

**RC103 Remote Control Panel**  
**for ACK or Ameri-King Retrofit Installation Kits**

**Description, Installation, Operation Manual**



**P/N S1820513-25**

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**1. INTRODUCTION**

This manual contains information to install the RC103 Remote Control Panel. This RCP is part of a retrofit kit intended to replace ACK or AMERI-KING ELTs and RCPs with KANNAD ELTs and RC103 RCP.

This manual is not intended to be an installation manual for the ELT system. Please refer to the relevant KANNAD ELTs user and installation manuals.

**2. PARTS LIST**

As the retro-fit kit is intended to replace ACK or AMERI-KING ELTs, the ELT to RCP harness is not provided.

The ACK or AMERI-KING interconnecting cables already installed in the aircraft must be used.

**2.1. ACK Retrofit Installation Kit**

The following parts are included with the Retrofit Kit P/N 1202572:

1. RC103 Remote Control Panel, P/N S1820513-25.
2. Adapter cable DIN12/RJ11, P/N S1820514-09.
3. RCP identification label.
4. Kit, Universal Mounting Bracket, P/N S1840502-02.
5. This RC103 RCP description, installation and operation manual.

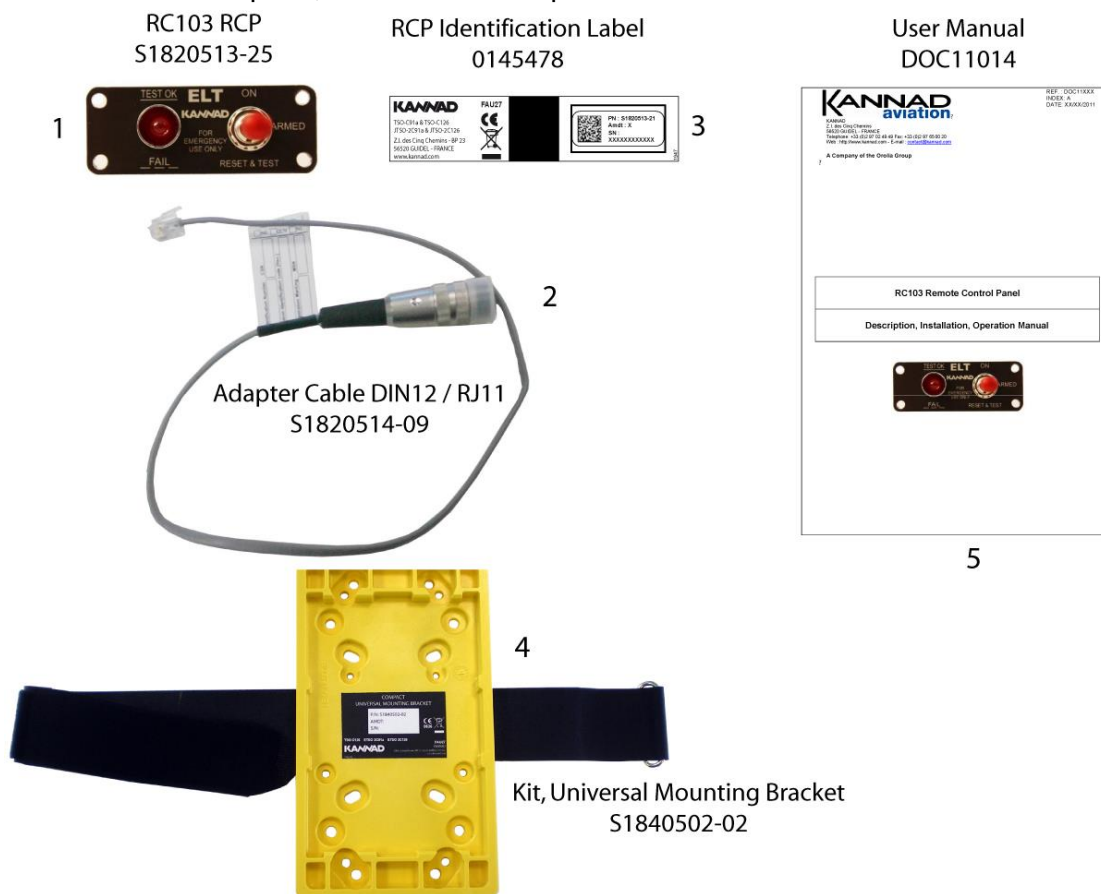


Figure 1: Contents of ACK Retrofit and Installation Kit

**2.2. AMERI-KING Retrofit Installation Kit**

The following parts are included with the Retrofit Kit P/N 1202573:

1. RC103 Remote Control Panel, P/N S1820513-25.
2. Adapter cable DIN12/RJ11, P/N S1820514-09.
3. RJ11 coupler.
4. RCP identification label.
5. Kit, Universal Mounting Bracket, P/N S1840502-02
6. This RC103 RCP description, installation and operation manual.

