THE ADX 1 ANALOGUE DRUM EXPANDER

Thank you for purchasing the ADX 1 Analogue Drum Expander. To get the best results out of your high quality unit, please study the following instructions carefully.

Please check the packing materials for the following items:

One (1) -- ADX 1
One (1) -- 'wall wart' style 12 volt AC adapter
One (1) -- ADX 1 Manual
One (1) -- registration card
One (1) -- customer service letter
One (1) -- MAM Catalog

If any of these items are missing, please call 800 330-7753.

OVERVIEW

There are 8 controls per channel to create a wide range of different sounds. The individual channels can be auditioned with the 'Trigger' buttons or via MIDI.

In addition, each channel has a 'Panorama' control and a 'Volume' control. 'Panorama' adjusts the respective volume of the right and left side with regards to the master output. 'Volume' adjusts the level of the individual channels.

Each channel has its own output at the rear of the device. When any of these outputs are connected to another mixing device, the signal(s) is not separated from the master output. At the rear of the unit you will also locate the two master outputs (left/right), the MIDI ports (IN/THRU), the ON/OFF switch, the connection for the AC 12 Volt adapter and the MIDI Channel Switch (which you can gently set with a small screwdriver, toothpick, etc.).

To get started, please plug the barrel end of the 12 Volt AC adapter into the ADX 1, and the other end into your power source. The LED (Power) on the front panel shows if the unit is in stand by mode. It is not an on/off switch. Next, plug signal cables from the left and right outputs of the ADX 1 to your mixing/monitoring device. With the volumes turned down on the ADX 1, switch the power on.

INTERNATIONAL CUSTOMER SUPPORT:
MAM GMBH, 91058 ERLANGEN - GERMANY
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It's time to play!

You can produce 5 different drum sounds with the ADX 1:

Metal
HiHat
Snare
Synth
Bass.

CONTROLS FOR THE INDIVIDUAL SOUNDS:

Metal:
Metal is used to create cymbal sounds and consists of two different metallic-sounding generators (1 and 2). Each generator is treated with a band pass filter. The filter for generator 1 has the parameters Cut off 1 and Resonance 1; the filter for generator 2 has the parameters Cut off 2 and ENV Mod 2. You can mix the two generators with each other using the Mix 1/2 setting. Pot set to the left: only generator 2, set to the right: only generator 1. Decay is the resonance time during an active trigger. Release is the resonance time after the end of the trigger. Trigger time is fixed (about 200 msec.) and independent from the duration of the Note-On-Event. Modulation affects Cut off 1 and Cut off 2 (see section "Modulation")

HiHat:
HiHat consists of one metallic-sounding noise generator and one "clean" signal, whose pitch can be determined with the pot Tune 1. You can mix the two generators with each other using the Mix 1/2 setting. There is a high pass filter with the parameters Cutoff, Resonance and ENV Mode to modify the sound. Modulation affects the Cut off frequency of the filter (see section "Modulation"). Decay is the resonance time during an active trigger; Release is the resonance time after the end of the trigger. Trigger time is fixed (about 200 msec.) and independent from the duration of the Note-On-Event.

Snare:
The sound of Snare is created by one metallic-sounding noise generator. Tune changes the pitch of the noise signal. The signal is put through two band pass filters connected in parallel 1 and 2, each with the parameters Cut off and Resonance. Decay is the resonance time during an active trigger. Release is the resonance time after the end of the trigger. Trigger time is fixed (about 200 msec.) and independent from the duration of the Note-On-Message. Modulation affects Cutoff 1 and Cutoff 2 (see section "Modulation")

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Synth:
Synth is used to create sounds like bells or synthesizers and consists of 3 sinus oscillators 1/2/3. The pitch of oscillators 2 and 3 can be determined separately with the pots Tune 2 and Tune 3. Tune 1/2/3 controls the pitch of all three oscillators together. Fm Depth controls the depth of the frequency modulation (oscillators 2 and 3 are modulated through oscillator 1) and is used for the creation of metallic sounds. Modulation affects the pitch of the oscillators (see section "Modulation"). Bend determines the depth of the pitch modulation by the Envelope Generator (middle position: no modulation, left: maximum negative, right: maximum positive). Attack affects an increase of volume at the beginning of the trigger. Release is the resonance time after the beginning of the trigger.

Bass:
Bass consists of one sinus oscillator, whose pitch can be determined by Tune. Additional Overtones can be created by frequency modulation of the sinus generator (Depth of the modulation: Fm Depth, Pitch of the modulation: Fm Tune). To make the bass sound "dirtier" it can be over modulated with the Distortion Pot. Modulation affects the pitch (see section "Modulation"). Attack creates the typical click you hear when you pick a bass string. Bend determines the depth of the pitch modulation by the Envelope Generator (middle position: no modulation, left: maximum negative, right: maximum positive). Release is the resonance time after the beginning of the trigger.

CONTROLLING SOUNDS VIA MIDI

All sounds are triggered by Note On Messages via a common MIDI channel. The MIDI channel is set by the MIDI channel switch at the rear of the device.

Fixed notes are assigned to each sound:

Metal: "open" ---------- D#2 (51)
"closed" ---------- G#1 (44)

HiHat: "open" ---------- A#1 (46)
"closed" ---------- F#1 (42)

Snare: "open" ---------- D#1 (38)
"closed" ---------- C#1 (37)

Synth: ---------- F1 (41)

Bass:---------- C1 (36)

The sounds Snare, HiHat and Metal can either be played open or closed. If they are played open, release time matches the setting of the Release control. If they are played closed, release time is automatically set to minimum, regardless of the Release setting.

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Modulation:
Each sound can be affected by a 'typical' Modulation control:

Metal: ---------- Cutoff 1 and Cutoff 2
HiHat: ---------- Cutoff
Snare: ---------- Cutoff 1 and Cutoff 2
Synth: ---------- Tune 1/2/3
Bass: ---------- Tune

You can either use a random generator, which generates a random value for each trigger, or a MIDI controller on each sound. If you use a MIDI controller, there will be the following assignments:

Metal: ---------- Controller 106
HiHat: ---------- Controller 105
Snare: ---------- Controller 104
Synth: ---------- Controller 103
Bass: ---------- Controller 102

Controllers are only active, if the corresponding MIDI channel is selected at the rear of the ADX 1. In both cases (random generator or controller), the Modulation control adjusts the strength of the modulation. Every time the received controller volume is higher than 0, there is a switch from random generator to controller for each sound. The random generator is automatically reactivated if the controller volume equals 0. The control via MIDI controllers is quanticed in 16 intervals. This means controller values 1-15, 16-31, 32-47 ..... 112-127 each generates the same level of modulation. Unlike the random generator, the controllers are immediately in effect, regardless of the start of the trigger.

PRECAUTIONS:
Like most electronic appliances, the ADX 1 should not be stored in hot, damp or dusty places. Please prevent doing so!

When not using the unit for a longer period, please make sure the power supply is disconnected!

Do not open or modify the unit! This should only be done by authorized persons!

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TECHNICAL SPECIFICATIONS:

TRIGGER: ---------- 1 Button per channel
POTS:---------- 10 pots per channel
---------- Master Volume Pot
OUTPUTS:---------- 5x Jack (Single Out)
---------- Master left/right
MIDI: ---------- IN, THRU
POWER SUPPLY: ---------- 12-Volt ~ (AC), 830 mA
DIMENSIONS: ---------- 321 x 173 x 70 mm
19" Rack mount-Kit available (DMRMK)

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