

# SELEX ES<sup>®</sup> MODEL 1120 A-NV TACAN



## CHOOSE THE NAVAL TACAN SOLUTION BASED ON TIME-TESTED RELIABILITY

Built on more than a decade of performance in over 600 locations of the 1118A/1119A DME throughout the world, the Selex ES<sup>®</sup> TACAN offers field-proven reliability and ease of operation. The Model 1120A-NV TACAN is built on the DME of choice for the FAA.

### Product Overview

Sold and in operation in more than 55 nations, Selex ES Distance Measuring Equipment (DME) has a field-proven record of performance for en route and precision approach landing applications. Now the 1120A-NV TACAN takes advantage of that legacy by maintaining 90% commonality with the 1119A DME. Selex ES TACANs offer highly reliable operation, advanced performance and ease of maintenance.

### Additional Features Include:

- › Single and Dual Equipment with fully redundant hot standby transmitter
- › Either transmitter in a dual selectable for main or standby
- › Comprehensive Remote Maintenance Monitoring (RMM)
- › Fault Diagnostics
- › Remote Integrity Verification/Control
- › Dual Independent Monitoring
- › Traffic Load Monitoring



## SPECIFICATIONS

### TECHNICAL

	FAA-E-2996 Performance Specification Distance Measuring Equipment (DME)
MIL-STD-291C Military Standard	Standard Tactical Air Navigation (TACAN) Signal
	STANAG 5034 The Standard TACAN Signal
	DO-278 Software Integrity Assurance Considerations for Communication, Navigation, Surveillance and Air Traffic Management (CNS/ATM) Systems

### MECHANICAL

Weight	204 kg (450 lbs.)
Dimensions	183 cm H x 61cm W x 96 cm D (72" H x 24" W x 38" D)

### ENVIRONMENTAL

Temperature and Humidity	MIL-STD-810G
EMI	MIL-STD-461F
Shock	MIL-STD-901D (DSSM)
Ship Motion and Inclination	DOD-STD-1399 Section 301A
Vibration	MIL-STD-167-1A

### ELECTRICAL

Primary Power	85-264 V AC, 47 to 63 Hz, single phase
Power Consumption	Single equipment: 235 VA, dual equipment: 445 VA
	Equipment includes independent power supplies for main and standby equipment. Power supply failures indicated at control and monitor port by aural and visual alarms.
Operating Frequency Band	960 to 1215 MHz
Frequency Accuracy and Stability	$\pm 0.0005\%$ for the assigned channel
Power Output	$\geq 5000$ watts (adjustable from 1000 - 5000 W, 1dB steps)
Transmitter Pulse	X channel pulse spacing $12 \pm 0.1\mu\text{s}$ , Y channel pulse spacing $30 \pm 0.1\mu\text{s}$
Pulse Shape Rise	$2.0 \mu\text{s} \pm 0.25 \mu\text{s}$
Pulse Width	$3.5 \pm 0.5\mu\text{s}$
Transmit Pulse Count	700 to 5400 pps
Replay Delay	X channel $50 \pm 0.1 \mu\text{s}$ (adjustable from 35-56 $\mu\text{s}$ ), Y channel $56 \pm 0.1 \mu\text{s}$ (adjustable from 50-62 $\mu\text{s}$ )
Dynamic Range	-110 dBW/m <sup>2</sup> (-94dBm, -124 dBW) to -22 dBW/m <sup>2</sup> (-6dBm, -36 dBW)
Receiver Sensitivity	70% replies at -124 dBW (-94 dBm, -110 dBW/m <sup>2</sup> ) at cabinet antenna connector
System Shutdown	<ul style="list-style-type: none"> <li>• Reply delay error exceeds <math>0.5 \mu\text{s} \pm 0.2\mu\text{s}</math></li> <li>• Pulse spacing error exceeds <math>0.5 \mu\text{s} \pm 0.2\mu\text{s}</math></li> <li>• A fall of 6 dB or more of minimum transponder receiver sensitivity</li> <li>• RF power reduced by 3 dB</li> <li>• VSWR &gt; 4.0:1</li> <li>• Continuous ident longer than 5 seconds</li> <li>• Lack of ident greater than 65 seconds</li> <li>• Reply efficiency falls below 70%</li> <li>• Transmitter count (PRF) falls below 700 pps or exceeds 6000 pps (upper limit adjustable)</li> </ul>
Built-in Test Equipment (BITE)	Accessible via IP/Ethernet, USB and legacy RS232 terminal interface
Remote Maintenance Monitoring (RMM)	Includes a personal computer and PMDT software to provide monitoring and control of the TACAN, specifically providing the capabilities of monitor automated tests. The software provides user-friendly Windows™ menus. Over 40 parameters can be collected and displayed with pre-alarms and alarms. Security is assured by the incorporation of a 4-level password system. RMM can provide fault isolation down to the LRU from the local and remote sites with unlimited range over telephone lines.

Note: Specifications are planned performance and are subject to change without notification. Please contact Selex ES for your current requirements. May 2022.

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