



Mission Aircrew Course

**IFR ELT Search
FEB 2011**



Task description

- **ELT search in an IFR environment**
 - requires maneuvering and multiple flight plan changes in an IFR environment
 - contrary to expectation and IFR pilot training of stable flight with minimal nav changes
 - requires changing navigation, changing flight plans, ATC coordination



ELT Types

- **406 with GPS**
- **406 no GPS**
- **121.5**
 - **Number in use, projected**
- **How each works, transmission facts, ranges, battery life**



ELT search equipment

- **Becker, L-Tronics, VHF radios**
- **How each tool works, strengths, limitations**
 - **Becker**
 - **L-Tronics**
 - **VHF Radios**



Standard ELT VFR Search Techniques

- High altitude route search to begin
- Direct to with Becker
- Wing Null
- Aural-fade
- Collapsing box
- De-tuning



Applying Standard ELT search techniques to IFR environment

- **Direct translation**
- **Describe variances by technique**
 - Electronic vs visual checkpoints
 - Charts
- **Altitude management**



Impact of an ELT search during an IFR flight

- **IFR flight – normal flight parameters**
- **Variations to normal IFR flight in ELT searching**
 - Rapidly changing flight plan
 - Impact of technology on flight requirements
 - Block airspace/altitudes
 - Much more maneuvering than normal
 - CAP mission base radio
- **Ease of MP being distracted**
 - Aviate, Navigate, Communicate, then CAP mission



Aircrew roles and responsibilities

- **A true CRM environment**

- **MP/MO are cross-trained**
 - Pure IFR environment
 - MO talks with Scanner

- **Scanner deals with outside world**
 - Translates IFR to VFR
 - Owns CAP comms



Responsibilities Matrix

	Mission Pilot	Mission Observer	Mission Scanner
Primary Role	Aircraft Commander	Sortie Commander	Translation to non-IFR
Minimum Qualification	CAP IFR MP with 25 ELT missions	CAP MO (prefer IFR MP) with 25 ELT missions and IFR navigation experience	CAP Mission Observer with excellent navigation, chart reading and communication skills
Primary Task	Review, accept and fly the sortie safely	Plan the sortie and run the ELT search airborne	Translate sortie info from IFR to VFR for Mission Base, Ground teams
Flight Task	Fly safely and within CAP/FAA regs	Supports MP as Navigator and with radio/nav setup	Visual scanning where possible
Search	Not involved except to fly the plane where instructed	Defines search plan, monitors receivers, records inputs and makes adjustments to complete search	Supports MO planning at all stages; translates inputs onto VFR sectional and ultimately road maps
Navigation	Execute navigation plan; Accept airborne sortie changes after review of each change on ATC compliance, fuel reserve, aircrew ability and endurance, and safety	Create initial nav plan. Make all navigation plan adjustments, including impacts on fuel, aircrew ability and endurance, and safety	Supports MO
Radios	Handles ATC comm	Optional ATC comm; handles CAP comm if back seat unable	Handles CAP comm
Environment	Pure IFR, no distractions	Pure IFR, no distractions; responds to info requests from MS	Translation to the non-IFR world -Location and flight/search status -VFR sectional and Ground team road map level



Training Plan

- **Plan and execute two IFR ELT training flights**

- **Crew of 3 MP, MO, Instructor as MS**
 - **First flight under IFR flight plan**
 - **No View Limiting Device (VLD)**
 - **Becker, then L-Tonics or VHF radios**

 - **Second flight under IFR flight plan**
 - **VLD <P/MO (instructor provides see and avoid)**
 - **Becker, then L-Tronics or VHF radios**



Questions?