

PUBLIC SAFETY NETWORK TESTING SOLUTION

Verify and Document Critical Communications Coverage



POLICE



FIRE



EMS



BUSINESS CRITICAL
/ LIFE SAFETY



CELLULAR



WiFi



In-Building Coverage Testing, Commissioning, and Code Compliance

- Streamline grid-based testing to meet NFPA72 1221, NFPA 1225, IFC 510, and local code requirements
- Automate commissioning tests for FCC-compliant Business Critical and Emergency Responder Communications Enhancement Systems (ERCES)
- Verify P25 and Analog FM uplink performance automatically during grid, drive, and walk tests
- Test in-building or outdoor signal quality across multiple LMR, cellular, and WiFi networks
- Automatically generate real-time pass/fail results and printable reports



MADE IN THE USA
of U.S. and imported parts

PCTEL
an Amphenol company

Automated Testing Saves Time & Money

PREPARE. MEASURE. REPORT. IT'S THAT EASY.

Replace manual processes and ensure critical communications coverage with the PCTEL® Public Safety Network Testing Solution. Our SeeHawk® *Touch* software platform streamlines grid-based coverage testing and BDA (bi-directional amplifier) commissioning testing. The SeeHawk® *Central* cloud platform makes it even easier to plan tests, submit results, and meet or enforce local building codes and regulatory requirements for Emergency Responder Communications Enhancement Systems (ERCES). The simple pass/fail grading system is also a great way to ensure coverage for cellular, WiFi, life safety, and business critical radio networks.



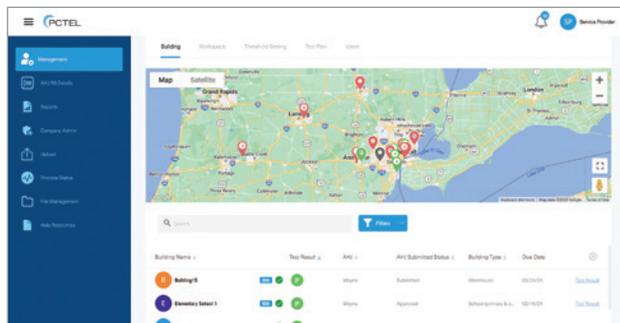
1 PREPARE

Create grids and set up tests

- Track testing due dates and schedule activities in SeeHawk *Central*
- Schedule uplink testing with kit at radio site or with SeeHawk® *Monitor* (optional)
- Prepare test plans remotely in SeeHawk *Central* cloud platform or locally on your tablet
- Import a floorplan, add and adjust grids
- Identify test locations and critical test points
- Select frequencies
- Configure pass/fail criteria
- Submit test plans for pre-approval by public safety officials in SeeHawk *Central*



- ▲ Automatically identify test locations with easy-to-use grid creation tools that rotate to fit your floorplans



- ▲ Plan and configure tests remotely in SeeHawk *Central*

2 MEASURE

Execute tests and grade by threshold

- Measure all bands, technologies, and channels simultaneously
- Objectively measure signal quality (BER and SINR)
- Automatically detect cellular networks & identify operators
- Test channel power for any technology

Tap to test downlink

Tap and talk to test uplink

View pass/fail results in real time

Area	Grid ID	Area #	Channel	Band	Frequency (MHz)	DL Power (dBm)	DL S/N (dB)	DL FER (%)	DL BER (%)	DL Signal Power	DL DAQ	UL Power (dBm)	UL S/N (dB)	UL FER (%)	UL BER (%)
	01	01	5330	BB 14: Upper 700...	763.00000	-79.79	6.51			-108.12	4.6	-55.00	28.00		
	01	01	1	WiFi Band	2412.00000	-57.00									
	01	01	1	300 p25 german...	380.12500	-64.03	37.21	0.00			4.7	-60.00	28.00	0.00	
	01	01	1	DMR	452.25000	-119.36					4.8	-52.00			
	01	01	1	TETRA	870.17500	-103.94					4.5	-55.00			

