



Certelecom Laboratories Inc.

Safety - EMI - Telecom - ISO Guide 25

ENGINEERING TEST REPORT

**ON:
THE AMERICAN BIOMETRIC COMPANY
"BIOMOUSE PLUS"**

FCC ID: NEWAB2

**IN ACCORDANCE WITH:
FCC PART 15, SUBPART B
CLASS B CERTIFICATION**

PROJECT NO.: 7R00108(R.1).1

TESTED FOR:

**AMERICAN BIOMETRIC COMPANY
3429 HAWTHORNE ROAD
GLOUCESTER, ONTARIO
K1G 1H2**

TESTED BY:

**CERTELECOM LABORATORIES INC.
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NVLAP LAB CODE: 100351-0

MARCH 1998

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This report applies only to the items tested.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

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EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

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Equipment List - Radiated Emissions

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Section 1. Summary of Test Results

General:

All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart B for Class B Digital Devices.

These tests were conducted using measurement procedures of ANSI C63.4-1992.

The equipment was tested for conducted emissions from 0.45 MHz to 30 MHz using a 50 microhenry line impedance stabilization network (L.I.S.N.) as described in ANSI C63.4-1992. Peripheral equipment was also operated through a 50 microhenry L.I.S.N.

The equipment was tested for radiated emissions from 30 MHz to 1000 MHz with extension to the 10th harmonic of any fundamental clock frequency in accordance with the requirements of FCC Part 15, Subpart B. Frequencies were initially identified in a large shielded room. Amplitude measurements were made on an outdoor Open Area Test Site. Details of the outdoor site are on file with the FCC.

Abstract:

| Name Of Test | Para. No. | Results | Margin |
|---------------------|-----------|----------|----------|
| Conducted Emissions | 15.107 | Complies | <32 dBμV |
| Radiated Emissions | 15.109 | Complies | 2.2 dB |

THIS REPORT APPLIES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE. None



NVLAP Lab Code: 100351-0

TESTED BY: Ken Colborne
Ken Colborne, Technologist

DATE: 1 MAY 98

APPROVED BY: W. Waterhouse
W. Waterhouse, RF Engineering Lab Manager

DATE: 1st May 1998

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Section 2. Equipment Under Test (E.U.T.)

Manufacturer: American Biometric Company

Model No.: BioMouse Plus

Serial No.: None

Production Unit

Pre-Production Unit

Description of E.U.T.

The BioMouse Plus is a personal computer peripheral with dual functions. That is, it is both a biometric fingerprint scanner and a smartcard reader.

Modifications Incorporated in E.U.T.

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Theory of Operation

The E.U.T. has an embedded micro-controller that performs both imaging and smartcard reader operations. A CCD is used to collect images from fingers placed on the device's platen. These images are then transmitted to the host computer (usually a personal computer), where they are compared against reference data. A smartcard interface circuit is used to interface the micro-controller to the IC within the smartcard. The BioMouse Plus acts as a "transparent" smartcard reader in that all commands/responses are generated/interpreted by the host PC.

The BioMouse Plus interfaces to computers using a proprietary digital interface consisting of eight signal wires and two power wires. One of two methods are used to connect this interface to the computer. When used on desktop computers the BioMouse desktop extension is used to connect the device to the computers parallel port. In this configuration, the BioMouse Plus is powered with an external 9VAC (or 12 VAC), adaptor that is plugged into the desktop extension. When using the BioMouse Plus on laptop computers the BioMouse PCMCIA card is used to connect the device to the laptop. The BioMouse Plus PCMCIA card provides both power and control signals to the device.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Justification

The E.U.T. was configured for testing as per typical installation. Position and bundling of cables were investigated to establish maximum amplitude of emissions.

The following combinations were investigated to establish worst case configuration:

- (1) The E.U.T. was installed in a laptop computer, mouse and printer were configured with the laptop.

Exercise Program

The E.U.T. exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

Exercise mode:

- (1) A customer provide computer program allowed the laptop to exercise the E.U.T. in a manner typical of usage.

