EUROCOPTER CANADA LIMITED

FLIGHT MANUAL SUPPLEMENT FLIR U8000 / U8500 SYSTEM INSTALLATION EC 120 B

SUBJECT: FLIR U8000 / U8500 SYSTEM INSTALLATION (P/N 120-901814)

The FLIR U8000 / U8500 System Installation is designed to provide high quality thermal images. It is operated by an operator using a FLIR hand controller.

APPLICABILITY:

This Flight Manual Supplement shall be used when the FLIR U8000 / U8500 System is installed on the helicopter.

Department of Transport (Canada) Approved

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IMPORTANT NOTE

THE INFORMATION AND DATA CONTAINED IN THIS DOCUMENT SUPERSEDE OR SUPPLEMENT THAT CONTAINED IN THE BASIC APPROVED FLIGHT MANUAL FOR THE EC 120 B HELICOPTER IN THOSE AREAS LISTED HEREIN. FOR LIMITATIONS, PROCEDURES AND PERFORMANCE NOT CONTAINED IN THIS DOCUMENT REFER TO THE APPROVED FLIGHT MANUAL AND OTHER APPLICABLE APPROVED FLIGHT MANUAL SUPPLEMENTS.

SECTIONS 2, 3, 4, AND 5 OF THIS DOCUMENT COMPRISE THE APPROVED FLIGHT MANUAL SUPPLEMENT. COMPLIANCE WITH SECTION 2, LIMITATIONS, IS MANDATORY.

SECTIONS 1 AND 6 ARE UNAPPROVED AND ARE PROVIDED FOR INFORMATION ONLY.

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RECORD OF REVISIONS

Pev.	Pages at this revision	Description, Reason, Changed Pages	Prepared (name and date)	Checked (name and date)	App'd/Acc'd (Civil A/W Authority) (name and date)	Released (name and date)
0	1 through 10	Original Issue	(see page 1)	(see page 1)	(see page 1)	(see page 1)
•	1 through 10	Description of installation clarified, FLIR Switch removed and replaced with FLIR Push-Button on LACU, (Pages 3 to 10)	See page 1.	See page 1.	See page 1.	See page 1.
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NOTE: Revisions to this document will be distributed to operators of this equipment by the STC holder.

NOTE: Revised portions of affected pages are identified by a vertical black line in the margin adjacent to the change.

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1. GENERAL (unapproved)

The FLIR U8000 / U8500 System Installation is designed to provide high quality thermal images.

There are 2 variants to this installation: the FLIR U8000 System Installation, and the FLIR U8500 System Installation. The FLIR U8500 System Installation has a higher resolution in Infrared.

The gimbal mount assembly is secured to the cabin structure below the cabin floor. The gimbal mount assembly extends from the underside of the cabin through an opening in the lower fairing. The gimbal mount assembly is secured to the mount spacer (isolation collar) with a dovetail assembly for quick installation and removal. The infrared camera is attached to the mount spacer (isolation collar). Refer to Figure 1.

The Electronic Control unit is installed on the rear avionic shelf located in the rear baggage compartment. The FLIR monitor is mounted adjacent to the Instrument Panel and the FLIR hand controller is attached to the rear of the observer's seat.

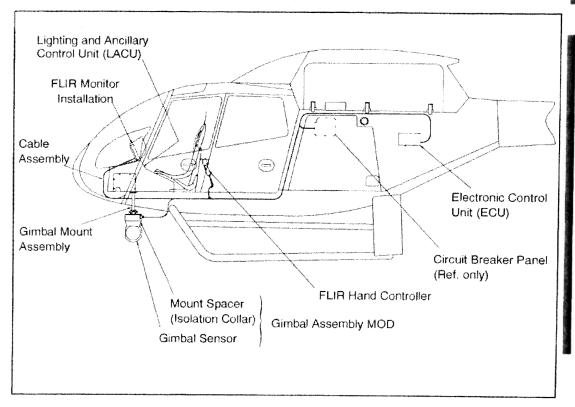


Figure 1 FLIR U8000 / U8500 System Installation

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2. LIMITATIONS

a. Prohibited Configuration

The installation of Dual Controls is prohibited when the monitor glareshield is installed.

The glareshield shall be installed for night operations.

b. Minimum crew

One pilot and one crew member are required for FLIR/Camera operations. The FLIR/Camera is controlled by any trained crew member excluding the pilot by means of a Hand Control Unit. The trained crew member also controls the Monitor and the FLIR Switch.

c. Altitude Limitations

Maximum altitude for FLIR/Camera operation 10.000 feet

d. Temperature limitations

OAT for FLIR/Camera operation -20° to +50° C

e. Airspeed Limitations

V_{NE} with the FLIR Gimbal installed is limited to 130 KIAS.

f. Placards

There is one placard associated with this installation.

