

Problem Set 2

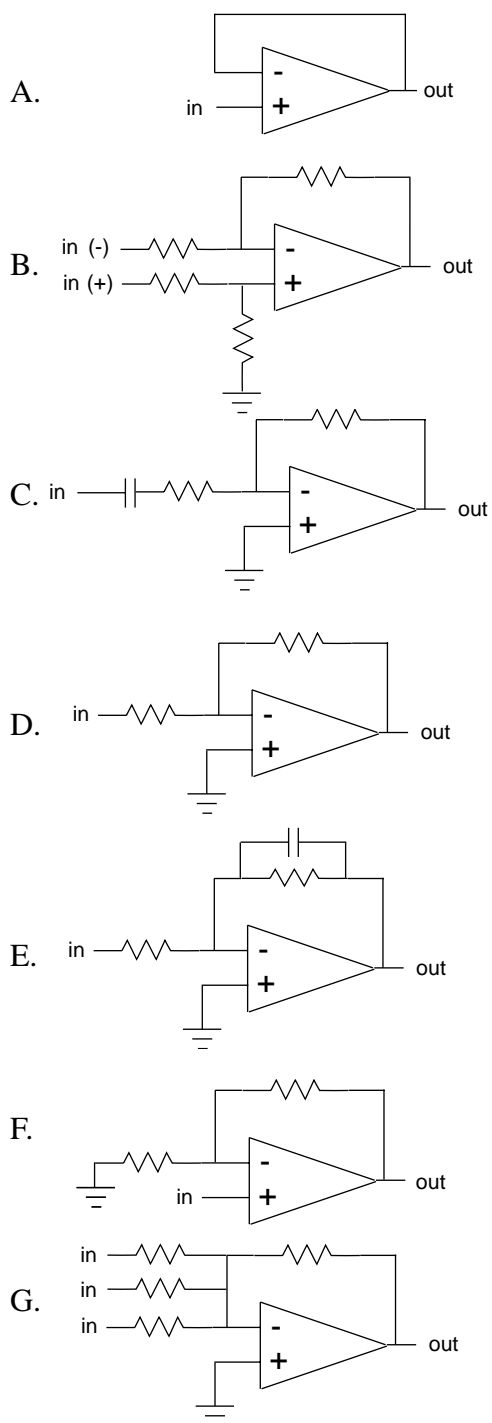
1. How would you determine if a ground loop is the cause of a hum you hear in an audio chain consisting of two mono devices connected in series with balanced cables? If it is a ground loop, how can it be eliminated?

2. Identify the audio connectors. Which can be used for unbalanced connections? Which can be used for balanced connections? Name a common audio device using each type.



3. Explain how a microphone's directional sensitivity (polar pattern) is related to its type (pressure or pressure-gradient). Is there a similar relationship between polar pattern and dynamic versus condenser construction?

4. Match these common op-amp audio circuits with their function:



1. buffer amplifier 2. inverting amplifier 3. non-inverting amplifier 4. summing amplifier
5. low-pass filter 6. high-pass filter 7. balanced (differential) input amplifier