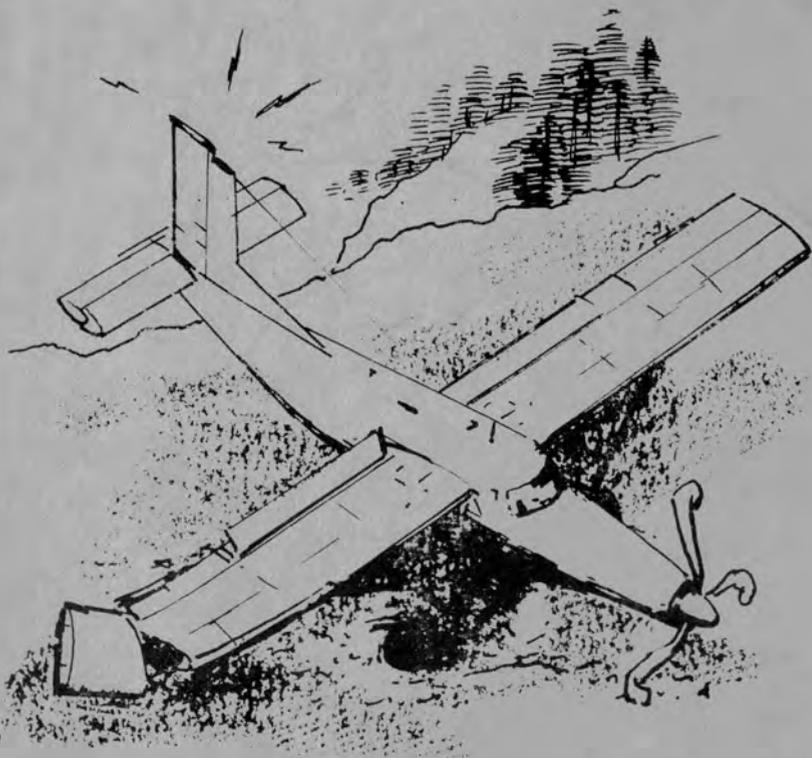


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~~Adapted~~

EMERGENCY LOCATOR TRANSMITTER  
(ELT)  
OPERATING PROCEDURES  
AND  
INFORMATION



OCTOBER 1972

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Preface

This booklet contains information for the proper handling and utilization of Emergency Locator Transmitter (ELT) equipment installed on Company owned or operated aircraft. The information is general in nature and pertains to all installations regardless of the type aircraft involved. Specific differences, as may apply to individual installations, will be found in applicable Aircraft Flight or Operations Manuals.

