

# 400W HF Linear Amplifier

This new design features a power grid, broadband input circuit yet only requires a meagre 10W of drive for full output. It displays all the advantages of the grounded grid configuration without any of the drawbacks.

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There is virtually no limit to the number of ways in which it is possible to put together a linear amplifier for the HF bands. The method that most people use will be largely dictated by whatever they happen to have to hand in the junk box.

For instance, if a pair of 813 bottles are lying about gathering dust, the most sensible course is to keep an eye out for a 5V @ 20A transformer (for the heaters) and another transformer capable of stepping the mains back up to a level in keeping with the super-

grid. You keep the requirement for a box of electrolytics at the back of your mind and, when such an item crops up at the local junk sale, snap it up for a song. The same goes for HV tuning capacitors, fuse holders, cases, etc.

If you're patient, it is possible to build a first rate linear amplifier for no more than a few pounds. It might not look either too pretty or compact when it is finished but it will probably work and save you £100's. This is the way I go about most home construction projects. I keep a permanent shopping list for about half a dozen projects at the back of my mind and, when I see something at the right price, I buy it even though I know that I shall not be able to use it for a considerable time to come.

That was the way I came to build this particular project. It took around four months of evenings to complete but the preparation lasted most the previous year, albeit at a very low level of consciousness.

As it happened, I had 4CX250B valves kicking around the house. I had already used such a bottle in a 2m linear amplifier and I had purchased more gear than I needed for that project. Here is a truth about building this type of equipment. It would be prohibitively expensive to purchase all the parts necessary for a high power valve

The complete unit (above) and with the front panel removed showing the space for the amplifier alongside the integral power supply

