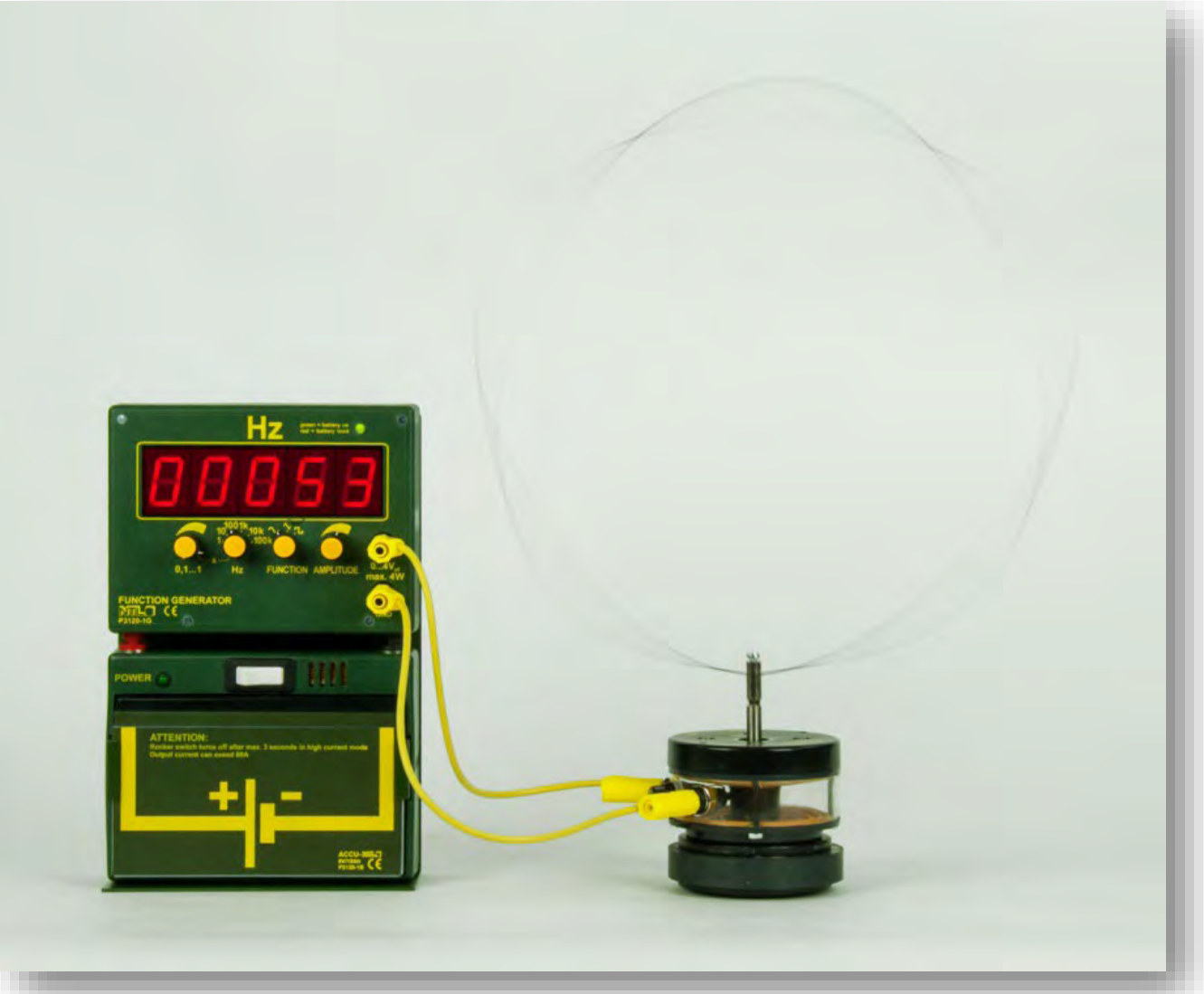
STANDING CIRCULAR WAVES

SWD 02.09



Material:

Item Code	Qty	Description
DW452-2S	1	Vibration generator
DW451-3R	1	Resonance wire, circular, with plug
P3120-1B	1	Rechargeable battery, "inno", 6V/10 Ah
P3120-1G	1	Function generator with digital display "inno"
P3120-4A	1	L-shaped assembly platform
DG507-37	2	Safety connecting lead, 37 cm, yellow

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Goal:

Gain a model impression of spatial standing waves or the formation of certain steady states in a confined system.

Setup:

The hook with plug is inserted into the sleeve of the metal cylinder (on the vibration exciter). The cylinder must be locked in place!

The "inno" function generator is plugged onto the "inno" rechargeable battery and both devices are attached to the L-shaped assembly platform.

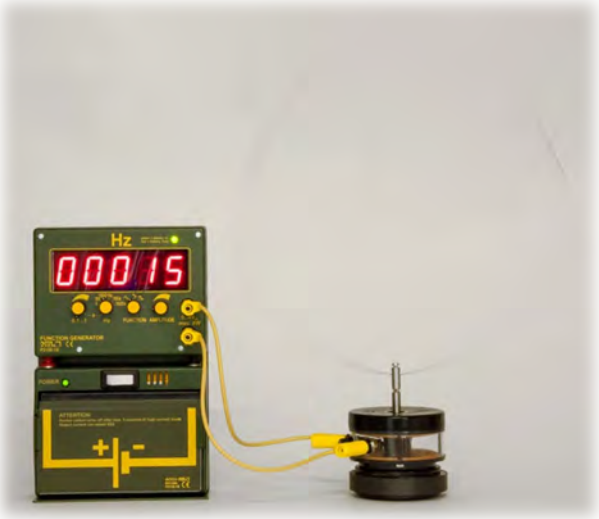
The function generator is connected to the vibration generator with two connection lines.

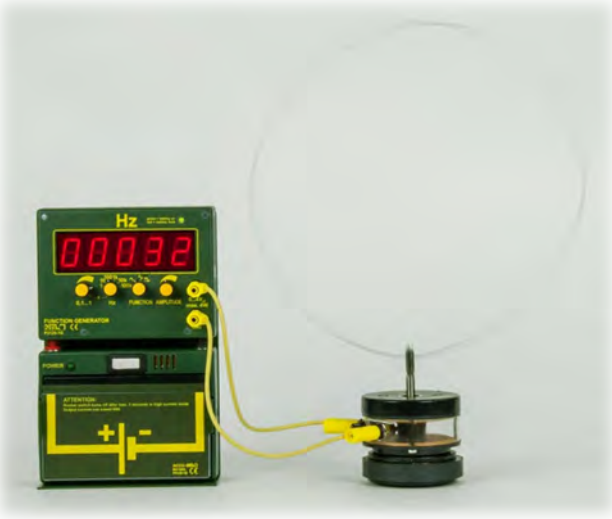
The following settings are selected on the function generator:

100 Hz, "sine ~", the amplitude is chosen very low.

Experiment:

Select a not too high output voltage at the function generator and slowly increase the frequency until different standing waves appear at the resonance ring.





Note:

Even though these circular standing waves are only a very simplified model of possible quantum states of electrons in an atom, it is of essential importance in the development of quantum theory.