BS EN 16683:2015

BSI Standards Publication

Railway applications — Call for aid and communication device — Requirements

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of EN 16683:2015.

The UK participation in its preparation was entrusted to Technical Committee RAE/4/-/1, Railway applications - Braking.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2016

ISBN 978 0 580 76222 2

ICS 13.320; 45.060.01

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2016.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16683

December 2015

ICS 13.320; 45.060.01

English Version

Railway applications - Call for aid and communication device - Requirements

Applications ferroviaires - Dispositifs d'appel à l'aide et de communication à disposition des passagers - Prescriptions

Bahnanwendungen - Hilferufvorrichtung und Kommunikationseinrichtung für Fahrgäste - Anforderungen

This European Standard was approved by CEN on 7 November 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 16683:2015 E

Contents

Page

European foreword

This document (EN 16683:2015) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies:

— the functional requirements for a Call For Aid and Communication device;

— the dynamic analysis of the Call For Aid system.

NOTE 1 The Call For Aid function on existing vehicles may require modification to work in conjunction with vehicles that comply with this European Standard.

NOTE 2 The Call For Aid function is separate from the Passenger Alarm System (PAS), which is provided to deal with emergency situations. The PAS is described in EN 16334.

NOTE 3 The communication device is different from the PAS, but it can share some parts of the PAS to achieve its functionalities.

NOTE 4 The PAS is regarded as a safety relevant system whereas the CFA and communication device are non-safety relevant aids to passengers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16334, *Railway applications - Passenger Alarm System - System requirements*

prEN 16584 (all parts), *Railway applications — Design for PRM use — General requirements*

prEN 16585 (all parts), *Railway applications — Design for PRM use — Equipment and Components onboard Rolling Stock*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
authorized person
operational people authorized to deal with the situation following CFAD or communication device operation

Note 1 to entry An authorized person could be, for example, either staff on the train or at a call centre as defined by operating rules.

3.1.2
call for aid
CFA
system used to enable passengers to inform an authorized person or the driver of a request for help

3.1.3
call for aid device
CFAD
device used to trigger the CFA by a passenger

3.1.4
CFAD operated
status of the CFAD (for example a push button) when its passenger interface is manipulated in order to change its status and send information to the CFA system

3.1.5
communication device
system used to enable the passengers to speak to authorized persons

3.1.6
communication device interface
interface used by the passenger to speak to authorized persons

3.1.7
driver only operation
DOO
train without authorized persons on board, except the driver

3.1.8
public address
PA
system used by authorized persons to broadcast to the passenger areas

Note 1 to entry: This is also known as audible communication system.

3.1.9
sleeping car attendant
dedicated authorized person who is responsible for sleeping car(s) during night operation

3.1.10
staff on board operation
SOO
train with authorized persons on board in addition to the driver

3.2 Abbreviations

For the purposes of this document, the following abbreviated terms apply.