EQUIPMENT: *The American Biometric Company "BioMouse Plus"*
 FCC ID: *NEWAB2*

Section 3. Equipment Configuration

Equipment Configuration List:

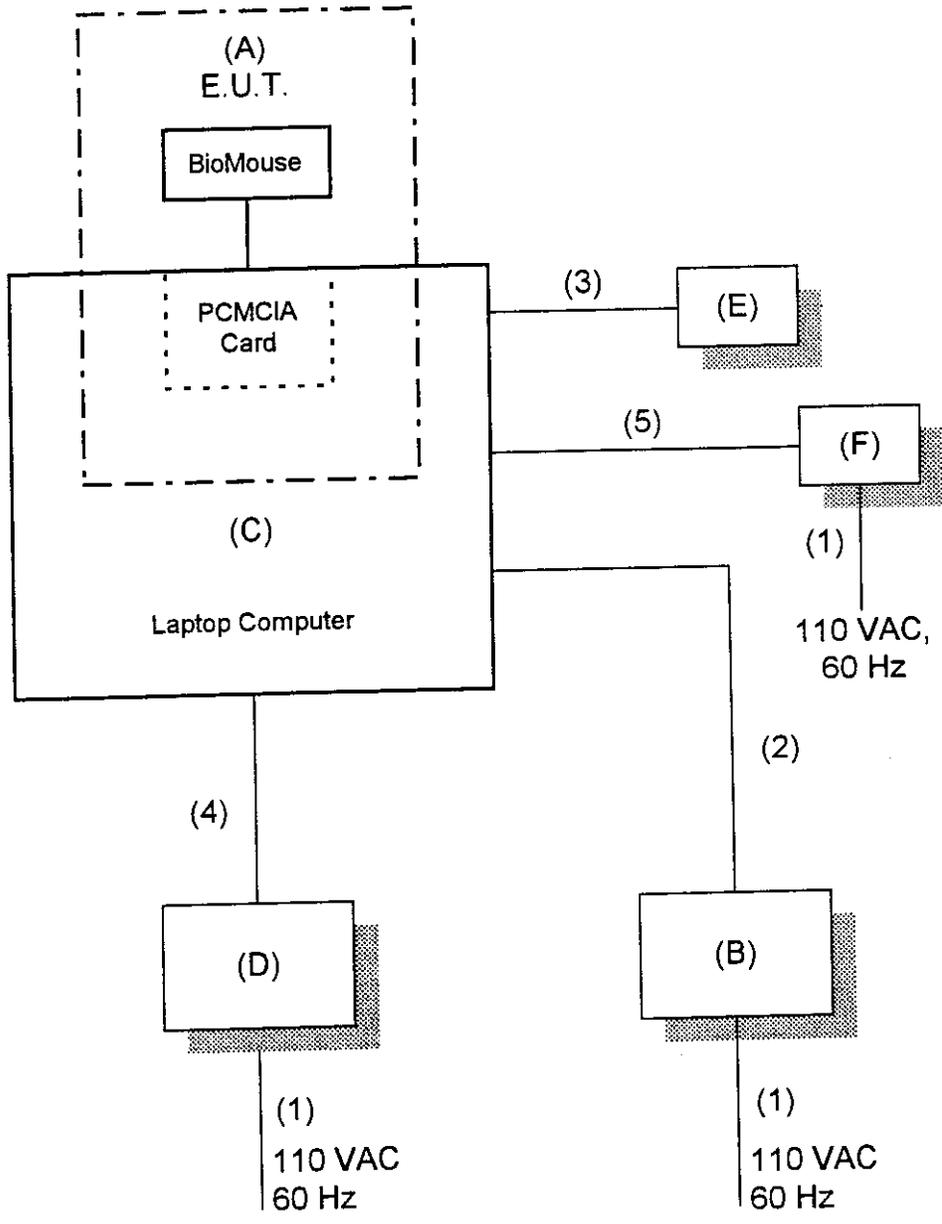
| Item | Description | Model No. | Serial No. | FCC ID. | Rev. |
|------|------------------------|--------------|--------------|----------------|------|
| (A) | BioMouse & PCMCIA Card | None | None | None | |
| (B) | Power Adaptor | FR-PCP8H+AD | 01958692 | None | |
| (C) | Digital Laptop | HINOTE2 | FR-P8EWG-AA | A09-P8XN0TEX | |
| (D) | Compaq Monitor | PRESARIO1410 | 612AG07HR476 | CSYSC-474 | |
| (E) | Mouse (Generic) | LG-BM-3816 | LG-1404380 | 1AP02AD-M40 | |
| (F) | 24-Pin Printer | DL1150 | M3382A | 95DP033M3382A1 | |

