

**FEDERAL COMMUNICATION COMMISSION
445 12TH STREET, SW
WASHINGTON, DC 20554
USA**

Blagnac, on September 5, 2003

V/Réf. :
N/Réf : 03B65215
P.J. :

SIÈGE SOCIAL :

14, place Marcel Dassault
B.P. 48
31702 BLAGNAC Cedex
France

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Attestations Statement (Request for Equipment notification)

Dear Sir,

Please find here included the obtained approvals related to our new Emergency Locator Transmitter (ELT) model ADT 406.

This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed for Automatic Portable application when floatation is required.

These two versions use the same transmitter board.

A common FCC-ID: LYJADT406 is required.

These ELT are approved by:

- COSPAS-SARSAT, with the Type Approval Number N° 0131 dated July 15, 2002
- FAA, with the TSO C91a & TSO C126 letter dated February 24, 2003
- FAA, with the TSO C91a & TSO C126 letter dated June 12, 2003
- JAA, with the JTSO2 C91a & JTSO2 C126 letter N° F.O. 089 dated October 3, 2002
- JAA, with the JTSO2 C91a & JTSO2 C126 letter N° F.O. 112 dated April 29, 2003

Copies of these approvals are presented here under.

Note: For information we present also the FCC ID:LYJA06T already obtained on our previous range of ELT (model A06T)

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et ELFES ELECTRONIQUES
sont des marques
de ELTA S.A.

S.A. au capital de 2 600 000 €
R.C.S Toulouse 92 B 1746
SIREN 388 919 177
Code A.P.E. 322 A
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COSPAS-SARSAT Type Approval Certificate N° 0131



tac131_ADT406AF-AP.pdf

FAA TSO C91a & TSO C126 LETTER dated February 24, 2003



TSO_ADT_406_AF_AP.pdf

FAA TSO C91a & TSO C126 LETTER dated June 12, 2003



TSO_ADT_406_AP.pdf

JAA JTSO2 C91a & JTSO2 C126 LETTER F.O. 089 dated October 3, 2002



FO089-JTSO-ADT406-AF-AP.pdf

JAA JTSO2 C91a & JTSO2 C126 LETTER F.O. 112 dated April 29, 2003



JTSO_ADT_406_AP.pdf

Note:

For information FCCID:LYJA06T already obtained on our previous A06T ELT (CEIS TM was the previous name of ELTA)



FCC-ID_A06T.pdf

C. CRESP
Product Support Manager

A large, stylized handwritten signature in black ink, likely belonging to C. Cresp.



Electronics for Harsh Environments

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V/Réf. :
N/Réf : 03B65216
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Bloc diagram of our ELT models ADT 406

Dear Sir,

Please find here included the bloc diagram related to our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board so the same block diagram can be used.



block diagram.pdf

C. CRESP
Product Support Manager

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ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Cover Letter – ELT models ADT 406 Request for Equipment
notification: FCCID:LYJADT406

Dear Sir,

By this letter ELTA is requiring a new Equipment Authorization Notification for our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board .

These equipment (New ELT) were designed to upgrade and in a medium term to replace our previous range of ELT already approved by FCC per the FCCID: LYJA06T.

These new ELT keeps the same functionality's and transmits both on 121.5-243 and 406 MHz.

Note: on 406 MHz we are using the latest channel authorized by Cospas-Sarsat (406.028 MHz) .

Transmission characteristics are the same but use updated components.

C. CRESP
Product Support Manager

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V/Réf. :
N/Réf : 03B65218
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : External photos of our ELT models ADT 406 (Request for Equipment notification)

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Please find here under some external photos of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

For the two version, on the front panel you will find:

- User accessible control Switch ON-OFF-ARMED, protected against false manipulation (should be pull then move to the correct position). Normal position onboard the A/C is "ARMED" for Automatic activation when a crash condition is detected. OFF is for maintenance or transport. ON is for manual activation.
- The Remote Control Panel connector for the connection to a remote Control Unit in the A/C cockpit
- 50 Ω BNC RF connector for the connection of an external antenna (Primary antenna) located on the A/C fuselage
- 50 Ω TNC RF connector for the connection of a back-up 406 MHz antenna (ADT 406 AF/AP version) or a secondary whip antenna 121.5-243-405 MHz (ADT 406 AP version)