FFlex Device 081703025 DC Power Level: 92%

Automated, objective downlink signal quality measurements

Automated, objective uplink signal quality measurements (white)

- LMR (P25, DMR, TETRA, Analog FM, etc.)
- WiFi
- Cellular (5G/LTE/FirstNet)

Automated Uplink Testing



- ▲ Initiate uplink test at each grid location in SeeHawk *Touch*



- ▲ SeeHawk *Monitor* automatically measures uplink at the radio site

“Our testing groups are much more efficient with PCTEL testing solutions and SeeHawk® Central.”

– Andrew Masur, Owner & Mobile Solutions Architect, Mobil-Fi

3 REPORT

Auto generate real-time results and submittable reports with one tap

- Synchronize uplink data from uplink test kit at radio site or from SeeHawk Monitor Platform Manager
- Automatically upload to SeeHawk Central cloud platform for collaboration and reporting
- Automatically incorporate uplink and equipment room test results
- Customize pass/fail criteria on multiple reports to meet local government or business requirements
- Save printable reports within minutes, locally or on SeeHawk Central
- Submit results to AHJs and Radio Systems and track approval status in SeeHawk Central

Channel	Frequency (MHz)	Area Passed	Critical Points	Test Result
1 Montgomery County 750...	853.86250	4743 (100%)	3/3 (100%)	PASS

Instant pass/fail results

Save as Excel or Word document



Simplify the reporting and approvals process with the SeeHawk Central cloud platform

Submit Building Report

AHJ Submit

Company Name: Contact Person:

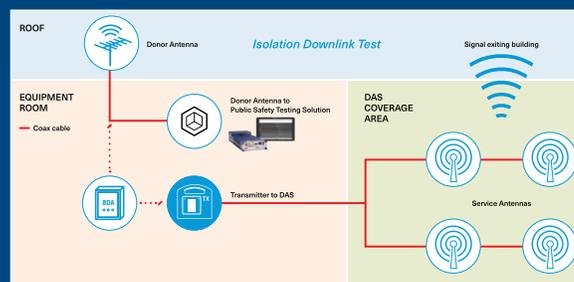
Radio System Submit

Company Name: Contact Person:

GET MORE DONE WITH ONE PUBLIC SAFETY TESTING KIT

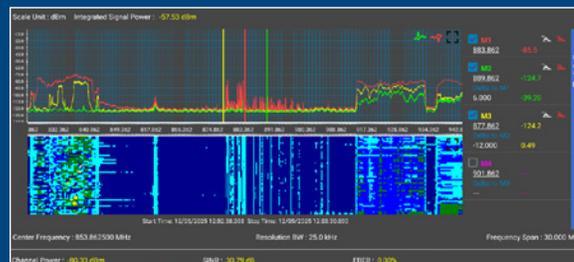
BDA Commissioning Option

- Efficiently perform all RF-based BDA commissioning tests recommended by the SBC, ETA, and BDA manufacturer guidelines
 - Easily train and supervise personnel
 - Guided preparation in SeeHawk Touch or Central
 - Guided testing using a PCTEL kit and CW transmitter
 - Automated grading & reporting in SeeHawk Touch or Central
 - Submit results to public safety officials and track approval status in SeeHawk Central
- See separate brochure for more details.



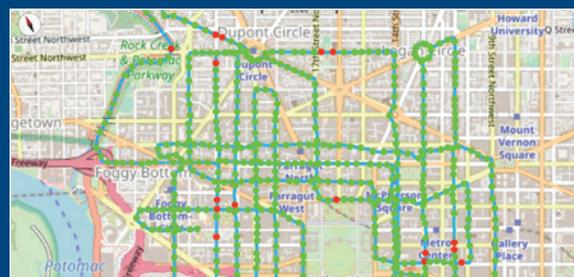
▲ BDA Commissioning: Isolation Test

Troubleshooting



▲ Spectrum Analysis (SA) mode for troubleshooting and equipment room work, right on your tablet. Includes Waterfall graphs to identify intermittent issues. Automated Antenna Verification Test (optional) mode also available.

