

The information and instructions contained in this document have been produced in accordance with alternative procedure to DOA EASA AP058. The technical content of this document refers to EASA ETSO Authorisation number EASA.210.818 and P/N S1840501-XX(X)(XX) under which the minor change or repair is covered.

KANNAD 406 AF-COMPACT

Change in installation configuration

1. PLANNING INFORMATION

A. Effectivity

This Service Bulletin is applicable to the KANNAD 406 AF-COMPACT ELTs (P/N S1840501-01) and KANNAD 406 AF-COMPACT (ER) ELTs (P/N S1840501-04) manufactured by Safran Electronics & Defense Beacons SAS.

B. Concurrent Requirement

N/A

C. Reason

An issue has been reported to Safran Electronics & Defense Beacons concerning the transmission of some random bursts in maintenance code during valid distress transmissions.

Indeed, it appears that during distress transmission, some emissions may erroneously be encoded with a maintenance encoding instead of an operational one. Emissions with maintenance encoding are filtered by Cospas-Sarsat infrastructure and may not be visible by the Mission Control Center.

Fortunately, this defect is never permanent during a distress as distress bursts are still sent by the ELT at more or less regular intervals, but the distress signal may be interrupted and delayed, or disturb the rescue activities. In addition, this defect only affects the 406 MHz transmission addressed to Cospas-Sarsat, homing frequencies are not affected.

Therefore, there is a limited safety impact as the emergency services receive the distress burst. It is even possible that emergency services will consider the reception of maintenance codes.

After analysis, it was concluded that it can only occur in a specific installation configuration (programming dongle connected to the ELT during flight).

There are two installation configurations that lead to this issue:

- When the installation configuration includes a Compact ELT with a Programming Dongle Assembly (P/N S1820514-06).
- When the installation configuration includes a Compact ELT with a Programming Dongle (P/N S1820514-01).

D. Description

This Service Bulletin describes how to check the installation and, if necessary, change the installation in order to avoid random improper transmissions during ELT distress transmission. In case of a change of installation involving the removal of the Programming Dongle, this Programming Dongle can be kept and used as on-ground programming tool only.

The risk is classified as low taking into consideration the limited safety impact detailed in section C. Reason. Therefore, following the inspection, the aircraft affected by the specified installation configurations do not need to be grounded.

E. Compliance

Mandatory - Service Bulletin must be accomplished.

The installation configuration including a Programming Dongle or a Programming Dongle Assembly shall be modified as per instruction Section 3: Accomplishment instructions.

This Service Bulletin must be accomplished within 1 year from the Service Bulletin release date.

F. Approval

Following the application of this Service Bulletin, all installation configurations remain approved configurations.

G. Manpower

Inspection: Less than 1 minute once access is gained to the ELT.

Modification: 1 hour.

H. Weight and Balance

None

I. Electrical Load Data

Not Changed.

J. Software Accomplishment Summary

Not applicable.

K. References

DOC07089 406 AF COMPACT Initial Installation Manual.

L. Other Publications Affected

As a consequence of the Service Bulletin issuance, the DOC08038 406 AF COMPACT Operation Manual and DOC07089 406 AF COMPACT Initial Installation Manual will be updated.

M. Interchangeability

One-way.

2. MATERIAL INFORMATION**A. Material - Price and Availability**

In case of an installation configuration including a Programming Dongle (P/N S1820514-01):

- DIN 12 Connector P/N S1820514-03.
- Price: free of charge.

In case of an installation configuration including a Programming Dongle Assembly (P/N S1820514-06):

- None, or DIN 12 Connector P/N S1820514-03, refer to section [3.C Changes to apply for installation including Programming Dongle Assembly \(P/N S1820514-06\)](#).
- Price: free of charge.

B. Industry Support Information

If the installation configuration requires it (see [3.A Inspection of the Installation Configuration, page 4](#)), Safran Electronics & Defense Beacons will provide the DIN 12 connector free of charge and endorse the cost of transport subject to prior approval and instructions from Safran Electronics & Defense Beacons. The DIN 12 connector will be free of charge for 1 year starting from the release date of this Service Bulletin.