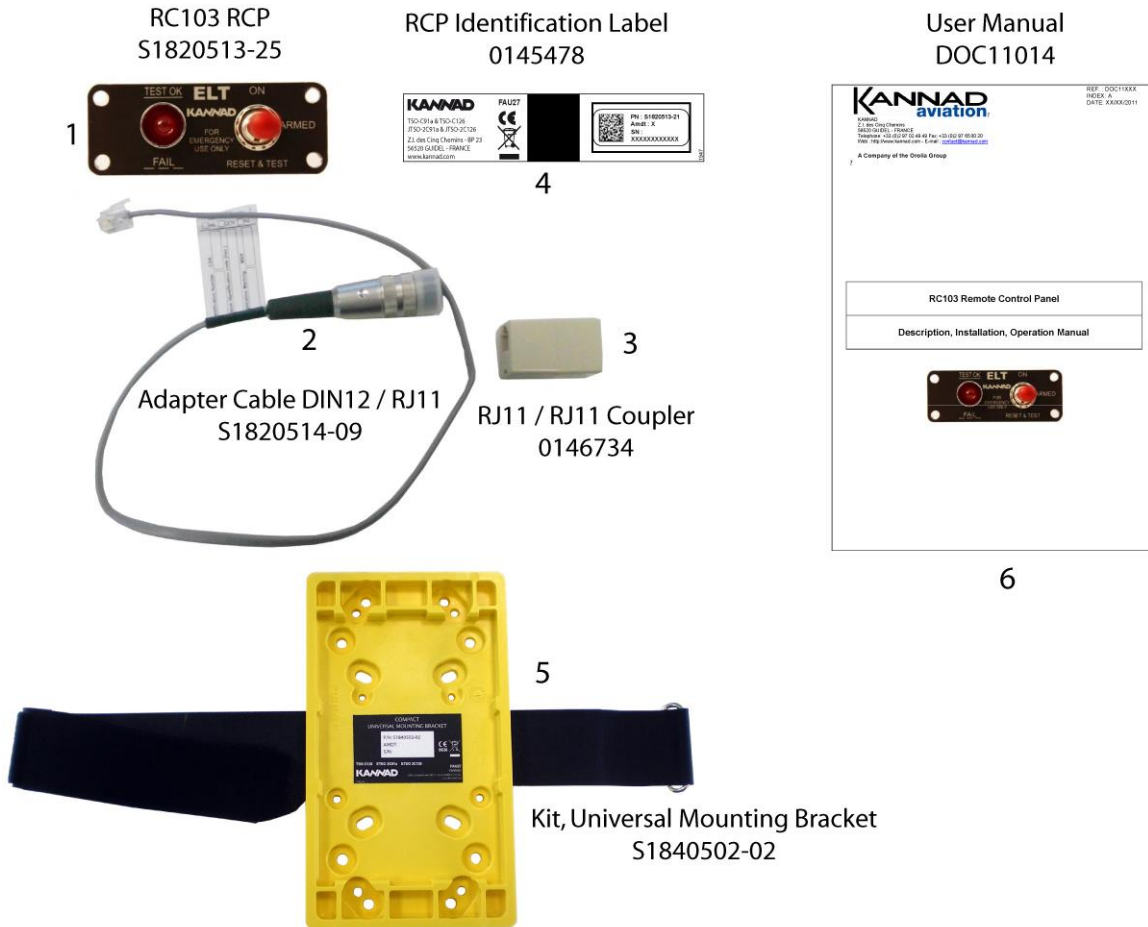


Figure 2: Contents of AMERI-KING Retrofit and Installation Kit

### 3. REMOTE CONTROL PANEL INSTALLATION

#### 3.1. ACK Retrofit Installation

The RC103 RCP and KANNAD ELT cannot be used in conjunction with ACK interconnecting cable unless adapter cable for ACK retrofit, P/N S1820514-09, is connected directly with the ACK cable.

Use the existing mounting hole of ACK remote switch since the face plate of the RC103 Remote Control Panel is designed to accommodate that hole pattern.

1. Connect DIN-12 connector of adapter cable for ACK retrofit to DIN-12 socket of ELT.
2. Connect RJ11 male connector of adapter cable for ACK retrofit to the ACK interconnecting cable.
3. Affix the RCP identification label on the ACK interconnecting cable (RCP side).
4. Feed the RJ11 male connector from the ACK interconnecting cable through the panel cutout.
5. Plug the RJ11 male connector to the RC103 Remote Control Panel.
6. Slide the RC103 Remote Control Panel and the harness inside the cutout and secure the RC103 Remote Control Panel using the hardware of the former ACK remote switch.

