
Using the ARX MIXXMaster in your Project Studio

Application Notes

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Although the ARX MIXXMaster was originally designed as part of the MIXX series of installation products, it also doubles up as the perfect all purpose control centre for a computer based hard disk project studio. Only 1RU, it's got enough ins and outs to handle just about everything you need for hard disk based recording. Two really great sounding mic pre amps, each with a direct out, 3 way EQ and Pan plus master L and R mixed outputs, and two pairs of stereo Line/Aux inputs with more than enough headroom to handle the output from a headphone jack if necessary (an mp3 player, for example).

Most home/project hard disk recording is done track by track, mixed on screen on a virtual mixer, with the finished mix then mastered to something two track. That's the way I do it, and I'm sure I'm not alone.

I record jingles, station ID's and do audio restoration work. In my own home based project studio I use the following:

- Pentium 3GHz computer, with 1 Gig of RAM and a couple of big hard disks. I could probably use less RAM, but I also like to dabble in off line video editing, and there's very little in video that more RAM won't fix!
- Sony Vegas hard disk multitrack recording system
- Sound Forge 7 editor
- Hoontech 24 DSP Value 96K Soundcard (I had to pension off the Digital Audio Labs CardDplus as my new machine had no ISA slots, and I couldn't afford the PCI version upgrade)
- ARX MIXXMaster
- ARX COMPO compressor/limiter
- ARX EQ260 Graphic Equalizer, for room tuning and analog tweaking
- Rode NT2 condenser mic
- Shure sm57 and 58 dynamic mics
- Roland TR-505 drum machine
- VOX Pathfinder, Peavey Backstage Plus and Guyatone Flip (the Japanese Boogie?) guitar amps
- Tremit tremolo footpedal
- Hotcake overdrive pedal
- Casio CTK-200 keyboard
- Gibson Flying V 1958 reissue, Legendary 'East Doncaster' 6 string (not a Telecaster or a Stratocaster but an East Doncaster!) 1975 Fender F80 acoustic, and a 1962 Maton acoustic 12 string.
I love that 12 string; I bought it from a guy for only \$50 because it had a hole in the side of it. Apparently he'd sit around playing it all night, until one day his wife said "Either the guitar goes or I go!"
"Gee, I'll miss you," he replied, at which his wife hit him over the head with it. Hence the hole!
- Alesis Nanoverb
- Rean patchbay, to link it all together with the minimum of fuss
- Old Harman Kardon stereo amp bought at auction for \$40
- Beyer 770 headphones, for late night editing

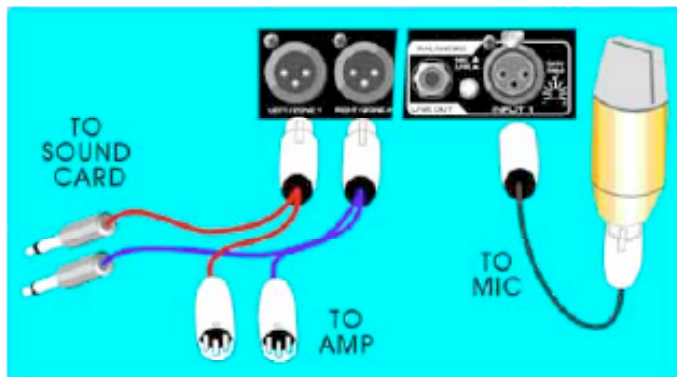


Fig 1

Fig 1 shows the typical Mic pre setup. The mic is plugged into Channel 1 of the MIXXMaster. The output of the MIXXMaster goes to the sound card inputs, with a split to the Aux In of the amplifier for monitoring. The output of the sound card goes into the Tape In of the amp.



Mic Input 1

Usually I'll lay down a rough track with a bit of acoustic guitar and mumbled vocal first, just to get the feel of the track down. It's a working track I can throw away later. If I need an acoustic guitar track I'll put that down with the Rode. Being a condenser mic, the Rode needs phantom power to drive it, and luckily the MIXXMaster has rock solid 48V DC switchable phantom power available.

Then I'll put down some drums with the Roland TRS 505. I plug the outputs of it into Line In 1 inputs.



Line Inputs

These have got 3 way EQ, so I can modify the basic drum sounds to fatten them up with whatever EQ I feel like. The Roland (like most drum machines) is an awkward thing to program, so I just tap out some time on the kick and snare buttons. Sometimes I run it through the Afterburner compressor with the Enhance button IN and a 4:1 or more compression ratio dialed up. Send it through the Nanoverb on one of the Hall settings, and John Bonham would turn over in his grave!!!