DMI

Train control and monitoring system

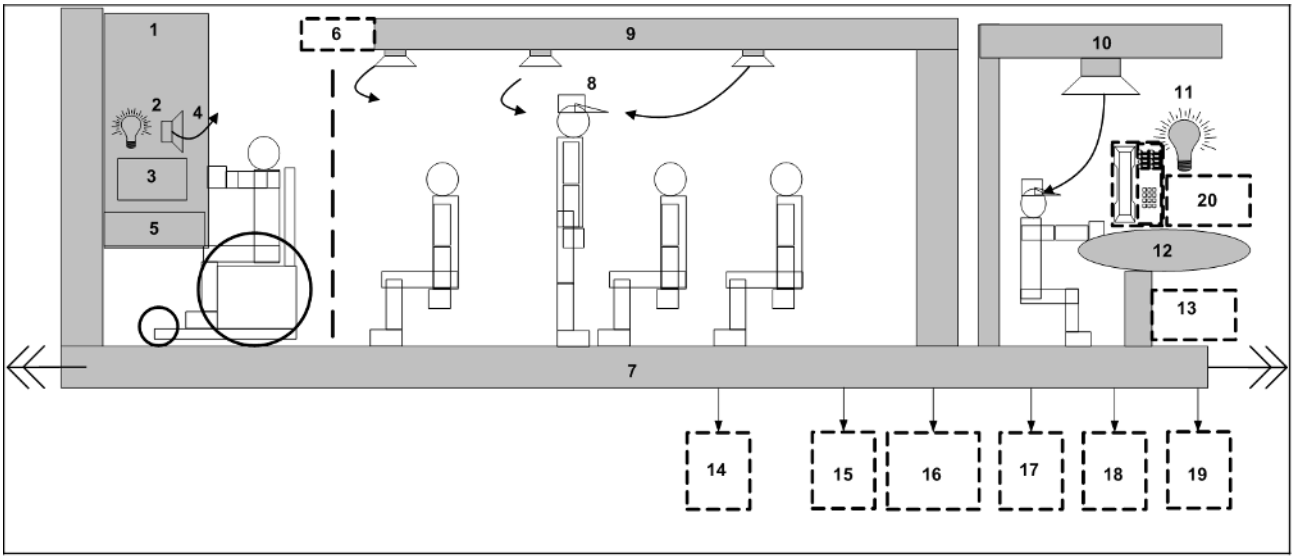
4 CFA

4.1 CFA interfaces overview

The CFA overview is summarized, as an example, by Figure 1 — Example of CFA general overview to show the different CFA system elements and their interaction through the train. It also shows those elements considered mandatory and those considered optional.

NOTE CFA provision is primarily for PRM passengers, but it can be used by any passenger on the train.

The different elements are more precisely described in the following clauses.



Key

shaded box - mandatory CFA system element

dotted box - optional CFA system element

1	CFA passenger interface (includes 2, 3, 4 and 5)	11	visual and acoustic devices
2	visual and acoustic feedback	12	acknowledgement button
3	CFAD (push button)	13	remote reset command (active cab only)
4	microphone/loudspeaker	14	wireless link
5	resetting device	15	recorder
6	visual location	16	passenger information system
7	CFA Function	17	others
8	authorized persons (optional for DOO)	18	TCMS
9	broadcast to inform the authorized persons on board that a CFAD has been operated	19	audio/intercom communication system
10	active driver cab or authorized persons area (if applicable)	20	location of operated CFAD

Figure 1 — Example of CFA general overview

4.2 CFA general requirements

The CFA shall have no interaction with the brake system.

The CFA shall not adversely interfere with the operation of the PAS.

The CFA shall not adversely interfere with the operation of the communication device.

For units designed to always be operated with authorized persons on board (SOO), the facilities for the authorized person shall be provided with the functionality to deal with the CFA operation, as set out in this European Standard. In this situation any action by the driver during CFA operation should not be required.

For units designed to be operated always by the driver alone (DOO), the active driver cab shall be provided with the functionality to deal with the CFA operation, as set out in this European Standard. An external call centre may be advised in parallel to the driver.

NOTE The above requirements are to prevent the CFA having a direct impact on the driver's ability to control the train.

For units designed to be operated as DOO or SOO, a device may be provided to suspend the active driver cab CFA functionality when authorized persons are on board. The operating mode selected by the device for the CFA should be consistent with the operating mode selected for door closing function (driver only operation or staff control).

This European Standard does not define when suspending the active driver cab CFA functionality is permitted, as this shall be described through operational rules.

All the changes of state of the CFA, including all the CFADs (operation, acknowledgement, reset, etc.), should be recorded.

The design of the CFAD passenger interfaces shall comply with prEN 16584 (all parts) and prEN 16585 (all parts).

At the locations where the CFAD is provided, it is permitted to support this operation with a communication channel. In this case, the operation of the CFAD shall also provide the additional functions of the communication device as defined in Clause 5 and a separate passenger operated communication device is not needed.

4.3 Basic CFA

4.3.1 Minimum requirements of the basic CFA

The aim of the basic CFA is to indicate to the authorized person that a CFAD has been operated. As a minimum the following requirements shall be fulfilled:

— an acoustic signal shall be broadcast within the vehicle and other vehicles connected to alert the authorized persons;

— for the CFAD in a sleeping compartment and universal toilets, there shall be a visible signal outside these rooms but inside the vehicle;

NOTE 1 For example, flashing the occupied light for universal toilet.