Inter-connection Cables:

| Item | Description | Length (m) |
|------|--------------------------------|------------|
| (1) | 3 Wire AC Cable Unshielded | 1.3 |
| (2) | 2 Wire DC Cable Unshielded | 1.0 |
| (3) | 9 Wire Din Connector I/O Cable | 1.5 |
| (4) | 13 Wire Video Cable | 1.0 |
| (5) | 25 Wire Printer I/O Cable | 1.0 |

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Configuration of the Equipment Under Test (E.U.T)



EQUIPMENT: The American Biometric Company "BioMouse Plus"
 FCC ID: NEWAB2

Section 4. Conducted Emissions

| | |
|-----------------------------------|----------------------|
| NAME OF TEST: Conducted Emissions | PARA. NO.: 15.107 |
| TESTED BY: Ken Colborne | DATE: March 18, 1998 |

Test Conditions: Test Voltage: 120 VAC
 Temperature: 21 °C
 Humidity: 15 %

Minimum Standard:

| Frequency(MHz) | Maximum Powerline Conducted RF Voltage | |
|----------------|--|------|
| | μV | dBμV |
| 0.45 - 30.0 | 250 | 48 |

Test Results: Complies. See attached graphs and table.

Measurement Data: See attached graphs and table.

Method Of Measurement: (Procedure ANSI C63.4-1992)

Measurements were made using a spectrum analyzer with 10 kHz RBW, Peak detector. Any emissions that are close to the limit are measured using a test receiver with 10 kHz bandwidth, CISPR Quasi-Peak detector.

Broadband emissions are identified by switching the receiver detector function from Quasi-Peak to Average. If the amplitude of the emission drops by 6 dB or more then the emission is classified as broadband and the Quasi-Peak level is reduced by a factor of 13 dB.

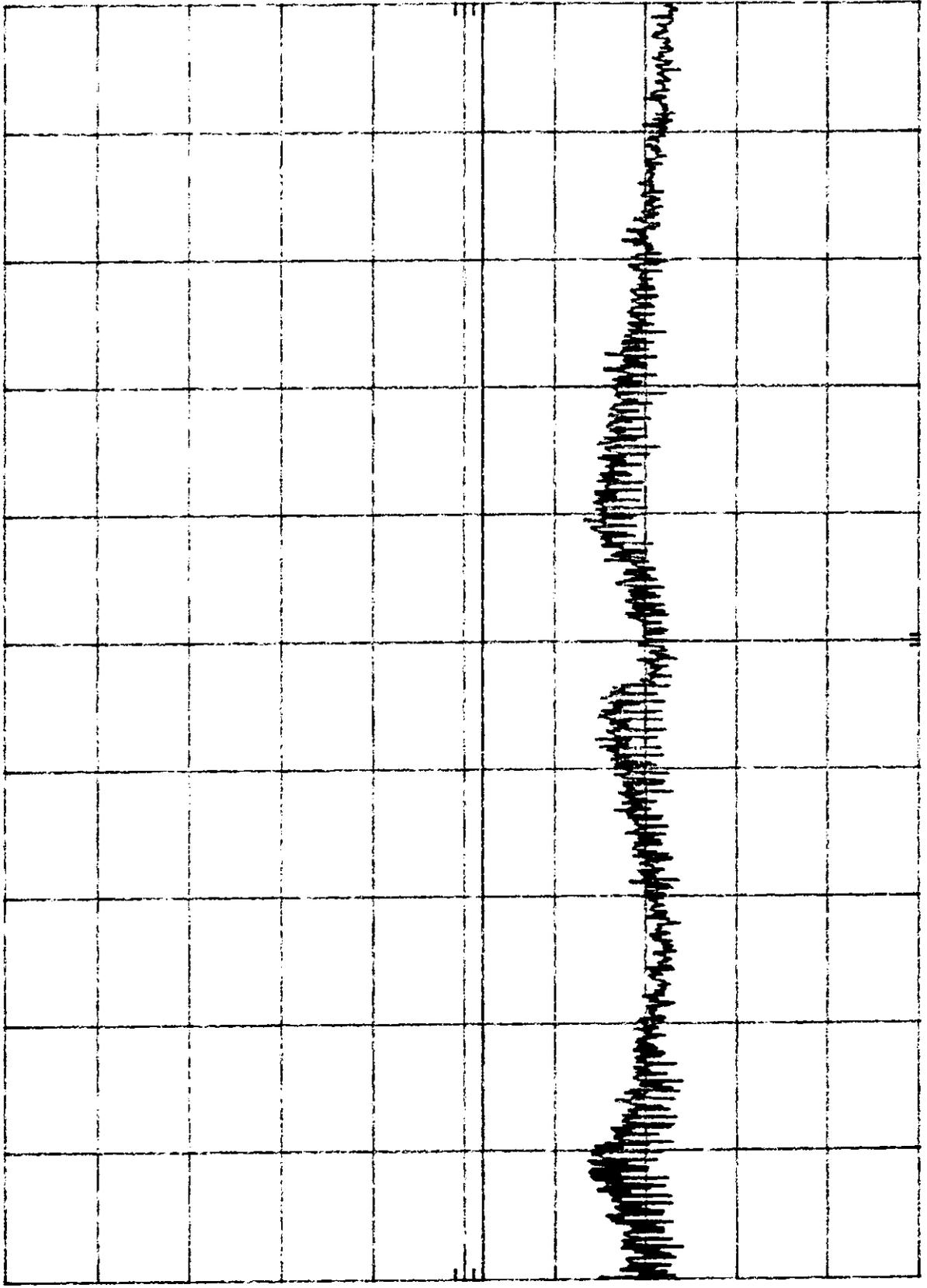
7R00108 10dB Limiter used March 18, 1998 Neutral

