

TECH-KNOW KITS

LISTENING BUG

This is a simple hi-fi device, which can be used as a microphone amplifier. This circuit can be used to listen or record conversations going on in a remote room.

In the circuit, the condenser microphone picks up the sound signals and converts them in to electrical signals. These signals are amplified by op amp 741. The IC is used in the inverting mode and pot P1 is used to adjust the gain of the amplifier. Pot can also be used as volume control for the amplifier. The output of 741 is further amplified by the transistor pair 187 and 188, which forms a push-pull configuration. Output of the transistor can drive the speaker. Lengthy speaker connections should be given through shielded cable to suppress humming noise.

Output of 741, that is from point C as shown in the circuit, can be fed into the "pickup point" of a transistor radio or tape recorder so that voice can be heard from the radio or the tape recorder.

Parts list

Resistors		Capacitors		Semiconductors	
R1	3K3	C1	47Kpf	Q1	187
R2,	4K7	C2,	10 uF/63V	Q2	188
R3,R4	10K	C3	220uF/16V	U1	LM741
R5	2M2	C4	1000uF/16V		
	Horizontal preset				
Miscellaneous					
LS1	8E SPEAKER				
X1	Condenser microphone				
	8 PIN BASE				