NOTE 2 Universal toilets are defined in the technical specification for interoperability for persons with reduced mobility (PRM TSI).

— the basic CFA shall be available in all train modes where passengers are allowed to be on the vehicle;

— the basic CFA does not include a communication channel or feedback of authorized persons acknowledgement.

NOTE 3 This is deemed to be the minimum requirements to comply with the PRM TSI.

4.3.2 Local basic CFA devices

The basic provision shall include:

— CFAD;

— acoustic device for feedback;

— visual indicators for feedback;

— information labels explaining the CFA operations.

NOTE For further information see prEN 16584-1 (contrast) and prEN 16584-2 (tactile).

4.4 CFA isolation

Isolation of the function by intentional action shall only be possible by an authorized person.

NOTE 1 The operating rules associated with this isolation are outside the scope of this European Standard.

It should be possible to isolate individual devices composing the CFA (for example some CFAD) without affecting the overall availability of the CFA.

NOTE 2 The operating consequences of CFAD isolation are outside the scope of this European Standard.

Isolation of the CFA shall be traceable. The CFA shall inform the authorized person and/or the driver that part or all the CFA has been isolated.

NOTE 3 Examples: sealed switch and note in incident report for the train, or recorded in an electronic system.

4.5 CFAD operation requirements

4.5.1 Actions and feedback at the CFAD location

The actions after the operation of a CFAD shall be:

— a local feedback (visual and audible) generated within 2 s;

— an output signal of a CFAD operation sent to the CFA. The CFA shall be latched until reset;

— the audible local feedback signal shall have a maximum duration of 3 s. It can be one or several tones;

— visual feedback detectable by the passenger, until the CFAD is reset.

If acknowledgement is required (see 4.8), visual feedback should change state when the CFAD operation is acknowledged by an authorized person. A label shall explain this change of status.

NOTE 1 For example, the visual local feedback signal could be switching on a flashing light at a frequency of less than 2 Hz, until CFAD operation is acknowledged. After acknowledgment, the flashing light would become steady.

NOTE 2 For further information see prEN 16584-1 (contrast) and prEN 16584-2 (tactile).

4.5.2 Actions at train level

4.5.2.1 General – all trains

The following requirements apply to SOO and DOO.

— Within 5 s following the operation of a CFAD, the CFA shall initiate a CFA audible signal broadcast throughout the train, unless the CFAD is locally reset (see 4.9).

— The CFA train broadcast audible signal should be broadcast to all vehicles even if the train is operating as coupled multiple units.

— If the same CFAD is operated several times before being reset, only the first operation shall be taken into account by the CFA.

— To aid the authorized persons dealing with the situation, different specific tone signals or vocal messages (that may be coded) can be used to indicate the location of the operated CFAD.

— For rolling stock intended to cross international boundaries, the audible signal for authorized persons should be a tone signal as given in Annex A.

NOTE For trains crossing borders it is advised to use a tone. For domestic only traffic a national language message may be used.

Specific additional requirements applicable to sleeping coaches are given in 4.6.

A PA broadcast announcement by the driver or another authorized person on board shall suspend the CFA train broadcast audible signal.

As an option the CFA can advise an external call centre.

4.5.2.2 SOO additional requirements

For SOO, the authorized persons can be advised by additional visual and/or audible signals in dedicated location(s).

Where provided at the authorized persons dedicated location(s), the audible signal shall be repeated each time an additional CFAD has been operated (for a maximum duration of 4 s).

4.5.2.3 DOO additional requirements

In the active driver cab there shall be visual and audible signals to advise the driver within 5 s after the initiation of the broadcast following the operation of a CFAD.

The audible signal in the active driver cab shall be repeated each time an additional CFAD has been operated (for a maximum duration of 4 s). The CFA operation audible signal in the active driver cab can be the same as used for the PAS operation.