On another track I put down some hi hats, cymbals, and any tom fills, with a little bit of Plate reverb for some zing. I'll spend a bit of time on the drum tracks (after all, they're in every beat of every bar), and once I'm happy with them I'll mix them down to a stereo pair on a new track.

Once I've got the drums settled, I leave the Rode set up into Channel 1, and plug the sm57 into Channel 2. Then I'll maybe put down some guitar tracks with the 57 on the Peavey, and edit them into one decent rhythm track and one decent lead track.

When it's time for some bass I pinch my daughter's Casio CTK-200, because it's got a couple of basic bass guitar sounds in it. But by running through the Afterburner in Mono mode I can get an amazing bass sound. In mono mode the Afterburner has separate Low and High compression, which, when coupled with the Enhance function, gives a really big fat chunky sound.

If I need any keyboard sounds I'll put them down next. The Casio's sounds are pretty generic - it's only a \$99 machine, but when slipped into the mix they're surprisingly good. I'm not much of a keyboard player, so if something is complicated I'll 'hunt and peck' at the keys, get a basic riff down and loop it as necessary in SoundForge.

I might put together a 'mix-so-far' stereo pair at this stage, so that I can concentrate on the vocals next.

For speed I like to put down the vocals wet, with any reverb already added. It's my live sound background I guess - I'll chose a reverb type, tweak it if necessary, and then run with it, trusting my judgement. I want to capture the moment, not analyse it to death.

I suppose I could pop the vocals straight into the Nanoverb and adjust the source and effect on its front panel, but the MIXXMaster lets me do it much more subtly.

The mic channels each have a direct Line Out on the rear panel. So, on Channel 1 with the Rode on it, I run a line from the direct out into the Nanoverb. Then from the Nanoverb I run left and right line outs into the Aux In sockets on the MIXXMaster.



Aux In connectors

Now I can adjust the levels to my heart's content and get the wet mix exactly right, just as you would do on a larger console.

I'm the first to admit that I'm not the world's best singer (*'my voice filled the hall, and people could be seen leaving to make room for it!'*). But my theory is that the quality of the microphone you use should vary in inverse proportion to the quality of your voice. Let's face it, someone who can really sing would sound good down a couple of soup cans on a piece of string, but others like myself need all the help we can get. The Rode is a really great sounding mic and turns my wheezing vocals into something approaching music! I'd recommend it to anyone.

I usually track on the headphones, and mix on the speakers. When tracking, I'll have a headphone on one ear so I can monitor the mix of previous tracks, and leave the other ear open so I can hear what I'm recording. It's a lot faster than setting up a headphone mix on something.

When I've got the vocal tracks all down, it's time to call it quits and start the mixdown. If I'm happy with the music 'mix-so-far' that I did earlier, then I'll just layer the vocal tracks on top.



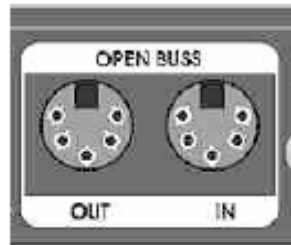
Left and Right Main Outputs

For the mixdown setup, I run the outputs of the computer into the MIXXMaster Line in 1 and 2, the ones with the three way EQ. From the balanced XLR outputs they go into the Afterburner, set up in Stereo mode, probably with the Enhance switched on.

I'm using the ARX Ambience 1's as monitors, spaced about 6 foot (1.8m) apart. They're compact, economical and surprisingly accurate. I'm not saying they're a match for a pair of high end studio monitors, but something mixed on the Ambience's is very listenable in the car, and sounds impressive on the nephew's 3-in-1 boom box.

Although I usually record electric guitar through the SM57 connected to mic channel 2, sometimes inspiration strikes at the oddest hour, usually when the neighbours are asleep and want to stay that way! Luckily all the amps have got line outs that I can run straight into the Aux In of the MIXXMaster. If I need a really tubey gurgle to the sound I'll tun it through the Hotcake pedal.

As I mentioned before, the MIXXMaster is one part of the MIXX system. If ever I needed *more* mic inputs, I could always link it up to its twin, a 4 mic channel MIXX, by using the Open Buss link connectors on the back of each unit.



Open Buss connectors

This would give me 6 mic inputs that would mix down to a stereo pair to go into the sound card. Or if I needed more Line Inputs, I could link up another MIXXMaster the same way. It really is that easy.

The proof of the pudding's in the eating, so what's the sound quality of the finished product like after all this, I hear you ask? Good enough to get regular daily airplay on the top rating breakfast program! That's good enough for me.



Duncan Fry is a director of ARX systems, so he's not *totally* impartial when it comes to ARX products! But this article is proof of ARX's policy that "we only build equipment that's good enough for us to use."
'Nuff said!