

INSTRUCTION MANUAL
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ATTAX

3-CHANNEL GUITAR PREAMPLIFIER

MANUAL

Hughes & Kettner 

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WE AT HUGHES & KETTNER WOULD LIKE TO CONGRATULATE YOU ON YOUR CHOICE OF THE ATTAX PREAMP!

The HUGHES & KETTNER ATTAX preamp is designed to meet the rigorous demands placed on contemporary musicians: superior sound quality, flexibility, and user-friendly operating define the **ATTAX** as a valuable tool in your quest for the ultimate sound.

The streamlined operating and control concept enables you to immediately dial in hot sounds. No fuss, no endless knob twiddling. This Operator's Manual introduces you to the ATTAX's features and options.

3 CHANNELS - THE STANDARD OF THE 90's

The ATTAX features three separate channels: One **solid state CLEAN** for vintage and contemporary clean tones. The two **tube channels, CRUNCH and LEAD**, are carefully tuned for a broad overdrive spectrum, from a slight crunch to heavy duty shred.

TWO EFFECTS LOOPS!

The ATTAX features **two separate loops** for effects/multi-effects devices: a standard **MONO FX LOOP** with SEND and RETURN jacks and a **STEREO LOOP** with a SEND and two RETURN jacks (Left/Right).

STEREO SETUP - NO PROBLEM!

The output, effect, and master sections feature stereo circuits enabling stereo setups, o. g. with a stereo power amp and two cabinets. Stereo effects processors can be added through the STEREO LOOP for optimum effects utilization.

FREQUENCY-CORRECTED RECORDING OUT JACKS

The two **Recording Out jacks** feature frequency-corrected signal paths that simulate the sound of a miked 4 x 12" cabinet, an ideal tool for home recording, studio situations, and on stage DI to the mixer.

MIDI - THE ULTIMATE CONTROL FEATURE!

The **MIDI option** requires no soldering. Installation is simple, and offers the ATTAX user all the comfort of MIDI capabilities. All three channels and the effects loop can be called via MIDI program change messages.

We hope you have fun and enjoy success with your ATTAX!

Hughes & Kettner 



THE ATTAX'S THREE CHANNELS

THE SOLID STATE CLEAN CHANNEL

This channel utilizes innovative solid state circuitry that is capable of producing warm, dynamic vintage tones, as well as contemporary, hi-fi clean sounds.

The HUGHES & KETTNER "SOFT CLICK" circuitry delivers the soft clip of a vintage tube amp at high volumes, except that you don't have to alienate your neighbors to get that warm tone. It "feels" like a vintage amp; the preamp's dynamics and response are true to classic tube performance criteria.

ATTAX CRUNCH - THE VINTAGE TUBE CHANNEL

The ATTAX CRUNCH tube channel covers the tonal spectrum from clean to overdrive. The emphasis on attack response in this channel enables you to control overdrive levels with your guitar's volume pot. At higher gain settings, your tone is carried by lengthy sustain ideal for a singing blues tone with superior dynamic punch.

AT-TAX LEAD - HOT-RODDED HEAVY TUBE OVERDRIVE

The LEAD channel's extreme gain reserves deliver the distinct performance characteristics of modified tube amps: fat, searing tube overdrive at any volume, ideal for modern lead playing and heavy-duty power chord chunk.

▼ SELECTING THE THREE CHANNELS: CLEAN / CRUNCH / LEAD

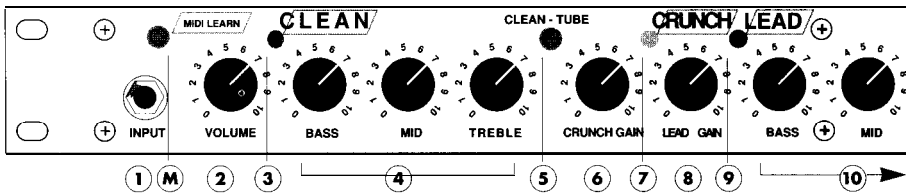
Channel switching is executed via the switch on the FRONT PANEL or the included STAGEBOARD.

The CLEAN /TUBE SWITCH (5) activates either the SOLID STATE (CLEAN channel), or the TUBE (CRUNCH/LEAD) sections.

The CRUNCH /TUBE SWITCH (12) activates either the CRUNCH or LEAD channel in the tube section.