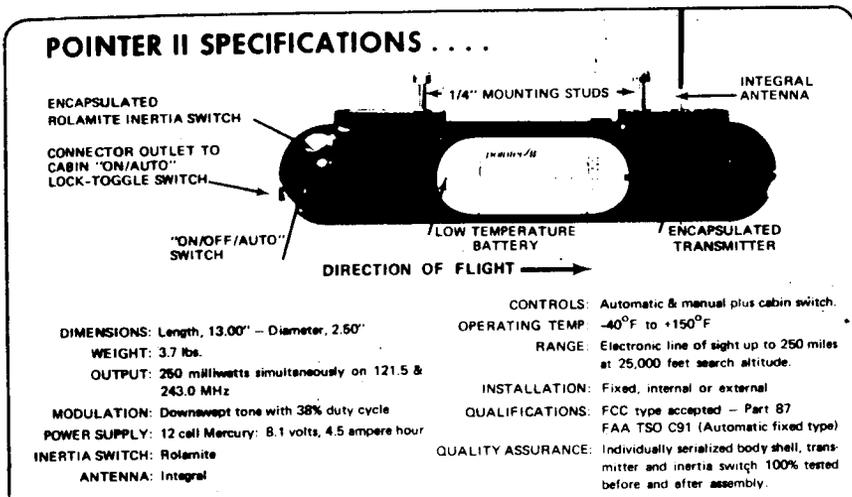


Figure 1

### POINTER II TRANSMITTER-BATTERY OPERATING LIFE

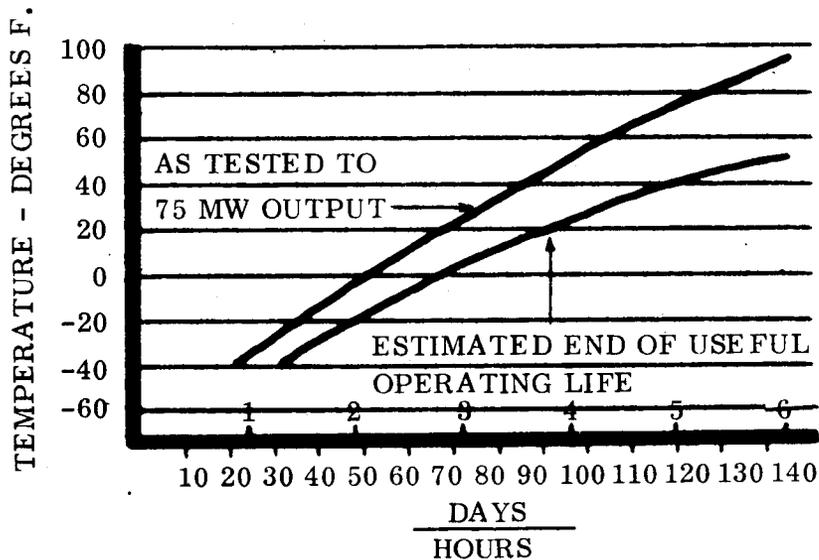


Figure 2

Reception range is determined by topography, atmospheric conditions and search aircraft altitude; under ideal conditions this could be 100 miles at 10,000 feet to 200 miles at 25,000 feet. The Pointer II battery is designed for a two year "shelf life"; the battery will be changed annually, however. The battery expiration date is printed on the Pointer II nameplate.

A special feature of the Pointer II ELT is the "Rolamite" inertia switch. This switch senses deceleration only along the axis of the ELT case; the number of G's required to trip the switch depends on G duration - measured in milliseconds. The idea is to prevent normal flight accelerations, vibrations, or bumping the structure where the unit is mounted from setting it off, but a deceleration as low as 2½ G's will, if it is sustained long enough. (See Figure 3). False alarms are thereby avoided, yet anything strong enough to cause structural deformation will activate the unit. Malfunctions may occur, however; for example, vibration, after many hours of exposure, may eventually cause the ELT to activate. In selecting a mounting location for the ELT within an aircraft, an area of vibration resonance may inadvertently be chosen. PIC's should therefore be prepared to recognize ELT actuation and know what to do to deactivate it.

Figure 4 is the wiring schematic for the Pointer II. The ON/OFF/AUTO switch is a miniature toggle switch located on the aft end-cap of the Pointer II. The Inertia Switch is located inside the end cap. Note that if the inertia switch is closed, the only way that the transmitter can be deactivated is to turn OFF the switch on the end cap, or to remove the end cap. The Cockpit Remote Switch is a lock-toggle switch located on the instrument panel; it has an on/off capability only when the Inertia Switch is open and with the three position miniature toggle switch in AUTO.

