



**Grant Bridgeman (Student Member IBS) puts the new Aeta Mixy through its paces, and finds something small that thinks very, very big.**

The audio mixer is one of the most basic elements of a sound recordist's equipment, and (to make a slightly sweeping statement) the basic design has remained largely unchanged for many years. The reason for this is simply that the hardware mixer is a highly-evolved piece of equipment designed to suffer the rigours and problems of location recording, while always sounding good. So, for the French manufacturer, Aeta to produce a portable mixer that is controlled by software, is something that will be regarded with scepticism by many – and from the straw poll of experienced production mixers I've spoken to whilst reviewing this mixer, I have definite evidence to support this...

#### **A Software Location Mixer? Never!**

The Aeta Mixy is essentially a three channel audio mixer, but this simple description really understates what this diminutive (170 x 50 x 130mm and 1.2kg) device is capable of. The best way is probably to list the inputs and outputs on the mixer, (deep breath now): there are three microphone input channels, two line input channels (5-pin XLR), a USB connection, an S/PDIF input (RCA), an AES 3 output, three pre-fader direct outs (unbalanced), an optical TosLink output, a 12-way Minicon connection (that allows for radio transmitter inputs on channels two and three), two line outputs (various formats) and a headphone socket.

This slightly overwhelming array of connectivity is why the menu driven control of this mixer is so perfectly suited. It would just not be possible to achieve the same level of flexibility in the same compact unit with just hardware controls. Essentially it operates more like an in-line mixing desk than it does a conventional location mixer. The various input options are assignable to the main stereo bus, which then routes to the various outputs, while the inputs can be monitored at different points in the signal path, allowing, for example, the two line level inputs to be monitored without routing them to the bus, and hence acting as the headphone return feed.

This degree of flexibility (or complexity) is exactly what conventional location mixers have not adopted, and initially I was concerned that it would take up valuable time on location. However, I found it actually became very quick to change between set-ups by storing the different configurations in the Mixy's internal memories. So I had memory 1 storing the configuration for working with a single boom, memory 2 was for two split booms, memory 3 for a single boom with two radios, and so on. Once the different configurations had been stored, switching between them was far faster than with any conventional mixer, and far less prone to operator error, too!

#### **Operating: A la Carte**

The front panel of the Mixy does feel somewhat barren of controls. The three rotary faders that control the input gains of the microphone channels are comfortably sized and set on the left hand side of the front panel. The second channel's fader has an outer concentric control that is used

when channels one and two are linked in stereo mode (when channel 1's control no longer functions). This outer ring allows  $\pm 5\text{dB}$  balance adjustment while the fader itself controls the level of both channels. In MS mode, the outer ring controls stereo width. The third channel has a button located next to it, to quickly insert a 20dB pad prior to the pre-amplifier.

On the right hand side is the headphone level control and the display panel, with menu buttons either side. One of these doubles as the main on/off button while the other is a 'soft' button that can be assigned to different functions. A joystick below the display is used to navigate the menus and to select the headphone monitoring options, while the display panel itself shows the metering and monitoring options when not being used for menus.

The menus are intelligently labelled and straightforward to use, with the more important functions set towards the top. That means that within two key presses you can access the configuration menus for the three microphone inputs, setting the routing (off, L, C, R), pre-amp gain and phantom power (off, T12V, P12V, P48V). A nudge on the joystick then brings up the limiter, high-pass filter and phase settings for each channel. To change any setting, it's a case of selecting the parameter with the joystick, scrolling through the options, and finally confirming the selection. All very intuitive and fast, and the menu options have been well thought out so it is not necessary to scroll through endless choices. For example, the pre-amp gain selection is made in practical steps of 10dB, instead of infinite variation.

After using the Mixy for a short time I found the menus quickly became familiar, and when using it in my shoulder bag with a rain cover it was still possible to navigate the menus and soft keys even with gloves on. The only niggle in that regard was that it is very easy to nudge the joystick and change the monitoring configuration accidentally.

The main problem I found with the operation of the mixer was the lack of flexibility of the line up tone and slate mic controls. Only one function can be assigned to the single soft button at a time – so you have to choose either the tone or slate mic facility, and a menu trip is needed to change between these functions. The other concern I had was with the screen's visibility. In general there wasn't a problem, but when the sun did come out in full force it was necessary to adjust the brightness to be able to read things clearly.

## Audio Performance

The innovative control of the Mixy has somewhat overshadowed the most important aspect, that of its audio performance – and on this front it performed very well. I used the Mixy in a number of different configurations (but I must admit not all of those of which the mixer is capable!), firstly connecting it up my hard disk recorder and went off round rural Leicestershire to capture noises great and small.

