Subject: Presenting....
Posted by PakProtector on Wed, 02 Feb 2005 12:00:59 GMT
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Revision 6. Got it running last night. Seems to be a distinct improvement over the previous one. This does not imply that the previous one was in any way poor...just this one is bloody excellent.Going to try some different valves in the CCS circuit. gm of the 12BY7 is ~15 mA/v and the 12GN7 I've got waiting in the wings is 35 mA/V. It is dificult to imagine it getting much better.regards,Douglas....damned Thrintun!

Subject: Re: Presenting....
Posted by Manualblock on Wed, 02 Feb 2005 12:19:39 GMT
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Gee; mine doesn't look like that. Nice work. Are you saying that some led's sound better than others?

Subject: Re: Presenting....
Posted by PakProtector on Wed, 02 Feb 2005 12:27:27 GMT
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Hey-Hey!!!,It is a fairly limited bit of experimentation I have done. Draw an X-Y axis, voltage increasing with +X, and current increasing with +Y and look at the I-V relationship on the LED...Ideally the plot will be horizontal until it reaches the proper voltage and then it will make a 90-degree turn and go straight up(indicating zero resistance.Of course the vertical won't be vertical and the sharp 90 won't be absolutely sharp. Some are sharper than others and with smaller radius bends. We want to be operating in the near-vertical portion of the zone.regards,Douglaslook through Digi-Key or Mouser and download at least one LED data shet and see what is going on.

Subject: Re: Presenting....
Posted by Wayne Parham on Wed, 02 Feb 2005 13:05:19 GMT
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Pretty cool Douglas. I guess I've been remiss and haven't followed the changes for each revision. What are the differences?

Subject: Re: Presenting....
Posted by PakProtector on Wed, 02 Feb 2005 13:29:12 GMT
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Rev 1. bi-polar PS 5687 foreplay. +/- 180V supplies for a bigger cathode load on the output buffer cathode follower.Rev 2. CCS on the amplifier plate, then cathode folower, then back to the plate. Still cathode-follower output.Rev 3. Eliminated the CF, and ran the mu-follower CCS like GuinevereRev 4. new chassis, shunt regulated PS. small C, C-L-C, 3x 0C3 and a 12SN7 amplifier triode. Rev 5. new chassis, Hg-vapour rectified(816's), choke input supply and 2x VR150/0D3 shunt regulator strings for each channel. L-C filter for filament DC as well. 8BD octal plug for the twin triode. Direct 12SN7 but with adapters 12B4A was best fitted to system gain structure.Rev 6. is the valve CCS I developed at Wayne's sugestion. unregulated L-C power supply with damper diodes.Rev 7. plans..increase B+ to mid 500's and use the DHT 10Y as the amplifier valve. More DC filaments...regards,Douglas

Subject: Re: Presenting....
Posted by Wayne Parham on Wed, 02 Feb 2005 14:36:51 GMT
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Thanks for bringing me up to speed. I've missed a lot! Are these conceptual or are they already drawn up?!!

Subject: Re: Presenting....
Posted by PakProtector on Wed, 02 Feb 2005 14:50:56 GMT
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all but the last(the DHT amplifier triode) have been built and served me well. Guinevere is a branch at Rev 3. Valve rectification and L-C filter. Ought to be significantly better. I salvaged photo-flash caps from disposable cameras(also a good source of AA cels). They are nice for 'lytics, and a big step up from switch-mode computer PS caps.Trying to figure a way to soft start an 866 power supply for the next one. Glowing Hg vapour is too nice to look at.regards,Douglas

Subject: Re: Presenting....
Posted by Wayne Parham on Wed, 02 Feb 2005 15:09:01 GMT
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Cool! I agree about the mercury vapor tubes, I love the ones that glow! Cats eyes are cool and

blue glowing 2A3's are nice too. I like how they pulsate with the signal.