This project is by Simon Lyne

"This VFD graphic equaliser was built form parts of a 1990 hi-fi. The display chip is an LC566 which had a data sheet in Japanese or Chinese so I downloaded a data sheet of a similar chip that was in English as I live in the UK, this meant I could work out what all the pins did. I added two headphone ports so you can plug it in and also plug in some headphones, while the device does not need to be powered on when you listen to music. You need a lot of gain to get any action on the tube so at some point in time I need to build a preamp for it.

"I used breadboard which could be soldered to and rats nest wiring for the electrical connections. The headphones and high voltage batteries were put on the outside as I ran out of room inside the case.

"The VFD tube is a turquoise colour rather than the blue in the photo, also the camera had trouble with getting an image of the bars so that's the best image I could get. There's also an image of it with no input being fed in: that image is the one that has the red number visible. The red numbers are not in the other images because this thing eats batteries.

"The VFD EQ uses a 555 timer as an oscilator, as I have software on my computer that simulates the frequencies they produce, I also have lots of 555 chips and do not know how to use crystal ones. The device does not like fresh batteries and you have to twiddle with the switch to turn it on, when the battery's are dying it will just switch on first time. When it is on fresh battery's it will get hot even though there's no short, I think the device draws more current than the batteries can supply, causing the power problems. The 3 small batteries on the bottom of the device are 12v each and the ones inside the device are 1.5V AA's.

"I hope this helps with the blanks and adds anther interesting page to your site, as your site is a very interesting read that inspires me with new ideas and shows that you do not need a microcontroller for all complicated projects."

CLICK HERE for a high resolution Adobe PDF of Simon's circuit diagram (1,240KBytes)

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