REF 90.0 dBμV ATTEN 10 dB

hp

10 dB/

DL
38.0
dBμV



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Conducted Emissions
120 VAC, 60 Hz
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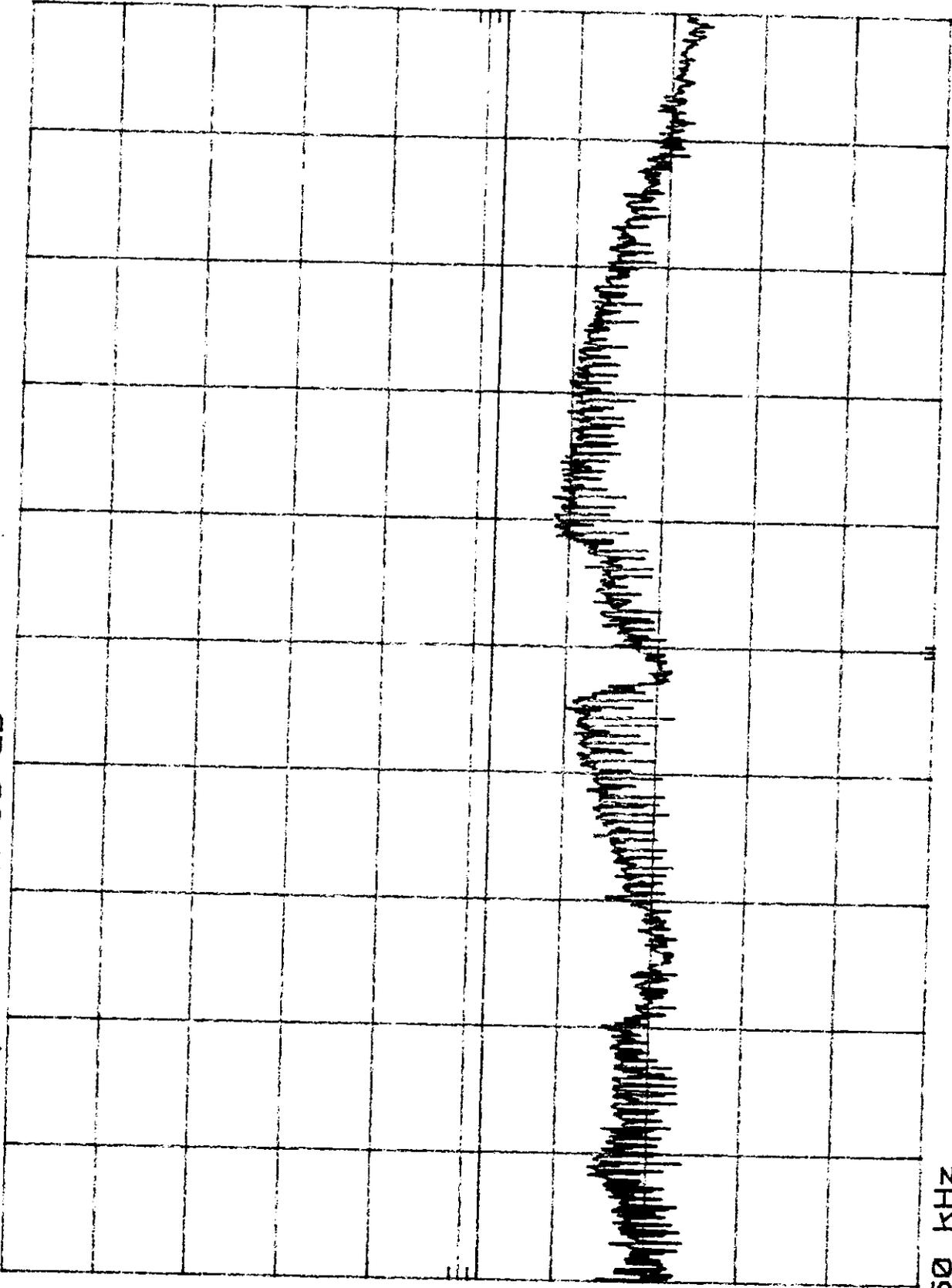
START 450 KHZ
RES BW 10 KHZ
VBW 30 KHZ
STOP 30.0 MHz
SWP 887 msec