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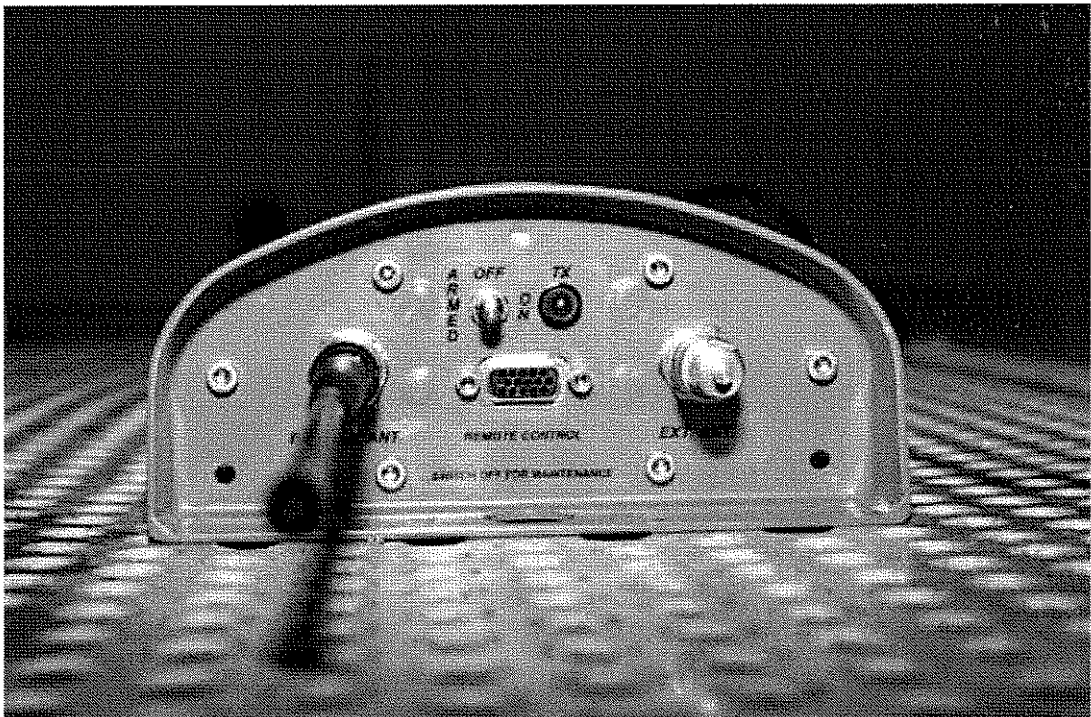
Code A.P.E. 322 A

T.V.A. FR 27 388 919 177

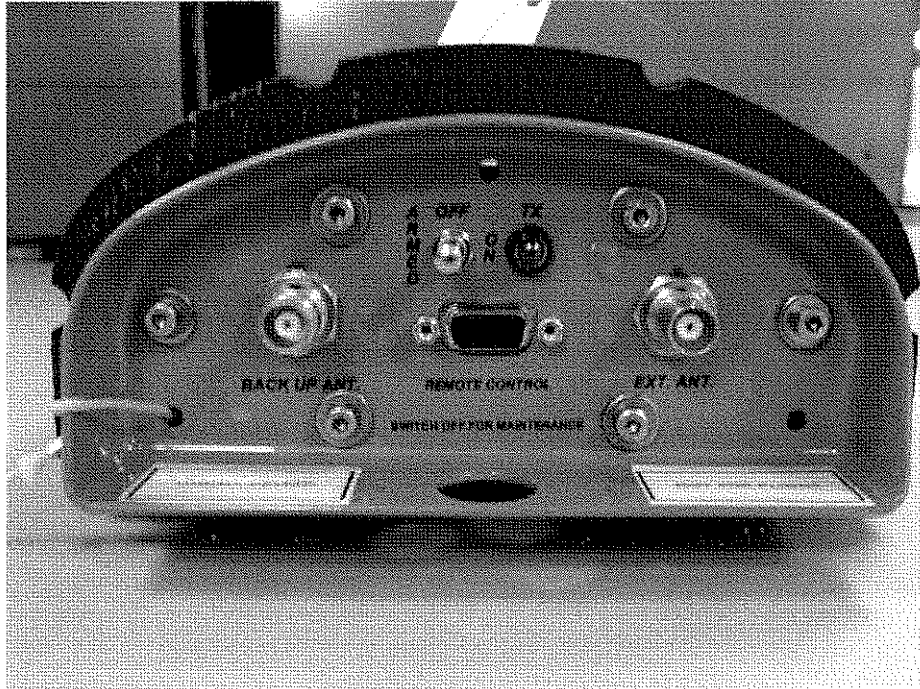
ADT 406 AF/AP General view with its Cockpit Remote Control Panel and back up antenna