An LED DESIGNATES the currently ACTIVE CHANNEL.:

CLEAN = GREEN, CRUNCH = YELLOW, LEAD = RED
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FRONT PANEL CONTROL FEATURES (from left to right)

1. INPUT

1/4" instrument input jack.

(M) MIDI LEARN BUTTON

MIDI OPTION installation is a prerequisite to **MIDI capability**. Upon **MIDI OPTION** installation, press the **MIDI LEARN BUTTON** on the **ATTAX'a** front panel to save the current sound/effect parameter settings. Installation is a matter of just a few minutes, it requires no soldering. Talk to your **HUGHES & KETTNER DEALER** for the details.

2. (CLEAN) VOLUME

Regulates the **CLEAN** channel's volume. Depending on your instrument's pickups, a setting of 7 - 8 is the clip threshold (**SOFT CLICK**).

3. GREEN CLEAN LED

The **GREEN LED** illuminates when the solid state (**CLEAN**) section is active.

4. CLEAN / BASS / TREBLE

The **THREE-BAND, PASSIVE VOICING** section defines the **ATTAX's** tonal characteristics in the **CLEAN** channel. Precise tuning and balance of filter frequencies enable you to quickly and efficiently dial in diverse sounds.

▼ SETTING VOICING PARAMETERS

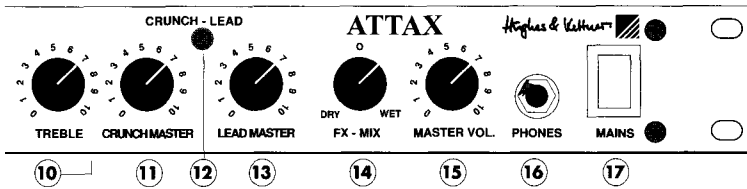
Dial in the standard setting (**BASS, MID, TREBLE** in the 12 o'clock position), and then modify the settings to suit your requirements.

5. CLEAN / TUBE SELECTOR SWITCH

Activates either the **SOLID STATE** (**CLEAN** channel), or the **TUBE SELECTION** (**CRUNCH** and **LEAD** channels).

6. CRUNCH GAIN

The **CRUNCH GAIN** POT regulates the **CRUNCH** channel's input sensitivity. Try different settings to achieve everything from ultra-clean sound to vintage tube overdrive.



7. CRUNCH LED

The YELLOW LED illuminates when the CRUNCH channel is active.

8. LEAD GAIN

The LEAD GAIN pot regulates the amount of distortion in the tube preamp's LEAD channel. The intensity of the compression effect inherent in tube technology increases parallel to the amount of overdrive.

9. LEAD LED

The RED LED illuminates when the LEAD channel is active.

10. CRUNCH AND LEAD TUBE CHANNELS VOICING SECTION

The two tube channels' tone controls are a combination of active and passive circuits designed to respond in a more musical manner. For instance, the active bass filters provide mid-range characteristics and provides additional presence (without unnecessary bending of frequency bands). The voicing section follows the tube section in the amp's circuitry.

▼ SETTING VOICING PARAMETERS

Dial in the standard setting (BASS, MID, TREBLE in the 12 o'clock position), and then modify the settings to suit your requirements.

THE ATTAX MASTER SECTION

In addition to the three channel's respective VOLUME and/or GAIN controls, the CRUNCH and LEAD channels each incorporate a MASTER control (CRUNCH MASTER / LEADMASTER). The overall output of the ATTAX is defined via the STEREO MASTER VOLUME knob (15). These features allow for an optimum volume balance between the three channels, an essential feature for gigs.

11. CRUNCHMASTER

Regulates the CRUNCH channel's volume in relation to the CLEAN and LEAD channel's respective volumes.

12. CRUNCH / LEAD SELECTOR SWITCH

Activates either the ATTAX's CRUNCH or LEAD channel.

13. LEADMASTER

Regulates the LEAD channel's volume in relation to CLEAN and CRUNCH channels' respective volumes.

14. FX-MIX

The FX MIX pot regulates the original signal's volume and its relationship to that of the processed signal, i. e. the one sent from the effects device connected to the STEREO EFFECTS LOOP. DRY = **original signal only**, WET = **processed signal only**. You can dial in any signal blend between these two extreme settings.

NOTE: If no signal procession is connected to the STEREO LOOP, then the **FX-MIX** pot can be used as a master volume. The FX-MIX has no influence on overall ATTAX output when it is set to DRY (refer to the "Activating a Second MASTER VOLUME" paragraph on the following page).