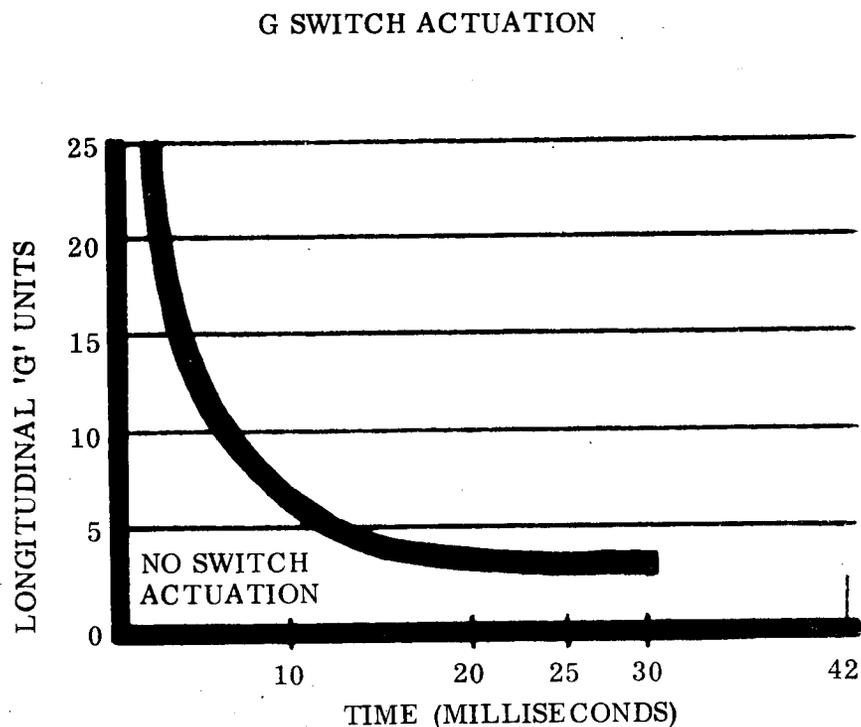


Figure 3

### Normal Operation

The only routine attention required by aircrews is in preflighting the ELT. The main thing to look for is that the three position miniature toggle switch located on the aft end of the ELT is in the AUTO position. This switch will normally be left in that position. If it is found to be in the OFF position, before you switch it to AUTO, first turn on the aircraft radio to monitor the signal because the inertia switch may be closed. The cockpit remote lock-toggle switch should be checked in the AUTO position, also.

Routinely checking the ELT by actuating the cockpit switch is NOT desirable because of the confusion that would result due to the large number of aircraft that would be doing so at the beginning of every flying day. Tests within a hanger will be conducted during periodic maintenance. If some doubt exists about the integrity of the ELT, a brief check may be conducted. Base SOM will issue directives describing the procedure to be used for coordinating this type of ELT check.

Aircraft equipped with UHF radio will guard 243.0 Mhz at all times. An ELT distress signal may vary anywhere from a "loud and clear" signal with wide area coverage, to a weak signal with very limited range. In the latter case, an aircraft overflying the crash site would hear the signal build and fade briefly. This could be the case if the crash site was in a low spot in rough terrain with high forest canopy. VHF radio, frequency 121.5 Mhz should be used to attempt voice contact since the ELT will usually blank out 243.0 Mhz. Those aircraft not equipped with UHF will monitor VHF 121.5 at all times. The "Base Operations Procedures Guide", Section 6.20, will contain detailed procedures to be followed in the event a live ELT is encountered.

### Abnormal Operations

A number of electro/mechanical failures can occur which can cause the ELT to activate. Most of these can be deactivated by switching to OFF the three position miniature toggle switch located on the aft end cap. If this doesn't do it, unscrew the aft cap and remove the battery. (A piece of broken contact spring could complete the circuit between battery and transmitter). Be advised that the forward end of the Pointer II also unscrews; any attempt to silence the unit from this end will only result in unnecessary damage.

Recognizing that the ELT is transmitting could be a problem on some aircraft if 243.0 Mhz is not being monitored. Depending on the frequencies selected and on the aircraft's radio antenna configuration relative to the ELT signal may be quite audible even on VHF (particularly if it is set to 121.5, a harmonic of 243.0), or it may be heard only as a rhythmic "keying" sound. Pilots should be alert to this symptom of transmission. Aircraft with VHF only can monitor their own ELT by using VHF radio set to 121.5 Mhz.