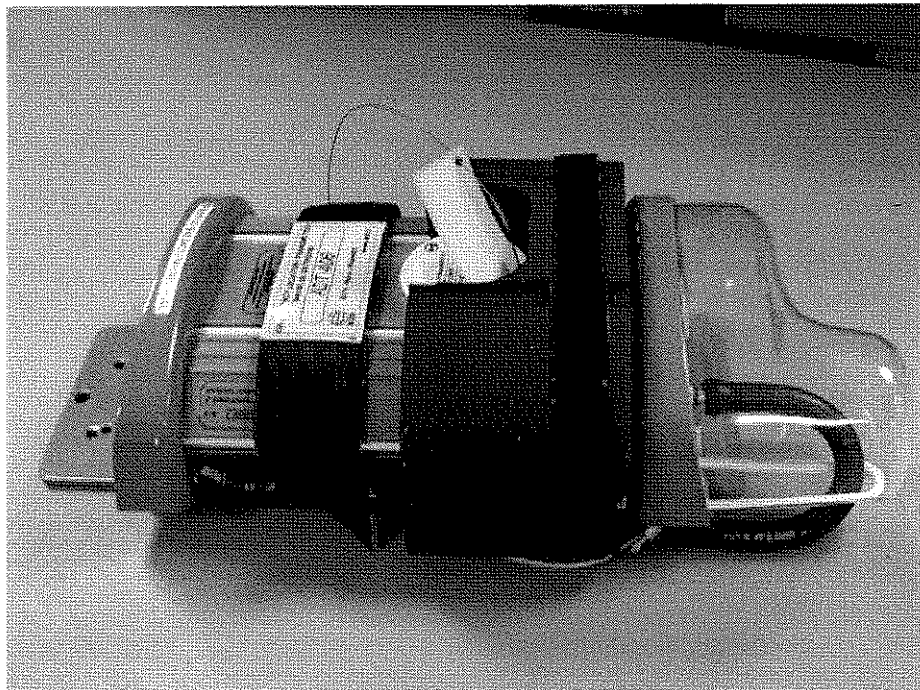
ADT 406 AF/AP front view



ADT 406 AP front view with its floating device



ADT 406 AP General view with its bracket mount, protective cover and secondary whip antenna



C. CRESP
Product Support Manager





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ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : ID Label location on our ELT models ADT 406

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Please find here under some drawings for the ID labels location & content of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

These drawings are the appendix 5 of our FAA TSO Qualification Data Package.



02E67355-APP5.pdf

FCC ID information is on the drawing 02P64743.

Location of this label is given on the drawing 01P66929 with the other labels, including the FAA ELT registration request one, present on the ELT body.

Cospas-Sarsat ELT identification is indicated on the label 02P64744 (15 hex + clear indication) and 01P67370.

Front panel controls location is given by the label 01P67371 stuck on the front face of the ELT

C. CRESP
Product Support Manager

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V/Réf. :
N/Réf : 03B65220 [1 of 4]

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Internal photos of our ELT models ADT 406 (Request for Equipment notification)

Dear Sir,

Please find here under some internal photos of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

For the two version there is only one electronic board (T shape). This board includes the microcontroller circuitry and the three transmitters amplifiers. One for the each distress frequency 121.5-243-406 MHz.

121.5-243 MHz transmitters are low power (Up to 200 mW peak) permanent transmission in accordance with RTCA DO-183 requirements.

406 MHz transmitter is high power (5W peak) in burst mode 440 ms or 520 ms repeated every 50 s in conformity with Cospas-Sarsat requirements.

