

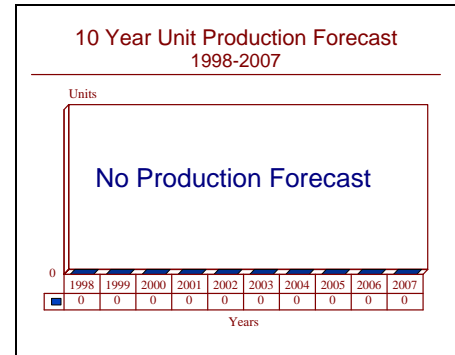
# ARCHIVED REPORT

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## URN-25 - Archived 11/99

### Outlook

- Production believed complete
- Procurement for new ships will likely be met through reuse of existing sets
- **Barring any future activity, this report will be dropped in 1999.**



### Orientation

**Description.** Tactical Air Navigation (TACAN) Beacon.

**Sponsor**  
US Navy

Naval Air Systems Command  
Jefferson Plaza Bldg. 1  
Washington, DC 20361-0001  
USA  
Tel: +1 202 692 2260

**Contractors**

NavCom Defense Electronics Inc  
4323 N Arden Drive  
El Monte, California (CA) 91731-1997  
USA  
Tel: +1 818 442 0123  
Fax: +1 818 442 4405  
(Prime: Development/production)

**Status.** Production believed to be complete; in service.

**Total Produced.** Through 1997, an estimated 529 sets were produced.

**Application.** Provides TACAN-equipped aircraft with range, bearing and identification information.

**Price Range.** Based on contract cost averaging, the price of one URN-25 set was about US\$67,000 in 1989.

### Technical Data

#### Characteristics

	<u>Metric</u>	<u>US</u>
Dimensions:	53 cm x 61 cm x 168 cm	21 in x 24 in x 66 in
Weight		
Transponder:	436 kg	960 lb
Status Control Indicator:	34 kg	75 lb

Power: 115 volts 45 Hz to 450 Hz  
 Power Output: 3,000 W (at end of tube life); 700 W (selectable mode)  
 Emergency Power Levels: 700 W and 150 W

#### RF Pulse Spectrum

Energy Levels: 800 kHz from Center Frequency 200 MW  
 2 MHz from Center Frequency 2 MW

**Design Features.** The transponder, consisting of a Receiver Transmitter and a Status Control Indicator, has a 252-channel capacity, transmits 3 kW peak power and has a built-in monitor and test capability. With the exception of redundant ceramic triodes utilized in the transmitter, the system is completely solid-state and has been designed for the electronically modulated antenna groups. The transponder design includes modular construction, the use of digital techniques, and emergency-

mode operations at reduced power (or automatic switch-over in dual installations in the event of a failure). It takes approximately one minute to change the beacon's channel, and whereas shipboard MTBF is around 1,200 hours, ground station MTBF is well over 3,000 hours.

The URN-25 TACAN transponder group provides TACAN-equipped aircraft with range, bearing, and identification within a 300-mile radius, when coupled with a suitable antenna [OE-273(V)].

## Variants/Upgrades

None specified.

## Program Review

**Background.** Initially, the US Navy contract provided for design, development and testing of four first-article systems and then production of seven systems. The URN-25 was developed to replace the Navy's existing SRN-6 and URN-20 TACAN transponders. It was designed to military specifications, meeting all qualifi-

cations for installation in surface ships, transportable vans, and fixed shore sites. The first URN-25 TACAN Beacon was delivered to the Navy in January 1978.

The last known contract, awarded in March 1991 and valued at US\$4.2 million, was for an unspecified quantity of URN-25 beacons.

## Funding

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Funding for the URN-25 is not included in current US procurement documents.

## Recent Contracts

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No recent contracts have been identified.

## Timetable

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<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	FY76	Navy issued development contracts for URN-( ) replacement for URN-20
Aug	1976	NavCom selected to develop URN-25
	FY78	Initial deployment
	1997	Production believed completed

## Worldwide Distribution

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The URN-25 is in service with the **US Navy** and in the navies of **Australia, Egypt, Republic of China, Spain, and Turkey**.

## Forecast Rationale

With over 500 systems produced to date, the US Navy fleet is basically converted to the URN-25. Very limited additional procurement is possible for new ship construction, such as the DDG-51 Arleigh Burke class destroyers, and to sustain spares levels. At this time, however, none is projected; since the Navy provides for refurbishment of existing systems removed from retired

ships for reinstallation on other surface vessels, where it is cost-effective to do so, the rather large number of systems already produced will suffice for new platforms.

*Barring any future activity, this report will be dropped in 1999.*