

7 Telephone Voice Pickup

□ You can pick up and amplify the voice signals from your telephone by using this simple IC circuit and a small pickup coil. The circuit has sufficient output to drive a loudspeaker. One section a quad op amp is used as a high-gain

voltage amplifier. This increases the relatively low output of the pickup coil (a few millivolts) to a sufficient level to drive the loudspeaker. The circuit draws about 60 milliamperes from a 12 volt power source. You can purchase a ready made

pickup coil or construct one yourself using about 200 turns of fine enamel wire wound around an

iron core. Place the pickup near the telephone receiver for best results.

PARTS LIST FOR TELEPHONE VOICE PICKUP

C1—10- μ F, 25-WVDC electrolytic capacitor
C2—01- μ F, 15-WVDC ceramic disc capacitor
C3, C4—15- μ F, 15-WVDC electrolytic capacitor
C5—.001- μ F, 15-WVDC ceramic disc capacitor
IC1—3900 quad amplifier
L1—inductance pickup coil (see text)

Q1—2N4401
R1—1000-ohm, $\frac{1}{2}$ -watt 10% resistor
R2, R4—1,000,000-ohm, $\frac{1}{2}$ -watt 10% resistor
R3—470,000-ohm, $\frac{1}{2}$ -watt 10% resistor
R5, R6, R7, R8, R9—10,000,00-ohm, $\frac{1}{2}$ -watt 10% resistor
R10—100-ohm, $\frac{1}{2}$ -watt 10% resistor
SPKR—8-ohm PM type speaker