The visual signals for CFA operation in the active driver cab shall be different from those used for PAS operation. The visual signal shall remain until all operated CFAD are reset.

For trains designed to use a communication with an external call centre to deal with CFA event, if this communication link with an external call centre is not available, CFAD operation information shall be given in the active driver cab.

When the train stops at the station with doors unlocked and when there is a CFAD operated on the train, the internal audible and visual signals for CFAD operation should be repeated once in the active driver cab as a reminder.

4.6 CFAD operation in sleeping coach

The following requirements are complementary requirements for sleeping coaches to those set out in 4.5.

— The CFA train broadcast audible signal should be suspended in the sleeping coach.

NOTE This is to avoid disturbing the occupants during night operation.

— There shall be a provision to advise the sleeping coach attendant of an operated CFAD and its location within the sleeping coach under the supervision of the attendant.

— In the sleeping coach attendant's area, there should be provision to disconnect the associated vehicle(s) from the CFA train broadcast audible signal. The default condition shall be day operation, which does not disconnect the sleeping coaches from the general broadcast provided by the train.

— The disconnected status of a sleeping coach shall be visible in the dedicated area provided for the sleeping coach attendant, in order to be changed back in case of day operation.

4.7 Locating operated CFAD

Devices shall be provided to indicate the location where the CFAD has been operated. In addition to 4.3.1, the following requirements shall apply:

— where the capability for remote resetting of a CFAD (see 4.9) is provided, the system shall enable the authorized person to be informed of the locations of all operated CFAD;

— visual signals can be used on the outside of the vehicle to indicate where a CFAD has been operated. This external signal shall only be active when the train is at standstill.

NOTE This is to inform authorized persons not on the train where a CFAD has been operated.

4.8 Acknowledgements and feedback

4.8.1 SOO acknowledgement and feedback recommendations

The on-board authorized person should be capable of acknowledging a CFAD operation.

If an on-board authorized person acknowledges a CFAD operation:

— this shall turn off the train broadcast generated by this CFAD operation;

NOTE This is to avoid masking additional CFAD operations.

— this should be detectable at the active CFAD location (see 4.5.1).

If a CFAD is reset before the authorized person acknowledgement, the CFA should take this action as:

— the acknowledgement for that CFAD;

— the local reset of that CFAD.

4.8.2 DOO acknowledgement requirements

The CFA shall allow the driver to acknowledge CFAD operation in the active driver cab. This action shall immediately cancel the audible signal. This action shall be available for any additional CFAD activation.

If a first CFAD has already been acknowledged by the driver, the CFA shall automatically generate the acknowledgement to the second and all subsequent CFAD operations. This situation shall continue until all the operated CFAD have been reset.

NOTE 1 This is to avoid unnecessary actions by the driver.

In the active driver cab, an acknowledgement device provided for another system (e.g. PAS) may be used for acknowledgement of CFAD operation.

If a CFAD is reset before the driver acknowledgement, the CFA should take this action as:

— the acknowledgement for that CFAD;

— the local reset of that CFAD.

In the situation where the PAS has been acknowledged by the driver then the CFA system shall treat the operation of any CFAD as a second operated device (see 4.8.3).

NOTE 2 From an operational point of view, the driver's actions to deal with a PAS event has a higher priority.

NOTE 3 The driver is not required to acknowledge the operated CFAD. This feature is to minimize the workload of the driver.

4.8.3 DOO feedback to passengers

For the first acknowledged operated CFAD see 4.5.1.

For second and subsequent operated CFADs, the CFAD local feedback light shall initially show the 'not acknowledged status', and then shall automatically change to an 'acknowledged status'. This change of status should be between 4 s and 10 s.

NOTE The driver is not required to acknowledge each operated CFAD. This feature is to minimize the workload of the driver.

4.9 CFAD reset

Each CFAD shall have the capability to being individually reset. This shall require intentional action, without using a tool.

The passenger should be able to reset the CFAD. A label in accordance with the prEN 16584 series shall be provided to indicate how this is achieved.

NOTE 1 This is to permit any passenger to correct an unintentional operation of CFAD.

