



TETRA Terminal Interoperability Certificate

Date of issue: 17 October 2001

CLEARTONE

TETRA Terminal:

Terminal Type:	CM9000P
Hardware:	Serial number 00001
Software:	version 0.32
Firmware:	-

Tele Danmark has witnessed that the Cleartone Terminal is operating in accordance with

TTR002 Ver 1.0.1[April 2000] DMO TETRA Interoperability Profile (TIP)

for the specified features.

Features:	Tested(Yes/No/NA)
• Activation and Deactivation of Direct Mode	No
• Group call	Yes

NA: means not applicable (not supported)

The tests have been performed on the Cleartone terminal on the 20th October 2000. The tests were conducted using/establishing communication with the DMO terminals stated on page 2 of this certificate.

Authorised IOP test engineer

Preben Raae Hansen

Tele Danmark, Telelaboratoriet

Sven Lundbech

Telelaboratoriet (Tele Danmark) has made every effort to ensure that tests have been made correctly, and in accordance with DMO TIP. Telelaboratoriet (Tele Danmark) has no liability for the test results, or towards the manufacturers.

Tele Danmark
Telelaboratoriet
Telegade 2
2630 Taastrup

Tlf. +45 43 34 55 01
Fax +45 43 71 59 02

E-mail: info@telelaboratoriet.dk

Web-site: <http://www.telelaboratoriet.dk>



Information about the equipment used for testing

Testing 20th October 2000:

The tests performed on 20th October 2000 were performed using the following terminals:

Manufacturer	Terminal Type	Software/Hardware Release No.
Nokia	THR420	SW: HY11.0390 HW: HRU420-02
Simoco	SRP1000	SW: 4313 327 72027 HW: PS3TT001T30000B
Marconi	Puma T1	SW: Release DMO 1.2.0 FW: Release vsf19md HW: Puma T

Additional information about the test performed

The tests were performed in the 380-400 MHz band. The terminals were operating with the following configuration:

MNI		GSSI	Frequency	Notes
MCC	MNC			
1	1	10101	383.7375	Configured in all MSs
1	1	10102	383.5875	Configured in all MSs
1	1	10103	383.7375	Configured in all MSs
1	1	10104	383.7375	Configured in all MSs
1	1	10600	383.7375	Configured in Cleartone MSs only
1	1	10100	383.7375	Configured in Motorola MSs only
1	1	10200	383.7375	Configured in Marconi MSs only
1	1	10300	383.7375	Configured in Nokia MSs only
1	1	10400	383.7375	Configured in Simoco MSs only

Test Results

The Tables indicates whether or not tests addressing a specific requirement of the TIP specification have been performed, whether or not the requirement is applicable for the terminal, and the result of the test if executed. Each entry of the table may take one of five values, -: No test performed, N/A: Not applicable, I: Inconclusive, P: Pass or, F: Fail. No test performed is also assigned in case of no test case being available.

The test results have been derived from examining the behaviour of a combination of live terminals. The verdicts indicated are based on the log evaluation of the information exchange between a transmitting terminal and a number of receiving terminals. The verdicts reflect the fact that at the time of the IOP testing it was possible to demonstrate a behaviour that was/was not in accordance with the related requirement.

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Test performed on the 20th October 2000

- : Not performed.
- N/A: Not applicable
- P: Pass
- F: Fail
- I: Inconclusive

Table 1: Testing of requirements relating to the interaction between the terminal under test and an infra structure

Cleartone CM9000P	
7 Activation and Deactivation of Direct Mode	
7 Activation of Direct Mode	-
7 Deactivation of Direct Mode	-

Table 2: Testing of requirements relating to the interaction between the terminal under test and other terminals in DMO mode.

Cleartone CM9000P	Nokia THR420	Simoco SRP1000	Marconi-OTE Puma-T1
8 Group call (Test case Number)			
8.1 Call setup, Initiating (3.1)	P	P	P
8.1 Call setup, Receiving known address (3.2)	P	P	P
8.1 Call setup, Receiving unknown address(3.3)	P	P	P
8.1 Call setup, Late entry (3.4)	-	-	P
8.1 Call setup, Engaged terminal (3.8)	P	-	-
8.1 Call setup, Occupied carrier (3.9)	-	-	I ¹
8.2 Ongoing call (3.1)	P	P	P
8.2 Ongoing call, Expiry DT207 (3.7)	P	I ²	P
8.3 Call release, Normal (3.1)	P	P	P
8.3 Call release, Expiry DT311 (3.5)	P ³	P ³	P ³
8.3 Call release, Expiry DT221 (3.6)	P	P	P
8.4 Group address capability	-	-	-

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Comments:

1. No log files available.
2. At the time of the testing a preliminary verdict of PASS was assigned. The test should have been concluded with a call originated from the Cleartone Mobile, this to verify that the Cleartone Mobile has determined that the resources are available. No evidence of such a call can be found in the Cleartone log file.
3. The Release cause given in DM-RELEASE is: "Cause not defined or unknown".

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Certificate Date: 17 October 2001
Issued to: Cleartone for terminal: CM9000P

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