7R00108 10dB Limiter used March 18, 1998 Phase
REF 90.0 dBμV ATTEN 10 dB

hp

10 dB/

DL
38.0
dBμV



START 450 KHZ
RES BW 10 KHZ
VBW 30 KHZ
STOP 30.0 MHz
SWP 887 msec

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Section 5. Radiated Emissions

| | |
|----------------------------------|----------------------|
| NAME OF TEST: Radiated Emissions | PARA. NO.: 15.109 |
| TESTED BY: Ken Colborne | DATE: March 30, 1998 |

Test Conditions: Test Voltage: 120 VAC
 Temperature: 21 °C
 Humidity: 16 %

Minimum Standard:

| Frequency(MHz) | Maximum Field Strength at 3m | |
|----------------|------------------------------|--------|
| | μV/m | dBμV/m |
| 30 - 88 | 100 | 40.0 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46.0 |
| Above 960 | 500 | 54.0 |

Test Results: Complies. The worst-case emission level is 42.8 dBμV/m @ 3m at 601.39 MHz. This is 3.2 dB below the specification limit.

Measurement Data: See attached table.

The equipment was prescanned in a shielded room using a spectrum analyzer and broadband antenna. A list of frequencies was compiled for investigation in the open field. The equipment was then moved to an open area test site where amplitude measurements were made at a distance of 3 meters. The bandwidth was set to 120 kHz and the detector function was CISPR Quasi-Peak.

All fundamental clock frequencies were measured to the 10th Harmonic.

EQUIPMENT: The American Biometric Company "BioMouse Plus"