As I was connecting up I hit the first hurdle: that the return feed into the mixer is via the 5 pin XLR line inputs, a point not made entirely clear in the manual.

Considering the range of connections that are available on this mixer I'm surprised that there is not a 3.5mm stereo jack line-in that would suit connection with cameras such as the Z1 – a market in which the Mixy will no doubt excel – so I had to make up an adapter cable.

In the field the Mixy provided some very impressive results. The preamps were very hard to overload; in fact on the 0dB pre-amp setting I could not generate any distortion from the preamp at all – and I tried really quite hard! The input limiter uses a fairly soft knee that was not jarring to the sound whilst still preventing overloads. The dynamic range was excellent, giving a low noise floor for the quiet rural atmospheres, and the high-pass filters are well chosen, two options giving a sharp roll-off (18dB/Octave) from 50 or 120 Hz, while the third gives a very natural 6dB/Octave slope from 300Hz.

## To USB or Not USB

The USB connection between Mixy and a computer worked well with a PC (running windows XP) but failed to work correctly with a Mac (running OSX 10.4.10), generating different problems each time the connection was made. However, when connected to the PC I noticed a problem with interference on the Mixy's headphone outputs – something that was definitely related to the USB connection and apparent even if the USB inputs were not routed to

the L/R bus. The quality of the recordings themselves (if only 16 bit) was very good, and showed nothing of the interference that was audible in the headphones.

To use all of the inputs simultaneously, I then setup three mics (two as a linked stereo pair on inputs one and two), a stereo line input, and used the USB interface to record a stereo mix to the PC. It all worked well, with the only compromise being that you don't have proper level control of the line input – there is some attenuation available to set the maximum input, but it would have been nice to have a wider ranging control available.

The final test was the connection of the Mixy to a digital S/PDIF input. As soon as a valid clock signal is detected on the input the digital outputs (AES 3) are synchronised, even if the digital input is not routed through the mixer. One thing that tripped me up (even though it does clearly state it in the manual) is that once the S/PDIF inputs are assigned to the main bus they replace any other signals that are routed there. Due to time constraints it has not been possible to test the 24 bit AES3 or Toslink digital outputs of the unit.

The Mixy is powered by an internal rechargeable battery which takes four hours for a full charge. A full charge easily lasted a whole day (more than 10 hours), with varying numbers of condenser microphones connected to the mixer and it has been left powered up even when not in use.

## Where's the 'But'?

Even though I've really enjoyed using the Mixy and got some really good sounding results through it, not everything was plain sailing. This particular mixer was loaded up with version 0.23 of the firmware, which I did find to be slightly glitchy on occasions – with a power down and reboot to cure the odd problem. However, I'm told that this is not the current software version (which was unavailable for the review, unfortunately), and that several key improvements have been made. For example, the headphone monitoring selection via the joystick now operates in a 'lock until pressed' mode which means that the inevitable accidental nudging of the joystick no longer changes the settings.

I hope that some of the other problems, such as USB compatibility, have also been resolved in the software update. Upgrading the firmware is a relatively simple task that should

solve some of the operational problems that were encountered with this version of the mixer, and I expect will also evolve with use.

The Mixy manual is well laid out, and mostly clear – although some of the capabilities are a little hidden within the schematic diagram (such as: the monitor RTN option relates to the line input). The main gripe I had with the manual was the style, in which the Mixy has been referred to with the feminine article throughout. Although this does keep the manual light hearted and easy to read, it can come across as rather patronising.

The Mixy is not just a conventional three channel location mixer, although this does describe one of the many possible roles it is perfectly suited for. In fact, the Mixy is a very powerful mixer with excellent audio quality, which can be used over shoulder, for talkback applications and for playback and recording via a laptop. The menu system is quick and easy to use, and provides the perfect interface to control the great flexibility of this mixer.

**jbs**

## Final Word

I must thank Chris Woolf for his help during the review, as he has previously been involved in the evolution of this mixer and answered quite a few of the problems that were encountered relating to this early version of the firmware.

## Aeta Mixy

The UK price is still to be finalised, but is expected to be around £1100.

The review kit included: charger, carry case, 5-pin XLR to 3-pin XLR's pigtails for the line input and line output connections, 6-way Hirose to XLR (for AES 3) and RCA (for S/PDIF).

The 0.23 firmware version was dated 19th March 2007, and it was tested with a Mac running OS X 10.4.10 and a PC running Windows XP (Media Center Edition).

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Connecting the Mixy to a PC is via a simple USB cable, and worked very well

