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mostronome

The mostronome is a metronome which differs from all other types in that it does not produce a 'tap', but a brief whistle. This is pleasant to the ear and at the same time far more penetrating than the sound produced by the conventional 'tap' generators.
The repetition frequency of the mostronome is generated by the gates N1 and N2. With potentiometer P1 the frequency can be varied between about 40 x per minute and 10 x per second. Point 3 of gate N1 drives transistor T1 which is connected as a buffer stage. Via resistor R4, the emitter voltage of this transistor periodically drives transistor T3 on and off. The gates N3 and N4 form a square wave oscillator with a frequency around 500 Hz. The output of this oscillator (point 11 of gate N4) switches transistor T4 via T2 and R8. T4 does not pass the oscillator signal continuously because the base of this transistor is periodically cut off by T3.

The short whistle (abt. 0,15 s) periodically available at the emitter of T4 arrives at the base of T5 via R9. Via R10 and volume control P2, the collector of T5 drives a loudspeaker.
The impedance of this loudspeaker may lie between 4 Ω and 16 Ω.
Since the average current consumption is low because the whistle is very short, a 6 V battery (powerpack) is quite sufficient to serve as the power supply.