To receive a DIN 12 connector, contact an Authorized Partner (See [Appendix A: List of Authorized Partner](#)) and provide:

- The reference number of this Service Bulletin,
- The serial number of the affected KANNAD 406 AF-COMPACT ELT,
- The serial number of the affected dongle.

The DIN 12 connector will be delivered free of charge by the Authorized Partner.

Any other cost related to this replacement such as removal, administrative, aircraft grounded, loss of earnings, etc. cannot be claimed to Safran Electronics & Defense Beacons SAS.

C. Material Necessary for Each Component

Not applicable.

D. Material Necessary for Each Spare

Not applicable.

E. Re-identified Parts

Not applicable.

F. Tooling - Price and Availability

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

IMPORTANT: Verify the aircraft instructions. When a new ELT is installed without any Dongle in the installation configuration, the ELT needs to be reprogrammed systematically at a programming center or with a PR600. It is possible to use the removed Programming Dongle as an on-ground programming tool.

A. Inspection of the Installation Configuration

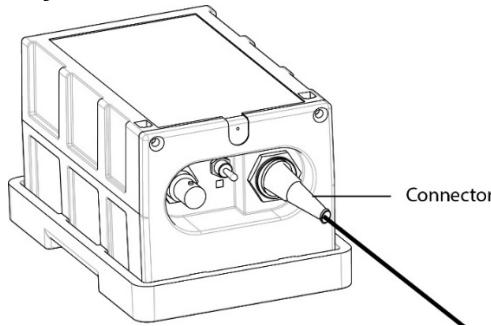


Figure 1: Connector Location

1. If the installation does not include any connector, the installation is correct and does not need to be modified.
2. If the installation includes a connector, refer to the connector label to find its Part Number:



- a. If the installation includes a **DIN 12 connector P/N S1820514-03**, the installation is correct and does not need to be modified.
- b. If the installation includes a **Programming Dongle P/N S1820514-01**, the Programming Dongle shall be replaced by a DIN 12 connector (P/N S1820514-03), following the procedure given in section **3.B Changes to apply for installation including Programming Dongle (P/N S1820514-01)** [page 5](#).
- c. If the installation includes a **Programming Dongle Assembly P/N S1820514-06**, remove the Programming Dongle Assembly of the installation following the procedure given in section **3.C Changes to apply for installation including Programming Dongle Assembly (P/N S1820514-06)** [page 6](#).

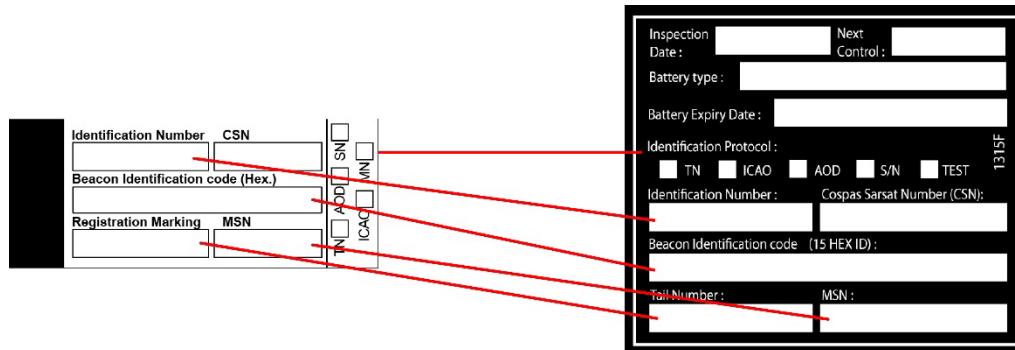
3. If the connector label is missing or unreadable:
 - a. Remove the small screw which holds the metallic body of the connector with a small flathead screwdriver.
 - b. Slide down the metallic body of the connector to remove it.
 - c. Open the small plastic plate.
 - d. If there is no small PCBA inside the connector, it is a DIN12 connector P/N S1820514-03. If there is a small PCBA inside the connector, it is a Programming Dongle P/N S1820514-01. Refer to Figure 2: DIN12 connector vs Programming Dongle.

