

Kestrel TSCM[®] Professional Software Signals Intelligence Support System (SISS)[™]

The professional Kestrel[®] 3D Energy Probe (KEP)[™] | OTA Radiated Antenna Kit is a modern and uniquely designed technologically advanced, low cost solution under the powerful Kestrel[®] brand and is ideal for deployment in virtually any type of Power Line Carrier (PLC) or Broadband Power Line (BPL), application for references analytical metrics, and utilized for intermittent or continuous monitoring the local power grid environment at all known and developing operational threat levels within the private and public sector national security apparatus. The model 3DEP-10 Kestrel[®] 3D Energy Probe (KEP)[™] Probe | OTA Radiated Antenna[™] is an innovative and uniquely designed in Canada and manufactured in the USA product. Our operator centric design provides cross technology capability for superior Power Line analytics and Over-the-Air (OTA) capability that significantly enhances the inspection process for so-called intentional and unintentional radiators across the target area power grid and other conductive paths. ✨

Introducing the Kestrel[®] 3D Energy Probe | OTA Radiated Antenna[™] Kit, specifically designed and developed for TSCM and RSSM[™] applications for use with all (frequency dependent) Software Defined Radio (SDR) hardware and analyzers, utilizing the advanced capabilities of the Kestrel TSCM[®] Professional Software.

Technical Surveillance Countermeasures (TSCM) has Never Been this Easy!



The 3DEP-10[™] is designed specifically for TSCM | RSSM[™] applications for use with virtually all suitable SDR radios and analyzers

PLC | BPL | OTA Near-Field Frequency Range (10 kHz - 3 GHz)

- VLF | 3 kHz to 30 kHz
- LF | 30 kHz to 300 kHz
- MF | 300 kHz to 3 MHz
- HF | 3 MHz to 30 MHz
- VHF | 30 MHz to 300 MHz
- UHF | 300 MHz to 3000 MHz



Key Features

- Universal SDR Design
- Rapid Field Deployment
- Easy to Use
- Dual Technology (PL) (OTA) PWR | GRD Only Modes

The model 3DEP-10 supports extended monitoring of the local target area power grid as a dedicated spectrum band or an independently assigned SDR radio as part of a Remote Spectrum Surveillance and Monitoring (RSSM)[™] deployment. ✨

The 3DEP-10 is a professional lab quality instrument for deployment by trained technical security professionals with training and working knowledge of high-voltage circuits. ✨

"The Kestrel[®] brand is transforming the technical security industry with innovative modern SDR technology and a powerful standards based methodology"



"Target hostile signals with the speed and precision of a kestrel!"



Key Features

20200913v1-06

Our regulated RF output has a 20 dB, 30 dB and 40 dB operator-controlled attenuator to better compensate for the wide variations in PL noise artifacts and higher signal levels within a modern moving target threat model. The Live | Neutral (common) mode, provides optimal signal passage without the need for time-consuming and technically unnecessary manual or automatic switching. The GRD mode permits isolated analysis of the earth ground and permits the electrical wiring grid to be utilized as a Broadband OTA Antenna. Sophisticated simplicity in design means that the operator can deploy the 3DEP-10 for continuous power line monitoring across a low cost dedicated or shared radio, or monitor in a real-time operator assisted analytical role. ✨

"Innovation is Simply the Beginning..."

Specifications

- Model:** 3DEP-10 Kestrel[®] 3D Energy Probe (KEP)[™]
- Application:** PL Monitoring and OTA Signal Analytics
- Ranges (PLC):** 10 kHz to 750 kHz
(PLC): 750 kHz to 150 MHz
(OTA): 30 MHz to 3 GHz (and higher)
- Attenuation:** 20 dB | 30 dB | 40 dB
- Impedance:** RF Output 50 Ω
- Connector:** SMA (M) Regulated | SMA (M) GRD Only
- Mechanical:** 205 mm x 75 mm x 35 mm
- Mains Voltage:** 250 VAC (MAX)
- Mains Cable:** 3-Wire Parallel Conductor
- Coaxial Cable:** Low Loss Belden | SMA (M) to SMA (M)
- RF Adapter:** N (M) to SMA (F)
- Certifications:** CE Approval

Specifications are Subject to Change Without Notice...