ADT 406 AP General view- Case Opened



Img_0756.pdf

ADT 406 AF/AP or AP , electronic board [Bottom view]



Img_0768.pdf

C. CRESP
Product Support Manager

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ELTA Grantee Code: LYJ

SIÈGE SOCIAL :

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Internal photos of our ELT models ADT 406 (Request for Equipment notification)

Dear Sir,

Please find here under some internal photos of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
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121.5-243 MHz transmitters are low power (Up to 200 mW peak) permanent transmission in accordance with RTCA DO-183 requirements.

406 MHz transmitter is high power (5W peak) in burst mode 440 ms or 520 ms repeated every 50 s in conformity with Cospas-Sarsat requirements.

ADT 406 AF/AP or AP , electronic board [Top view]



Img_0769.pdf

ADT 406 AF/AP or AP , internal mechanical assy [left view]



Img_0772.pdf

C. CRESP
Product Support Manager

03B65220 [2 of 4]Page 1/1

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14, place Marcel Dassault
B.P. 48
31702 BLAGNAC Cedex
France

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Internal photos of our ELT models ADT 406 (Request for Equipment notification)

Dear Sir,

Tél. : +33 (0)5 34 36 10 00
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Please find here under some internal photos of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

For the two version there is only one electronic board (T shape). This board includes the microcontroller circuitry and the three transmitters amplifiers. One for the each distress frequency 121.5-243-406 MHz.

121.5-243 MHz transmitters are low power (Up to 200 mW peak) permanent transmission in accordance with RTCA DO-183 requirements.

406 MHz transmitter is high power (5W peak) in burst mode 440 ms or 520 ms repeated every 50 s in conformity with Cospas-Sarsat requirements.

ADT 406 AF/AP or AP , internal mechanical assy [Right view]



Img_0771.pdf

ADT 406 AF/AP or AP , 406 MHz 5W amplifier (Cospas-Sarsat)



Img_0767.pdf

C. CRESP
Product Support Manager

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V/Réf. :
N/Réf : 03B65220 [4 of 4]

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Internal photos of our ELT models ADT 406 (Request for Equipment notification).

Dear Sir,

Please find here under some internal photos of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

For the two version there is only one electronic board (T shape). This board includes the microcontroller circuitry and the three transmitters amplifiers. One for the each distress frequency 121.5-243-406 MHz.

121.5-243 MHz transmitters are low power (Up to 200 mW peak) permanent transmission in accordance with RTCA DO-183 requirements.

406 MHz transmitter is high power (5W peak) in burst mode 440 ms or 520 ms repeated every 50 s in conformity with Cospas-Sarsat requirements.

ADT 406 AF/AP or AP , 121.5-243 MHz 200 mW amplifiers and OCXO for Cospas-Sarsat 406 MHz generation (EWOS 0519 from SOREP manufacturer)



Img_0762.pdf

ADT 406 AF/AP or AP , Microcontroller section



Img_0764.pdf

C. CRESP
Product Support Manager

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B.P. 48
31702 BLAGNAC Cedex
France

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Operational Description of our ELT models ADT 406 (Request for Equipment notification)

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Please find here under some information related to the operational description of our new Emergency Locator Transmitter (ELT) model ADT 406. This model can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

This ELT equipment is only a simple three frequency transmitter without any adjustment controlled by the user.

The operational description is part of the document issued for JTSSO & TSSO Approval:

- Document 02E67355, "TSSO C91a & TSSO C126 Qualification Data Package for ELT model ADT 406 AP (here presented without appendixes)
- Document 02E65151, Declaration of Design and Performances

Emission type for 121.5 MHz is 3K20A3X (± 6 KHz allowed bandwidth),

Emission type for 243 MHz is 3K20A3X (± 12 KHz allowed bandwidth),

Emission type for 406 MHz is 16K0G1D (± 1 KHz allowed bandwidth).

Antenna requirements are part of the Cospas-Sarsat requirement and were tested in the accredited laboratory INTESPACE located in Toulouse, France.