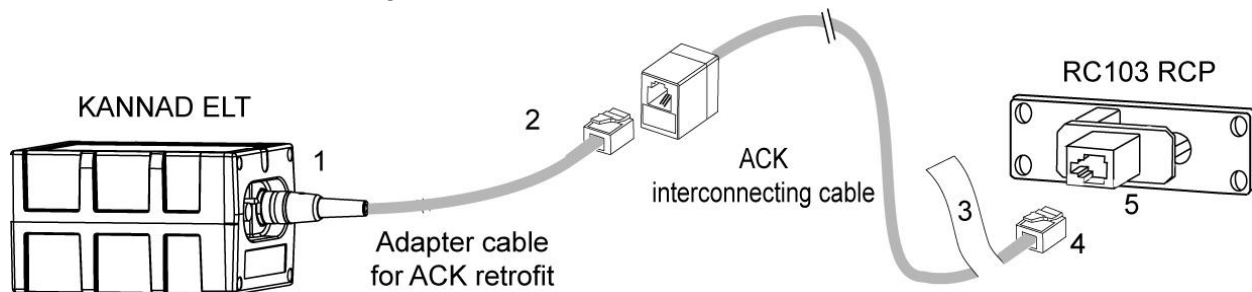


Figure 3: ACK retrofit connection

7. If an optional outside buzzer is connected:
  - Mount and install the buzzer: Refer to § 3.3. Outside Buzzer Installation
  - Connect the buzzer: Refer to Section 7 CONNECTING DIAGRAMS.
  - Put heat-shrinkable sleeves to protect the pins

### 3.2. Ameri-King Retrofit Installation

The RC103 RCP and KANNAD ELT cannot be used in conjunction with Ameri-King interconnecting cable unless adapter cable for Ameri-King retrofit, P/N S1820514-09, is connected directly with the Ameri-King cable.

Use the existing mounting hole of Ameri-King remote switch since the face plate of the RC103 Remote Control Panel is designed to accommodate that hole pattern:

1. Connect DIN-12 connector of adapter cable for Ameri-King retrofit to DIN-12 socket of ELT.
2. Connect RJ11 male connector of adapter cable for Ameri-King retrofit to one side of the female adaptor.
3. Connect RJ11 male connector of the Ameri-King interconnecting cable to the other side of the female adaptor.
4. Affix the RCP identification label on the Ameri-King interconnecting cable (RCP side).
5. Feed the RJ11 male connector from the Ameri-King interconnecting cable through the panel cutout.
6. Plug the RJ11 male connector to the RC103 Remote Control Panel.
7. Slide the RC103 Remote Control Panel and the harness inside the cutout and secure the RC103 Remote Control Panel using the hardware of the former Ameri-King remote switch.

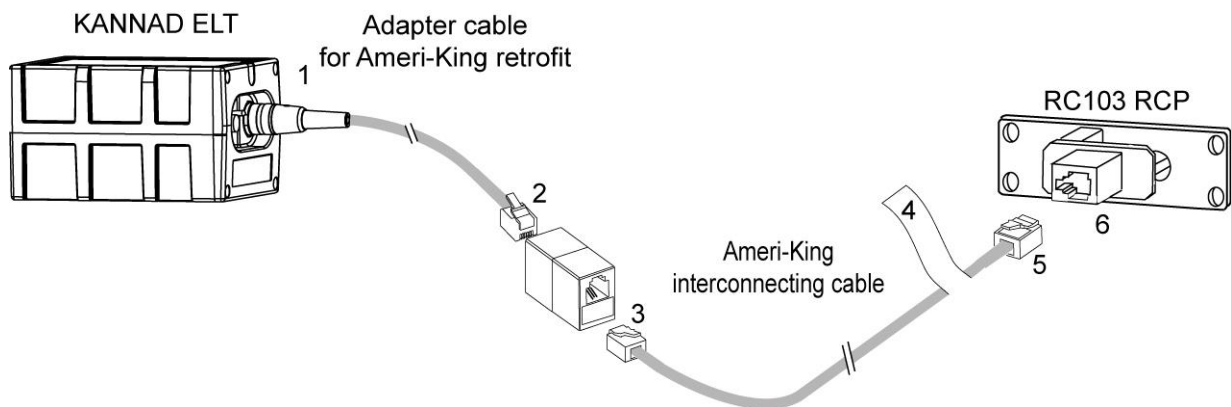


Figure 4: Ameri-king Retrofit Connection

8. If an optional outside buzzer is connected:
  - Mount and install the buzzer: Refer to § 3.3. Outside Buzzer Installation
  - Connect the buzzer: Refer to Section 7 CONNECTING DIAGRAMS
  - Put heat-shrinkable sleeves to protect the pins.

### 3.3. Outside Buzzer Connection

An optional outside buzzer assembly (P/N S1820515-06) can be connected to the ELT-RCP. It gives an audio indication of emergency location transmitter (ELT) activation. It is supplied with a mounting tray to install the buzzer on the aircraft.



Figure 5: Outside Buzzer

- Drill 3 x Ø 3mm holes according to drilling mask (Refer to Figure 28: Outside buzzer, overall dimensions and drilling mask);
- Fix the mounting tray (1) with 3 M3 screws and nuts or with 3 rivets;
- Install the buzzer (2) on the into the mounting tray and tighten plastic nut (3) (maximum torque on plastic nut: 6Nm);
- Crimp the Fast-On terminals (4) on the wires;
- Wrap the Fast-On terminals with heat shrinkable sleeve (5) (25 mm);
- Using clamps (6), fix the wires on the mounting tray;
- Affix the label (7) on the wires.

