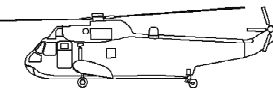


# Belcher Bits BB-31: Modern U.S. Nukes 1/48

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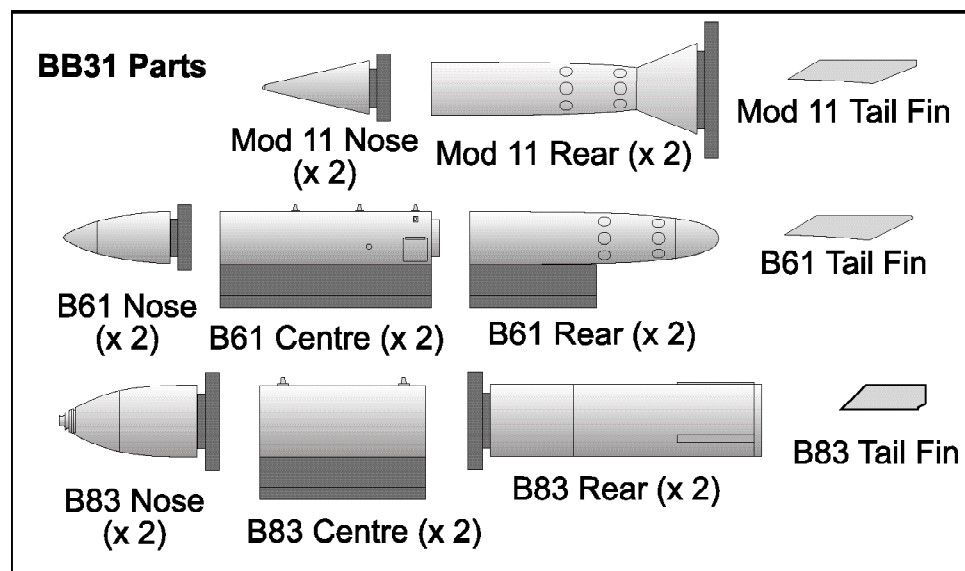
## Background

As megaton yield thermonuclear weapons took over the strategic role in the '60s, fusion warheads became small enough to allow tactical nuclear bombs to be used. Most modern aircraft carry their loads externally and smaller low-drag weapons capable of high-speed release were required for tactical use.

The **B-61** bomb is a lightweight, low-drag design capable of being released at speeds above Mach 1, at either low or high altitudes. First entering service in 1967, they have been continually upgraded and over 1300 remain in service in 2010. The nose section contains the radar altimeter and impact fuzes. The centre warhead assembly contains the warhead and safety circuits, with spin rockets for free fall stabilization. Warhead size is selectable, and depending on the application, the yield can vary from 1.5 Kt to over 150 Kt. One variant of this weapon is intended for strategic use and is capable of yields over 300 Kt. The rear section contains a ribbon parachute to slow the bomb for laydown delivery or to suspend it for retarded airburst.

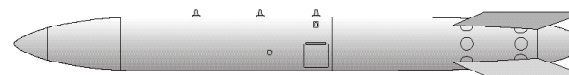
The latest variant (**B-61 Mod 11**) is specifically designed for bunker busting. It uses a special hardened nose and casing and a modified tail for high speed delivery. This weapon is designed to penetrate 3-6 metres into the ground before detonation.

The **B-83**, dating from 1984 is a modern strategic rather than tactical weapon, replacing the B-28, B-43 and B-53. This bomb is intended for low-level, high speed delivery against hard targets such as ICBM silos. The bomb is 144" long and the body is 18" in diameter and of heavy construction. The shock-absorbing nose has concentric rings to prevent ricochets on delivery. Warhead yield could be as high as 1.2 Mt. Like the B-61, this bomb can be used in free fall airburst, retarded airburst or contact/laydown delivery. The B-83 has the most robust safety features against accidental detonation.



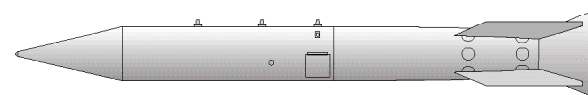
## B-61 Assembly

Remove the nose section from its pour stub, leaving a small disc. Glue it on the front of the centre section (the small door is to the rear). Remove the pour stubs from the bottoms of the centre section, and from the rear section. The centre section includes three suspension lugs, allowing either a 14" or 30" spacing. Make your choice and remove either the front or the middle lug. There are 8 pairs of discs at the rear of the rear section. Line up one pair with the suspension lugs, and glue the rear section in place. These discs are the attachment points for the tail fins. Most photos show this bomb with four fins in the 'x' configuration but it is obviously possible to mount the tail fins in a '+' configuration instead. Cut four fins from 0.015" plastic card according to the diagram and glue in place. The bomb is typically seen in natural metal overall, with the front of the nose cone in reddish-brown plastic.



## B-61 Mod 11 Assembly

This variant uses the conical nose cone, and the rear section with the larger conical tailpiece. Assemble as for the regular B-61, but note tail fins are slightly different in shape and glue to the conical tailpiece as well as the discs. Some pictures of this bomb show it to be overall black, others look more like natural metal.



## B-83 Assembly

Similar in process to the B61. Note that the rear section has three strips to indicate where the tail fins are to be placed. Glue this in place with one strip aligned with the suspension lugs. I have also seen photos of this weapon with four tail fins, so the choice is open to you. Remove the bottom two strips, glue on three pieces of 0.015" x 0.040" strip at 90 degrees, and there you go. B83s only use the 30" suspension lug spacing. Most photos show these bombs as overall gloss white.



## References

1. (Best) Articles at [www.nuclearweaponarchive.org](http://www.nuclearweaponarchive.org)
2. The History of the US Nuclear Arsenal, James Gibson, Bison Books, 1989
3. Photos of both types [www.skyindustries.com](http://www.skyindustries.com) on display at USAF Museum, Dayton.