If an ELT voluntarily starts to transmit, it should be deactivated as soon as practicable. Remember that the cockpit remote switch cannot override the inertia switch to turn the ELT off. A malfunctioning ELT should be written up on the maintenance log which should include the circumstances at the time of activation.

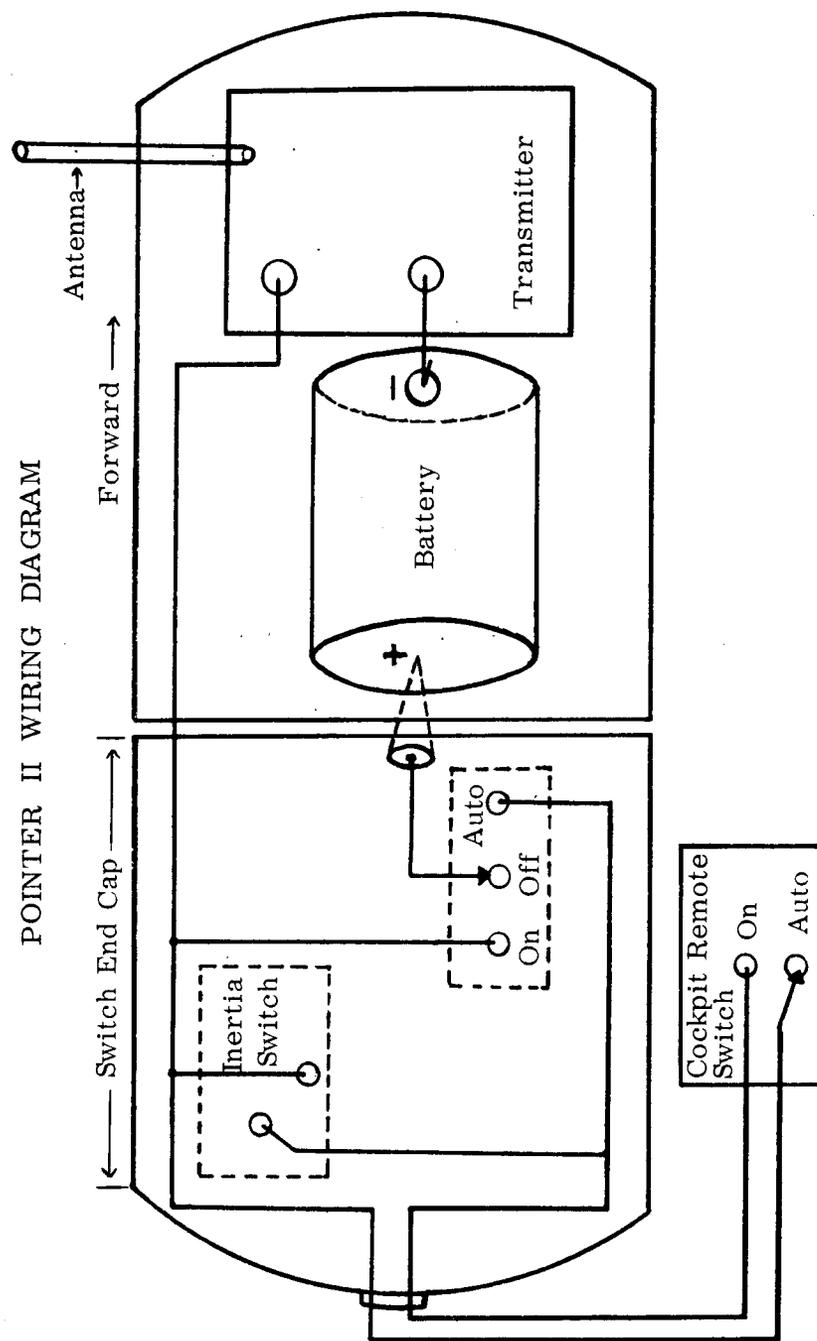


Figure 4