Each operated CFAD shall return to its initial status after being reset.

The resetting of all the operated CFAD shall end the CFA train broadcast acoustic signal.

As an option remote resetting of CFAD is permitted, a dedicated device shall be provided for that action.

NOTE 2 The device may be a push button, an icon as a DMI input, etc.

4.10 Dynamic analysis of the CFA function

The requirements of Clause 4 are illustrated by event sequences in Annex B. This annex is informative and presents sequences for SOO and for DOO.

5 Communication device

5.1 Introduction

The communication devices are mandatory on trains designed for DOO and optionally, for PRM purposes. The requirements set out in Clause 5 shall apply.

5.2 General requirements

This section defines the communication device requirements:

— the communication device shall have no interaction with the brake system;

— the communication device shall not adversely interfere with the operation of PAS;

— the communication device shall enable the authorized person to talk to the location where a communication device interface has been operated;

— operation of the communication device interface by a passenger shall:

1) initiate a communication request with an authorized person;

2) activate a signal to initiate an alert at the location of the authorized person.

NOTE To initiate a communication is to start the functionality to open the communication channel.

— the communication device shall require an action by the authorized person before the communication channel is opened between the passenger and the authorized person;

— it is permitted to use acknowledgement to indicate to the passenger that authorized persons are aware of their request before the communication channel is opened;

— it is permitted to use the PAS 'staff aware' light to indicate to the passenger that authorized persons are aware of their request before the communication channel is opened;

— after the communication channel has been opened, the communication device shall not require any further action by the passenger. In case of repetitive action by a passenger on the same communication device interface, only the first action is considered. The repeated actions on the same communication device interface are ignored until the communication is closed;

— all the changes of state of the communication device should be recorded;

— the communication channel shall only be available where a communication device interface has been operated;

— an action is required by the authorized person to cancel the communication channel;

— in the event of the operation of another communication device interface, the communication device:

1) shall generate another signal to initiate an alert for the authorized person;

2) should permit the authorized persons to communicate by broadcast to all the communication device interface operated locations;

3) shall prevent several operated communication device interfaces being able to talk to each other.

— for SOO or for DOO designed to be operated with an external call centre, a device may be provided to suspend the driver functionality when authorized persons are on board or when call centre functionality is used;

— within a maximum of 1 s of the communication device interface being operated, there shall be a local visual and audible indication that it has been operated;

— if the option is provided for a communication channel for CFA, the opening of the communication channel by the authorized person shall cancel the CFA train broadcast acoustic signal.

5.3 Communication device interface design requirements

The communication device interface is set out in Annex C.

The device used to activate the communication request shall be different from that used to activate the PAS. It is permitted to share the passenger communication interface and the passenger feedback associated with the PAS as defined in EN 16334.

5.4 Communication within a sleeping coach

In a sleeping coach, communication should be available between attendant area and the universal toilets and sleeping compartment when a CFAD is operated.

If the CFA train broadcast signal is locally disconnected by using the devices in the sleeping coach attendant's area, the communication channels shall be routed to the attendant area.

5.5 Communication priority requirements

Activated communication devices or communications initiated by an active CFAD shall not inhibit PAS or PA communications.

NOTE PAS and PAs from the driver are regarded as safety related systems and have priority.

Annex A
(informative)

CFA train broadcast audible signal tone for cross border trains

A CFA train broadcast audible signal tone for cross border trains is suggested below:

— 1 signal = 2 beeps – silence – 2 beeps;

— 1 beep = 0,25 s +/- 10 %; 340 Hz +/- 10 %;

— Interval between the 2 beeps = 0,75 s +/- 10 %;

— Silence = 1,75 s +/- 10 %.

Signals repeated after a 2 min delay.

Annex B
(informative)

Flowchart of CFA operation

This annex presents detailed events sequences for trains capable of driver only operation and for staff on-board operation. This is a simplified diagram and it does not cover all the detailed requirements set out in this standard.

