

Belcher Bits BB-20: Mk 24 Mine (FIDO) & Sonobuoys 1/48

**Belcher
Bits**

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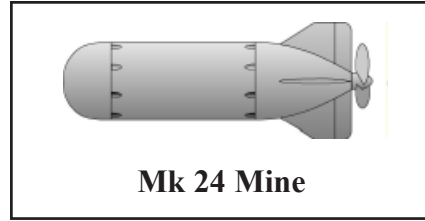
Mk 24 Mine (FIDO)

One of the best-kept secrets of WWII was the development and operational use of aircraft-delivered passive acoustic homing torpedoes by the Allies. Early in 1942, development started at the Harvard Underwater Sound Lab and by early 1943, the design was in production at Bell Labs. Referred to as the Mk 24 Mine for security reasons, this torpedo was 19 inches in diameter and 84 inches long. It was controlled by four hydrophones in the nose that steered it towards the loudest radiated noise, such as the sound of a submarine's propellers. The Mk 24 or FIDO was relatively slow and its warhead was only 92 lbs of HBX, so it was primarily intended to damage a submarine and force it to the surface where it could be sunk by more conventional weapons. However, a successful attack detonating at the stern was often fatal, and in total, 37 submarines were reported sunk by Mk 24s in WWII.

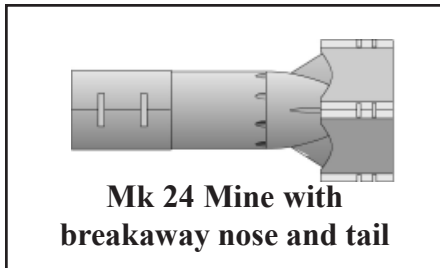
The Mk 24 torpedo was the source for further development in homing torpedoes, from the immediate post war Mk 27 to today's Mk 48 and Mk 50.

Like other air-dropped torpedoes of WWII, the Mk 24 was commonly used with a breakaway nose and tail of light plywood. The ring nose prevented the torpedo from diving too deep on hitting the water, and the tail protected the steering surfaces and the prop on impact. The kit provides alternate noses; simply remove the pieces from the resin bases, sand the mating surfaces smooth and glue together.

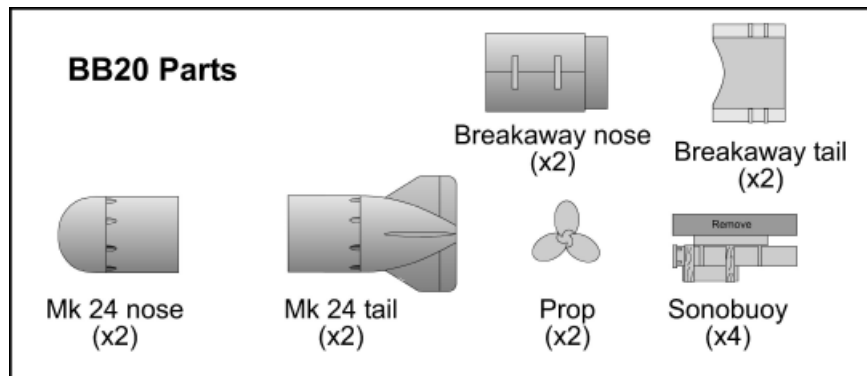
Colours are not known but a dark grey or black for the torpedo is likely. The prop would be bronze so a weathered brown with a



Mk 24 Mine



Mk 24 Mine with
breakaway nose and tail



BB20 Parts

Mk 24 nose
(x2)

Mk 24 tail
(x2)

Breakaway nose
(x2)

Breakaway tail
(x2)

Prop
(x2)

Sonobuoy
(x4)

hint of metallic gold would look good. The plywood parts may have been painted grey, but they would look more interesting if done in natural wood colour with the reinforcing strips in aluminum.

Sonobuoy

Another modern weapon developed and used in the same period was the sonobuoy, a small floating radio transmitter which sends back noise heard by a suspended hydrophone. Use of several hydrophones allows the operator to estimate the source of the noise (again, likely the propellers) based on volume. In 1943-45, it was necessary to use different coloured smoke floats with each sonobuoy to identify the buoys. The first sonobuoy was the AN/CRT-1A, and while it looked somewhat primitive by today's standards, the basic concepts for passive acoustic sonobuoys remain the same. Over 10,000 sonobuoys were produced for use in WWII, and they were often used in conjunction with the Mk 24.

The strange case of the Japanese I-52 submarine, sunk in the Atlantic (yes, Atlantic) in 1945 is a case in point. It is clear that the Americans knew its location in advance from coded transmissions and it was attacked and sunk by aircraft using sonobuoys and a Mk 24 FIDO torpedo. One interesting fact is that the audio recordings of the sinking (relayed via sonobuoy transmitters) still exist, recently re-discovered on long-forgotten wire recordings in a USN facility.

The kit provides 4 sonobuoys, mounted on a light bomb rack for hanging in a bomb bay. The smoke floats are taped near the top of the sonobuoy as seen in a photo in Ref 2, not near the bottom as the photo at right (Ref 1) shows.

The kit provides the basic sonobuoy and float, but not the radio antenna seen at right (too small to cast reliably). Simply cut a length of 1/16" (1.5mm) plastic rod to 0.2" (5mm) long, taper the top a bit and insert a wire antenna about 1/2" (13mm) long.

Colours are also unknown, but likely dark grey or green. Tape is a different colour and the smoke floats would have been black with white or yellow bands.

References

1. Atlantic Air War: Sub Hunters, Lambert, Airlife
2. Avenger at War, Tillman, Ian Allen 1979
3. Various info from Terry Higgins ... thanks, Terry

