

AN/USM-719

Multi-Function Test Set

P/N: 90 000 121 NSN: 6625-01-565-2569



Álava Ingenieros



EHS ode 5,

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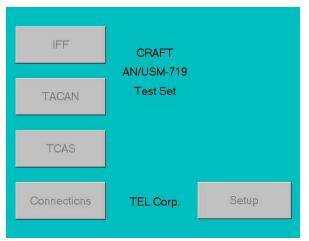
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Description

The AN/USM-719 is the next generation in ground support test equipment. Based on entirely new up-to-date technology and digital architecture; the AN/USM-719 is a leap forward in precision testing of the following systems:

- ➤ Transponder: Modes 1, 2, 3/A, C, 4 Mode S, EHS (Enhanced Surveillance) and Mode 5
- ➤ Interrogator: Modes 1, 2, 3/A, C, 4, Mode S, Mode 5, TCAS & ETCAS, Shipboard Processor
- ADS-B (Automatic Dependent Surveillance Broadcast) TX & RX
- TACAN (A/A, G/A and A/A Beacon
- VSWR
- Built in powered KIV-78 Bay
- Available Accessory Package Option

The AN/USM-719 Multi-Function Test Set provides unsurpassed reliability and ruggedness designed by an established and well recognized company with 50 years in the design and manufacture of aviation ground support and bench test equipment.



The AN/USM-719 large 6.0 in. color LCD (NVG compatible) screen and surrounding soft-keys and keyboard provides easy and quick access to a multiple of test screens menus, and display options affording single man operation, instant results, and a host of pre-programmed and manually variable parameters to meet the most demanding requirement's for testing of airborne avionic and communication equipment.

Ceneral Specificati	
3 3	MIL-PRF-28800F, Class 1
Size	14.5 x 9.4 x 6.5 inches
Weight	18 lbs. (operating)
· ·	24 lbs (accessories and Lid)
Operating	Temperature -40° to +55° C
Battery Type	Lithium Ion (3)
Battery Life	8 Hours at 20% Duty Cycle
Battery Charger	Built-in
Power requirements	115 VAC, 50 to 400 Hz/12 to 40 VDC

Features

The AN/USM-719 is designed in a compact, waterproof and durable case. Instant one button GO/NO test can be performed based on stored parameters. The user also has the capability to manually select and vary parameters individualized for each system. All accessories are neatly stored in the Test Set cover and the battery charger is included.

Mode 4 and Mode 5 U.S. Department of Defense (DoD) AIMS International Program Office Approved

Utilizes the KIV-78 appliqué for Mode 5 Interrogator and Transponder tests (not included).

Ideally suited for any temperature or region due to its self calibrating software.

Built-in battery charger and three (3) front panel replaceable "Lithium-Ion" batteries (included).

AN/USM-719

Transponder Mode Specification

Transponder testing can be performed in an "AUTO" mode based on stored criteria or "Manual" Mode offering individually selected tests and detailed results.

Modes Tested:

- ➤ Mode 1
- ➤ Mode 2
- ➤ Mode 3A
- Mode C
- Mode S
- > ELS (Elementary Surveillance)
- > EHS (Enhanced Surveillance)
- ➤ ADS-B TX and RX
- ➤ Mode 4
- ➤ Mode 5
- EOR (End of Runway)

Interrogator/TCAS Mode Specification

Transponder testing can be performed in an "AUTO" mode based on stored criteria or "Manual" Mode offering individually selected tests and detailed results.

Modes Tested:

- ➤ Mode 1
- ➤ Mode 2
- ➤ Mode 3A
- Mode C
- / Ivioue C
- Mode SMode 4
- Ivioue 4
- Mode 5TCAS/ETCAS
- Shipboard Processor Test
- OMNI/TAPER
- VSWR (Voltage Standing Wave Ratio)

Transponder Test Specifications

Test Set Transmitter

Output Frequency 1030 MHz / \pm 10 KHz Output Power -20 to -100 / \pm 1 dBm (DC) 0 to -100 dBm / \pm 1 dBm

(Ant)

Interrogation PRF

Direct Connect

SIF 450 ± 5 Hz Mode S short word 45-50 Hz Mode S long word 13-16 Hz Mode 5 200-225 Hz

Antenna Connect

SIF 235 ± 5 Hz Mode S short word 45-50 Hz Mode S long word 13-16 Hz

Mode 5

Test Set Receiver

Measurement Range 1086.5 to 1093.5 MHz

Measurement Accuracy ±200 KHz

Power

Measurement Range 47 to 64 dBm Measurement Accuracy ±2 dB (DC)

±2 dB (Ant)

S**ensitivity**

Measurement Range -45 to -87 dBm (DC)

-49 to -81 dBm (Ant)

Measurement Accuracy ±2 dB (DC)

±3 dB (Ant)

200-225 Hz

Reply Efficiency

Measurement Range 0 to 100%

Interrogator Test Specifications

Output Frequency 1090 MHz / \pm 10 KHz Output Power -20 to -100 / \pm 1 dBm (DC) 0 to -100 dBm / \pm 2 dBm

(Ant)

Test Set Receiver

Measurement Range 1029.7 to 1030.3 MHz

Measurement Accuracy ±200 KHz

Power

±2 dB (Ant-to-Ant)

Sensitivity

Measurement Range -45 to -87 dBm (DC) -55 to -87 dBm (Ant)

Measurement Accuracy $\pm 2 \text{ dB (DC)}$

±3 dB (Ant-to-Ant)

TACAN

Modes A/A, G/A, A/A BCN

Frequency Range 962 to 1213 MHz, 126 X/Y

Frequency Accuracy ± 10 kHz

Power Out $-20 \text{ to } -100 \pm 1 \text{ dBm (DC)}$ $0 \text{ to } -100 \text{ dBm } \pm 1 \text{ dBm (Ant)}$

Bearing Accuracy ±1° (G/A & A/A BCN)
Range Accuracy ±0.5 nmi Typical, ±1.0 nmi

Velocity Accuracy ±3%

Direct Connect and Antenna to Antenna Testing capability.

VSWR - Capability to conduct a sweep of a user specified frequency range and record results as a Pass/Fail.

^{*}Direct Connect (DC) and hand held antenna (Ant) options.

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