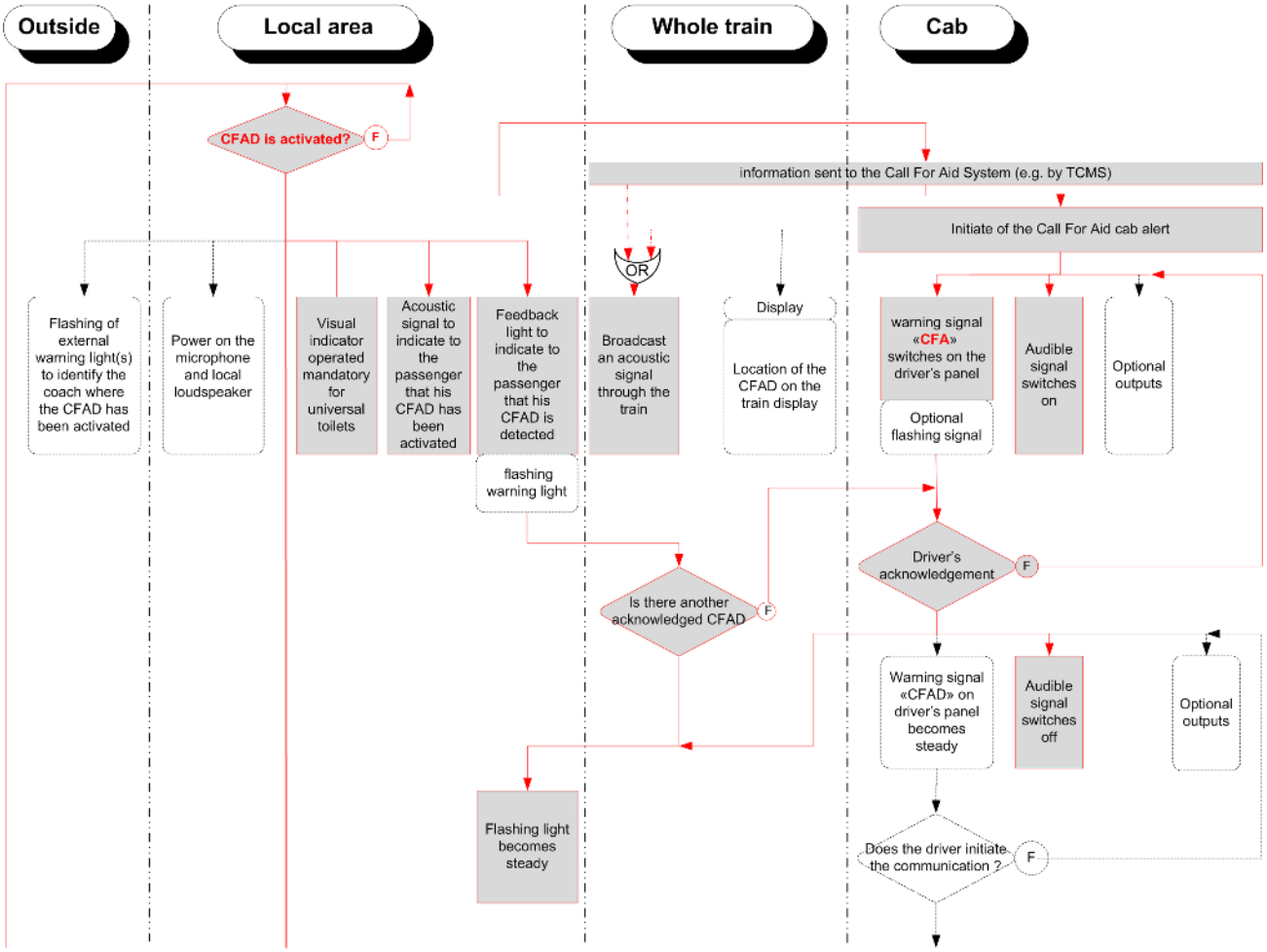