Figure 2: DIN12 connector vs Programming Dongle



B. Changes to apply for installation including Programming Dongle (P/N S1820514-01)

1. Visually inspect that the antenna is correctly connected and that the ELT switch is set to "ARM" position.
2. Set the RCP switch to "RESET & TEST" to do a self-test:
 - a. The buzzer operates during the whole Self-test procedure.
 - b. After a few seconds, the test result is displayed with the LED as follows:
One long flash indicates that the system is operational and that no error conditions were found.
3. Disconnect the Programming Dongle from the ELT.
4. Use a label printer to print out the coding information written on the Programming Dongle label.



5. Stick the coding information labels onto the ELT rear label.

IMPORTANT: The CSN field of the ELT label shall not be changed.

6. Desolder the Programming Dongle from its cable.

7. Solder a DIN 12 connector in place of the Programming Dongle by keeping the same wirings.

NOTE: The wiring procedure is detailed in the DOC07089 KANNAD 406 AF COMPACT Initial Installation Manual, refer to Appendix B: Extract of the Initial Installation Manual for Wiring.

8. Connect the DIN 12 connector to the ELT.

9. Set the RCP switch to "RESET & TEST" to do another self-test:

- a. The buzzer operates during the whole Self-test procedure.

- b. After a few seconds, the test result is displayed with the LED as follows:

One long flash indicates that the system is operational and that no error conditions were found.

C. Changes to apply for installation including Programming Dongle Assembly (P/N S1820514-06)

1. Visually inspect that the antenna is correctly connected and that the ELT switch is set to "ARM" position.

2. Set the RCP switch to "RESET & TEST" to do a self-test:

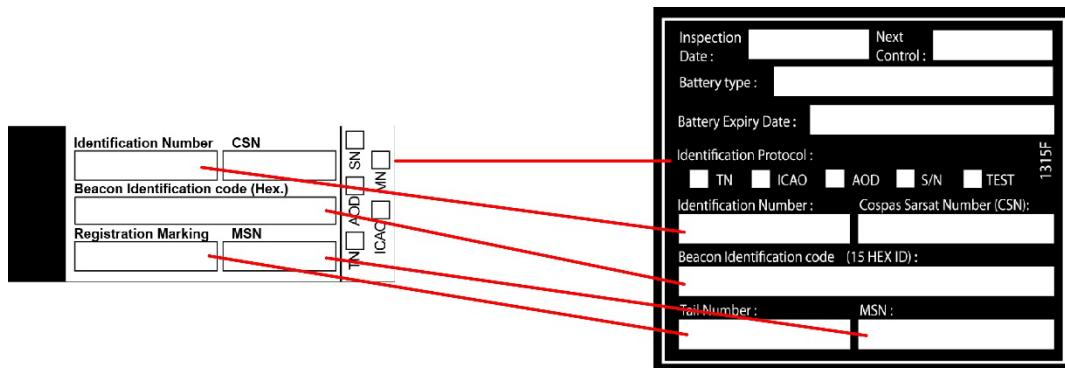
- a. The buzzer operates during the whole Self-test procedure.

- b. After a few seconds, the test result is displayed with the LED as follows:

One long flash indicates that the system is operational and that no error conditions were found.

3. Disconnect the Programming Dongle Assembly from the ELT and from the RCP cable.

4. Use a label printer to print out the coding information written on the Programming Dongle label.



5. Stick the coding information labels onto the ELT rear label.

IMPORTANT: The CSN field of the ELT label shall not be changed.

