

September 14, 2000

Federal Communications Commission  
Equipment Approval Services  
7435 Oakland Mills Road  
Columbia, MD 21046  
Attn: Andy Leimer

**SUBJECT: ITRONIX CORPORATION**  
**FCC ID: KBCXC6250RIM801D**  
**731 Confirmation No.: EA98559**  
**Correspondence Reference No.: 16092**

Dear Andy,

On behalf of Itronix Corporation we hereby submit the following amendment in response to your e-mail dated September 14 requesting additional information for the subject application.

1. The modem will only be operated in the 806-821 MHz frequency range in accordance with the emission mask limits specified in 90.210(g) of the FCC Rules. The modem is capable of operating up to 825MHz and therefore was tested accordingly. Please refer to the previously submitted frequency attestation statement from the applicant confirming the above.
2. Please find attached the calibration certificate and gain information for the dipole antenna used for the ERP measurements. The following is a detailed description of the ERP signal substitution measurement method used:

The EUT is first placed into the field test area at 3.0 meters. The field of maximum intensity is found by rotating the EUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Both horizontal and vertical polarizations are investigated. The field strength is recorded from a calibrated spectrum analyzer for each channel being performed. The EUT is then replaced with a calibrated dipole of a well-known gain. The dipole is fed through a directional coupler and the power at the coupler port is monitored. The field of maximum intensity is found for the dipole and the power adjusted in order to read the same on the spectrum analyzer that was found for the EUT. The feed point for the dipole is then connected to a calibrated power meter and the power adjusted to read the same as the coupler port previously recorded, to account for any mismatch in impedance, which may occur at the dipole antenna. The forward power for the dipole is then determined. The actual ERP level is determined by adding the forward power and the calibrated gain of the dipole.

If you have any further questions or comments, please contact the undersigned.

Sincerely,



Shawn McMillen  
General Manager  
Celltech Research Inc.  
Testing & Engineering Lab

cc: Itronix Corporation



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August 29, 2000

Federal Communications Commission  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, MD 21046

Reference: ITRONIX CORPORATION  
FCC ID: KBCXC6250RIM801D  
731 CONFIRMATION NO.: EA98559

Gentlemen,

The RIM 801D radio incorporated in Itronix laptop PC was tested to its capability of 806-825MHz frequency range. In order to comply with the requirements of 90.210(g), all 801D radios in mass production will operate and be limited to the 806-821MHz frequency range, as requested on the submitted FCC Form 731 and to be listed on the FCC grant.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Fred Phillips".

Fred Phillips  
Certification Engineer  
Itronix Corporation



P.O. Box 80589 78708-0589  
2205 Kramer Lane, Austin, TX., 78753-4002  
(512) 835-4684

## Certificate of Calibration Conformance

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The instrument identified below has been individually calibrated in compliance with the following standard(s):

ANSI C63.5 - 1988, American National Standard for Electromagnetic Compatibility-Radiated Emission Measurements in Electromagnetic Interference (EMI) Control-Calibration of Antennas, American National Standards Institute, Inc.

Environment: Laboratory MTE is maintained in a temperature controlled environment with ambient conditions from 18 to 28 C, relative humidity less than 90%. The instrument under test has been calibrated on an open air test site (OATS) with environment temperature conditions ranging from 0 to 40 C which has no known influences on measurement quality.

<b>Manufacturer:</b>	EMCO	<b>Operating Range:</b>	400 - 1000 MHz
<b>Model Number:</b>	3121C-DB4	<b>Instrument Type:</b>	DIPOLE Balun 4
<b>Date Code/SN:</b>	0003 - 1494		
<b>Tracking Number:</b>	J 49718		
<b>Date Completed:</b>	04-Apr-00		
<b>Test Type:</b>	3 and 10 Meter, Horizontal		
<b>Calibration Uncertainty:</b> (95% Confidence Level)	03m 10m	400 - 1000 MHz, +/-1.0 dB; 400 - 1000 MHz, +/-1.0 dB;	
<b>Test Remarks:</b>	None		
<b>Recall/Interval:</b>	18 Month Factory Calibration Provided		

Calibration Traceability: All Measuring and Test Equipment (M/TE) identified below are traceable to the National Institute for Standards and Technology (NIST). Calibration Laboratory and Quality System controls are compliant with the objectives of MIL-STD 45662A, ISO/IEC Guide 25 and ANSI/NCSL Z540-1.

**Standards and Equipment Used:**

**Make / Model / Name / S/N / Recall Date**

Anritsu MS4623A Network Analyzer

992201

14-Jun-00

**Condition of Instrument  
On Release:**

In Tolerance

  
Calibration Completed By

Lee D. Thompson, Cal Lab Technician

  
Attested and Issued on 04-Apr-00

Rick Flores, Calibration Lab Manager


**Gain and Antenna Factors for Dipole Antenna**
**Manufactured by EMC Test Systems**
**Model Number: DB-4 Serial Number: 1494**
**3.0 Meter Calibration**
**Polarization: Horizontal**

Frequency (MHz)	Antenna Factor (dB/m)	Gain Numeric	Gain dBi
400	21.0	1.35	1.3
425	21.3	1.42	1.5
450	21.6	1.48	1.7
475	21.9	1.54	1.9
500	22.2	1.58	2.0
525	22.9	1.48	1.7
550	23.6	1.38	1.4
575	24.3	1.28	1.1
600	25.0	1.19	0.7
625	25.2	1.24	0.9
650	25.4	1.29	1.1
675	25.5	1.34	1.3
700	25.7	1.39	1.4
725	26.2	1.31	1.2
750	26.8	1.24	0.9
775	27.3	1.17	0.7
800	27.9	1.10	0.4
825	27.9	1.15	0.6
850	28.0	1.20	0.8
875	28.1	1.26	1.0
900	28.1	1.31	1.2
925	28.4	1.30	1.1
950	28.7	1.28	1.1
975	29.0	1.26	1.0
1000	29.3	1.24	0.9