

# U.S. Navy high-energy laser test

The U.S. Navy says it has successfully tested a new high-energy laser weapon that can shoot down aircraft in mid-flight

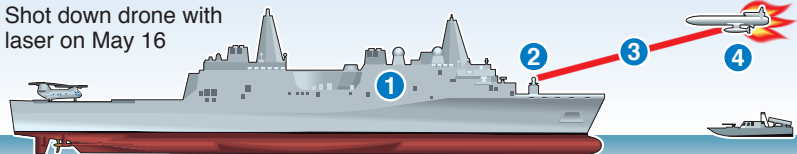
## LASER WEAPON CAPABILITIES

**1 Ship:** Needs enough space and spare electrical power to host laser

### *USS Portland*

Shot down drone with laser on May 16

**2 Laser:** Can be fired again and again, at more targets than ship's onboard supplies of missiles and ammunition can handle



**3 Beam:** Engages by line of sight, reaching target almost instantly (no need to plot intercept course)

**4 Target:** Beam's precise focus causes disabling damage in seconds, even if target tries to manoeuvre

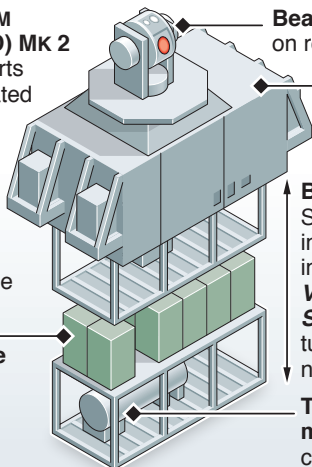
**Cost:** Less than \$1 per laser shot – gives ship alternative to using expensive interceptor missiles against small targets such as drones

## LASER WEAPON SYSTEM DEMONSTRATOR (LWSD) Mk 2

"Solid-state laser" converts electrical energy to radiated energy, then focuses it onto specific target

**Power:** Expected to reach 150 kilowatts – sufficient to shoot down unmanned aerial vehicles (UAVs) or cripple armed small boats

**Energy storage module**  
Powers laser shots.  
Recharged by ship's electrical system when laser is not firing



**Beam director:** Housed on rotating mount

**Tactical laser core module**  
Bolted onto ship's forward deck

**Below decks**  
Support modules fit into spaces originally intended for host ship's **Vertical Launch System (VLS)** missile tubes, which were never installed

**Thermal storage module:** Provides cooling capability