

# TREAD

Tire Rapid Entanglement & Arresting Device

# Exponent®

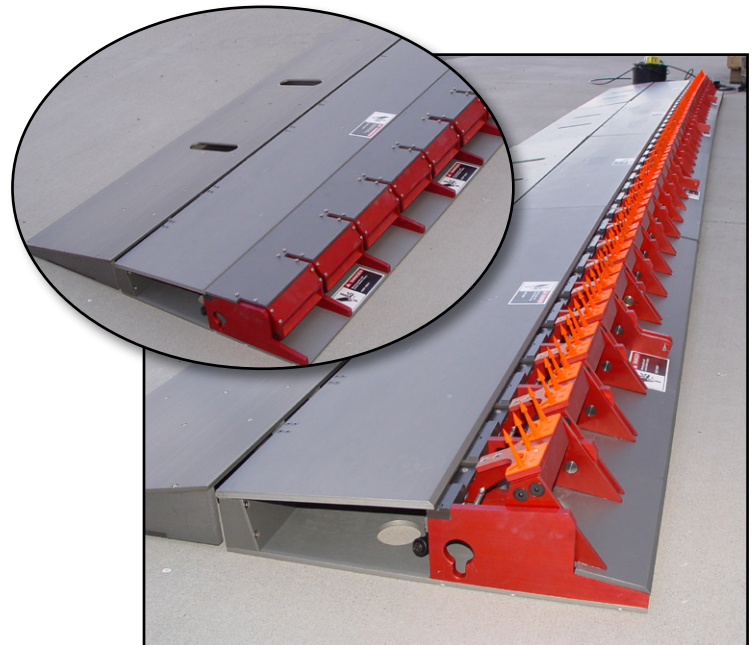


While conducting checkpoint operations or providing security for fixed locations, the military has the need to selectively stop vehicles while searching for weapons, wanted persons or illegal contraband. During these checkpoint operations, it is important for soldiers to have a non-lethal tool that can effectively stop a vehicle that fails to proceed as directed.

While there are a wide range of mechanisms available that attempt to immobilize moving vehicles, current tools suffer issues with portability, selectivity, and effectiveness.

The TREAD relies on an entangling net to wrap around the front wheels of a vehicle, preventing or reducing tire rotation and effectively braking the vehicle as well as impeding steering capability. The TREAD net is housed in a portable module shaped like a speed bump consisting of four sections linked together to create an 18-foot wide speed bump. Vehicle traffic can freely traverse over the system when it is in an unarmed state. In the armed state, a synthetic net is attached to the vehicle's tires with a series of barbed staples. The net is pulled from the speed bump housing, rapidly wraps around the tires, and arrests vehicle motion.

The TREAD deployment system has several advantages over other systems because it is specifically designed to address the selectivity requirement for traffic stop scenarios – i.e. some vehicles should be allowed to pass, while others must be stopped.



## Features of the TREAD include:

- ▶ *Can be set up or removed in under ten minutes without the use of tools*
- ▶ *Does not require anchors of any kind*
- ▶ *Arms and disarms from a remote location in under two seconds*
- ▶ *Deployed in either unarmed-by-default or armed-by-default modes*
- ▶ *Effectively disables a wide range of sizes and classes of vehicles*
- ▶ *Effective at stopping vehicles within an appropriate stopping distance with minimal damage to vehicle*
- ▶ *Speed bump form factor slows traffic in the unarmed state*
- ▶ *Can be used on gravel or sandy surfaces*
- ▶ *Operated using Mil. Spec. rechargeable batteries*
- ▶ *Cartridge system allows housing to be reused after a vehicle is captured*
- ▶ *Device may be quickly reloaded for continued use after net deployment*
- ▶ *Capable of 1200 arm/disarm cycles on a single charge*
- ▶ *Modular design allows transport in small and light-duty vehicles*