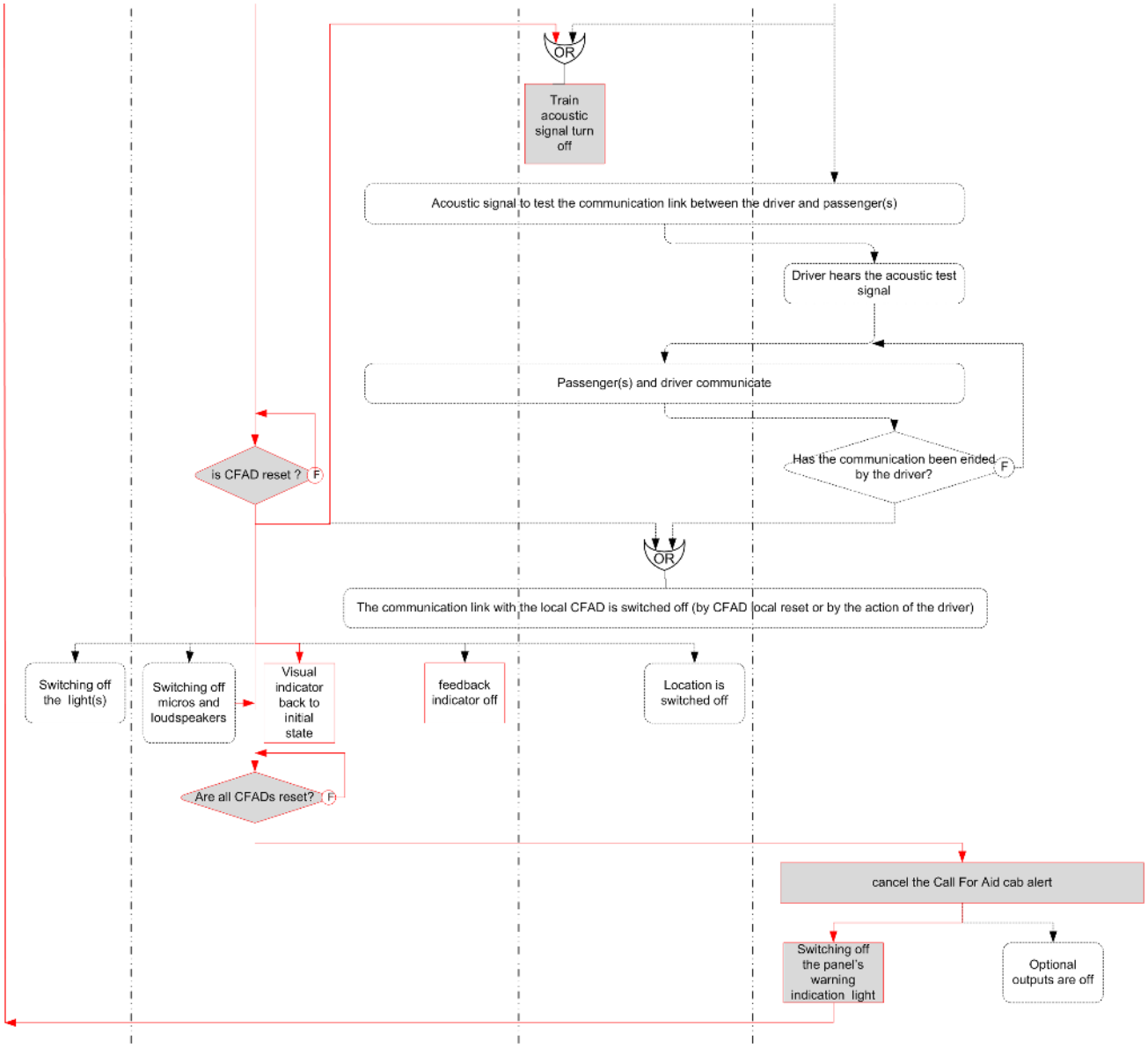


