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Subject: Re: Straighten me out on gainclones  
Posted by [GarMan](#) on Wed, 04 Feb 2004 14:22:47 GMT  
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Electrically, a gainclone is very simple to build. If you have all the components, you can breadboard it in less than an hour and have a fully functional mockup. The most difficult part in connecting the parts together is working with the chip. The leads are pretty delicate and if you bend one more than three times, it will fall off (This was a \$7 lesson I learned the hard way.) The most difficult part for me was the mechanical assemble, cutting and drilling the chassis for I/O jacks and screwing everything down in place. But how much time you spend on this will depend on how "finished" you want the amp to look. The project can be as cheap or as expensive as you want it to be. The heart of the amp is the chip, which runs at about only \$7 to \$8 each. The most expensive parts were the transformer for \$50 and the chassis at \$30. I also used two Auricaps, at \$10 each for coupling caps, but regular film caps at \$1 each will also do. BTW, my transformer was a 220VA unit, a bit of an overkill. Like I said, you can spend \$50 or \$5000 to build one of these things. So the amp is cheap and easy to build. What this means for us hobbists is it presents a very real and viable way to explore setups that may have been out of reach. For example, biamping your speakers, which in turn allows you to introduce active crossovers. Also, as you've mentioned, powered speakers may also be an option. However, before you jump into this gainclone bandwagon, there may be a few things you want to think about:- That Yamaha unit you have is sweet. I have no doubt that a properly build gainclone can beat it in sound quality, but it would be a pretty serious project to introduce all the functions it has.- High quality power speakers are not just speakers with an amp attached. The real benefits of powered speakers is to allow the designer to customize the amp/speaker interface so that current, voltage and load are precisely matched. Quite often, powered speakers use active crossovers in front of the amps to allow for even better control of phase and response curves. In the end, a gainclone is still a very low risk experiment. It will not take up a lot of your time (unless you catch the bug and find the strong desire to build a half dozen of them), can be done on a shoestring, and most importantly, it's a lot of fun. Most soundcards should have enough output to drive one, and you may end up using it more than your Yamaha, simply because you built it yourself. have fun with it. Gar.

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