

Physics 623
Digital to Analog and Analog to Digital Conversion:
Lab worksheet

1) In section 4 of the lab write-up, we are going to build an Analog to Digital converter using the Digital to Analog converter IC MC1408 in a negative feedback loop. The circuit of Fig. 3 will only track towards increasing negative voltage. Can you modify the circuit so that it will track in both directions?

2) This modification introduces a problem called “hunting” where the count changes back and forth by one or two counts. Can you think of a way to stabilize the display to make it easier to read? (We can talk about this in lab -- the most straightforward solution isn't obvious.)