



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

E.136

(05/97)

SERIES E: OVERALL NETWORK OPERATION,
TELEPHONE SERVICE, SERVICE OPERATION AND
HUMAN FACTORS

Operation, numbering, routing and mobile services –
International operation – General provisions concerning
users

**Specification of a tactile identifier for use with
telecommunication cards**

ITU-T Recommendation E.136

(Previously CCITT Recommendation)

ITU-T E-SERIES RECOMMENDATIONS

OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

OPERATION, NUMBERING, ROUTING AND MOBILE SERVICES

INTERNATIONAL OPERATION	E.100–E.229
Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139
Operation of international telephone services	E.140–E.159
Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.199
Maritime mobile service and public land mobile service	E.200–E.229
OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE	E.230–E.299
Charging in the international telephone service	E.230–E.249
Procedures for remuneration of Administrations for facilities made available	E.250–E.259
Measuring and recording call durations for accounting purposes	E.260–E.269
Establishment and exchange of international accounts	E.270–E.299
UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS	E.300–E.329
General	E.300–E.319
Phototelegraphy	E.320–E.329
ISDN PROVISIONS CONCERNING USERS	E.330–E.399
<i>QUALITY OF SERVICE, NETWORK MANAGEMENT AND TRAFFIC ENGINEERING</i>	
NETWORK MANAGEMENT	E.400–E.489
TRAFFIC ENGINEERING	E.490–E.799
QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING	E.800–E.899

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION E.136

SPECIFICATION OF A TACTILE IDENTIFIER FOR USE WITH TELECOMMUNICATION CARDS

Source

ITU-T Recommendation E.136 was prepared by ITU-T Study Group 2 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 26th of May 1997.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had/had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

© ITU 1997

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

CONTENTS

	<i>Page</i>
Introduction	iv
1 Scope	1
2 References	1
3 Definitions and abbreviations.....	1
3.1 Definitions	1
3.2 Abbreviations.....	2
4 Requirements of tactile identifier	2
5 Recommendation for a tactile identifier	2
6 Physical description of tactile identifier.....	2

Introduction

The purpose of this Recommendation is to specify the form, size and position of a tactile identifier for Machine Readable Cards (MRCs) used in telecommunication applications, i.e. prepaid telephone cards. Machine readable card technologies can present problems for all users: namely, to orient and turn the card the right way so that it may be inserted correctly into the card-reading device. For people who are blind or severely visually impaired, the task of orienting the MRC correctly can be a substantial obstacle. With at least four different tactile identifier designs in concurrent use, people will be confused. There is, therefore, a need for a single international standard for a tactile identifier on MRCs to aid all users, especially blind and visually-impaired people, in orienting cards quickly and correctly. A tactile identifier on MRCs will also substantially aid visually-non-impaired people to orient and insert cards more quickly and with fewer errors.

SPECIFICATION OF A TACTILE IDENTIFIER FOR USE WITH TELECOMMUNICATION CARDS

(Geneva, 1997)

1 Scope

The scope of this Recommendation is currently limited to prepaid telephone cards of the ID-1 format.

NOTE – Further investigation is needed to determine whether the scope of this Recommendation should be extended to include telecommunication charge/calling cards and other cards used in telecommunication applications (e.g. debit/credit cards).

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- ITU-T Recommendation E.116 (1997), *International telecommunication charge card service*.
- ITU-T Recommendation E.118 (1996), *The international telecommunication charge card*.
- ISO/IEC 7810:1995, *Identification cards – Physical characteristics*.
- ISO/IEC 7811-1:1995, *Identification cards – Recording technique – Part 1: Embossing*.
- ISO/IEC 7811-2:1995, *Identification cards – Recording technique – Part 2: Magnetic stripe*.
- ISO/IEC 7811-3:1995, *Identification cards – Recording technique – Part 3: Location of embossed characters on ID-1 cards*.
- ISO/IEC 7811-4:1995, *Identification cards – Recording technique – Part 4: Location of read-only magnetic tracks – Tracks 1 and 2*.
- ISO/IEC 7811-5:1995, *Identification cards – Recording technique – Part 5: Location of read-write magnetic track – Track 3*.
- ISO/IEC 7816-1:1987, *Identification cards – Integrated circuit(s) cards with contacts – Part 1: Physical characteristics*.
- ISO/IEC 7816-2:1988, *Identification cards – Integrated circuit(s) cards with contacts – Part 2: Dimensions and location of the contacts*.

3 Definitions and abbreviations

3.1 Definitions

This Recommendation defines the following terms:

3.1.1 ID-1: A standard for a personal identification card made from solid or laminated PVC or similar; 85.60 mm by 53.98 mm, 0.76 mm thick, with 3.18 mm radius corners (see ISO/IEC 7810).

3.1.2 machine readable card (MRC): An ID-1 card bearing information in a format (magnetic, inductive, electronic, mechanical or optical) which can be read by a magnetic, electronic, mechanical or optical card reading device.

3.1.3 prepaid card: An ID-1 card or thin flexible card bearing a magnetic stripe, integrated circuit or inductive storage coils which can store a preset number of tariff units for paying for phone calls or other telecommunication services. When the card is used, units are deleted sequentially from the memory until all have been used and the card expires.