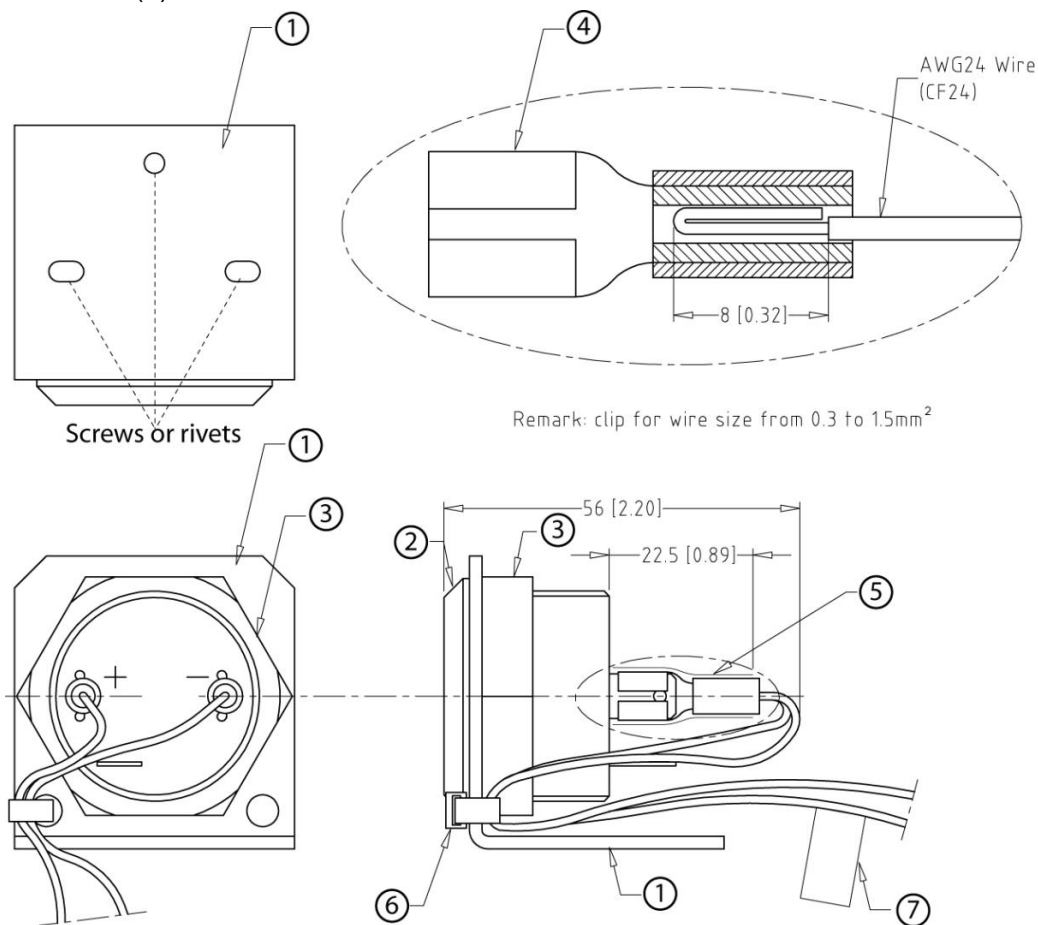


Figure 6: Buzzer Installation



## 4. WORKING MODES

### 4.1. Controls

The following elements are to be found on the RC103 remote control panel:

1. three-position switch (ON, ARMED, RESET & TEST);
2. red visual indicator.



Figure 7: RCP Controls

The visual indicator gives an indication on the working mode of the ELT:

- After the self-test:
  - one long flash indicates that the system is operational and that no error were found;
  - a series of short flashes indicates the test has failed.
- In operation mode:
  - one short flash every 0.7 seconds during 121.5 MHz transmission;
  - one long flash during 406 MHz transmission (every 50 seconds).

### 4.2. Working mode information

The RC103 remote control panel enables remote control and remote monitoring of the KANNAD ELT provided that the ELT switch is in armed position.

#### 4.2.1. Remote Control

Remote control is done through a 3-position switch:

1. ON (transmission) enables manual activation of the ELT;
2. ARMED (standby mode to enable automatic activation by the shock sensor of ELT) is an idle position. Unless there is an emergency, the switch must stay in this position.
3. RESET & TEST is used either to stop the ELT transmission if activated or to perform a self-test.



Figure 8: 3-position switch

The OFF mode is not available on the remote control panel but directly on the ELT itself by switching it in OFF position.

**Important notice: TEST/RESET (downwards) is a momentary position.**

Refer to the ELT's operation manual for precise information on these modes.

#### 4.2.2. Monitoring

Monitoring is done through the visual indicator operating in the same way than the one of the ELT: Refer to the ELT's operation manual for precise information.

## 5. OPERATION

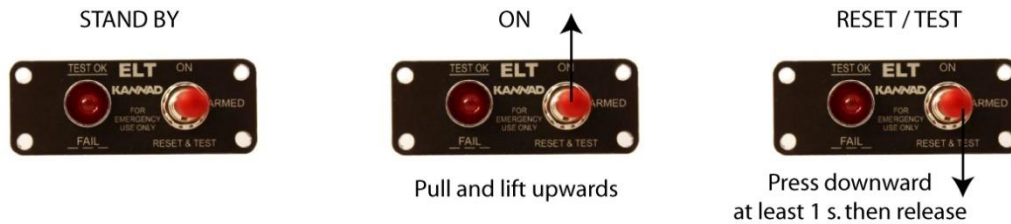


Figure 9: Operating modes

### 5.1. Standby mode

The standby mode is the ARMED position (idle position). The switch is in the middle position.