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Document 02E67355, "TSO C91a & TSO C126 Qualification Data Package for ELT model ADT 406 AP (extracts without appendixes)



02E67355A.pdf

Document 02E68861, Declaration of Design and Performances



02E65151B_DDP_ADT406.pdf

C. CRESP
Product Support Manager

A handwritten signature in black ink, consisting of a large, stylized "C" followed by a series of loops and a horizontal stroke.



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France

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Parts lists/Tune Up Info. for our ELT models ADT 406 (Request for Equipment notification)

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Our new Emergency Locator Transmitter (ELT) model ADT 406 can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

We confirm that that Parts List/Tune Up in not applicable to our unit. Indeed this ELT equipment is only a simple three frequency transmitter without any adjustment controlled by the user.

C. CRESP
Product Support Manager

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V/Réf. :
N/Réf : 03B65223
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : RF Exposure for our ELT models ADT 406 (Request for Equipment notification)

Dear Sir,

Our new Emergency Locator Transmitter (ELT) model ADT 406 can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

These equipment are not mobile phone. They are Distress Beacons transmitters operating on the international distress frequencies 121.5-243-406 MHz. They are used only in case of grave and imminent danger, like an Aircraft crash.

We confirm that the RF exposure are not applicable to this emergency equipment.

C. CRESP
Product Support Manager

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V/Réf. :
N/Réf : 03B65224
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Schematics of our ELT models ADT 406

Dear Sir,

Our new Emergency Locator Transmitter (ELT) model ADT 406 can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) . The same schematics is used.

Please find here under a copy of the electronic board schematics.

It is the drawing 00P66768 and it is applicable to both ELT ADT 406 version.

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- ADT 406 AF/AP or AP Schematics sheet 1/3 is the Microcontroller part.
- ADT 406 AF/AP or AP Schematics sheet 2/3 is the 121.5-243 MHz part, amplifier & audio modulator, Frequency sweep. The frequency sweep is issued from the microcontroler)
- ADT 406 AF/AP or AP Schematics sheet 3/3 is the 406 MHz part, amplifier & phase modulator

Drawing 00P66768



00p66768.pdf

C. CRESP
Product Support Manager

A handwritten signature in black ink, appearing to be 'C. Cresp'.



Electronics for Harsh Environments

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Blagnac, on September 5, 2003

V/Réf. :
N/Réf : 03B65225
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Tests report & test setup photo of our ELT models ADT 406
(Request for Equipment notification)

Dear Sir,

Our new Emergency Locator Transmitter (ELT) model ADT 406 can be divided in two versions:

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- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

The difference is on the secondary antenna used.

- For ADT 406 AF/AP the secondary antenna is a backup antenna that operates only the 406 MHz signal:
- For the ADT 406 AP the secondary antenna is a whip antenna that meets the requirements on the three frequencies 121.5-243-406 MHz.

All the test related to EMI/RFI were re-performed in order to validate that no degradation occurs in that configuration.

Test report is part of the TSO & JTSC approval process.

We will submit here under only the tests related to RF aspects of the ELT. All the environmental tests can be consulted in our premises at any time upon request.

This equipment (ELT) is an aeronautic application and test requirements are described in DO-160D standard. This standard is much more harder than the basic telecommunication requirement (EMI & RFI especially).

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A compliance matrix is given in our "Declaration of Design and Performances" documents. (see exhibit 03B65221)

Test reports are called out in the following documents:

- 02E64014, Qualification Data Package for the ELT model ADT 406 AF/AP. Test report is 02E66225.
- 03E60999, Qualification Data Package for the ELT model ADT 406 AP. Test report is 03E60998.

Detail are given here after

02E64014, Qualification Data Package for the ELT model ADT 406 AF/AP, extracts



02E64014-extracts.pdf

. Test report is 02E66225 (extracts).



02E66225-extracts.pdf

03E60999, Qualification Data Package for the ELT model ADT 406 AP, extracts



03E60999A-TSO_QDPADTAP-extracts.pdf

Test report is 03E60998.



03E60996B-JTSO_QDPADTAP-extracts.pdf

C. CRESP
Product Support Manager

A large, stylized handwritten signature in black ink, likely belonging to C. Cresp.