15. MASTER VOL

The ATTAX's **overall output is** defined via the MASTER VOLUME knob. It influences all outputs.

16. PHONES

1/4" head phone jack. The PHONES **output** jack delivers a speaker-simulated signal, so the ATTAX sounds similar to your stage setup at headphone volumes.

17. MAIN SWITCH:

AC mains power switch

ATTAX BACK PANEL CONTROL FEATURES

18. MAINS

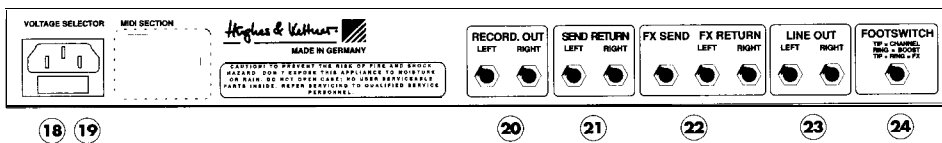
The included **Euro-norm mains cable** is connected to this socket. Ensure the voltage selector is set to the correct voltage (refer to the safety guidelines).

19. FUSE

Use a screwdriver to unlock and unscrew the FUSE **holder**. Ensure replacement fuses' specifications are identical to the original. The ATTAX is factory-set to the European norm of 230 V.

20. RECORDING OUT JACKS

The RECORDING OUT jacks deliver a frequency-corrected STEREO SIGNAL, comparable to a that of a miked 4 x 12" cabinet, ideal for home recording, studio, and DI-to-mixer applications.



21. MONO FX LOOP

Serial signal path for external effects processors. Connect the **ATTAX'S LOOP RETURN** to the device's **OUTPUT** jack. The output signal's dry/wet mix is regulated at the processor.

22. STEREO FX LOOP

The parallel **STEREO EFFECTS LOOP's dry/wet mix** is regulated via the **FX MIX pot** (14). The effects signal can be activated via the STAGEBOARD or MIDI messages.

Connect the **ATTAX's LOOP SEND** jack to the **device's INPUT**, and the **ATTAX's LOOP LEFT/RIGHT RETURN** jacks to the device's **LEFT/RIGHT OUTPUT** jacks.

Use the **ATTAX STEREO LOOP'S RIGHT RETURN** jack for mono signal processors. The LOOP sends a mono signal if only the **RIGHT RETURN** jack is connected.

TIP 1: You can connect other instruments/sound generation equipment to the **ATTAX** via the **STEREO LOOP'S RETURN** jacks instead of a signal processor/effects device. A second guitar, keyboard, drum machine, tape player, etc. can be used for rehearsals / practice sessions.

▼ Adding a **STEREO SIGNAL** (tape deck, keyboard, etc.):

- Connect the device's LEFT /RIGHT OUTPUTS to the ATTAX STEREO LOOP'S LEFT / RIGHT INPUTS.
- Step on the STAGEBOARD'S FX footswitch (the loop is activated).
- Regulate the device's volume via the **FX MIX pot** located on the front panel (to the left towards DRY = **volume down**, to the right towards WET = volume **up**).

TIP 2: You can also use the loop to activate an additional MASTER VOLUME, provided you do not connect a signal processor.

▼ Activating the additional MASTER VOLUME

- Step on the STAGEBOARD'S FX footswitch (the LED illuminates).
- Dial in a separate MASTER VOLUME setting for the ATTAX via the FX MIX pot (to the left towards **DRY = volume up**, to the right towards **WET = volume down**).
- **You** can switch back and forth between the two MASTER VOLUMES via the FX footswitch.

Upon MIDI option installation, you can also call MASTER VOLUME changes via MIDI messages.

23. LINE OUT (LEFT / RIGHT)

The two LINE OUT jacks (Left/Right) feed the preamp's signal to a power amp(s). Use a single **LINE OUT** jack to drive a mono power amp and speaker cabinet.

24. STAGEBOARD JACK

Connect the included ATTAX STAGEBOARD to this MULTIPIN jack.

ATTAX STAGEBOARD

Your ATTAX **preamp** package includes the STAGEBOARD which enables you to activate the 3 CHANNELS and the STEREO EFFECTS LOOP via footswitches.