This mode is used to enable automatic activation by the shock sensor of the ELT provided that the ELT switch is in armed position. Unless there is an emergency, the switch must stay in this position.

### 5.2. ON mode

This mode is used to manually activate the ELT. When this mode is selected, the ELT transmission is activated.

- Pull and lift the switch upwards.  
A self test is first performed (Refer to 5.5. RESET & TEST)
- After the self-test (duration about 10 seconds), the ELT starts to transmit:
  - The visual indicator is flashing in the same way than the one of the ELT.

### 5.3. RESET & TEST

This mode is used either to perform a self-test or to stop the ELT transmission if activated.

#### 5.3.1. Self test

Self-test must be performed regularly by a pilot or maintenance personnel from the Remote Control Panel.

Note: each self-test consumes energy from the battery. Should self-tests be carried out more often than the maximum specified in the ELT user manual, the battery life-time of the ELT might be shorter than specified.

Press the switch downwards for at least 1 second then release it (the switch comes back to the ARMED position):

The visual indicator flashes as follows:

- one short flash at the beginning of the self-test sequence

After a few seconds, the test result is displayed with the visual indicator as follows:

- one long flash indicates the system is operational and that no error conditions were found;
- a series of short flashes indicates the test has failed: Refer to the ELT manual.

#### 5.3.2. RESET

This mode is used to stop the ELT when activated.

If the ELT is activated, the visual indicator of the RCP flashes in the same way as the ELT:

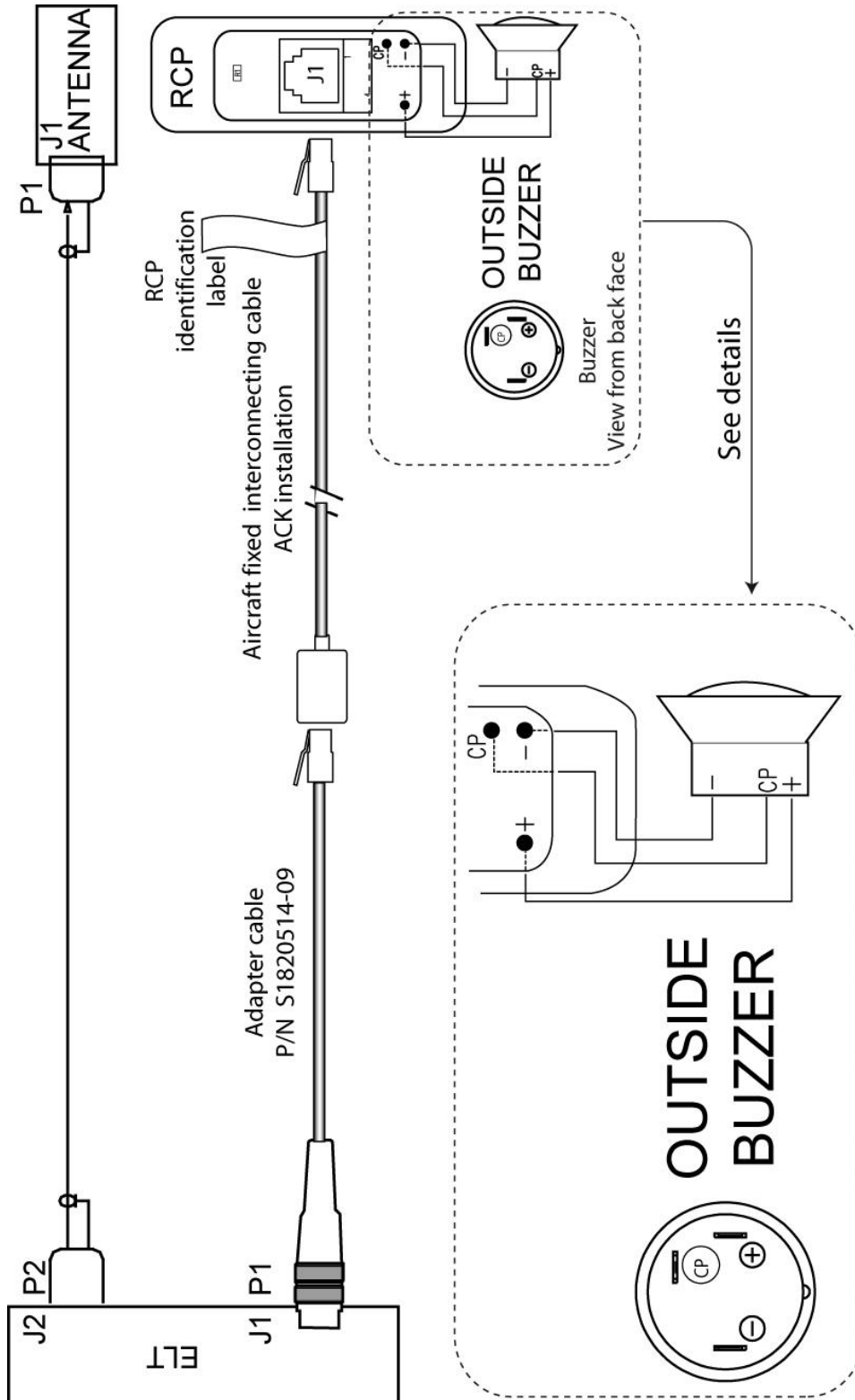
- Press the switch downwards for at least 1 second then release it (the switch comes back in ARMED position):
  - the ELT comes back in standby mode.