Drive and Walk Testing



▲ Path-based testing for cellular and LMR networks. Optional outdoor mode includes automatic GPS mapping.

Critical Communications Testing: Public Safety, Life Safety, Business Critical

PCTEL's Public Safety Network Testing Solution combines the precision measurement capabilities of the IBf/ex® scanning receiver with our Android™ tablet-based SeeHawk *Touch* network testing and grid test reporting software and optional subscription to the SeeHawk *Central* cloud platform. Choose the kit and options that meet your testing needs.

"PCTEL's testing solution and SeeHawk *Central* platform have revolutionized how we conduct business. Generating reports to customers and AHJs has never been easier."

– **Randy Armstrong, Project Manager, LS Systems, a Division of Sciens Building Solutions**

Kits	IBf/ex Scanning Receiver	SeeHawk Software	Accessories
Public Safety Network Testing Solution – In-Building P25 or TETRA (DMR and Analog FM optional)	<ul style="list-style-type: none"> Lightweight software-defined radio (SDR) receiver Measure all frequencies 10 MHz - 1 GHz P25 or TETRA downlink signal decoding (SINR and BER) Analog FM signal decoding (SINR) (optional) DMR signal decoding (SINR and BER) (optional) High-speed multi-band testing Bluetooth® connectivity 5-Year Warranty 	SeeHawk <i>Touch</i> features: <ul style="list-style-type: none"> Grid test radio channel power (any technology) Grid test signal quality for P25 or TETRA (DMR and Analog FM optional) Grid test uplink (SeeHawk <i>Monitor</i> system required at radio site) Grid test noise channel power Equipment room test Indoor walk test Signal Analyzer 	<ul style="list-style-type: none"> Android™ tablet Battery pack Back or side pack Walk test antennas Flex antenna adapter Carrying case A/C charger
Public Safety Network Testing Solution – In-Building P25 and ATT-VZW-TMO	All P25 kit features, plus: <ul style="list-style-type: none"> Decode 4G LTE All Verizon, T-Mobile, AT&T and CBRS LTE bands 	All P25 kit features, plus: <ul style="list-style-type: none"> Grid test LTE signal quality 	All P25 kit features
Public Safety Network Testing Solution – P25 and Cellular	All P25 kit features, plus: <ul style="list-style-type: none"> All cellular bands 10 MHz - 6 GHz Decode 2G, 3G, 4G and 5G cellular technologies 	All P25 kit features, plus: <ul style="list-style-type: none"> Grid test 5G, LTE, TD-LTE, and UMTS/WCDMA signal quality Outdoor mode for drive test Antenna Verification Testing (AVT) 	All P25 kit features, plus: <ul style="list-style-type: none"> Vehicular rooftop antennas Car charger
Options			
BDA Commissioning (add-on software option with hardware kit)		<ul style="list-style-type: none"> Perform BDA commissioning tests Report BDA information and test results 	<ul style="list-style-type: none"> RF components for commissioning tests CW transmitter (sold separately)
SeeHawk Software Subscriptions		<ul style="list-style-type: none"> SeeHawk <i>Central</i> subscription with unlimited test uploads and user logins SeeHawk <i>Touch</i> maintenance and software updates 	
Additional options	<ul style="list-style-type: none"> Decode Analog FM, DMR, P25, TETRA, WiFi, 5G NR, NTN, NB-IoT, LTE-LAA, or LTE MIMO technologies 	<ul style="list-style-type: none"> Additional SeeHawk <i>Touch</i> software licenses for planning and reporting 	<ul style="list-style-type: none"> Outdoor test kit Additional batteries
Training			

We offer in-person and online training in the use of PCTEL test & measurement solutions. Learn more at pctel.com/ps-training



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