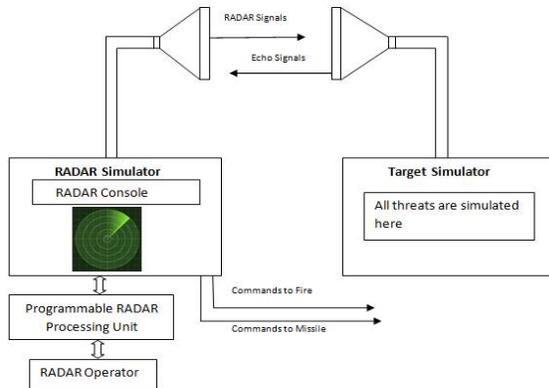UTS Radar Operator Training Simulator (ROTS) is a single integrated hardware and software solution for training the radar operator for an effective learning experience as in real time operation. It is loaded with enough features including multiple target simulation, Doppler, ECM jamming and more.

Features:

- Library includes different configurable RADAR waveforms, helicopter and aircraft databases (RCS swirling models for target echo generation).
- Predefined training modules available with maps containing multiple targets including UAS, fighter aircraft and helicopter as a profile which can be run using few mouse clicks. User can also create different profiles.
- It is software and hardware solution, which means using GUI configuration of profile, is made and accordingly real signal is generated by hardware in radiation or injection mode.
- It is a cloud based interface and hence a batch of operators can be trained at a time. Also individual report of operator is produced.

- In build Built in Self Test (BIST) allows easy trouble shoot and recognition of any system failure.
- Loaded with different types of Jamming Techniques, RCS, target modulations & clutters.
- RADAR display includes PPI, A-Scope, B-Scope and inbuilt spectrum analyzer to check the input-output signal power level.
- ECM & ECCM techniques can be tested.

Basic Training Modules:

➢ Training on different radar waveforms, conventional & LPI.
➢ Training on target detection observation on radar screen by varying radar waveform properties and detection properties.
➢ Training on Effects of low, medium and high PRF and PW on target detection.
➢ Training on target detection in different environment conditions (rain, fog, snow etc.,) and under different clutter (land, sea and volume) condition.
➢ Training on effects of deceptive jamming (RGPO/I, VGPO/I and MFT) on target detection.
➢ Training on effects of target detection on radar console, when target enabled noise jamming.
➢ Training on reaction time available for radar to take counter action against different targets.

Specifications:

- Band of operation: C (5.4 to 5.9 GHz), X (9 to 10GHz), Ku (16 to 18GHz)
- Instantaneous bandwidth : 50/200/1000MHz
- No. of targets :8
- Range: 300m – 150 Km
- Range resolution: 1/5/15m
- User friendly GUI
- Modeling of RADAR RF parameters
- Configurable RCS with swirling models
- Programmable clutter models- ground, sea, volume
- Configurable target models: point
- User can make Radar system to be static or moving type
- Programmable target speeds(Doppler shift based on relative motion)
- ECM : Barrage, spot, sweep jamming
- User can create, save and load profiles consisting typical target scenarios
- Single channel model to support injection and radiation mode testing
- Power supply AC 240V, ±10%, 50Hz

ECM Training Modules:

- Operator cab be trained on, how to operate at different jamming conditions and how does the jamming affects the radar display console.
- ECCM techniques are adoptable at different jamming conditions.
- How to identify a real target, out of multiple false targets.
- This test can be performed on the destined radar which is deployed for operational by using Radar Training Simulator (RTS-Sim).

Advantages:

- Reduced operational cost
- Exposure to more realistic threat scenarios
- Training under non hazard conditions
- Understanding the behavior of radar in specific operational conditions
- Analyzing, recognizing and identify data
- Better exposure to Manage unknowns or uncertainties
- Collaboration with other operators for the same mission
- control over planning of operations
- Provides clear picture on training gaps

Applications:

- Training for RADAR users
- Class Room Training
- For simulation purposes
- Radar Algorithm development and testing
- RF Data acquisition

Other related Products:

- Radar Target Simulator
- Radar Threat Simulator
- Programmable RADAR Processing Unit
- Communication EW Scenario Simulator

Optional modules:

Customistion as per the RADAR console and PPI of the client RADAR is possible.

Ordering Information:

UTS-ROTSV5.0

For more information

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