**5.4. RCP operational tests**

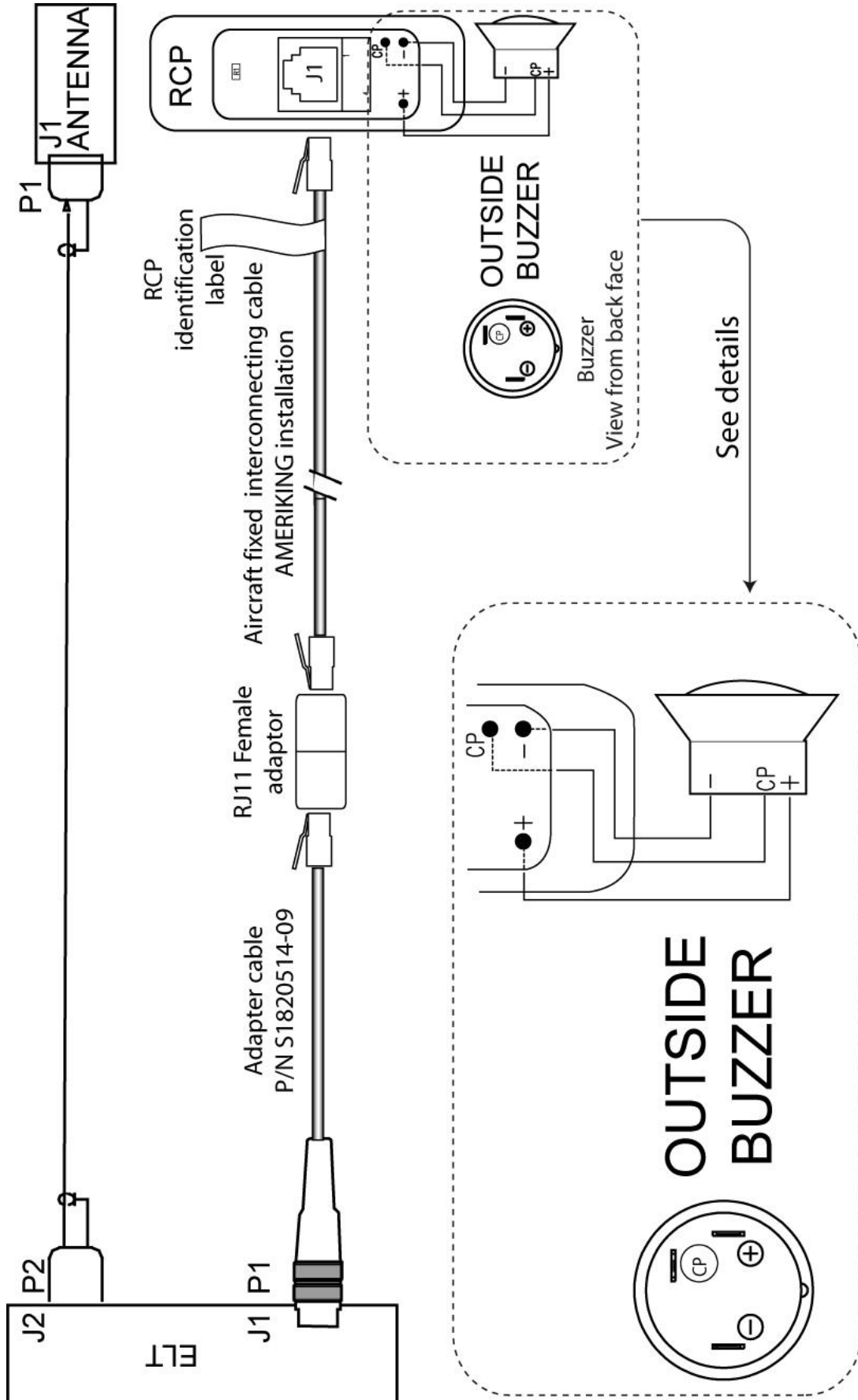
Check correct operation of RCP visual indicator by switching ELT and RCP as described in the ELT User Manual.