FCC ID: NEWAB2

Test Data - Radiated Emissions

| Test Distance (meters) : 3 | | Range: A Tower | | Receiver: 014 | | RBW(kHz): 120 | | Detector: CISPR | | | |
|-------------------------------|-----------|-------------------|---------------------|------------------|----------------------------|--------------------------|-------------------------|------------------------|-------------------------------|-------------------|----------------|
| Freq. (MHz) | Ant. * | Pol. (V/H) | Ant. HGT. (m) | Table (deg.) | RCVD Signal (dBµV/m) | Ant. Factor (dB)** | Amp. Gain (dB)*** | Dist. Corr. (dB) | Field Strength (dBµV/m) | Limit (dBµV/m) | Margin (dB) |
| 120.27 | B/C1 | V | | | 20.0 | 13.7 | | | 33.7 | 43.5 | 9.8 |
| 120.27 | B/C1 | H | | | 17.7 | 13.7 | | | 31.4 | 43.5 | 12.1 |
| 160.03 | B/C1 | V | | | 22.5 | 15.0 | | | 37.5 | 43.5 | 6.0 |
| 160.03 | B/C1 | H | | | 21.2 | 15.0 | | | 36.2 | 43.5 | 7.3 |
| 128.87 | B/C1 | V | | | 14.8 | 14.0 | | | 28.8 | 43.5 | 14.7 |
| 128.87 | B/C1 | H | | | 17.6 | 14.0 | | | 31.6 | 43.5 | 11.9 |
| 143.19 | B/C1 | V | | | 18.9 | 14.7 | | | 33.6 | 43.5 | 9.9 |
| 143.19 | B/C1 | H | | | N.D. | 14.7 | | | 14.7 | 43.5 | 28.8 |
| 144.01 | B/C1 | V | | | 13.5 | 14.8 | | | 28.3 | 43.5 | 15.2 |
| 144.01 | B/C1 | H | | | N.D. | 14.8 | | | 14.8 | 43.5 | 28.7 |
| 180.0 | B/C1 | V | | | 11.0 | 14.9 | | | 25.9 | 43.5 | 17.6 |
| 180.0 | B/C1 | H | | | 22.7 | 14.9 | | | 37.6 | 43.5 | 5.9* |
| 171.82 | B/C1 | V | | | 13.2 | 14.8 | | | 28.0 | 43.5 | 15.5 |
| 171.82 | B/C1 | H | | | 23.5 | 14.8 | | | 38.3 | 43.5 | 5.2* |
| 157.5 | B/C1 | V | | | 12.5 | 15.0 | | | 27.5 | 43.5 | 16.0 |
| 157.51 | B/C1 | H | | | 22.0 | 15.0 | | | 37.0 | 43.5 | 6.5 |
| 320.74 | L/P | V | | | 13.7 | 18.7 | | | 32.4 | 46.0 | 13.6 |
| 320.74 | L/P | H | | | 14.6 | 18.7 | | | 33.3 | 46.0 | 12.7 |
| 360.83 | L/P | V | | | 13.1 | 19.5 | | | 32.6 | 46.0 | 13.4 |
| 360.83 | L/P | H | | | 9.8 | 19.5 | | | 29.3 | 46.0 | 16.7 |
| 441.02 | L/P | V | | | 20.7 | 21.3 | | | 42.0 | 46.0 | 4.0* |
| 441.02 | L/P | H | | | 14.3 | 21.3 | | | 35.6 | 46.0 | 10.4 |
| 601.39 | L/P | V | | | 18.0 | 24.8 | | | 42.8 | 46.0 | 3.2* |
| 601.39 | L/P | H | | | 12.7 | 24.8 | | | 37.5 | 46.0 | 8.5 |
| 561.3 | L/P | V | | | 19.1 | 24.0 | | | 43.1 | 46.0 | 2.9* |
| 561.3 | L/P | H | | | 11.2 | 24.0 | | | 35.2 | 46.0 | 10.8 |
| 441.02 | E/D4 | V | | | 15.8 | 25.8 | | | 41.6 | 46.0 | 4.4 |
| 601.39 | E/D4 | V | | | 12.2 | 30.6 | | | 42.8 | 46.0 | 3.2 |
| 561.3 | E/D4 | V | | | 13.1 | 29.4 | | | 42.5 | 46.0 | 3.5 |
| 171.82 | E/D3 | H | | | 19.9 | 15.9 | | | 35.8 | 43.5 | 7.7 |
| 180.0 | E/D3 | H | | | 21.2 | 16.0 | | | 37.2 | 43.5 | 6.3 |

Notes:

B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole

* Re-measured using dipole antenna.

** Includes cable loss when amplifier is not used.

*** Includes cable loss.

() Denotes failing emission level.

