

Fuzing & Ordnance Systems

MK 418 MOD 0

VARIABLE TIME - RADIO FREQUENCY FUZE

The MK 418 is a short intrusion, solid-state variable time radio frequency projectile fuze with an impact function backup feature. The MK 418 is effective against aircraft and missiles beyond a range of 500 yards as well as personnel, light equipment, installations, and surface craft.



The MK 418 includes the MK 42 MOD 3 Rear Fitting Safety Device (RFSD) with an arming distance of 700 to 1,330 feet from gun muzzle, depending on projectile caliber. This Safe and Arm device complies with STANAG 4187 (MIL-STD-1316C). The fuze will not fire prior to completion of primary (mechanical) and secondary (electrical) arming.

The MK 418 MOD 0 meets the NATO contour requirements of STANAG 2916 and MIL-STD-333.

The MK 418 fuze body consists of a front case and a capsule (steel sleeve) assembly. The front case consists of a green colored plastic nose ogive that is crimped on a threaded steel insert. The front case serves as a cover and support for the monitor electronics (oscillator and amplifier) and completes the profile of the projectile. The capsule assembly consists of an oscillator-amplifier unit (monitor electronics), reserve energizer, a rear fitting safety device. The reserve energizer and rear fitting safety device are assembled within the steel sleeve. The internal threads of the front case threaded insert mate with the external threads of the steel sleeve. The remaining threads of the sleeve fit the threads of the projectile fuze cavity.

On firing, setback shatters an ampoule in the reserve energizer, releasing electrolyte. Centrifugal force distributes the electrolyte activating the battery. Setback unlocks a pin in the clock of the RFSD. Spin releases two detents holding the clock mechanism, rotates a cam shaft to the rotor release position, and arms the rotor, breaking the shorting wire across the electric detonator. When the rotor is armed, the radio detection system is capable of functioning the fuze. On close proximity to the target, reflected signals reach the required amplitude, causing an SCR to discharge the firing capacitor through the detonator. This, in turn, initiates the lead, booster, and main projectile charge.



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MK 418 MOD 0 FEATURES

OVERALL SIZE

WT: 1.97 lb. (896 g)
LG.: 5.97 in. (152 mm)
XSECT: 2.4 in. (61mm)

INTRUSION

DP: 2.21 in. (56 mm)
Sleeve DIA: 1.827 in. (46.4 mm)
THD: 2.0 - 12 UNS - 2
THD DP: 0.914 in. (23.2 mm)

BALLISTIC LEVELS

Rotation: 254 rps
Setback: 13,700 g
Velocity: 2,650 ft/s (914 m/s)

WEAPONS

5-in/54 MK 18 & 19

AMMUNITION

5"/54 -caliber HE-VT projectiles
76-mm/62-caliber VT-NonFRAG projectiles

ARMING SAFETY

First Safety (Set Back)

900 g No Arm 1385 g All Arm

Second Safety (Spin)

40 rps No Arm 140 rps All Arm

UNO SERIAL NUMBER

0409

SAFETY STANDARD

STANAG 4187 MIL-STD-1316B

HERO ASSESSMENT

HERO Safe

ENVIRONMENTAL & PERFORMANCE STANDARD

MIL-STD-331A

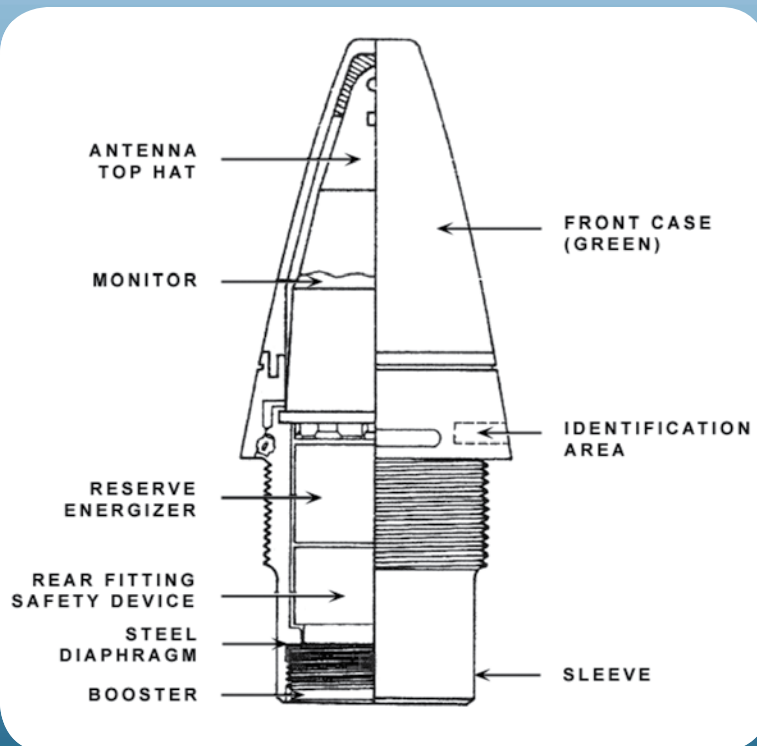
ENERGETIC COMPONENTS

Detonator, Electric, MK 71-0
PETN (.04 g), Lead Azide (.08 g)

Detonator, Relay, MK 64-0
Lead Azide (.135 g)

Lead, DWG 5467883
PBXN-5 (100 mg)

Booster, DWG 2512814
CH-6 (11 g)



L-3 FUZING & ORDNANCE SYSTEMS

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