ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-83

SAFETY REQUIREMENTS FOR DTE-TO-DCE INTERFACE

2nd Edition – September 1985

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BRIEF HISTORY

An initiative by ECMA resulted in a joint study with CEPT (European Conference of Posts and Telecommunications Administrations) conducted by rapporteurs from each organization on the safety requirements at the interface between a DCE and a DTE (terminal) in a Public Data Network. The result was ECMA-83, 1982, simultaneously approved as CEPT Recommendation T/CD 04-03.

The present revision resulted from further study, with participation also from rapporteurs from EUCATEL (European Conference of Associations of Telecommunication Industries) aimed at extending the scope to include the DTE-to-DCE interface on a telephone network. It contains identical requirements for both types of network, based on existing practice and experience on the telephone network. To achieve this commonality it was decided to modify the 1982 requirements to provide for touch-safe conditions at the interfaces.

It is intended to publish further related agreements later.

The text of the Preface of the CEPT Recommendation is reproduced below for information.

(Draft revision of) Recommendation T/CD 04-03;
Safety requirements for DTE-DCE interfaces.

The conference of European Postal and Telecommunications Administrations,

Considering,

That harmonization of safety requirements has been studied by GT/CD in co-operation with the European Computer Manufacturers Association (ECMA) and the European Conference of Associations of Telecommunication Industries (EUCATEL),

Recommends,

That the following requirements be used in future DTE "Permission To Connect" procedures by CEPT Administrations and for the specifications of DCEs by these Administrations.

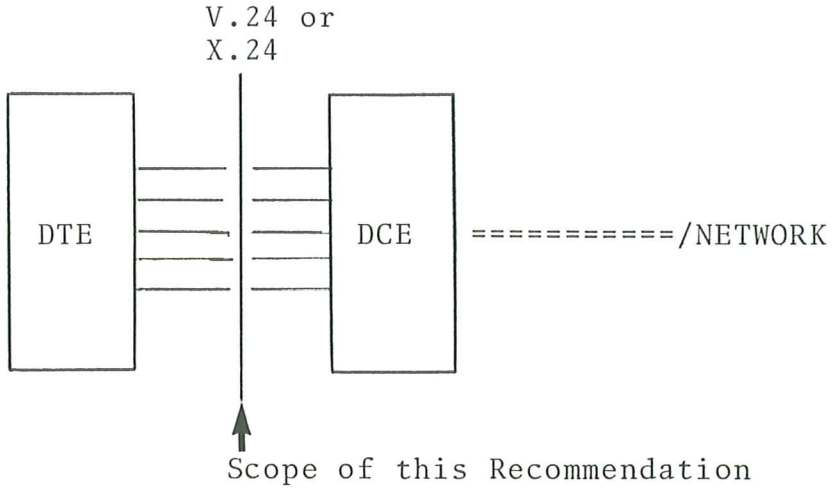
This Recommendation is the subject of further study and possible amendment.

NOTE

The articles of CEPT do not impose an obligation on member Administrations to apply the Recommendations of the Conference.

1. SCOPE

This Standard ECMA-83 specifies requirements to prevent electric shock hazards from existing at, or passing in either direction through, the interface connector between Data Terminal Equipment (DTE) and Data Circuit terminating Equipment (DCE) in interchange circuits as defined in CCITT Recommendation V.24 and X.24. For definition of DCE and DTE, reference is made to the CCITT book "Terms and Definitions".



The general safety of the equipment (e.g. for the operator) is not covered by this Standard, which is based on the assumption that the equipment meets the relevant standards for this purpose.

The certicifation procedure, that is the way in which it is certified that a specific equipment design meets the requirements specified, is also not covered by this Standard.

This Standard is a technical description for the DTE-to-DCE interface. It is applicable for connection of privately-owned DTE to Administration-owned DCE but its use with privately-owned DCE is not precluded.

This Standard contains no requirements for the connection points of a DCE to the telecommunication system (privately-owned or Administration-owned) with regard to safety on this system.

NOTE 1

The requirements for the connection points of an Administration-owned DCE to the telecommunication network are covered by CEPT Recommendation T/CD 1-1.

Administrations may require precautions in addition to this Recommendation when DTE-DCE interconnection is to be established via PTT wiring.

2. REFERENCES

IEC Publication 65	Safety requirements for mains operated electronic and related apparatus for household and similar general use.

IEC Publication 364-4-41	Electrical Installations of Buildings - Part 4 Protection for Safety - Chapter 41 Protection against Electric Shock
IEC Publication 380	Safety of electrically energized office machines
IEC Publication 435	Safety of Data Processing equipment
IEC Publication 664	Insulation co-ordination within low voltage systems including clearancies and creepage distances for equipment
IEC Publication 664A	First supplement to Publication 664
CEPT Recommendation T/CD 1-1	General engineering requirements for data circuit terminating equipment for analogue and digital networks
CCITT Volume X; Fascicle X.1	Terms and Definitions
ECMA-57	Safety requirements for Data Processing Equipment

In general, the edition of a publication which is applicable is the last one published. However, when a revision occurs, compliance with either the latest edition or the previous edition is acceptable during an interim period.

3. REQUIREMENTS

V.24 and X.24 interchange circuits shall meet one of the following requirements:

A. SELV circuits as defined in IEC 380, IEC 435 or ECMA-57.

B. SELV circuits as defined in IEC 364-4-41, not exceeding 25 Vrms or 60 Vdc.

NOTE

IEC 664 and 664A should be taken into account in designing these circuits.

C. Circuits meeting the requirements for accessible terminals in IEC 65.

NOTE 2

Use of the above circuits results in an interface that is safe to touch, whether it is accessible or not, since these circuits comply with the various requirements in different IEC standards for parts and circuits permitted to be accessible tc touch. This implies that they will not assume a hazardous voltage under normal conditions and single fault conditions.

NOTE 3

Interconnection of equipment complying with this Standard to equipment which does not comply should be avoided. Where such interconnection cannot be prevented the following shculd be noted.

Earthed circuits will probably be unaffected by the other unit, whereas floating circuits, previously safe to touch, may be degraded. Where this possibility is to be avoided, earthed circuits are preferred.