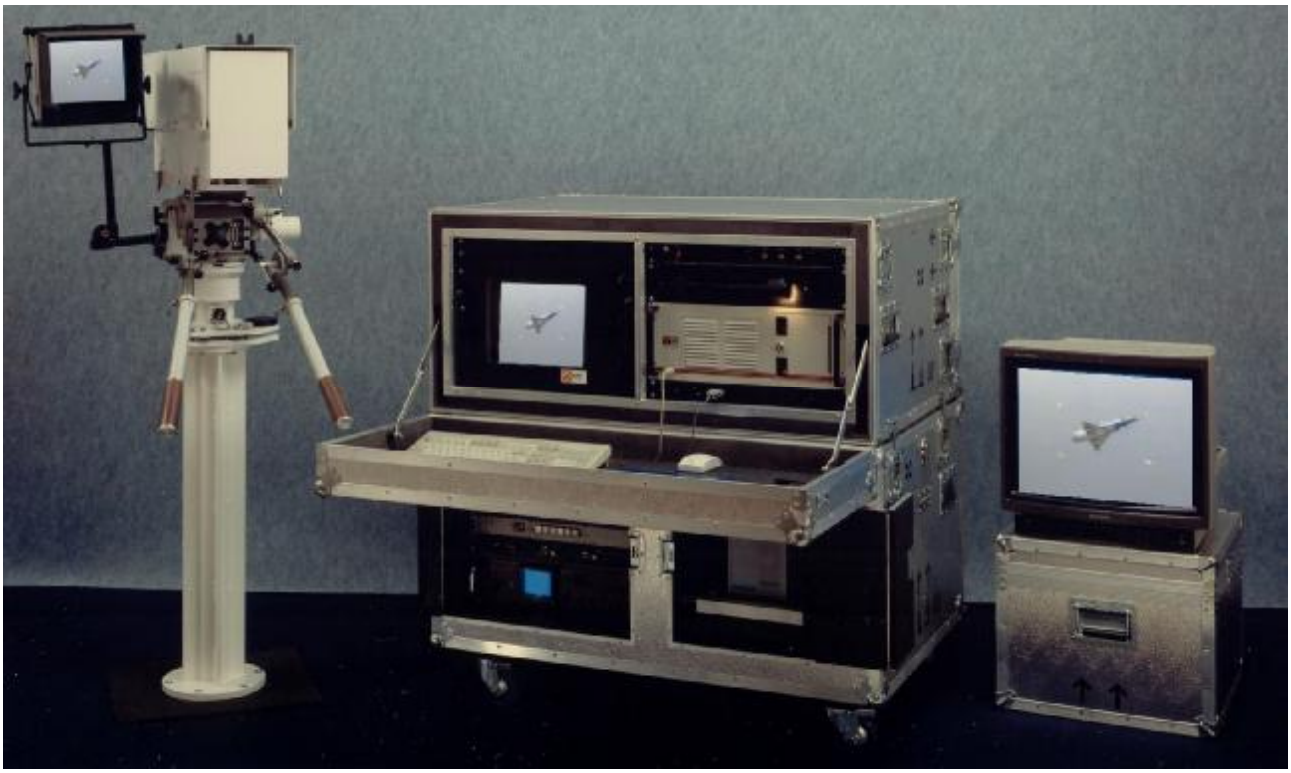
ESS - Electro-Optic Sky Screen and Tracking System

ESS is a proven, top performance test range safety system for accurate monitoring of missile and other airborne object flight tests.

ESS can operate as a stand alone, or as a supplemental test range safety system. It is available with CCD or with FLIR cameras.

ESS is easy to deploy and simple to use. It has high accuracy abort boundaries and proven top reliability.

ESS is the practical approach to range safety operations, exemplifying cost effective engineering.



System Highlights:

- Accurate abort boundaries.
- Real-time graphic overlay on a live camera image.
- Multiple graphic options for real-time and simulation use.
- Build-in geodetic database.
- Real-time flight-test data recording.
- Off-line play back.
- Fast local calibration and set-up.
- Flight test simulations for mount operator and safety crew training.
- Built-in testing capability.
- High reliability - portable, ruggedized industrial equipment.
- Optional TV Tracker for on-target real-time tracking.

ESS is used for safety monitoring during flight tests of missiles and other airborne objects. It utilizes two or more triangulated sensors with real-time video images overlaid by computer generated safety boundaries. Sensors are either CCD or FLIR (FPA) cameras. Each sensor uses a high-resolution camera mounted on a manual pedestal, which are interconnected to a PC based station. The system is portable and ruggedized, allowing fast deployment at the most appropriate locations. Short preparation time is enabled by means of built-in on-site configuration set-up and semi-automatic calibration routines. Components are top quality, ruggedized, off-the-shelf items.

System set-up, including trajectories, abort boundaries and other graphic data (externally created) can be loaded on-site from a diskette. The system can interface with any Cartesian coordinate system using pre-defined geodetic utilities and calibrations. Real-time data recording and playback capabilities permit on-site mission debrief as well as providing results for data reduction.

ESS has extensive simulation capability for operator training. Both nominal and malfunction trajectory simulations are easily generated to insure track reliability and provide safety crew training.

Technical Specifications:

· Overall Accuracy	1.3 mrad
· Safety Boundaries update frequency	25 Hz
· Video Standard	PAL (or CCIR), NTSC (or RS170) optional
· Angular Coverage	Az 0 to 360 degrees El -8 to +90 degrees
· Angular Resolution	Az & El 0.01 degree
· Output	RGBS or composite video
· Power Consumption	220 VAC, 50 Hz or 110 VAC, 60 Hz 2.3 A at 220 VAC
· UPS Backup	> 25 minutes
· Set-Up Time	30 minute
· Operating temperature range	0 to 50 degrees C
· Storage temperature range	0 to 60 degrees C
· Humidity	up to 80%

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