3.2 Abbreviations

This Recommendation uses the following abbreviations:

ISO International Organization for Standardization.

ITU International Telecommunication Union.

4 Requirements of tactile identifier

Below is a compilation of the most desirable requirements for the design of a standard common tactile identifier for all types of prepaid telephone cards. These requirements are of equal importance and are, thus, not prioritized.

- **High tactile conspicuity** – The tactile identifier must be easy to feel and recognize tactually by all users, but especially by blind and visually-impaired people, elderly people, etc.
- **High visual conspicuity** – The tactile identifier must be easy to see and recognize by non-visually-impaired users.
- **Asymmetrical position** – The tactile identifier must have an asymmetrical position so that the orientation of the card is unequivocally defined.
- **User testing** – The tactile identifier to be recommended should be selected on the basis of actual user testing to verify that the design meets the user requirements of the intended user groups.
- **Compliance with existing standards** – A standard for a common tactile identifier for prepaid telephone cards must in all other respects comply with existing standards for such cards, e.g. ISO/IEC 7810:1985.
- **Technical compatibility** – The tactile identifier should not interfere with the functioning of existing card reading technologies, i.e. embossing, magnetic stripes, integrated circuits "smart chips", optical storage, inductive storage, security holograms, etc.
- **Mechanical compatibility** – The tactile identifier should be positioned so that it will not interfere with the proper working of the mechanical card-handling technologies, card-feeding mechanisms, swipe-card readers, carbon-copy rollers, card-dispensing vending machines, etc.
- **Avoid proliferation of new designs** – Preferably, a standardized tactile identifier should use an existing design to avoid proliferation of new designs. Only when it is not possible to use any existing design should a new tactile identifier be created.

5 Recommendation for a tactile identifier

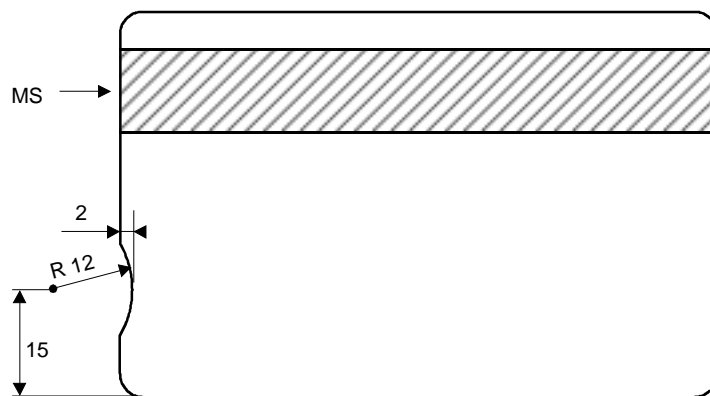
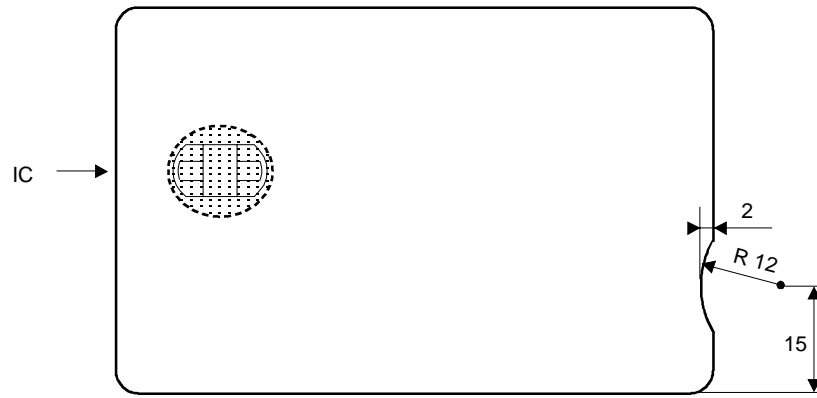
On the basis of user trials with different tactile identifier designs and allowing for technical constraints imposed by different card reading technologies, a standard for a tactile identifier on prepaid cards is recommended (see Figure 1).

6 Physical description of tactile identifier

The tactile identifier, when used, shall conform with the form, dimensions and location shown in Figure 1.

The figure shows the position and the geometry of the tactile identifier for telephone prepayment (ID-1) cards in two views: the upper view shows the front side of the card; the bottom view shows the rear side of the card (not to scale). All measures are in millimetres (mm). IC = integrated circuit, MS = magnetic stripe.

The standard tactile identifier shall be a 2 mm (± 0.1 mm) deep, segment-shaped edge indentation with a radius of 12 mm (± 0.1 mm) in the right hand short edge of the card, its centre located 15 mm (± 0.1 mm) from the lower long edge and 10 mm (± 0.1 mm) outside the right hand short edge of the card. The corners of the indentation where it meets the straight edge shall be rounded ($r \cong 0.5$ mm) to avoid sharp corners that may cause injury.



T0105180-96/d01

Figure 1/E.136

ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communication
Series Z	Programming languages