



Flom Test Labs  
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268  
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[info@flomlabs.com](mailto:info@flomlabs.com)

FCC ID: B5DM529

Date: April 26, 2007

Applicant: 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@us.telex.com](mailto:charlie.conner@us.telex.com)  
Jim Andersen  
Email: [jim.andersen@us.telex.com](mailto:jim.andersen@us.telex.com)

Equipment: BTR-800  
FCC ID: B5DM529  
FCC Rules: Radiofrequency Radiation Exposure Limits  
47 CFR 1.1310  
MPE - Mobiles   X   Fixed Based Station           

Gentlemen:

Enclosed please find your copy of the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

Please allow from 8-12 weeks to hear from the Commission, who may request additional data or information, and even a sample for pre-grant audit testing.

Should you need any clarification, just fax or phone. Thank you again for this order - it has been a pleasure to be of service.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)  
HSB/je

Flom Test Labs  
3356 N. San Marcos Place, Suite 107  
Chandler, Arizona 85225-7176  
(866) 311-3268 phone, (480) 926-3598 fax

p0730011, d0740057



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FCC ID: B5DM529

Date: April 26, 2007

Federal Communications Commission  
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Telex Communications, Inc.  
Equipment: BTR-800  
FCC ID: B5DM529  
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,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)  
cc: Applicant  
HSB/je

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FCC ID: B5DM529

## **Environmental Assessment**

for

**Mobiles/Fixed Base Station**

for

**FCC ID: FCC ID: B5DM529**

**Model: BTR-800**

to

**Federal Communications Commission**

**47 CFR 1.1310 (MPE)**

**Radiofrequency Radiation Exposure Limits**

**Date Of Report: April 26, 2007**

**On the Behalf of the Applicant:** Telex Communications, Inc.

**At the Request of:** 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@us.telex.com](mailto:charlie.conner@us.telex.com)  
Jim Andersen  
Email: [jim.andersen@us.telex.com](mailto:jim.andersen@us.telex.com)

**Supervised By:**

Hoosamuddin S. Bandukwala, Lab Director

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## Table of Contents

Rule	Description	Page
	Test Report	1
	Identification of the Equipment Under Test	2
	Standard Test Conditions and Engineering Practices	3
1.1310	Environmental Assessment	4

Required information per ISO 17025-1995:

a) **Test Report (Supplemental)**

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

c) Report Number: d0740057

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

e) Identification: BTR-800  
FCC ID: B5DM529  
Description: UHF Base Station

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

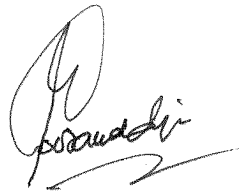
g) Report Date: April 26, 2007  
EUT Received:

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:



Hoosamuddin S. Bandukwala, Lab Director

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.



**Standard Test Conditions  
and  
Engineering Practices**

## **A2LA**

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“A2LA has accredited Flom Test Labs, 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 17025:2005 ‘General Requirements for the Competence of Testing and Calibration Laboratories’ and any additional program requirements in the identified field of testing.”

Please refer to [www.a2la.org](http://www.a2la.org) for current scope of accreditation.

Certificate Number: **2152.01**

**Name of Test:** Environmental Assessment

**Specification:** FCC: 47 CFR 1.1310

**Measurement Guide :** ANSI/IEEE C95.1 1992

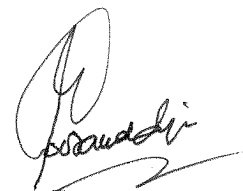
**Test Equipment:** Maximum Permissible Exposure (MPE) measurement system, consisting of: None

**Measurement Procedure :** 1. The minimum safe distance was calculated from the formula Power Density =  $EIRP / 4\pi R^2$  (Peak Watts/m<sup>2</sup>).

**Results:** Attached.



<b>Name of Test:</b>	R.F. Radiation Exposure		
<b>FCC Rules:</b>	1.1307, 1.1310, 1.1311, 2.1091		
<b>Description, EUT:</b>	See page 2 of Test Report		
<b>Limits: Uncontrolled Exposure</b> 47 CFR 1.1310 Table 1, (B)	0.3-1.234 MHz:	Limit [mW/cm <sup>2</sup> ] = 100	
	1.34-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (180/f <sup>2</sup> )	
	30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 0.2	
	300-1500 MHz:	Limit [mW/cm <sup>2</sup> ] = f/1500	
	1500-100,000 MHz:	Limit [mW/cm <sup>2</sup> ] = 1.0	
<b>Test Frequencies, MHz</b>	482 MHz		
<b>Power, Conducted, W</b>	=0.1		
<b>Antenna Gain</b>	= 1.5 dB		
<b>Antenna Model</b>	1/2 Wave monopole		
<b>MPE Calculations</b>	Power <sub>[W EIRP]</sub> = P <sub>[conducted]</sub> x G <sub>[antenna]</sub>	=	0.141
	Limit <sub>[mW/cm<sup>2</sup>]</sub>	=	0.321
	Limit <sub>[W/m<sup>2</sup>]</sub> = 10 x Limit <sub>[mW/cm<sup>2</sup>]</sub>	=	3.21
	R <sub>[m]</sub> = [P <sub>[W EIRP]</sub> / (4π x Limit <sub>[W/m<sup>2</sup>]</sub> )] <sup>1/2</sup>	=	0.0591
<b>Test Frequencies, MHz</b>	518 MHz		
<b>Power, Conducted, W</b>	=0.1		
<b>Antenna Gain</b>	= 1.5 dBi		
<b>Antenna Model</b>	1/2 Wave monopole		
<b>MPE Calculations</b>	Power <sub>[W EIRP]</sub> = P <sub>[conducted]</sub> x G <sub>[antenna]</sub>	=	0.141
	Limit <sub>[mW/cm<sup>2</sup>]</sub>	=	0.345
	Limit <sub>[W/m<sup>2</sup>]</sub> = 10 x Limit <sub>[mW/cm<sup>2</sup>]</sub>	=	3.45
	R <sub>[m]</sub> = [P <sub>[W EIRP]</sub> / (4π x Limit <sub>[W/m<sup>2</sup>]</sub> )] <sup>1/2</sup>	=	0.057



Supervised By:

Hoosamuddin S. Bandukwala, Lab Director

**(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:** 5.7cm.

Antenna Gain: 1.5 dBi 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. .

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.

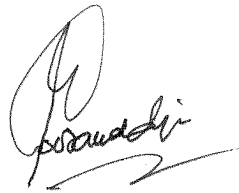
**Warning:** Maintain a separation distance from the antenna to a person(s) of at least 5.7cm.

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:

Hoosamuddin S. Bandukwala, Lab Director