model:Radar -1000

PC based Radar training system

Overview

Radar -1000 can generate a modern Radar Signal and give user a variety of capabilities to test X-band receivers covering 8~12 GHz such as the receivers of RWR, MWR and other EW Receivers.
It generates lots of Radar signals according to user's intention.

With compact and rugged design, user can make their own scenario to generate the Radar signals through their test procedures or test purpose.
Radar-1000 can generate CW or Pulsed signals up to 4 signals simultaneously and is very useful to test EW system and train EW operator.

Features

- Radar Simulator function
- Radar Detector function
- Simulate Various Radar Signals
- Generate Multiple Radar Signals Simultaneously
  (Up to 4 radars)

- Programmable Emitter Parameters : Freq. PRI, PW, SCAN etc
- EW Operators Training
- ECM Technique Development

System configuration

System configuration

Hardware platform	1 set
Horn Antenna & Triangular Stand	1 set
RF Cable	1 ea
Ethernet cable	1 ea
BNC cable	1 ea
Program CD	1 ea
Manual book	1 book

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Experiments (Study objectives)

Chap 1, Oveview of Radar technology
Chap 2, Introduction of Radar training system
Chap 3, Hardware configuration & function
Chap 4, Operating Procedures & Software install
Chap 5, Radar Fundamentals - I (Pulse Radar)
Chap 6, Radar Fundamentals - II (FMCW Radar)
Chap 7, Frequency Modulation Test (Fixed, Agile, Hopping)

Chap 8, Pulse Modulation Test - I (CW, Stable, Jitter)
Chap 9, Pulse Modulation Test -II (Dwell & Switch, Random)
Chap 10, Scan Modulation Test - I
      (Conical, Steady, Sector, Lobe-Switching, Circular)
Chap 11, Scan Modulation Test - II
      (Orthogonal, Helical, Spiral, Raster)
Chap 12, Multi Threat Signal Test

Spec

1) Radar Simulator Function
   (1) Frequency Characteristics
     • RF output from 8.0GHz to 12.0GHz
     • Frequency type : Fixed, Agile, Hopping
     • Agile Pattern : Sine, Triangle,
       Rectangle, Saw
     • Hopping Frequency Number : 8
   (2) Pulse Characteristics
     • Pulse Range : 10us ~ 100ms
     • PW Range : 0.1~225us
     • Pulse type : CW, Stable, Jitter, Stagger,
          Dwell & Switch, Random
     • Stagger : 16 steps
     • Jitter Pattern : Sine, Triangle, Rectangle, Saw
     • Dwell & Switch : programmable up to 16 steps
   (3) Scan Characteristics
     • Scan type
      : Conical, Steady, Sector, Lobe-Switching,
       Circular, Orthogonal
        Helical, Spiral, Raster
     • Scan Rate : 50mS ~ 10Sec
     • Scan Depth : 0~ 30dB
   (4) Number of RF Signal
     • 8.0GHz ~ 12.0 GHz
      - 4 pulse Signals or 1 CW

2) Radar Detector Function
   (1) Pulse Radar Characteristics
     • PW : 5nsec, Fixied Signal
     • Detection Range : 10meters (Max.)
     • Display : Range
   (2) FMCW Radar Characteristics
     • Detection Range : 10meters (Max.)
     • Display : Range, Velocity

3) Other Features
     • 110-240 VAC operation
     • Accessories
       * (2)RF cable (3 meters, N(M) to N(M))
       * AC power cable
       * (2)BNC cable (1 meters)
       * Ethernet Cable (Option : -U)
       * (2)Horn Antenna
       * Triangular Stand
       * Labtop
       * Accessories ABS Case

4) Environmental
     • Operating Temperature 10°C to +40°C
     • Storage Temperature -10°C to +70°C
     • Relative humidity 5% to 85% (non condensing)
     • Mechanical shock rating 20G

5) Inputs/Outputs
     • Ethernet Interface Port
     • USB x 3 Interface Port
     • Video Out
      Scan Monitor : BNC(f)
      Pulse Monitor : BNC(f)
     • RF Output
      N-type (f)
     • RF Monitor Output
      SMA(f)