6. Connect the DIN 12 connector from the RCP cable to the ELT.

NOTE: If the RCP cable is not long enough for connection, the procedure to make a new cable of the correct length is available in the DOC07089 KANNAD 406 AF COMPACT Initial Installation Manual, refer to Appendix B: Extract of the Initial Installation Manual for Wiring. In this case, a DIN 12 connector can be ordered free of charge.

7. Connect the DIN 12 connector to the ELT.

8. Set the RCP switch to "RESET & TEST" to do another self-test:
 - a. The buzzer operates during the whole Self-test procedure.
 - b. After a few seconds, the test result is displayed with the LED as follows:
One long flash indicates that the system is operational and that no error conditions were found.

For further information, please contact:

Safran Electronics & Defense Beacons SAS Customer Service

Zone Industrielle des Cinq Chemins

56520 GUIDEL

FRANCE

E-mail: support.sar@beacons.safrangroup.com

Tel.: +33 2 97 02 49 00

4. Appendix A: List of Authorized Partner

AMERICA

Marte Updates & Avionics

Av Olavo Fontoura, 1078, SECTOR D - LOTE 11 - ED
 Marte Update
 São Paulo SP 02012-021
 Brazil
www.marteupdates.com.br

Aeromni Aerospace Inc.

#46-21330 56 Avenue,
 Langley, BC
 V2Y 0E5
 Canada
www.aeromni.com

Maxcraft Avionics Ltd

250 18799 Airport way,
 Pitt Meadows, BC
 V3Y 2B4
 Canada
www.maxcraft.ca

Mid-Canada Mod Center

251 Jetliner Court, Hangar 53, PO Box 69,
 Breslau, ON N0B1M0
 Canada
www.midcanadamod.com

Mid-Continent Instruments and Avionics

9400 E. 34th Street North,
 Wichita KS 67226
 United States
www.mcico.com

Pacific Southwest Instruments

1721 Railroad Street
 Corona CA 92878
 United States
www.psilabs.com

Southern Cross Accessories

5250 Nw 33 road ave.
 STE-C Fort Lauderdale FL 33309
 United States
www.scross.com

ASIA-PACIFIC

Jet Aviation Australia Pty Ltd

Hangar 149, Tom McDonald Drive, Airport
Cairns QLD, 4870
Australia
www.jetaviation.com

Aviation Radio Ltd

18 George Bolt Street, Rongotai
Wellington 6022
New Zealand
www.aviationradio.co.nz

Pacific Avionics Pty Ltd

Hangar 480, 16 Miles Street, Bankstown Aerodrome,
Sydney NSW 2200
Australia
www.pacificavionics.com.au

Guangzhou Hangxin Avionics Co., Ltd

No. 2 Kexin Road, Tianhe District,
Guangzhou 510665
China
www.hangxin.com

JR-Tech (Guangzhou) Co.,Ltd

N° 7# Huahui Road, Huashan Industrial Zone, Huadu
GUANGZHOU 510880
China
www.jr-tech.com.cn

Japan Aerospace Corp.

2-3-8, Shiomi, Koto-ku
Tokyo 136-0082
Japan
www.j-aero.co.jp

Kaigai Corporation

2nd Floor, Y-S Bldg., 2-11-16, Shibadaimon, Minato-ku,
Tokyo 105-0012
Japan
www.kaigaibussan.jp

EUROPE, MIDDLE EAST AND AFRICA

Scandinavian Avionics Denmark

Stratusvej 9
 Billund DK-7190
 Denmark
www.scanav.com

Aerospace Management & Support

Athens International Airport, Building 46, 5th km
 Spata-Loutsa Avenue
 Spata, Athens GR-19019
 Greece
www.amsaero.eu

Scandinavian Avionics Norway

Generalmajor Mehrers Vei 1
 Gardermoen N-2062
 Norway
www.scanav.com

SEAM - Service Electronique Aviation Marine

1070 rue du Lieutenant Parayre
 13858 AIX EN PROVENCE Cedex 3
 France
<https://www.seam-avionic.com>

