Patent claims

1. Ignition device for ammunition, in particular medium-caliber ammunition, with at least one battery (1) and with at least one electronic or electric ignition chain component (3, 4), wherein the battery (1) has a battery housing (12), wherein an electrolyte and at least two electrodes are arranged in the battery housing (12), wherein by means of the electronic ignition chain component (3, 4) an active charge (9) of the ammunition can be made to explode, wherein the energy required for triggering the electronic or electric ignition chain component (3, 4) can be provided by means of the battery (1), wherein the battery housing (12) has a cup-shaped recess, wherein the at least one electronic or electric ignition chain component (3, 4) is arranged at least partially in the cup-shaped recess **characterised** in that the ignition device has an electric detonator (4), wherein the electric detonator (4) is designed as a first ignition chain component to initiate the explosion of the active charge (9) of the ammunition, wherein the electric detonator (4) is arranged at least partially in the cup-shaped recess.

2. Ignition device according to claim 1, **characterised in** that the ignition device has an electronic unit (2), wherein the electronic unit (2) has a proximity sensor with sensor electronics and/or a height detector and/or an antenna.

3. Ignition device according to claim 2, **characterised in** that the electronic unit (2) has a printed circuit board, wherein the proximity sensor with the sensor electronics and/or the height detector and/or the antenna is/are arranged on the printed circuit board.

4. Ignition device according to claims 2 or 3, **characterised in** that the electronic unit (2) has an ignition capacitor, wherein the ignition capacitor is arranged on the printed circuit board, wherein the ignition capacitor can be charged by means of the battery (1), wherein the electric detonator (4) can be detonated by means of current provided by the ignition capacitor.

5. Ignition device according to one of the preceding claims, **characterised** in that the battery housing (12) has at least one cable guide (16) for accommodating an electric cable (6.1, 6.2).

6. Ignition device according to one of the preceding claims, **characterised** in that at least one contact element (7) is connected to the battery housing (12), so that energy transmission is

made possible via the at least one contact element (7) and the battery housing (12), in particular between the electric detonator (4) and the electronic unit (2).

7. Ignition device according to one of the preceding claims 2 to 6, **characterised in** that the electronic unit (2) is arranged on a side of the battery (1) facing away from the electric detonator (4).

8. Ignition device according to one of the preceding claims 1 to 7, **characterised in** that the electric detonator (4) faces a detonator and/or the active charge (9) of the ammunition, wherein the detonator and/or the active charge (9) can be detonated by means of the electric detonator (4).

9. Ignition device according to one of the preceding claims 2 to 8, **characterised in** that the ignition device has a fuse housing (5), wherein the fuse housing (5) is arranged at a tip of the ammunition, wherein the battery (1), the electronic unit (2) and the electric detonator (4) can be mounted together as one unit in the fuse housing (5).

10. Ignition device according to one of the preceding claims, **characterised** in that the battery (1) comprises one or more cells.

11. Ignition device for ammunition, in particular medium-caliber ammunition, with at least one battery (1) and with at least one electronic or electric ignition chain component (3, 4), wherein the battery (1) has a battery housing (12), wherein an electrolyte and at least two electrodes are arranged in the battery housing (12), wherein by means of the electronic ignition chain component (3, 4) an active charge (9) of the ammunition can be made to explode, wherein the energy required for triggering the electronic or electric ignition chain component (3, 4) can be provided by means of the battery (1), wherein the battery housing (12) has a cup-shaped recess, wherein the at least one electronic or electric ignition chain component (3, 4) is arranged at least partially in the cup-shaped recess **characterised in** that the electrolyte is arranged inside an ampoule, the ampoule being designed to burst when the ammunition is fired and that the battery is then activated.

12. Ignition device according to claim 11, **characterised** in that the ampoule comprises glass and/or a metallic material.

13. Method for igniting or for self-destruction ammunition, in particular medium-caliber ammunition, comprising the ignition device according to one of the preceding claims, with at least one battery (1) and with at least one electric or electronic ignition chain component (3, 4), wherein the battery (1) has a battery housing (12), wherein an electrolyte and at least two electrodes are arranged in the battery housing (12), wherein an active charge (9) of the ammunition is caused to explode by means of the electric or electronic ignition chain component (3, 4), wherein the energy required for triggering the electric or electronic ignition chain component (3, 4) is provided by means of the battery (1), **characterised** in that the battery housing (12) has a cup-shaped recess, the at least one electric or electronic ignition chain component (3, 4) being arranged at least partially in the cup-shaped recess.

14. The method according to claim 13, **characterised** in that the method comprises the following sequential steps:

a) Firing of the military ammunition, in particular by electrical and/or mechanical initiation of a propellant;
b) Activation of the battery (1) by the launch load;
c) Initialisation of the proximity sensor;
d) Charge the ignition capacitor using the battery (1);
e) Decouple the battery from the ignition capacitor;
f) Activate the sensor electronics and the height detector;
g) when a target is detected: Discharge of the ignition capacitor onto the electric detonator (4) to initiate the explosion of the active charge (9);
h) alternatively to step g) if no target is detected: Self-destruction by discharging the ignition capacitor onto the electric detonator (4) to initiate the explosion of the active charge (9).