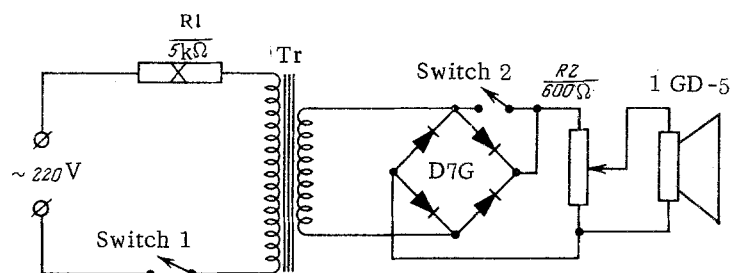


A SIMPLE "BUZZER" FOR PHYSIOLOGICAL INVESTIGATIONS

V. V. Rozenblat

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For making observations on conditioned-reflex changes in ability to perform muscular work, the frequency of the alternating current of the city mains was used directly by connecting a radio-translation loudspeaker through a simple device to the lighting circuit. A tone of 100 cps (the frequency of the mains doubled in a rectifier) is very familiar to most people from the customary "background" when listening to radio transmissions and sound recordings, so that it produces a minimal orienting reaction and is extremely convenient for observations on human subjects.



Scheme for connecting loudspeaker to ac mains. The damping resistor of 5 kΩ must be calculated for a power of not less than 5 W.

As the figure shows, when the ordinary radio loudspeaker was used (marketed in a wooden or plastic body with an output transformer and volume regulator) only a damping resistor, a diode rectifier (for doubling the frequency, because 100 cps is not only a more customary stimulus, but is also reproduced better by the loudspeaker) and two tumbler switches (for switching on the signal and switching over to a stimulus of 50 cps for the purpose of differentiation) were added. This type of "buzzer," a source of acoustic stimulation of small dimensions, has justified itself fully in use.