Electronics for Harsh Environments

**FEDERAL COMMUNICATION COMMISSION
445 12TH STREET, SW
WASHINGTON, DC 20554
USA**

Blagnac, on September 5, 2003

SIÈGE SOCIAL :

14, place Marcel Dassault
B.P. 48
31702 BLAGNAC Cedex
France

V/Réf. :
N/Réf : 03B65226
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Tests setup photo of our ELT models ADT 406

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Our new Emergency Locator Transmitter (ELT) model ADT 406 can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

These two versions use the same transmitter board and the same integration concept (metallic case) .

The difference is on the secondary antenna used. For ADT 406 AF/AP the secondary antenna is a backup antenna that operates only the 406 MHz signal. For the ADT 406 AP the secondary antenna is a whip antenna that meets the requirements on the three frequencies 121.5-243-406 MHz. All the test related to EMI/RFI were re-performed in order to validate that no degradation occurs in that configuration.

Test setup photos are included in the relevant test reports part of the TSO & JTSC approval process. (see test report exhibit for detail).

C. CRESP
Product Support Manager

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445 12TH STREET, SW
WASHINGTON, DC 20554
USA**

Blagnac, on September 5, 2003

V/Réf. :
N/Réf : 03B65227
P.J. :

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : Confidentiality for our ELT models ADT 406 (Request for Equipment notification)

Dear Sir,

By this letter ELTA is requesting confidentiality on the following items presented to FCC for Equipment Authorization:

- Block diagram per ELTA letter N° 03B65216,
- Internal photos per ELTA letter N° 03B65220,
- Schematics per ELYTA letter N° 03B65224,

Related to our new Emergency Locator Transmitter (ELT) model ADT 406 that can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed Automatic Portable application when floatation is required.

Internal photo need to be kept confidential as these ELT are new equipments and we wants to protect our marketing advance in this domain.

C. CRESP
Product Support Manager

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**FEDERAL COMMUNICATION COMMISSION
445 12TH STREET, SW
WASHINGTON, DC 20554
USA**

Blagnac, on September 5, 2003

V/Réf. :
N/Réf : 03B65228
P.J. :

SIÈGE SOCIAL :

14, place Marcel Dassault
S.P. 48
31702 BLAGNAC Cedex
France

ELTA Grantee Code: LYJ

ELTA contact : C. CRESP, c.cresp@elta.fr

SUBJECT : EXHIBIT DESCRIPTION (Request for Equipment notification).

Tél. : +33 (0)5 34 36 10 00

Fax : +33 (0)5 34 36 10 01

www.elta.fr

Dear Sir,

Please find here under the exhibit list related to our new Emergency Locator Transmitter (ELT) model ADT 406 that can be divided in two versions:

- ADT 406 AF/AP, designed for Automatic Fixed application or Automatic Portable application when floatation is not required,
- ADT 406 AP designed for Automatic Portable application when floatation is required.

Exhibit 1 "Attestation Statements", ELTA letter 03B65215 (Word document)

Exhibit 2 "Block Diagrams", ELTA letter 03B65216 (Word document)

Exhibit 3 "Cover letter", ELTA letter 03B65217 (Word document)

Exhibit 4 "External photo", ELTA letter 03B65218 (Word document)

Exhibit 5 "ID Label/location Info", ELTA letter 03B65219 (Word document)

Exhibit 6 "Internal Photos", ELTA letter 03B65220 (Word document)

Exhibit 7 "Operational Description", ELTA letter 03B65221 (Word document)

Exhibit 8 "Parts List/Tune Info.", ELTA letter 03B65222 (Word document)

Exhibit 9 "RF Exposure Info.", ELTA letter 03B65223 (Word document)

Exhibit 10 "Schematics", ELTA letter 03B65224 (Word document)

Exhibit 11 "Test Reports", ELTA letter 03B65225 (Word document)

Exhibit 12 "Test setup Info.", ELTA letter 03B65226 (Word document)

Exhibit 13 "ADT 406 AF/AP User's Manual", ELTA doc 02E65336 (pdf document)

Exhibit 14 "ADT 406AP User's Manual", ELTA doc 03E61013 (pdf document)

Exhibit 15 "Confidentiality", ELTA letter 03B65227 (Word document)

Exhibit 16 "Exhibit list", this ELTA letter 03B65228 (Word document)

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