

In-Building Coverage Certification Training



Critical Applications

Field technicians, engineers, and communication system operators all work toward the same goal - keeping their systems operating and their critical needs and customers served! Communication networks are experiencing unparalleled change and growth, and with that growth the need for trained technicians and engineers as well as managers, operators and owners becomes crucial. Bird Technologies Group offers specialized training in the assessment, design, installation and commissioning of RF coverage enhancement systems, as well as comprehensive, hands-on training in the operation and optimization of the TX RX System brand Signal Booster product lines. The Signal Boosters are easy to operate, user friendly solutions for installers and maintenance technicians, and for site operators or owners, even under the most difficult installation conditions. The Signal Booster II provides unparalleled performance and specifications making it the leader in indoor RF signal distribution products.

From caves and tourist attractions to airports and subways, Signal Boosters have found their way into critical applications that depend on maximum system uptime and operation under the most dramatic of events and situations. Current societal needs for two-way communication in public safety demand full-time operation with installations in public buildings such as courthouses, federal buildings, hotels, and sporting complexes. Airports, rail, subway stations and any other point of public transportation may require additional signal amplification to insure complete coverage to meet communication needs. TX RX Systems Brand provides Signal Boosters for Private Wireless as well as Public Safety communication applications.



Training Agenda (2 Days)

Topics will include basic RF theory, FCC rules and regulations governing Signal Booster systems, typical applications, system design and optimization, equipment set-up and use, and system maintenance. The course is designed to accommodate users across a variety of applications and at various technical levels.

Course Structure

A full class outline and schedule are included, but much of the training centers on the design and installation of Signal Booster systems and covers practical, real-world approaches to typical and highly specialized installations. Class time will include hands-on use of the Signal Booster II product. Troubleshooting techniques and practices will allow the field technician to quickly identify critical system operating parameters for system optimization, and in the unlikely event of a component failure, rapidly identify and remedy those conditions insuring continued system uptime. Training may be customized to fit the needs of those attending.

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Who should attend training?

RF Site Manager	RF Site Installers
RF Site Technicians	RF Systems Engineers
RF Field Engineers	

Topics covered in training

Practical radio frequency basics

Site survey and System Design

Typical site set-up, installation & commissioning practices

Impact of system parameters and system optimization

Fault location and correction

Documentation of faults and remedies

Product Comparison

Material Supplied

Course materials

Signal Booster II Certification

Upon completion of training, each participant will receive Signal Booster II certification, issued by the BTG/GES, that shows the student understands how to operate the Signal Booster II under the field conditions covered by the course. Signal Booster II Certification will require attendance at lecture sections and during hands-on practical applications. Testing of knowledge and skill will be part of the certification process.

Certification

Written Exam, Lab Practical Exam (Must pass written & LAB practical exam)

Course Outline

Day 1 Morning Session

Introduction to Signal Booster Systems	<ul style="list-style-type: none">• Terminology• Review of FCC Rules and Regulations covering• Applications
Specific Applications	<ul style="list-style-type: none">• Terminology (Head-end vs. Intermediate Signal Booster, Distribution Systems, Downlink/ Uplink Transmission Line, Antennas)• Scenarios for Signal Booster applications• Solutions using a Signal Booster
System Design	<ul style="list-style-type: none">• Design checklist• Site Survey• Design methodology• System block diagrams• System components

Course Outline

Day 1 Afternoon Session

Review of morning session	
Design Criteria and Checklist	<ul style="list-style-type: none">• Critical paths• Directivity and Isolation
Design Phases	<ul style="list-style-type: none">• I through IV• Performance Considerations
The OLC Circuit	<ul style="list-style-type: none">• Intermodulation• IM Control• Circuit Operation
Configuration and Control	<ul style="list-style-type: none">• Gain setting• Output power• OLC DataLog• Critical Parameter monitoring
Reliability	
Remote Monitoring and Control	<ul style="list-style-type: none">• IP Connectivity• Web-Browser screens• Remote monitoring and configuration control

Course Outline

Day 2 Morning Session

Review of Day 1	
Terminology	
Diagnosing and correcting faults	
Comparison with similar products	
Hands-on lab with Signal Booster II	<ul style="list-style-type: none">• Control panel and menu structure• Use of field equipment and products
Troubleshooting techniques	
Review and Q&A session	

Day 2 Afternoon Session

Review of all material	
Q&A session	
Certification Testing	

Notes:

Course fee includes all materials, lunches, and refreshments during the training days. Travel expense and hotel not included in fee.



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