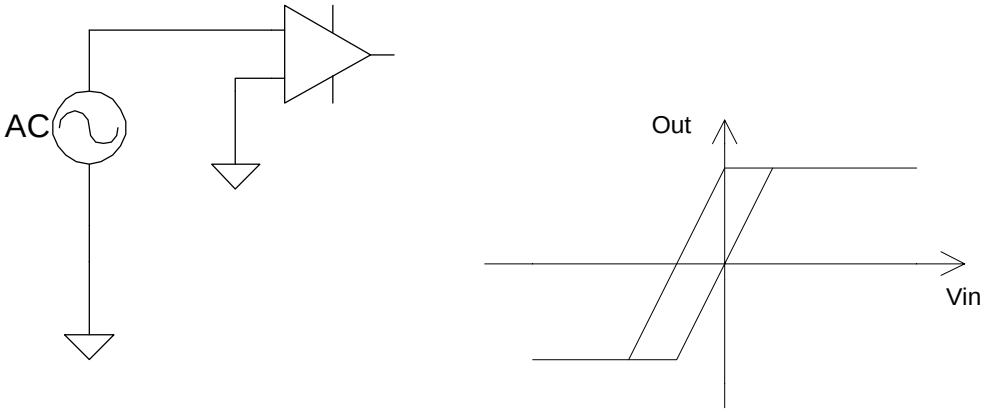
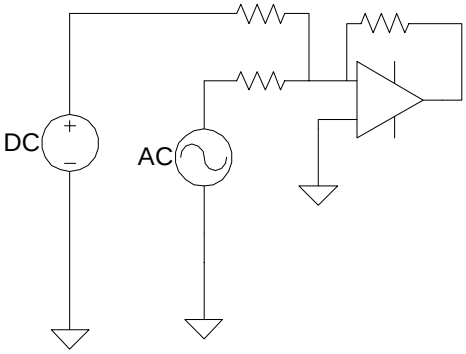
6.002 Demo# 24
Opamp Demo **Agarwal Fall 00**
Lecture 19

Purpose:
This shows open loop, intverting adder, and non-inverting configurations of an opamp.

Steps:
Part 1: Open Loop

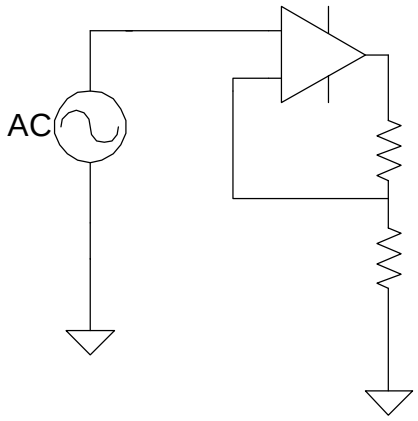


The hysteresis varies with temperature which can be changed with a can of liquid cold or a hot air gun.
Part 2: Inverting Adder



This was not shown in class.

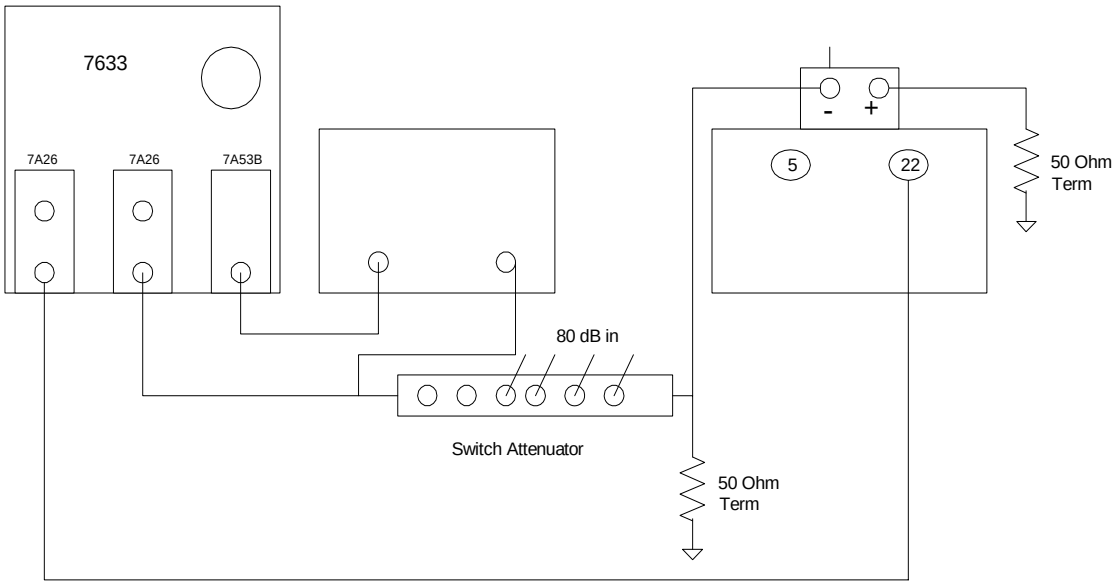
Part 3: Non-Inverting Amplifier



This was done in lecture and shown to have temperature immunity.

Description: Opamp Characteristics
Part 1) Open Loop
Scope: Vert 5V/Div
Horiz 50 uV/Div
Attenuator: 80 dB
Store a Single Sweep to avoid Hysteresis
Part 2) Inverting Adder

Part 3) Non-Inverting Amplifier
Set Switches onOp-Amp Card #2 to Up, Down
Remove Attenuator
Invert Polarity on Ch2
Scope: Non-Store
Ch4 2V/Div
Ch2 5V/Div
Function Generator = 100 Hz



Equipment:
Switchable Attenuator
(2) 50 Ohm terminators
Dual H.P. Supply w/card plug-in capability
Op-Amp transfer function & Input Output card
Op-Amp Non-Inverting Ckts 2
IEC Genetator
Bring Heath Gun and Frost Test Cooler

Scope Settings:
Vert Mode = LEFT, Trig Source = RIGHT
Vert Ch2 = 5v/Div (INVERTED)
Vert Ch4 = 2v/Div, trig Source ch4

7B53A Settings:
Mode= Norm
Coupling = DC
Source = INT
Mag = In
Sweep Time = Amp (Fully CCW)

IEC Gen. Settings:
3 v P-P Cal
Freq. = 0.3 Hz Sine wave