



PCS-4xx

Radar Simulators

Buffalo Computer Graphics, Inc. (BCG) offers a line of radar stimulator products including its new PCS-4xx series. The PCS-4xx is designed as a direct replacement for BCG's previous model PCS-3xx. The PCS-4xx offers a high fidelity radar image created by programmable software integrated with FPGA-based hardware. The heart of the PCS-4xx is BCG's Radar Signal Generator Express Board (RSGx). This hardware module utilizes a PCI Express platform with a small board footprint to fit into a wider range of packages including a desktop computer, 1U rack mount chassis, or a small portable unit. The reduced parts count of the RSGx Board increases system reliability while reducing the cost of the unit. With the added software control, the PCS-4xx delivers a wider range of programmable radar signals for a more realistic radar presentation on a variety of radar displays.

The PCS-4xx may also be integrated with ECDIS or commercial electronic charting systems to provide radar overlay capability. As with all BCG radar simulators, multiple units may be networked together to allow for an interactive multi-ship team training environment. The PCS-4xx is compatible with all existing BCG radar simulators (including scenario and radar database files) and a variety of integrated bridge training systems.

The PCS-4xx series includes a hardware/software kit installed in a customer's computer (Model PCS-401), a small portable system when transportability is required (Model PCS-450), a single radar antenna device (Model PCS-400), and a dual radar antenna configuration for S-Band / X-Band systems (Model PCS-420). Each model offers the same signal fidelity and functionality to the user. The PCS-4xx simulator family can be delivered with Windows 10 or Windows 11 operating system support, and it has been delivered with SHB operating systems as well.

Contact BCG for more information on any of the PCS-4xx models or any of our Maritime Simulation products.

Features

- ♦ Controlled through BCG's Maritime Simulation Tool (MaST)
- ♦ Network API for Third Party Control
- ♦ True radar occulting using 3D Radar Imagery
- ♦ Automatic Identification System (AIS) Interface
- ♦ STCW and IMO Compliant simulation
- ♦ Supports Windows SHB operating systems

Available Options

- ♦ Expanded Target Capacity
- ♦ Student Control of Ownship
- ♦ Multiple Package Types

PCS-4xx Specifications:

All simulation parameters are programmable based on customer's needs which include;

- ◆ PRF: 50-5000Hz
- ◆ Scan Rate: 5—60 RPM
- ◆ Pulse Width: 50-5000 nSec
- ◆ Angular Resolution: 0.17 degrees
- ◆ Horizontal and Vertical Beam Width: 0.3-90 degrees
- ◆ Speed Log: 200 pulses / NM
- ◆ Gyro Compass: 30V, 3-phase stepper
- ◆ Video Resolution: 4-64 yards / pixel
- ◆ 100 targets standard, expandable to 1000
- ◆ Exercise Playing Area up to 256NM x 256NM
- ◆ Antenna blanking sectors
- ◆ Set & Drift
- ◆ Yaw
- ◆ RACON and SART generation
- ◆ Dynamic Precipitation Clutter
- ◆ Sea Clutter
- ◆ Secondary Radar Effects include:
 - * Range Attenuation (Power)
 - * False Echoes
 - * Multiple Echoes
 - * Radar Interface
 - * Receiver Noise
 - * Beam Width / Pulse Width Effects

Available Radar Display Interfaces:

- * SPS-73, SPS-50, SPS-78, SPA-25x, SPQ-9B, TRS-3D
- * Sperry Marine VisionMaster / BridgeMaster-E
- * Furuno: All Models
- * Generic: Trigger, Video, ACP, ARP
- * SSR Engineering PCRP, various models
- * Resulting from programmability, Custom Radar Interfaces are available upon request



PCS-400 driving a Sperry BridgeMaster E



RSGx-Express Board

Contact BCG for information and pricing on our full line of Maritime Simulation products.

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