Project Overview: The MidiBox Mixer
The MBMixer project was designed as a replacement for an old stereo line mixer that I built a few decades ago. It has served well, but the pots get old and scratchy, and it just seems so “old fashioned” to have to reach around the front of the rack to adjust the volume. So I decided to design a replacement that could never get scratchy pots, and maybe even add remote control by MIDI. After a bit of research, the PGA4311 chips were looking very promising. Since this was going to be a big enough project just handling the audio, I looked for an easy way out of doing the MIDI coding as well. I found the MIDIBox, and everything was off and running.

One of the best things about this new mixer is that there is no control surface. I have found it incredibly better to keep the C.S. separate. By separating them, you can put the audio “backend” at the stage, where the signals are created and the amplifiers are fed. You can move the controls to the other end of a MIDI cable. You have just eliminated dozens of shielded audio cables running from the stage all the way up to the mix booth. All the audio stays backstage where it belongs. Even better is for a studio environment. I have my control surface and my MBMixer plugged in to separate MIDI ports on my computer. They are patched together in software. So I always have full manual control, but I can also record a “dynamic” mix with a sequencer, and play it back as easily as any other MIDI track. I also have an on screen mixer that is fully functional, and a few hotkeys on my PC keyboard that my wife requested for muting the system. (or turning it WAY FREAKING UP!)

One other reason for building it without a control surface. When I first came to the Midibox forums, I was amazed at the beautiful control surfaces that others have built, and continue to build regularly. I cannot compete with these guys. I will never be able to make a panel that beautiful. But I can design and build something cool to connect it to. Maybe with this release of version 2, my project will be popular enough for someone to build a CS just for the MBMixer. Until then, I'll just keep using my old Behringer BCR2000 deck.

The first revision was hand wired, and has worked beautifully for over a year now. But nobody else seemed to be building them. I went out to the forums and asked for ideas to improve the project. Some of the top suggestions were for balanced inputs, balanced outputs, expansion to any number of channels, and support for effects loops. Sure. OK. I can do that. The circuit board designs are a bit cramped. I did this to keep proto costs down, and so that the finished “stack” of boards would still fit in a 1U rack mounted case.