Century Avionics CC

Hangar M1, Gate 5, Lanseria Intl. Airport, Lanseria
 International Airport, PO Box 100,
 LANSERIA 1748
 South Africa
www.centuryavionics.co.za

Total Technic

Ataturk Havalimani lci, Yeni Yerlesim Bolgesi,
 Bakirkoy Istanbul 34149
 Turkiye
www.total-technic.com

Air Atlanta Aviaservices

Unit 2, Meadowbrook Industrial Center, Maxwell
 Way
 Crawley, West Sussex RH10 9SA
 United Kingdom
www.aviaservices.com

5. Appendix B: Extract of the Initial Installation Manual for WiringA. Wiring diagram with RC100 RCP**Connect RCP to ELT**

Refer to Figure 13: Wiring of 3-wire bundle between RC100 and ELT.

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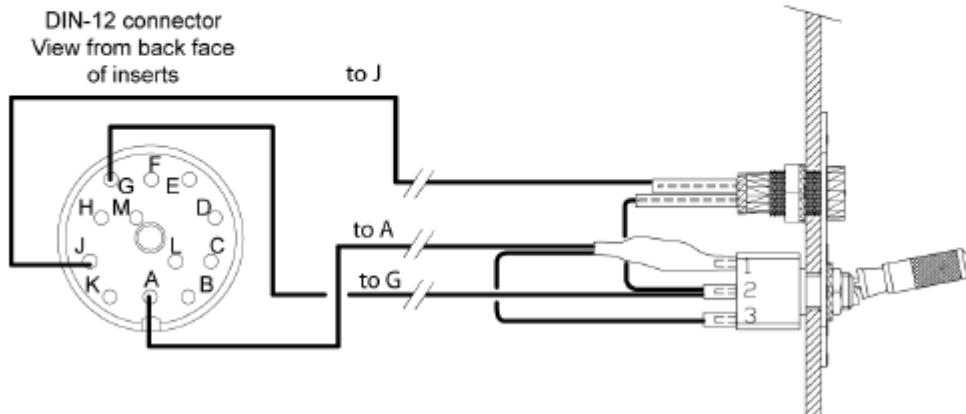
- Solder the DIN12 connector or Programming Dongle on the other side of the bundle (pins A, G, J):
 - Connect the wire from cathode (short leg) of LED to pin J of DIN12 connector;
 - Connect the wire from resistor to pin A of DIN12 connector;
 - Connect the wire from pin 2 of switch to pin G of DIN12 connector.
 - Connect the anode (long leg) of LED to pin 2 of switch.

