



M. Flom Associates, Inc.

International Compliance Testing Laboratory

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Date: March 7, 2005

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Telex Communications, Inc.
Equipment: Telex WT-1000 / Electro Voice CSB-1000
FCC ID: B5DB117
FCC Rules: Radiofrequency Radiation Exposure Limits
47 CFR 1.1310
MPE - Mobiles X Fixed Based Station

Gentlemen:

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

David E. Lee, Compliance Test Manager

enclosure(s)
cc: Applicant
DEL/del

M. Flom Associates, Inc.
3356 North San Marcos Place, Suite 107
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(480) 926-3100 phone, (480) 926-3598 fax

FCC ID: B5DB117
MFA p0520006, d05300055



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Environmental Assessment

for

Mobiles/Fixed Base Station

for

FCC ID: B5DB117

Model: Telex WT-1000 / Electro Voice CSB-1000

to

Federal Communications Commission

47 CFR 1.1310 (MPE)

Radiofrequency Radiation Exposure Limits

Date Of Report: March 7, 2005

On the Behalf of the Applicant:

Telex Communications, Inc.

At the Request of:

P.O. 315993

Telex Communications, Inc.
8601 E. Cornhusker Highway
P.O. Box 5579
Lincoln, NE 68505-5579

Attention of:

Charles E. Conner, Project Engineer
(402) 467-5321; FAX: -3279
E-mail: charlie.conner@telex.com
Jim Andersen
Email: jim.andersen@telex.com

Supervised By:

David E. Lee, Compliance Test Manager

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Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) **Test Report (Supplemental)**

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0530005

d) Client: Telex Communications, Inc.
8601 E. Cornhusker Highway
P.O. Box 5579
Lincoln, NE 68505-5579

e) Identification: Telex WT-1000 / Electro Voice CSB-1000
Description: FCC ID: B5DB117
UHF Transmitter

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: March 7, 2005
EUT Received: February 14, 2005

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:



David E. Lee, Compliance Test Manager

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

Identification of the Equipment Under Test (EUT)

Name and Address of Applicant:

Telex Communications, Inc.
8601 E. Cornhusker Highway
P.O. Box 5579
Lincoln, NE 68505-5579

Manufacturer:

Telex Communications, Inc.

FCC ID:

B5DB117

Model Number:

Telex WT-1000
Electro Voice CSB-1000

Description:

UHF Transmitter

Type of Emission:

Digitized Voice (91K0F3E)

Frequency Range, MHz:

776 - 800

Power Rating, Watts:

Switchable Variable N/A

Modulation:

AMPS
 TDMA
 CDMA
 OTHER

Antenna:

Helical
 Monopole
 Whip
 Other

Note: For RF Safety test antenna gain taken at the upper range of expected gain (i.e. 0 dBd) and RF Power set to highest nominal power across all channels.



A2LA

"A2LA has accredited M. Flom Associates, Inc. Chandler, AZ for technical competence in the field of Electrical Testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 - 1999 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Certificate Number: **2152-01**



NIST

I am pleased to inform you that your laboratory has been validated by the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Your laboratory is now formally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA between the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO) in the United States, covering equipment subject to Electro-Magnetic Compatibility (EMC) requirements. The names of all validated and nominated laboratories will be posted on the NIST website at <http://ts.nist.gov/mra> under the 'Asia' category."

BSMI Number: **SL2-IN-E-041R**

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992/2001, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

Name of Test: Environmental Assessment

MPE CALCULATION

Power Output = ERP

Frequency = 776 MHz

Uncontrolled Exposure Limit = $f/1500 = 0.517333 \text{ mw/cm}^2$

$$\begin{aligned} R_{\text{meters}} &= [P_{\text{ERP}} / (4\pi \times \text{Limit})]^{1/2} \\ &= [(16.9 \times 10^{-3}) / (12.56 \times 5.17333)]^{1/2} \\ &= 0.016127 \text{ m} \\ &= 1.6 \text{ cm} \\ &= \text{less than 1 inch} \end{aligned}$$

Supervised By:


David E. Lee, Compliance Test Manager

(The following will be placed in the Instruction Manual)

Mandatory Safety Instructions to Installers & Users

Use only manufacturer or dealer supplied antenna.

Antenna Minimum Safe Distance: 1.6cm

Antenna Gain: zero dBd referenced to a dipole.

The Federal Communications Commission has adopted a safety standard for human exposure to RF (Radio Frequency) energy which is below the OSHA (Occupational Safety and Health Act) limits.

Antenna Mounting: The antenna supplied by the manufacturer or radio dealer must not be mounted at a location such that during radio transmission, any person or persons can come closer than the above indicated minimum safe distance to the antenna i.e. **1.6cm**.

To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding the minimum safe distance shown above, and in accordance with the requirements of the antenna manufacturer or supplier.

Base Station Installation: The antenna should be fixed-mounted on an outdoor permanent structure. RF Exposure compliance must be addressed at the time of installation.

Antenna Substitution: Do not substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person or persons to excess radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

Warning: Maintain a separation distance from the antenna to a person(s) of at least **1.6cm**.

You, as the qualified end-user of this radio device must control the exposure conditions of bystanders to ensure the minimum separation distance (above) is maintained between the antenna and nearby persons for satisfying RF Exposure compliance. The operation of this transmitter must satisfy the requirements of Occupational/Controlled Exposure Environment, for work-related use. Transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna.

**Testimonial
and
Statement of Certification**

This is to certify that:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certifying Engineer:



David E. Lee, Compliance Test Manager