

UltraHAWK INEWT

Integrated Naval Electronic Warfare Trainer



Features & Benefits

- **Realism:** INEWT is an actual ECM system, designed and optimized for training
- **Integrated System Approach:** INEWT is an integrated EW system with ECM, ESM and Threat Generation capability
- **Mobility:** INEWT is designed for shelter based deployment or permanent ship based installation
- **Low Risk:** Ultra TCS has a proven record of delivering INEWT systems that eliminate risk
- **Expandability:** INEWT is modular that allows for expansion and upgrades
- **Programmability:** INEWT is fully programmable, allowing significant flexibility and repeatability

The Ultra Electronics TCS UltraHAWK Integrated Naval Electronic Warfare Trainer (INEWT) combines the strengths of Electronic Counter Measures (ECM), Electronic Support Measures (ESM) and Radar Signals Simulation (RSS) into a world leading EW training solution. INEWT supports training of radar and ESM operators, and evaluation of ESM and ECCM in one dedicated system.

The UltraHAWK INEWT system design ensures independent functions so there are no performance compromises. It is an advanced and cost effective approach to EW training or test and evaluation at sea or in the harbor.

The system features integrated programming capability which enables it to simulate a wide variety of ECM and radar signals in a multitude of scenarios. A total anti-shipping scenario is easily produced using an array of high power transmitters. Major subsystems of the UltraHAWK INEWT system are based on existing NDI (Non-Developmental Item) technology.

The INEWT system supports testing of active (radar) and passive (ESM & Radar Warning Receiver) sensors currently deployed around the world.

The system is designed for deployment into a self-contained shelter that can be fitted to any ship or used at dockside.

EW Training Concept

A training system should enable radar and ESM operators to handle a wide variety of EW scenarios. This can be expressed as three levels of training:

- Training the radar and ESM operators to identify that their system is being subjected to ECM and radar signals.
- Training the radar and ESM operators to recognize the type of ECM techniques and radar signals being intercepted by their sensor system.
- Training the radar and ESM operators to utilize the assets of their sensor system to increase the combat effectiveness of their platform.





Specifications

	Parameter	Specification	Remarks	
Antenna System	Tx Antenna Gain	9 – 39.9 dBi	Frequency dependent	
	Rx Antenna Gain	3.9 – 38.3 dBi	Frequency dependent	
	Frequency Coverage	0.5 – 40 GHz	Tx and Rx	
	Isolation (Transmit to Receive Antennas)	90 dB		
	Tracking Modes	Video, Radar, AIS and/or GPS		
RSS/Transmit System	Amplifier Types	Solid State <2.5 GHz		
		TWT > 2.5 GHz		
	Output Power	275 Watts CW <18 GHz	Minimum	
		40 Watts CW > 18 GHz	Minimum	
	Duty Cycle	CW or 50% duty cycle Pulsed		
	Frequency Coverage	0.5 – 40 GHz		
	Simultaneous Emitters	16 – 32		
RJS	Frequency Coverage (Input & Output)	0.5 – 40 GHz	3 bands	
	DRFM Clock Frequency	2 GHz		
	DRFM Instantaneous Bandwidth	800 MHz		
	Through System Latency Delay	1200 ns		
	DRFM Memory Length	8.3 ms		
	Range Delay Resolution	0.5 ns		
	Input Dynamic Range	+10 to -50 dBm		
	Output Dynamic Range	100 dB		
	Max Threshold Windows	32, frequency/amplitude		
	Max ECM Techniques in a Sequence	32		
	ECM Technique Types	See ECM Techniques Table		
	ES Receiver	Frequency Coverage	0.5 – 40 GHz	
		IF Centre Frequency	1 GHz & 160 MHz	
IF Pre-D Bandwidths (160 MHz)		100, 50, 25, 10 MHz		
IF Pre-D Bandwidths (1 GHz)		500, 250, 100, 50, 10 MHz		
PW Range		50 ns to 13.0 ms		
	PRI Range	<500 ns to 100 ms		

ECM Techniques
Multiple False Targets
Range Gate Pull Off (In), RGPO(I)
Velocity Gate Pull Off (In), VGPO(I)
Range & Velocity Gate Pull Off (In), RVGPO(I)
Active Decoy
Passive Decoy
Spot Noise (pulse & CW)
Swept Spot Noise (pulse & CW)
Barrage Noise (pulse & CW)
Burst Noise
Velocity Noise
Range Bin Masking
Velocity Bin Masking
Range/Velocity Bin Masking
Audio Modulation
(Adaptive) Inverse Gain
Intra-PRI
Synthetic Signal
Simulated Target
Range Extents
Chaff
Clutter
Capture



making a difference

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Printed in Canada
6095-1113 2015-01-01