

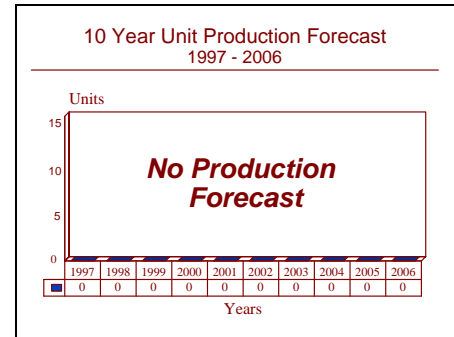
# ARCHIVED REPORT

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## ALT-28 - Archived 3/98

### Outlook

- In service; ongoing logistics support
- No further production expected



### Orientation

**Description.** Airborne Continuous Wave (CW) Jammer.

**Status.** In service, ongoing logistics support.

**Sponsor**

US Air Force  
 AF Systems Command  
 Aeronautical Systems Center  
 ASC/PAM  
 Wright Patterson AFB, Ohio (OH) 45433-6503  
 USA  
 Tel: +1 513 255 3767

**Total Produced.** Over 1,475 units have been produced.

**Application.** B-52H.

**Price Range.** The estimated cost is US\$ 75,000 per unit.

**Contractors**

Northrop Grumman Aerospace Corp  
 1111 Stewart Avenue  
 Bethpage, New York (NY) 11714  
 USA  
 Tel: +1 516 346 2812  
 Fax: +1 515 575 5776

Frequency range:

UHF to 100 GHz

### Technical Data

Dimensions	Metric	US
Weight per aircraft:	694.6 kg	1,530 lbs
Characteristics		
LRUs per aircraft:	10	

**Design Features.** The ALT-28 is a carcinotron noise jammer carried in pairs by the B-52 aircraft. Wideband carcinotron tubes can jam frequencies from UHF to 100 GHz. The ALT-28 was developed as part of the Phase 6 ECM modification to late models of the bomber. The jammer depends upon the ALQ-155 power management system to improve its ability to operate efficiently in a multiple threat environment. Eight ALT-28s are carried per aircraft. The MC-130E carries four ALQ-155/ALT-28 combinations.

**Operational Characteristics.** The ALT-28, in concert with the ALQ-155, provides a jamming signal to protect the B-52H from surface-to-air missile or AAA attack. The system's powerful rf signal screens the bomber from early warning radars and to incapacitate tracking radars attempting to develop a missile or gun firing solution.

**B-52 Defensive Avionics.** The B-52 carries one of the most powerful countermeasures suites of any aircraft. During Red Flag exercises, the bomber consistently showed that it could readily disable an extensive ground threat system with ease. It consists of:

- ALQ-172(V)2 active countermeasures set, including a steerable antenna system, two per aircraft.
- ALQ-155 jammer power management system.
- ALT-28 CW jammer, eight per aircraft.
- ALT-32 noise barrage jammer, one low band, two high band systems per aircraft.
- ALT-16 jammer, two per aircraft.
- ALR-20A radar warning receiver.
- ALR-46 digital warning receiver to analyze terminal threat data.
- ALQ-122 false target generator.
- ALE-20 flare dispenser.
- ALE-24 chaff dispenser
- ALQ-153 tail warning set, one per aircraft.

## Variants/Upgrades

No specific variants have been identified. The ALT-28 has been the subject of several update programs, the most elaborate being interfaces with the ALQ-155 power

management system, and integration the ALT-28 jammer with the ALR-46 radar warning receiver.

## Program Review

**Background.** The ALT-28 jammer program began in 1975 when Hallicrafters Inc (which became part of the Northrop Corporation) was awarded a contract for design and development of the ALT-28 jammer for the B-52 bomber. Other bidders were Motorola, Raytheon, Rockwell Autonetics, Westinghouse, Sylvania, AIL Cutler-Hammer and Kuras Alterman.

On June 17, 1992, Secretary of the Air Force Donald B. Rice announced *"The Bomber Roadmap,"* the plan for the manned bomber in the changed world threat climate. With the force being freed from the demands of nuclear deterrence, the Air Force would concentrate on conventional capabilities and the rapid response to regional threats.

The B-2 Stealth bomber became the main penetrating platform and was assigned the most demanding missions. Low-level penetration will be a major tactic of the Stealth bomber as it makes direct attacks on targets in high-threat targets arenas. The B-1B would be used as either a penetration or standoff platform, adding mass and precision to composite strike packages. The B-1B would be assigned targets in low-to medium-threat arenas.

All B-52Gs have been retired, and an enhanced fleet of B-52Hs will launch standoff weapons or perform direct attacks on low-threat arenas. New weapons capabilities and modified avionics are adapting these aircraft for their totally conventional role. A long-term plan is to go to a fleet of 66 B-52H aircraft in the active inventory.

## Funding

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Funding for support is from operations and maintenance accounts.

## Recent Contracts

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There have been no significant contracts awarded in several years. There is an ongoing low level of spare parts procurement and repair actions.

## Timetable

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	1975	Original contract
	1991	B-52 combat missions in Persian Gulf
Jun	1992	Bomber Roadmap released
	1994	Have Nap capability, last B-52Gs retired
	1997	Conventional weapons upgrades complete

## Worldwide Distribution

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This is a US only program.

## Forecast Rationale

The B-1B and B-2 are now the primary strategic penetrating bombers for the Air Force, and the B-52 a stand-off missile launcher and platform for selected conventional saturation bombing missions. Because of this, there is little need for a robust upgrade to the B-52H ECM system. The mission change will impact extending the life of the bombers, with budget constraints discouraging significant future upgrades to the B-52 ECM system.

As a result, the current B-52 ECM suite, including the ALT-28, should remain in service for the life of the bomber. Air Force structural modifications, according to

reports, are being considered to extend the life of the B-52 until 2035. Although this plan is optimistic, there is little doubt that the old workhorse will remain in service well into the next century. Those B-52s in the fleet are relatively low-hour airframes. They have spent much of their lives sitting on alert and receiving frequent upgrades and depot maintenance. No significant ALT-28 research and development or procurement is programmed.

There will be a low level of spares/repairs requirement as long as the B-52 fleet is operational, and the ALT-28 continues to be used.

## Ten-Year Outlook

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No further production is expected.

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