

Re: Newbie: Simple amplifier and voltage to current converter

Source: <http://sci.tech-archive.net/Archive/sci.electronics.basics/2007-12/msg00376.html>

- *From:* Jamie <jamie_kallpa_not_valid_after_kallpa_@xxxxxxxxxxxx>
 - *Date:* Thu, 13 Dec 2007 21:55:54 -0500
-

Chris wrote:

On Dec 13, 8:22 am, Chris <cfoley1...@xxxxxxxxxx> wrote:

On Dec 13, 7:26 am, harry...@xxxxxxxxxx wrote:

Hi everybody

I new to electronics and I need your help. I am experimenting with a microcontroler and I want a 0-5V output to make it 0-10Volt....can you tell me where I can find a simple circuit to implement?

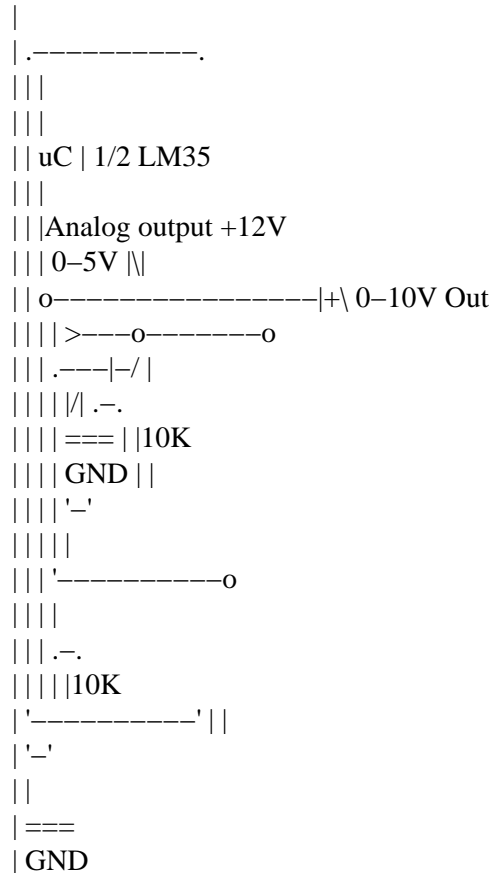
Another option is to covert the 0-5V to4-20mA. Can I do it in a simple way?

Thank you

Harry

If you've got a 0-5V output and a 12VDC supply, it's easy with an op amp (view in fixed font or cut&paste to M\$ Notepad):

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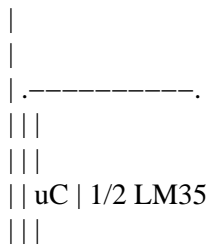


(created by AACircuit v1.28.6 beta 04/19/05www.tech-chat.de)

<snip>

Cheers
Chris

Sorry -- a small tweak. If you're deriving your +5V supply from the +12V supply (a good idea), or if the +12V supply is turned on first, the high impedance potential at the uC output pin could see a higher voltage than the uC power supply, which will cause the uC to latch up at turnon and possibly damage it. Simple fix:



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```
|||Analog out +12V
|||0-5V |||
|| o-----o-----|+\ 0-10V Out
||| |>---o-----o
||| .-. .----|-/ |
||| 22K||| | | .-.
||| | | === | |10K
||| '-'| GND | |
||| | '-'
||| === | |
||| GND '-----o
||| |
||| .-.
||| |10K
| '-----' | |
| '-'
| |
| ===
| GND
|
(created by AACircuit v1.28.6 beta 04/19/05 www.tech-chat.de)
```

Cheers
Chris

Ok, Am I the only one having a problem with the above component being used which is a temperature sensor if I remember ?
LM35 ?
Maybe the OP meant a LM358 ?

—
"I'd rather have a bottle in front of me than a frontal lobotomy"
http://webpages.charter.net/jamie_5