MET Principals:

In today's rapidly evolving threat environment, devices no longer rely solely on analog circuits and simple triggers. They incorporate microcontrollers, sensor suites, wireless triggers, and networked logic. This course bridges the gap between classic EOD methods and cutting-edge modern circuitry. Over the course, students learn to think like the adversary: dissect threat logic, reverse engineer smart devices, and develop render-safe strategies around them.

MET Fundamentals Course (5 days)

Our MET Fundamentals course gives practicing EOD and public-safety bomb technicians the practical skills to identify, diagnose, and safely approach these devices. We start with a rapid baseline skills assessment so instructors can tailor complexity and ensure everyone gets the right amount of circuit review and hands-on time.

From there we cover power sources, analog circuit behavior, and analog diagnostics, giving students bench time to test simple analog circuits and learn how far typical analog designs can be pushed before they activate. We then teach safe wire attacks and alarm bypass techniques; cap diagnostics; and x-ray interpretation of analog devices.

After the analog fundamentals, the course introduces microcontroller-enabled threats at a conceptual level: inexpensive boards, sensor modules, and mesh-networked devices. Students practice simple sensor limit testing on open devices, then move into closed-device identification and access planning through barrier materials.

MET Fundamentals Course (cont.)

The final day focuses on supervised exercises and a competency evaluation where each student performs an access-and-disablement on a closed device while documenting sensor violations and sequencing their actions.

Graduates leave with a practical checklist for initial device triage, a post-event AAR template, and a clear sense of when a device is beyond local defeat and requires higher-level mitigation.

This course pairs well with existing render-safe curricula and can be delivered standalone or as a pre-req for deeper Advanced Manual Techniques training.

Who should attend: Practicing EOD techs and public safety bomb techs with basic and advanced analog circuit familiarity and solid EOD fundamentals.

Duration & format: 5 days, in-person, instructor-led, bench labs, x-ray station, live practice devices.

Outcomes: Baseline competency assessment, analog diagnostics and wire-attack skills, basic digital device recognition, access through barrier materials, disablement planning, and a documented evaluation AAR.

Modern Electronic Threats Courses

Threats today blend classic mechanical tricks and modern electronics. Our Modern Electronic Threats (MET) courses trains bomb technicians to recognize circuits, interpret x-rays, and defeat devices that use hobbyist microcontrollers and modern sensor modules, while also teaching the hands-on access and disablement techniques that will help you win the fight.

This course balances electronics diagnostics and device analysis with practiced hazard recognition skills so you can confidently triage, plan, and act on both analog and digital threats.

- Systems-Thinking Approach: Devices are designed and constructed for specific reasons. Learn those reasons.

- Dual Focus: Practical electronics diagnosis plus proven manual access planning and disablement techniques application.

- Intensive Hands-On Labs: Bench builds, x-ray stations, and barrier material lanes.

- Clear Outcomes: Documented competency evaluations, AARs with timestamped sensor violation logs, and SOP templates for your team.

Visit us at RenderSafe.Tech

About Our Company

The vonLoewenfeldt Group is a Service-Disabled, Veteran Owned Small Business specializing in niche services that support critical infrastructure protection and threat mitigation. Our company and our services, like the needs of our clients, are unique. Our primary focus is on emerging threats and training solutions for the public and private sectors, equipment test and evaluation, and advanced technology development for addressing emerging explosive threats.

Because our staff has decades of experience planning and conducting high-stakes, high-consequence response operations, we are uniquely positioned to help clients identify and address infrastructure vulnerabilities, whether they come in the form of physical attacks on transportation, energy, telecommunications, or cyber-infrastructure; drone threats; or complex explosives attacks against commercial facilities and personnel.

In an era of increasing security challenges, safeguarding public and private infrastructure against the potential threat of terrorist or criminal use of explosives is paramount, and our sole mission is to help you fortify your facilities and infrastructure through comprehensive, hands-on training.

Our services go beyond standard training, employing realistic, scenario-driven workshops that simulate real-world explosive threats and help teams develop the critical skills and expertise needed to save lives, protect assets, and ensure continued operations. Our proven methodologies focus on practical solutions, ensuring that your organization remains viable in the face of evolving threats.

MET Deep Immersion Course (3-Weeks)

Threats evolve faster than doctrine. Our 3-week MET Deep Immersion Course is a complete, hands-on immersion that moves students from solid analog competency through advanced diagnostics, into applied AMT (Advanced Modern Threat) planning and real-world defeat exercises.

Week one establishes and documents baseline skills with a formal capability assessment so training can adapt to each cohort. We spend limited time on analog circuit behavior, focusing primarily on advanced x-ray interpretation, and repeated closed-device exercises to build intuition about how analog designs fail or persist under stress.

Week two transitions to modern digital architectures and inexpensive sensor ecosystems. Students get a carefully curated tour of hobbyist microcontroller platforms and sensor modules and why they are relevant to the EOD operator. You'll learn these parts behave, how they're commonly wired into triggers, and how environmental influences affect these sensors. There is also a focused module on mesh-networked devices.

Week three is deliberate practice and operational decision-making under stress. Students run multi-day scenario lanes that test low-light operations, accessing various barrier materials, and addressing combined analog/digital hybrid circuitry. Several devices will be engineered intentionally to be non-defeatable, but every scenario will require trainees to articulate hazards and approach rationales.

The course culminates with a formal competency evaluations and after-action review. Trainees are provided a written instructor critique, and time-stamped sensor-violation log. Graduates also receive an advanced competency certificate, and a personalized training report for their training records.

Course Particulars

- Who Should Attend: EOD technicians, senior public safety bomb techs, special missions personnel, render-safe team leaders and team members who need advanced recognition skills and mitigation techniques for advanced modern electronics.

- Student to Instructor Ratio: During classroom portions of the training, we maintain a 5:1 student-to-instructor ratio. During any hands-on lab, the student-to-instructor ratio is 3:1 at the greatest.

- Duration & Format: 3 weeks, in-person immersion, high instructor-to-student ratio, progressive evaluation, live build labs, x-ray diagnostics and interpretation labs, barrier-material lanes.

- Outcomes: Advanced AMT triage framework, non-destructive and destructive diagnostic skills for analog and digital devices, tactical access-and-disablement practice across materials and lighting conditions, and documented, evidence-quality AARs suitable for training managers and accreditation.

RENDER SAFE TECHNOLOGIES

The vonLoewenfeldt Group