Figure B.1 a) — CFA sequences



Key

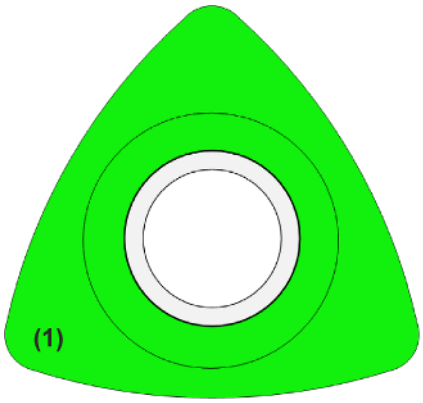
solid lines: mandatory (corresponding to basic CFA)

F false

Figure B.1 b) — CFA sequences

Annex C
(informative)

Communication device passenger interface



Key

(1) The colour of the operating device or the shape around the operating device should be green, it should not be red. It should contrast with the background (see prEN 16584-1).

Figure C.1 — Example of communication device passenger interface button

The form of the shape around the operating device should be a triangle.

The feedback lights should be located adjacent to the operating device (within 10 cm).

The label defined below should be located adjacent to the operating device (within 10 cm).

The minimum size of the label should be 6 cm × 6 cm. A handset symbol should be displayed. It is permitted to incorporate it in the button or on a separate label. The text on the label shall comply with prEN 16584-1.

Front colour and text following ISO 3864-1

Figure C.2 — Label

Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the Directive 2008/57/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in Table ZA.1, ZA.2, ZA.3 for the new published TSIs, within the limits of the scope of this standard, confers a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard, the TSI Locomotive and Passenger Rolling Stock (published on 12 December 2014) and Directive 2008/57/EC

Clause/ subclauses of this European Standard	Chapter/§/annexes of the TSI	Corresponding text, articles/§/annexes of the Directive 2008/57/EC	Comments
The whole standard applies	4.2 Functional and technical specification of the sub-system 4.2.5 Passenger related items 4.2.5.4 Communication devices for passengers 4.2.10 Fire safety and evacuation 4.2.10.4 Requirements related to emergencies 4.2.10.4.3 Passenger alarm and communication means	Annex III, Essential requirements 1. General requirements 1.6. Accessibility 2. Requirements specific to each subsystem 2.4 Rolling stock 2.4.1 Safety §5, §10 2.4.5. Accessibility 2.7. Telematics applications for freight and passengers 2.7.5. Accessibility	

Table ZA.2 — Correspondence between this European Standard, the TSI Safety in Railway Tunnels (published on 12 December 2014) and Directive 2008/57/EC

Clause/ subclauses of this European Standard	Chapter/§/annexes of the TSI	Corresponding text, articles/§/annexes of the Directive 2008/57/EC	Comments
The whole standard applies	4.2 Functional and technical specification of the subsystems 4.2.3 Subsystem rolling stock 4.2.3.3 Requirements related to emergencies 4.2.3.3.3. Passenger alarm and communication means	Annex III, Essential requirements 1. General requirements 1.6. Accessibility 2. Requirements specific to each subsystem 2.4 Rolling stock 2.4.1 Safety §5, §10 2.4.5. Accessibility 2.7. Telematics applications for freight and passengers 2.7.5. Accessibility	This TSI refers to the requirements set out in the LOC & PAS TSI, 4.2.10.4.3.

Table ZA.3 — Correspondence between this European Standard, the TSI Persons with Reduced Mobility (published on the 12 December 2014) and Directive 2008/57/EC

Clause/ subclauses of this European Standard	Chapter/§/annexes of the TSI	Corresponding text, articles/§/annexes of the Directive 2008/57/EC	Comments
The whole standard applies	5. Interoperability constituents 5.3 List and characteristics of constituents 5.3.2 Rolling stock 5.3.2.6 Interface of the call for aid device	Annex III, Essential requirements 1. General requirements 1.6. Accessibility 2. Requirements specific to each subsystem 2.4 Rolling stock 2.4.1 Safety §5, §10 2.4.5. Accessibility 2.7. Telematics applications for freight and passengers 2.7.5. Accessibility	This TSI refers to the requirements set out in the LOC & PAS TSI 4.2.10.4.3.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Bibliography

prEN 16186-2:2015, *Railway applications — Driver's cab — Part 2: Integration of displays, controls and indicators*

prEN 16186-3:2014, *Railway applications — Driver's cab — Part 3: Design of displays*