

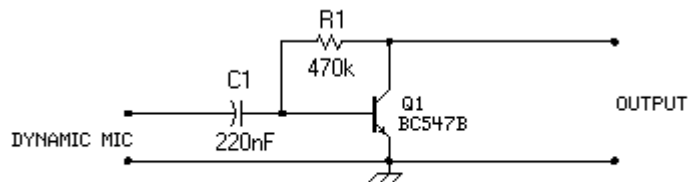
Dynamic microphone to electret microphone input

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- Summary of circuit features: Circuit which works as an preamplifier which allows you to replace an electret microphone with a dynamic microphone.
- Circuit protection: No special protection circuits used
- Circuit complexity: Very simple one transistor circuit
- Circuit performance: Worked well, although distortion and noise performance is not very good (but usable for many non-hifi applications)
- Availability of components: Uses common and easily available components
- Design testing: I have built this circuit and it worked well with Sound Blaster 16 sound card
- Power supply: 3-9V current limited power from electret microphone input (same as normally supplied to two wire electret capsule)
- Estimated component cost: Electronics components cost less than \$10 including connectors
- Safety considerations: No special electrical safety considerations.

Circuit description

This is a simple microphone preamplifier circuit which you can use between your dynamic microphone and any equipment designed to work with an electret microphone (2 wire connection to electret capsule). This amplifier amplifies the low level signal to the levels used by electret microphone input and uses the power from the device.



Dynamic microphone to electret microphone input adapter
Designed by Tomi Engdahl 1999

The circuit is a simple one transistor amplifier to convert the sub-millivolt level voltage from electret microphone to current changes as generated by electret capsule.

Component list

R1 470 kohm
C1 220 nF
Q1 BC547

Example of using the circuit

Connecting the circuit to 3.5 mm mono electret microphone input

The circuit below is a typical wiring used with electret microphones connected to 3.5 mm mono plug input (as used in video cameras and some portable audio recorders). You can use the wiring below just by replacing the electret capsule on the left with my dynamic microphone amplifier circuit described above.

