ALESIS M20

1.499,00 € tax included

Reference: UALADATM20

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Pros: Built in SMPTE chase, 20 bit, professional, XLRs, individual input selection, etc.

Just when the professional side of digital audio stepped up to 24 bit multi track recording to widen the semi-pro gap, Alesis responds with the M20, 20 bit version of the ADAT. The M20 remains completely compatible with the earlier 16 bit ADAT format, now called ADAT Type I. 20 bit tapes, however can only be played back on Type II machines such as another M20 or the Studer V-Eight ADAT Type II format machine.

Compatibility

You can sync M20s with any previous ADAT format machine, which means that you can have some 16 bit machines and some 20 bit machines recording in the same session. If you play a Type I tape in an M20, it will automatically detect the tape format and perform all operations in 16 bit mode. When you format a new tape, you have the option of selecting 20 bit or 16 bit formatting. A 16 bit formatted tape will play on any existing ADAT format machine.

The optical output of the M20 sends out all eight channels in full 20 bit mode. If the destination of the optical cable is a 16 bit ADAT, then the channels coming from the M20 can be dithered to 16 bits resulting in a better recording than if it was originally recorded on the 16 bit ADAT.

SMPTE/EBU

The M20 was designed for professional time code applications. RS-422, time code, word clock, and video reference jacks are located on the back panel so you don’t have to use any card options or external adapters to chase or generate time code. Time code is printed to a sub code area of the tape so you can have discontinuous SMPTE recorded without using up an audio track. The M20 operates at any frame rate at either 44.1k or 48k sample rates.

The MIDI in jack on the rear panel enables you to control the M20 with MMC (MIDI Machine Control) commands from a sequencer without an external box. No BRC and no AI-2 needed here. Any slave ADATs or ADAT-XTs will follow right along.

Sneaking Up From The Rear

As long as we are at the rear panel of the M20, you will find the standard ELCO connector used in already existing ADAT installations for +4 balanced connections to consoles and mic preamps. What you will not find are the 1/4” jacks for -10 hookups. Instead you will find XLR connectors with +4 balanced I/O. This is to stay in keeping with the professional motif of the M20. You will also notice that time

code I/O is also XLR. This insures that you will not get SMPTE leaking into the analog inputs because of a non balanced SMPTE connection. There is also an RJ-45 connector for connection to an external controller and remote meter bridge. There is also an expansion slot on the rear panel, and in it goes an AES I/O card which will allow direct AES interface without an external converter.

20 bits Is 16 Times Better

Speaking of input connectors, behind those XLRs are separate 24 bit 64x oversampling A/D converters and 20 bit 128x oversampling D/A converters for each channel. 24 bit converters are used to gain better linearity at the 20 bit level. 20 bits is only 25% more bits than 16 bits, but you have to remember that every bit doubles the resolution, so 20 bits is 16 times the resolution of 16 bits. Put that in your pipe and smoke it!

No More BRC

There is a new remote for the M20 machines called the CADI (Controller Autolocator Desktop Interface.) The new remote can control up to eight M20s. The CADI has a jog wheel for scrubbing machines and any M20 can be taken off line by the remote. The remote meter bridge will display the metering for up to four M20s. There are also error indicators for each machine to indicate drop outs or other error problems.

A Look At The Front Panel

Every button function known to Man is on the front panel of the M20. Transport controls, input/record select, synchronization controls, time code generation, locate points, punch-in/punch-out points, offsets, locate times, and lunar phases on Io can be controlled from right here. You can even have one input digital and the rest analog if you want.

There is a high resolution meter mode that enables you to calibrate the record levels anywhere from -20dBFS to -10dBFS within 0.2dB. What more could you ask for?

The M20 has an AUX track for recording analog audio so that you can scrub with the built in jog wheel to locate edit points or punch points accurately.

Inside

Did I mention the new transport? Direct drive capstan, direct drive full servo reel motors with no idler wheels or brake adjustments, built-in tension sensor arm so the tape tension remains constantly under computer control, twin tachometer output for computer monitoring of reel status, and automatic head cleaning. It is the fastest VHS transport I have ever seen!

One more thing, the operating software is in Flash RAM so any future updates can be done via e-mail and dumped in through the MIDI port. Cool, huh?

Put To The Test

Most of the time a reviewer gets a new product and plugs it in to his project studio, runs a few tests, and writes the review. Not so here.

The only way for me to tell how a piece of gear is going to operate under pro conditions is to throw it into a full fledged working environment. So, I had four M20s synced together for 32 tracks of 20 bit recording. The gig? A new Bela Fleck & The Flecktones album in Nashville. We fed everything under the Sun into the M20s. Everything from custom U67s to Sony C800-G mics fed through Avalon, MTI and GML mic preamps, to digital input from Apogee AD-8000 24 bit converters, to optical feeds from a Yamaha 02R. Monitoring was done digitally through the 02R feeding Meyer HD-1s and Sony MDR-7506 headphones.

We recorded 12 hours a day for six days and consumed 100 rolls of ADAT tape. We recorded 14 tunes with about 17 full takes per tune. At one point we added an original ADAT with the 4.01 update to the stack. It synced up and performed flawlessly, although somewhat slower in locating speed.

Bela, the band and I spent quite a bit of time (about 20 bits to be exact) listening to the difference between 16 bit and 20 bit for every instrument. Everything sounded better 20 bit except the 16 bit drum samples. That makes sense!

The feel and operation of the machines yells “Professional” throughout the sessions. I never once felt like I was trying to get away with using semi professional gear in a professional environment.