

By: July 2007 Dorneanu, Science Editor

[How to Build a Bomb That Multiplies Itself in the Air](#)

The CBU-97 Sensor Fuzed Weapon

When is a bomb actually not a bomb? When it's made of multiple charges that increase the target area proportionally to deliver devastating damage with only one initial charge. When it comes to multiple warheads, nothing beats the US Air Force's CBU-97 Sensor Fuzed Weapon. Cluster bombs, which deliver multiple submunitions, have been first developed by the Germans during the Second World War to attack both civilian and military targets. Modern weapons, like the CBU-97, are mostly air-dropped and are designed to eject multiple smaller submunitions in order to destroy infrastructure, like bridges and runways, military bases where aircraft and ground mechanized units are scattered over a large area and can also scatter land mines. When it comes to "multiple submunitions" the CBU-97 really means it, since one 1000-pound (450 kg) bomb splits into four separate charges in mid-air, then each panel is peeled away by wind to expose 10 BLU-108 submunitions inside. This produces 40 individual projectiles, in a spacing of submunitions approximately 100 feet (30 m) apart, which result in a circular pattern wide enough to engulf an entire airforce base with all the aircraft, munitions and personnel. The bomb is launched from a tactical aircraft at altitudes of 200 feet (60 m) to 20,000 feet (6100 m) above ground level and each of the 40 skeets scans its own designated target area to form a 1500 feet x 500 feet (460 m x 150 m) bombsite. No living or mechanical enemy unit can survive this massive attack and thus the bomb can wipe out entire platoons or tank divisions in one drop. At a preset altitude, the parachutes are jettisoned and rockets in the submunition canisters lift them up and then spin to disperse the skeets. Infrared sensors in each skeet then search for targets that are taken out with small powerful warheads. So, this is how one 92 inches (234 cm) long and 15.6 inches (40 cm) wide bomb can inflict both damage and fear to any enemy in the battlefield with small but powerful multiple warheads.