

Description

The TS-4530A, which has been upgraded and manufactured by Tel-Instrument, is the latest version of the respected AN/APM-424 and TS-4530 test set. The TS-4530A, developed under a U.S. Army contract now tests IFF including Mode 5, EHS, TCAS as well as ADS-B Transmit and Receive and now TACAN. Based on a new, highly integrated digital architecture; the TS-4530A performs the following tests:

- Transponder: Modes 1, 2, 3/A, C, 4 Mode S, EHS (Enhanced Surveillance) and Mode 5 (Levels 1 & 2)
- Complete TACAN Testing for A/A, G/A and A/A BCN
- ADS-B In and Out (transmit and receive) testing
- Interrogator: Modes 1, 2, 3/A, C, 4, Mode S, Mode 5 (Levels 1 & 2), TCAS & ETCAS
- Built-in KIV-77 CCI housing enclosure
- Built in GPS with integrated GPS antenna provides accurate Date, TOD and LAT/LONG for positioning
- Simple to use "GO/NO-GO" operation
- Selected Mode S BDS register information



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The TS-4530A includes a large 2.8 inch, color OLED display and a new 3-button switch assembly that adds a 4-way directional toggle action with push-in to select capability for user friendly fast operation.

Additional features include:

- Over-the-Air and Direct Connect test methods
- Rugged and durable MIL-PRF-28800, Class 1 package
- Extensive built-in diagnostics
- Improved power management for extended test set operation
- Reduced unit weight
- Remote download capability
- Bench Utility capability
- Multiple stored user presets

Auto Test 1/2		ACCEPT>	
Mode 1	Pass	Mode 4	Pass
Mode 2	Pass	Mode 5	Pass
Mode 3A	Pass	Mode S	Pass
Mode C	Pass		
More Details			

Additional

The TS-4530A is lighter than previous versions of the Test Set. Advanced power management extends battery operation time. The KIV-77 crypto housing blends into the unit and the crypto is readily visible with the same viewing line as the display in the unit. Rapid one button GO/NO-GO test can be performed based on stored parameters and criteria.

Signal Generator

Generator Frequency	1030 or 1090 MHz
Generator Power	
Antenna	+4 to -44 dBm with 1 dB resolution, 1.5 dB accuracy at antenna connector (2 dB accuracy for radiated field strength)
Direct	-40 to -95 dBm with 1 dB resolution, 1.5 dB accuracy
Waveforms	IFF Modes 1, 2, 3/A, C, 4, S & 5 comply DoD AIMS 03-1000A. IFF Mode S / TCAS / EHS complies with RTCA/DO-181C
ISLS Amplitude	Equal to P1 on difference or sum ports when ISLS suppression enabled. Provides ISLS pulse on difference antenna during Mode S P6
Interrogation Rate	Mode 1, 2, 3/A, C, 4 A/A mode – 235 Hz \pm 5 Hz Direct Connect 450 Hz \pm 5 Hz
Short	45 – 50 Hz
Long	13-16 Hz
Mode 5	200 – 225 Hz
Harmonics & Spurious	Complies with MIL-STD-461E (see EMC/RFI section)
Spectral Mask	Complies with DoD AIMS 03-1000A

Physical Characteristics

Packaging	MIL-T-28800, Class 1
Size	Length 14.1" Width 11.5" Height 7.5"
Weight Test Set Only	< 9 lbs. (with battery, without KIV77)
Weight with Transit case	37 lbs (without KIV-77)
Op Temperature	-40° C to +55° C
Battery Type	(2)7.2V NiCad provided
Battery Life	12 Hours at 20% DC
Battery Charger	Internal and External
Power requirements	100-240 VAC, 50-400 Hz 12 to 36 VDC
Antenna Configuration	Case Mounted
Integrated GPS	Mounted in crypto cover Antenna

Measurement Receiver

Frequency Range	1030 or 1090 MHz
Amplitude Range	+68 to +20 dBm at direct port, +24 to -24 dBm at antenna port
Input Protection	Antenna Ports: +40 dBm peak 30 μ s max @ 1% DC, +27 dBm average Direct Port: + 68 dBm peak 30 μ s max, 1% DC, +43 dBm average
Receiver Measurements	
Power	0.1 dB resolution 1.5 dB accuracy direct, 2 dB over the air
Frequency	10 kHz resolution Accuracy for IFF Modes 1, 2, 3/A, C, 4, S 0.1 MHz Transponder 0.05 MHz Interrogator
Pulse Spacing	Accuracy within 25 ns for pulses with rise times <100ns
Pulse Width	Accuracy within 25 ns for pulses with rise time <100ns and fall time <200ns
Receiver Bandwidth	>10 MHz at -3dB response

COMSEC Interface

KIV-77	Appliqué plugs directly into Test Set
KIT-1C / KIR-1C	Accessory cable connects to 37 pin circular connector on Test Set

Accessories

Standard 2-year TIC Warranty
 External Battery Charger
 AC Adapter, Power Cord
 DC Power Cable
 Direct Connect Cable TNC
 Transit Case
 Cable, KIT/KIR-1C Interface
 USB Cable, RS-232 Cable, 9-Pin
 RF Adapter TNC to N
 CD-ROM, Operation Manual