**6. CONNECTING DIAGRAMS**

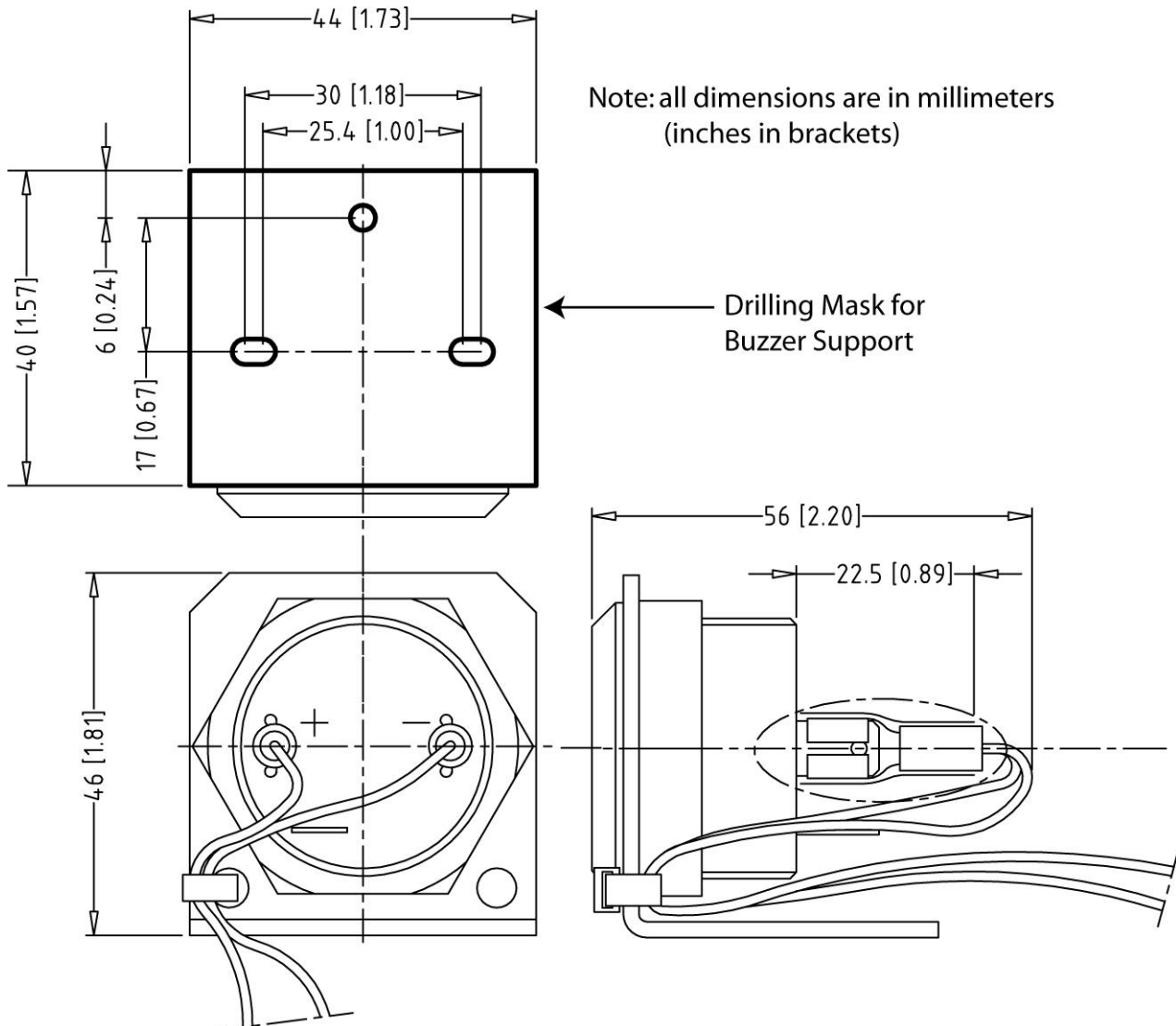
**6.1. ACK Retrofit**



**6.2. AMERIKING Retrofit**



### 6.3. OPTIONAL BUZZER OUTLINE DIMENSIONS AND WEIGHT



## 7. TECHNICAL CHARACTERISTICS AND COMPATIBILITY

### 7.1. Weight and Dimensions

- Dimensions: 53 x 19.4 x 35 mm (2.08 x 0.76 x 1.38 in.).
- Weight:
  - RCP: 20 g. (0.044lbs).
  - Adapter cable DIN12/RJ11: 30 g. (0.066 lbs).
  - RJ 11 coupler (AMERI-KING only): 9 g. (0.020 lbs).

### 7.2. Electrical Characteristics

- 3-position switch
  - Type: ON / MOM / ARM.
  - Contact type: Gold plate compatible with low current.
- Visual indicator (LED)
  - Color: red.

