

This is to certify that

HUGHES & KETTNER ATTAX 100™

complies with the provisions of the Directive of the Council of the European Communities on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive 89/336/EEC) and the low voltage Directive (73/23/EEC). This declaration of conformity of the European Communities is the result of an examination carried out by the Quality Assurance Department of STAMER GmbH in accordance with European Standards EN 50081-1, EN 50082-1 and EN 60065 for low voltage, as laid down in Article 10 of the EMC Directive.

Stamer Musikanlagen GmbH*
Magdeburger Str. 8
66606 St. Wendel



Lothar Stamer Dipl.Ing.
Managing Director
St. Wendel, June/2007

A handwritten signature in black ink, appearing to read "L. Stamer".

Für das folgend bezeichnete Erzeugnis

HUGHES & KETTNER ATTAX 100™

wird hiermit bestätigt, dass es den wesentlichen Schutzanforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die elektromagnetische Verträglichkeit (89/336/ EWG) und der Niederspannungsrichtlinie (73/23/EWG) festgelegt sind. Diese Erklärung gilt für alle Exemplare, und bestätigt die Ergebnisse der Messungen, die durch die Qualitätssicherung der Fa. Stamer Musikanlagen GmbH durchgeführt wurden. Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen: EN 50081-1 • EN 50082-1. Zur Beurteilung der Einhaltung der Niederspannungsrichtlinie wurde folgende Norm herangezogen: EN 60065

Diese Erklärung wird verantwortlich für den Hersteller



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abgegeben durch
Lothar Stamer Dipl.Ing.
Geschäftsführer
St. Wendel, Juni 2007

A handwritten signature in black ink, appearing to read "L. Stamer".