NOTE: Ensure the CLEAN /TUBE and CRUNCH / LEAD SELECTOR SWITCHES on the FRONT PANEL are set to OFF (not pushed in) when operating the ATTAX in the STAGEBOARD footswitch mode.

A combination of the two operating modes (footswitch /front panel) is not recommended.

QUICK ACCESS TO THE CHANNELS VIA THE STAGEBOARD.

When you switch from the solid state preamp section to the tube section via the STAGEBOARD, it is advisable to pre-select the channel via the LEAD /CRUNCH SELCECTOR SWITCH. You can then switch channels in one motion.

LEDs are integrated in the STAGEBOARD to give you a clearer picture of the channel switching status for on-stage applications.

These LEDs tell you **which** of the two CRUNCH / LEAD channels is preset. The front panel LEDs denete the currently active channel.

EFFECTS LOOP SWITCHING VIA THE ATTAX STAGEBOARD

In addition to channel selection feature, the STAGEBOARD can also be used activate/deactivate the STEREO EFFECTS LOOP via the FX ON / OFF SWITCH. The appropriate LED illuminates when the LOOP is active.

TECHNICAL DATA

Circuitry:	1 Solid-State CLEAN ,2 Tube preamps CRUNCH / LEAD		
Channels:	CLEAN:	Volume, Bass, Mid, Treble	- Master Volume
	CRUNCH:	Volume, > Bass, Mid, Treble <	- Crunch Master
	LEAD:	Volume,	Lead Master
Jacks:	Input, Phones, Recording Out (Left / Right), Mono Loop (Send / Return), Stereo Loop (Send / Return Left - Return Right), Line Out (Left / Right), Footswitch.		
Dimensions:	19" / 1 HU		

ATTAX SOUND EXAMPLES



The above examples are just hat examples. Your sound is ulimatly dependant on the type of instrument and the playing style you use. Nevertheless, these settings will give you a general impression of the ATTAX's sound spectrum.

ATTAX SET 1 - TOP FORTY SET SINGLE COIL

VOL.	BASS	MID	TREBLE	CR. GAIN	LEA. GAIN	BASS	MID	TREBLE	CR. MAST.	LEA. MAST.
7	10	10	10	8	10	7	6	5	7	7

ATTAX SET 2 - THE VINTAGE SET SINGLE COIL

VOL.	BASS	MID	TREBLE	CR. GAIN	LEA. GAIN	BASS	MID	TREBLE	CR. MAST.	LEA. MAST.
8	7	7	10	5	8	8	9	6	7	7

ATTAX SET 3 - THE HEAVY SET HUMBUCKER


VOL.	BASS	MID	TREBLE	CR. GAIN	LEA. GAIN	BASS	MID	TREBLE	CR. MAST.	LEA. MAST.
8	10	10	10	10	9	10	7	8	7	7

ATTAX SET 4 - THE FUSION SET HUMBUCKER

VOL.	BASS	MID	TREBLE	CR. GAIN	LEA. GAIN	BASS	MID	TREBLE	CR. MAST.	LEA. MAST.
7	10	6	2	10	7	9	10	6	6	7

IMPORTANT SAFETY INSTRUCTIONS!

BEFORE CONNECTING, READ INSTRUCTIONS

- Read all of these instructions
- Save these instructions for later use
- Follow all warnings and instructions marked on the product
- Do not use this product near water
- Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
- Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. This product should not be placed in a built-in installation unless proper ventilation is provided.
- This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- This product is equipped with a 3-wire grounding type plug, a plug having a third pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding type plug.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- If an extension cord is used with this product make sure that it is a 3-wire grounding-type and that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind on the product.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions: 

- When the power cord or plug is damaged or frayed
- If liquid has been spilled into the product
- If the product has been exposed to rain or water
- If the product does not operate normally when the operating instructions are followed. Adjust only these controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- If the product has been dropped or the cabinet has been damaged
- If the product exhibits a distinct change in performance, indicating a need of service! Selection of power supply cord. Use only a listed detachable power supply cord type SVT or SJT minimum 18 AWC, 3 conductor, one end configured for NEMA 5-15 other end for IEC 320/CEE 22!
- Fuses: For continued protection against risk of fire, replace fuses only with same type and ratings

TO PREVENT THE RISK OF FIRE AND **SHOCK HAZARD, DO NOT EXPOSE** THIS APPLIANCE TO MOISTURE OR RAIN. DO NOT OPEN **CASE; NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

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