1) Placard:

VNE IS LIMITED TO 130 KIAS WITH FLIR GIMBAL INSTALLED

Location: Located on the Instrument Panel in clear view of pilot.

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3. EMERGENCY PROCEDURES

· Generator Failure

FLIR Hand Controller Power Switch : Select OFF position

Monitor Push-Button : Press PWR switch to turn OFF

Refer to the Basic Aircraft Flight Manual for generator failure emergency procedures.

· Monitor too bright

Monitor Controls : Press ▼ (Down arrow) button on

Monitor to dim brightness

OR

Monitor Controls : Press PWR switch to turn OFF

4. NORMAL PROCEDURES

a. Pre-Flight Check

The following checks are to be carried out prior to every flight requiring the use of the FLIR U8000 / U8500 System Installation.

CAUTION

THE FLIR U8000 / U8500 SYSTEM CAN RUN ON EXTERNAL POWER OR BATTERY POWER. TO PREVENT POWER INTERRUPTION, SYSTEM SHALL BE POWERED OFF, ON THE FLIR HAND CONTROL, PRIOR TO ENGINE START.

Electrical connections

: Check for security

Dovetail Mount

: Check for security

FLIR push-button on LACU

: Press to power ON

FLIR Hand Controller Power

: Press to power OFF

Switch

CAUTION PRIOR TO TAKE OFF, ENSURE THAT THE CAMERA REMAINS STOWED BY SWITCHING THE POWER TO THE RES, OFF, OR

STBY ON THE HAND CONTROL UNIT.

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4. NORMAL PROCEDURES (continued)

b. Power Up

NOTE

A preflight systems operational check, if desired, should be done on EPU power. SHUT DOWN the system prior to switching from EPU to helicopter power.

Monitor Push-Button

: Press power switch to turn ON

FLIR Hand Controller Power

Select ON position

Switch

Refer to the Ultra 8000 or the Ultra 8500 Airborne Imaging System Operator's Manual for system operation procedures.

Refer to the Avalex AVM4120 Operation Manual for operation procedures for the monitor.

NOTE

After switching the power to the ON or STBY position on the Hand Control Unit, the FLIR will take several minutes before an image can be seen on the monitor.

CAUTION THE MONITOR MAY BRIEFLY FLARE WHEN POWERED ON. THIS MAY TEMPORARILY IMPAIR THE OPERATOR'S NIGHT VISION.

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4. NORMAL PROCEDURES (continued)

c. Operation

For information on the operation of the FLIR System, refer to the Ultra 8000 or the Ultra 8500 Airborne Imaging System Operator's Manual.

For information on the operation of the Monitor, refer to the Avalex AVM4120 Operation Manual.

The following FLIR Switch is located on the LACU and is used for troubleshooting and resetting the FLIR U8000 / U8500 System Installation.

(a) FLIR Push-Button - (refer to Figure 2)

FLIR Push-Button on LACU

 Press to power ON. Green Annunciator light illuminates

once power is ON

FLIR Push-Button on LACU

Press to power OFF.
 Annunciator light goes off indicates that power is OFF

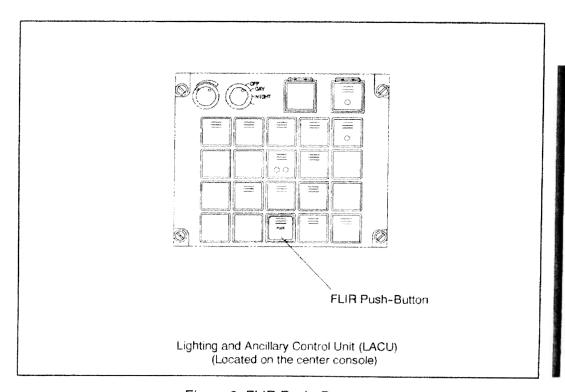


Figure 2 FLIR Push-Button

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4. NORMAL PROCEDURES (continued)

d. System Shutdown

Prior to landing, select STBY on the FLIR Hand Controller. This will stow the camera to protect the lens.

CAUTION TO PREVENT DAMAGE TO THE SYSTEM, THE FLIR U8000 / U8500 SYSTEM SHALL BE POWERED OFF PRIOR TO ENGINE SHUT DOWN.

FLIR Hand Controller Power

: Select OFF position

Switch

NOTE After switching the Hand Control Unit to the OFF position, it will take

30 seconds for the monitor to go blank.

Monitor Push-Button

: Press power switch to turn OFF

5. PERFORMANCE DATA

Reduce Rate of Climb by 125 Feet per Minute.

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6. WEIGHT AND BALANCE (removable items) (unapproved)

Total changes to weight and balance resulting from this modification are covered in the applicable Instructions for Continued Airworthiness.

Items that are removed between routine operations:

A. <u>Removable</u>	tems			***************************************			
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FLIR Hand Controlle	r 0.	77 1.	7 2.70	106.3	2.08	180.7	

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