**7.3. Environmental Characteristics**

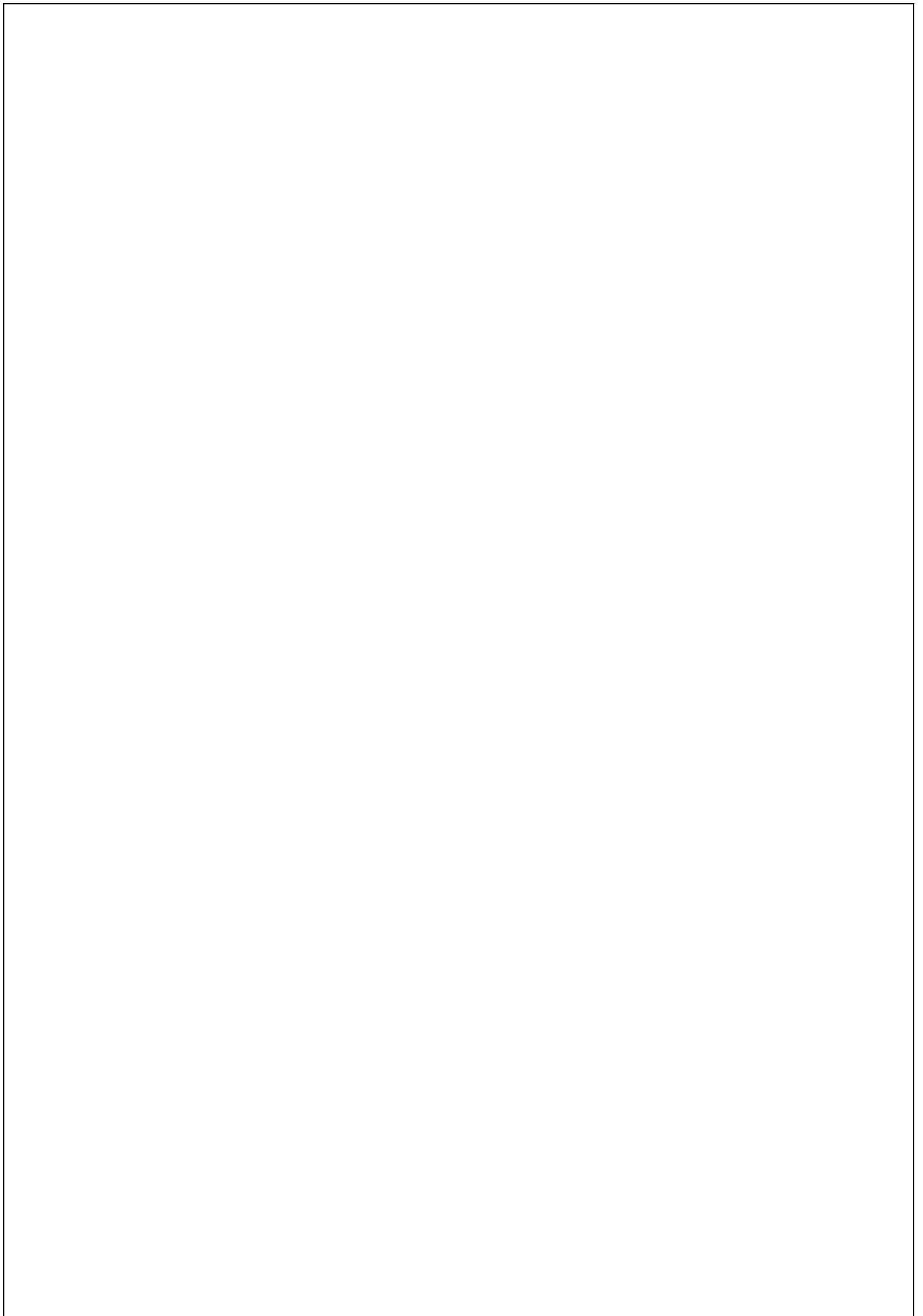
DO-160F ENV. Cat. [[ED62]XXA[ED62][S(M)]XXXXXXZXXX[ZC][ED62]XXXXXX

<b>.ENVIRONMENTAL CATEGORIES FORM FOR RC103 + Adapter cable + Outside Buzzer</b>		
TESTS	DO-160 F	CATEGORY
Temperature and altitude	4	§ 4.4.1 / ED62 (Class 1)
Low Temperature	4.5.1	§ 4.4.1 / ED62 (Class 1)
High Temperature	4.5.2 & 3	§ 4.4.1 / ED62 (Class 1)
In-Flight loss cooling	4.5.5	X
Altitude	4.6.1	X
Decompression	4.6.2	X
Overpressure	4.6.1	X
Temperature variation	5	X
Humidity	6	A
Operational shocks and crash safety	7	ED62 Special
Vibrations	8	S(M)
Explosion	9	X
Waterproofness	10	X
Fluids Susceptibility	11	X
Sand and Dust	12	X
Fungus	13	X
Salt Spray	14	X
Magnetic Effect	15	Z
Power Input	16	X
Voltage Spike	17	X
Audio Frequency Susceptibility	18	X
Induced Signal Susceptibility	19	ZC
Radio Frequency Susceptibility	20	ED62 Special
Emission of RF Energy	21	X
Lightning	22	XXXXX
Lightning Direct Effects	23	X
Icing	24	X
Electrostatic Discharges	25	X
Fire, Flammability	26	X

- Storage temperature: -55°C to +85°C

**7.4. Compatibility list**

- INTEGRA AP, P/N S1850501-02;
- INTEGRA AF, P/N S1851501-02;
- INTEGRA AF-H, P/N S1850501-02;
- INTEGRA AP-H, P/N S1850501-02;
- KANNAD 406 AF-COMPACT, P/N S1840501-01;
- KANNAD 406 AF-COMPACT (ER), P/N S1840501-04;
- OUTSIDE BUZZER KIT, P/N S1820515-06.



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