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Innovative TSCM | SIGINT Equipment Resources for Modern Deployment

Kestrel TSCM[®] Professional Software Signal Intelligence Support System (SISS)[™]

The Kestrel TSCM[®] Professional Software is a leading, highly versatile and scalable Software Defined Radio (SDR), TSCM specific and operator centric application. The Kestrel TSCM[®] Professional Software is a 100% Canadian engineered and developed software application that is ideal for professional Technical Surveillance Countermeasures (TSCM) and Remote Spectrum Surveillance and Monitoring (RSSM)[™] applications. Kestrel[®] is a full featured, low cost, standalone Signals Intelligence Support System (SISS)[™] and is an ideal sensor-based platform for a range of RF applications, including the detection, identification, signal analysis and signal localization tasks, for mission specific short-term and extended RF collection requirements across multiple radios and spectrum bands. Location Differential Signal Analysis (LDSA)[™] and Time Differential Signal Analysis (TDSA)[™] are powerful comparative analysis tools. Multiple Receiver Operation (MRO)[™] capability is an industry first permitting the real-time synchronization and hand-off of the spectrum and demodulation process across any supported radio or analyzer. When combined with a portable or mobile platform, the operator will soon appreciate the ability to deploy a powerful primary resource and easily transition to a walk-about locator utilizing the familiar TSCM[®] Professional Software for absolute precision and continuity. The Kestrel[®] brand, means a lot more than a lower overall cost of ownership, bringing new innovative features and methodology to the technical security market worldwide. In a modern moving target threat model, due-diligence can no longer be realized without embracing new techniques, methodology and innovative equipment resources. The Model 3DEP-10[™] brings a new and significantly enhanced capability to the professional technical operator. ↗

The Kestrel[®] 3D Energy Probe (KEP) | Power Line (PL) and Radiated Antenna addresses a serious void whereas the ambient power line utility is oftentimes over-looked and is under inspected during many technical inspections, or considered as unimportant, too difficult to conduct, simply not understood as a significant vulnerability. In many scenarios the Power Line (PL) threat may or not be considered by the technical operator or the end-user organization. Yet the ambient electrical wiring path is often the one totally open so-called "public" network that can communicate without restriction or limitation with the outside world invisibly with virtually unrestricted two (2) way communication. There are no firewalls, routers or switches, just an open conductive path between every corner of your facility and anyone else on the inside or outside, even within a standalone structure. A common ground conductor will exist even across multiple structures for CCTV and alarm installations elevating the threat. The need for phase-coupling may not be required or is easily accommodated during real-world attacks. Monitoring the electrical power grid during scheduled inspections and continuously as part of a managed Remote Spectrum Surveillance and Monitoring (RSSM)[™] risk protocol is an essential recommended practice within the TSCM community.



The 3DEP-10 is Powerful New Innovation that Extends Your Professional Credibility

PLC | BPL | and Radiated OTA Near-Field TSCM Frequency Range of 10 kHz to 3 GHz

RAW Unregulated Output Provides Analytical GRD Isolation and Grid Antenna Capability

Selectable Attenuator Settings of 20 dB, 30 dB, and 40 dB for Enhanced Signal Conditioning

Conductive and Radiated OTA Signal Detection and Hostile Signal Characterization

Designed for Real-World Mission Specific Deployment for Ad Hoc and Extended Monitoring

The 3DEP-10 is based on LIVE-NEUTRAL DIFFERENTIAL rather than the time-consuming and obsolete independent conductor-based switching which is unfortunately still widely promoted for the detection of PL emitter technology without any significant advantage and fails to promote Remote Spectrum Surveillance and Monitoring (RSSM)[™].

Kestrel[®] 3D Energy Probe (KEP)[™]

The KEP[™] is an advanced Power Line Carrier (PLC) | Broadband Power Line (BPL) | Over the Air (OTA) | resource packaged in a travel friendly soft case and includes all required accessories needed to safely connect directly to all SDR radios and analyzers, safely transferring unfiltered signal-level intelligence from live and unpowered electrical circuits and other unintentional radiator wiring paths up to 250 VAC. The KEP[™] technology utilizes a balanced Line-Neutral detection circuit, a dedicated GRD Mode and includes radiated OTA capability up to 3 GHz. The Kestrel[®] 3D Energy Probe (KEP)[™] can be utilized during operator assisted inspections or as part of a Remote Spectrum Surveillance and Monitoring (RSSM)[™] deployment across a shared pool of radios or a single dedicated radio. The ability to deploy the KEP[™] across our RF (Antenna) Switches is also supported, bringing unprecedented value and advanced technical capability.

Video-Over-Powerline (VoP)

The ability to decode and display analog NTSC Video-Over-Powerline (VoP) provides additional analytical capability specific to TSCM inspection protocols within a modern moving target threat model as defined under the TSB 2000 (Technical) Standard[™].

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