

Title (en)
COMBINATION ANTENNA FOR ARTILLERY AMMUNITION

Title (de)
KOMBINATIONEN-ANTENNE FÜR ARTILLERIEAMMUNITION

Title (fr)
ANTENNE DE COMBINAISON POUR MUNITIONS D'ARTILLERIE

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Application
EP 03738045 A 20030617

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Abstract (en)
[origin: WO2004001327A1] The invention relates to an annular slot antenna (17) that is tuned both to a carrier frequency of satellite systems for navigational purposes and to a substantially shorter wave radar frequency for a proximity fuse function, said antenna being capable of withstanding extreme mechanical stress and thus being particularly suitable for the detonators of artillery ammunition. Said antenna has a sandwich construction, in which an axially divided resonator annular chamber (28), which is positioned axially between an upper (23) and a lower (24) dimensionally stable, profiled metal cover plate, is equipped with a dielectric hollow cylinder (29), whose peripheral collar (30) that lies radially opposite the cylindrical reflector wall extends radially through an axial slot (13) between the two hollow cylindrical external walls of the annular chamber up to the external surface of the likewise peripherally slotted, solid detonator jacket. On one of the two cover plates, the internal edge of the antenna slot that opens into the annular chamber is defined by a ring (35), which can be inserted into the front of the external wall and on which connection points that are offset in relation to one another in the peripheral direction make contact through the dielectric annular disc and the cover plate lying axially opposite with a circuit carrier, where they are combined in a single-phase manner by means of a tuning network into an antenna line (20) to form high-frequency circuits in front of the switching circuits for positional determination and for the radar proximity fuse function, whose second phase is connected to the adjacent cover plate.

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