

GERMAN ADVISORY NOTE

German Advisory Note Number: DE 04

Subject: Inter-working after receiving ringing signals having a long duration

APPLICABILITY

This note is applicable for Terminal Equipment intended for connection to the German Public Switched Telephone Networks, in addition to:



" CTR 21" (When published)

NOTE: Until CTR 21 is available, reference should be made to ETSI document prTBR 21 (Sept 1997) or, when it is available, to TBR 21.

Appendix to this Advisory Note:

A: Additional requirements and tests for attachment to the German PSTN.

In consideration of the following:

- Ringing signals with a duration of up to 6.5 s can occur in some maintenance situations in the German PSTN.
- If a TE is not able to withstand this kind of ringing signal, it will impair its the capability to interwork properly.

The German Regulatory Authority advises the following:

To ensure interworking with the German Public Switched Telephone Network, the TE shall, in addition to the requirements of CTR 21, comply with the requirements found in Appendix A of this Advisory Note.

It is the responsibility of the supplier to provide information for users as to whether the Terminal Equipment complies with the additional requirements for the German Public Switched Telephone Network specified in this Advisory Note.

Appendix A also specifies the method to assess compliance with the additional requirement, including reference to the additional tests to be performed to dynamically assess compliance with the additional requirements.

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Appendix A

to

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A.1 INTRODUCTION

Terminal equipment approved to CTR 21 may not inter-work properly with the German Public Switched Telephone Network.

This Appendix specifies requirements to which a TE shall comply, in addition to the requirements of CTR 21 to ensure inter-working with the German Public Switched Telephone Network. It also specifies the method to assess compliance with these additional requirements, including reference to additional tests to be performed to dynamically assess compliance with the additional requirements.

A.2 REFERENCES

- [1] CTR 21; Terminal Equipment (TE). Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting the voice Telephony Service) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signalling.

NOTE: This document makes reference to CTR 21. Until CTR 21 is available, reference should be made to the base ETSI documents prTBR 21 (Sept 1997) or, when it is available, to TBR 21.

A.3 REQUIREMENTS and ASSOCIATED TESTS

A.3.1 Characteristics of TE for ringing signals

NOTE: The following requirements are in addition to clause 4.4.2. of TBR21.

A.3.1.1 Ringing signal overload (Requirement - New Clause 4.4.2.4)

Justification: 91/263/EEC, Article 4(f); Inter-working with the PSTN is assured by requiring the TE to withstand a load caused by ringing signal with a duration up to 6,5 s. The German PSTN may not be capable of a proper interworking with TE's which cannot handle this kind of ringing signals.

Requirement: The terminal shall be tested with a DC-voltage of $U = 63 \text{ V}$ ($R_i = 140 \text{ W}$) and $U = 85 \text{ V}$ ($R_i = 1340 \text{ W}$), superimposed in each case by an AC voltage $U_{\text{eff}} = 75 \text{ V}$ (25 Hz). The duration of the load is 6,5 s. After the test the TE shall still fulfill all remaining requirements of this TBR.

NOTE: This kind of signal can occur in maintenance-procedures. Under German national regulations, if the TE would stop inter-working with the PSTN after such a signal, the operator would be liable for any loss of service.

Test: The test shall be conducted according to A.3.1.2

A.3.1.2 Ringing signal overload (Test - New Clause A 4.4.2.4)

Requirement: Subclause A.3.1.1

Purpose: To ensure interworking of TE after ringing signals up to 6,5 s.

Measurement principle:

Preamble: Set the TE in quiescent state with answering facility, if provided, enabled.

Test state: Quiescent state.

Test configuration:

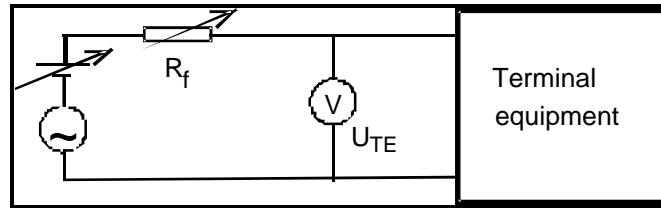


Figure A.8

DC feeding arrangement:

Feed voltage: 63 V. Feed resistance:
140 W. Feed voltage: 85 V.
Feed resistance: 1340 W.
Polarity shall be switched between each feed resistance.

Measurement points: The ringing signal has a sinusoidal source of 25 Hz and has duration of 6,5 s (on).

$U_{TE\text{ eff}} = 75\text{ V}$

Safety Warning: This test presents the potential for a shock hazard. Ensure satisfactory safety precautions are implemented to reduce the risk of electric shock.

Measurement execution:

Send the ringing signal described above 2 times with a pause of 2 s in between.

Formal processing: None.

Verdict: If TE after this test complies with all other tests of CTR 21 then Pass; else Fail.

Guidance: This Test should be done as the first one, when testing a TE. For automatic answering, if the TE seizes the line during the application of the test ringing sequence, the sequence shall be completed, but the test-setup shall not be adjusted to compensate any reduction in $U_{TE\text{ eff}}$ which occurs as a result of seizure.

A.3.1.3 Requirements Table (CTR-RT)

The requirements table of CTR 21, Annex B is still applicable.