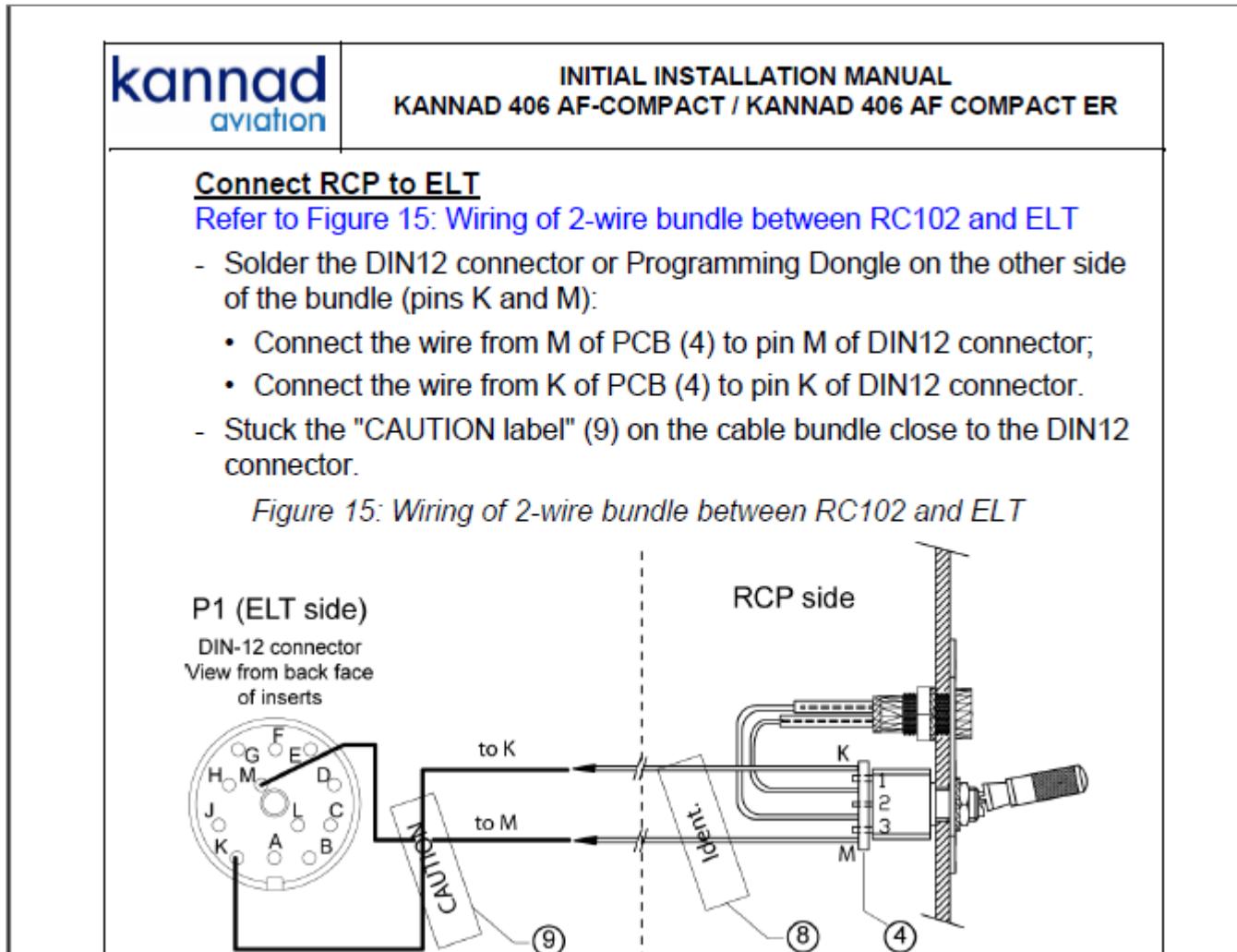
Figure 13: Wiring of 3-wire bundle between RC100 and ELT

P1 (ELT side)

 DIN-12 connector
 View from back face
 of inserts

RCP side



B. Wiring diagram with RC102 RCP

C. Wiring diagram with RC200 RCP**Connection**

Refer to Figure 17: Wiring of 3-wire bundle between RC200 and ELT.

Fabricate a 3-wire bundle (AWG 24, shielded preferred) long enough to reach between the ELT installation location and the cockpit RCP location.

Slide heat-shrinkable sleeves on both sides of each wire.

On the ELT side:

- Solder the wires to the DIN12 connector supplied with the pack:
 - solder the wires to pins G (RCP COMMON), A (RCP RESET) and J (RCP LED) of the connector.
 - Put heat-shrinkable sleeves to protect the pins

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On the RCP side:

- Strap pins 4 and 5 of the female 9-pin D-SUB connector supplied with the pack.
- Solder the wires to the female 9-pin D-SUB connector as follows:
 - Pin 8 (RCP COMMON) has to be connected to Pin G (RCP COMMON) of the ELT;
 - Pin 4 (RCP RESET) has to be connected to Pin A (RCP RESET) of the ELT;
 - Pin 9 (RCP LED) has to be connected to Pin J (RCP LED) of the ELT.
 - Put heat-shrinkable sleeves to protect the pins.
- Connect the female 9-pin D-SUB connector to the male 9-pin D-SUB socket of the RC200.

Figure 17: Wiring of 3-wire bundle between RC200 and ELT

