

**Santa Cruz County Sheriff's Office**  
**X-Ray Operation, Interpretation, and Component Recognition**  
**Expanded Course Outline**  
**10 Hours**

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**Course Title:**

X-Ray Operation, Interpretation, and Component Recognition; Device Build; and Maintenance

**Course Goal:**

To provide participants with an increased knowledge base of the X-ray tools at our disposal to include X-ray source, SCAN-X, XTK software (including 3-D), Grid Aim and component recognition.

To build devices for future training dates.

**Audience:**

Bomb Tech – T. Huntsman, S. Lopez, E. Zigman, D. Madison

Bomb Support – K. Schirmacher, M. Moise, M. Patzke, M. Christiansen

**Core Competencies:**

Classroom and practical exercise on the concepts, operations, and maintenance of the X-ray source, SCAN-X, XTK software, and component & design recognition of IEDs.

**Date**

2/18/2026

**Total Hours of Instruction:**

10

**Location:**

Headquarters – Bomb Bay

**Schedule:**

0700 – Team PT

0830 – Team meeting

0900 – Intelligence Briefing

0930 – Train the Trainer Presentation (Public Safety Presentations)

1030 – Component Recognition

1130 – XTK Review including grid aim

1200 – Lunch

1300 – X-Ray practicals

1530 – Device Builds

1700 – ENDEX

**Forecast:**

Cloudy with occasional rain showers, 40% chance. High 50F, W winds 5-10 mph.

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**Uniform:**

Green long sleeve/green BDUs

**Instructors:**

E. Zigman

**AAR:**

M. Christiansen

**Netcom notification**

N/A

**Mandated Training**

YES

**Method of Presentation:**

Visual / Verbal / Hands on instruction. Participants will be shown the proper method and then instructed to replicate

**Course Objectives**

Upon completion of the instruction, operators will be able to:

1. Maintain a practical understanding and knowledge of x-rays and equipment used to develop x-rays in the field.
2. Proper use of the XTK software and its capabilities
3. Familiarization X-ray sources, developer, techniques and procedures to correctly prepare and process single and multiple x-rays of suspect packages
4. Successfully build and prepare training devices for further training days
5. Ensure proper maintenance mission ready status of equipment

**Safety Plan**

1. Hospital
  - a. AMR or self-transport in Code 3 equipped vehicle
2. First Aid Kit and Medical supplies on Bomb truck
  - a. IFAK
3. Safety Officers
  - a. E. Zigman
4. Notify Netcom
  - a. N/A

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**Debrief/Clean-up**

1. Vehicles
  - a. ALL vehicles are fueled and cleaned of trash or washed if appropriate
  - b. Primary response vehicle organized and properly stowed from next mission
2. Equipment
  - a. Batteries returned to chargers
  - b. Explosives returned to magazine
  - c. Tools returned / organized
3. Vehicle Bay
  - a. Swept and cleaned of trash

**Training approved by:** \_\_\_\_\_  
**(Bomb Squad Supervisor)**