7r00109 Horizontal Prescan

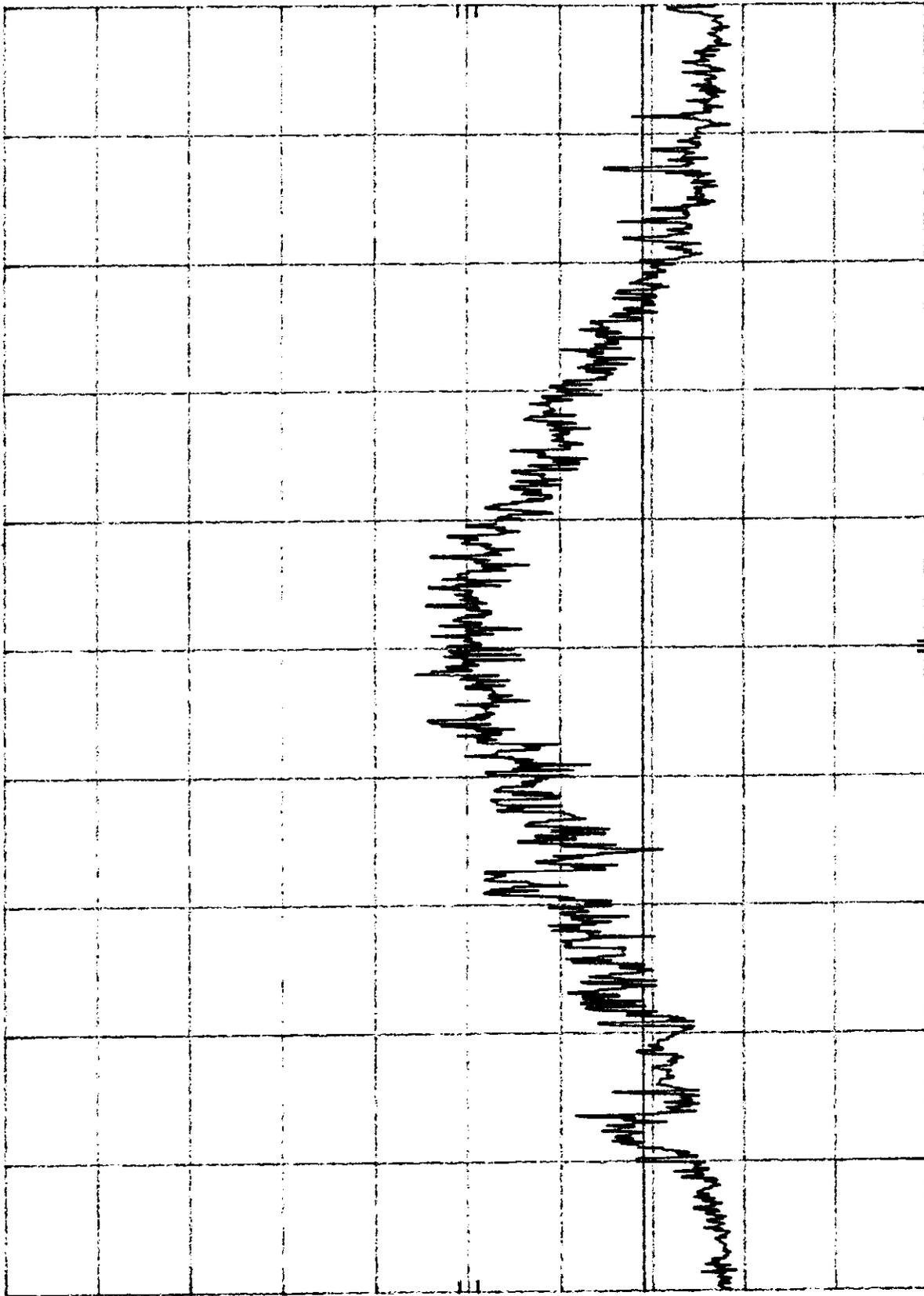
March 27, 1998

REF 90.0 dBμV ATTEN 0 dB

hp

10 dB/

DL
21.0
dBμV



START 30 MHz RES BW 30 KHZ VBW 100 KHZ SWP 810 msec STOP 300 MHz

7r00109 March 27, 1998 Horizontal Prescan

REF 90.0 dBµV ATTEN 0 dB

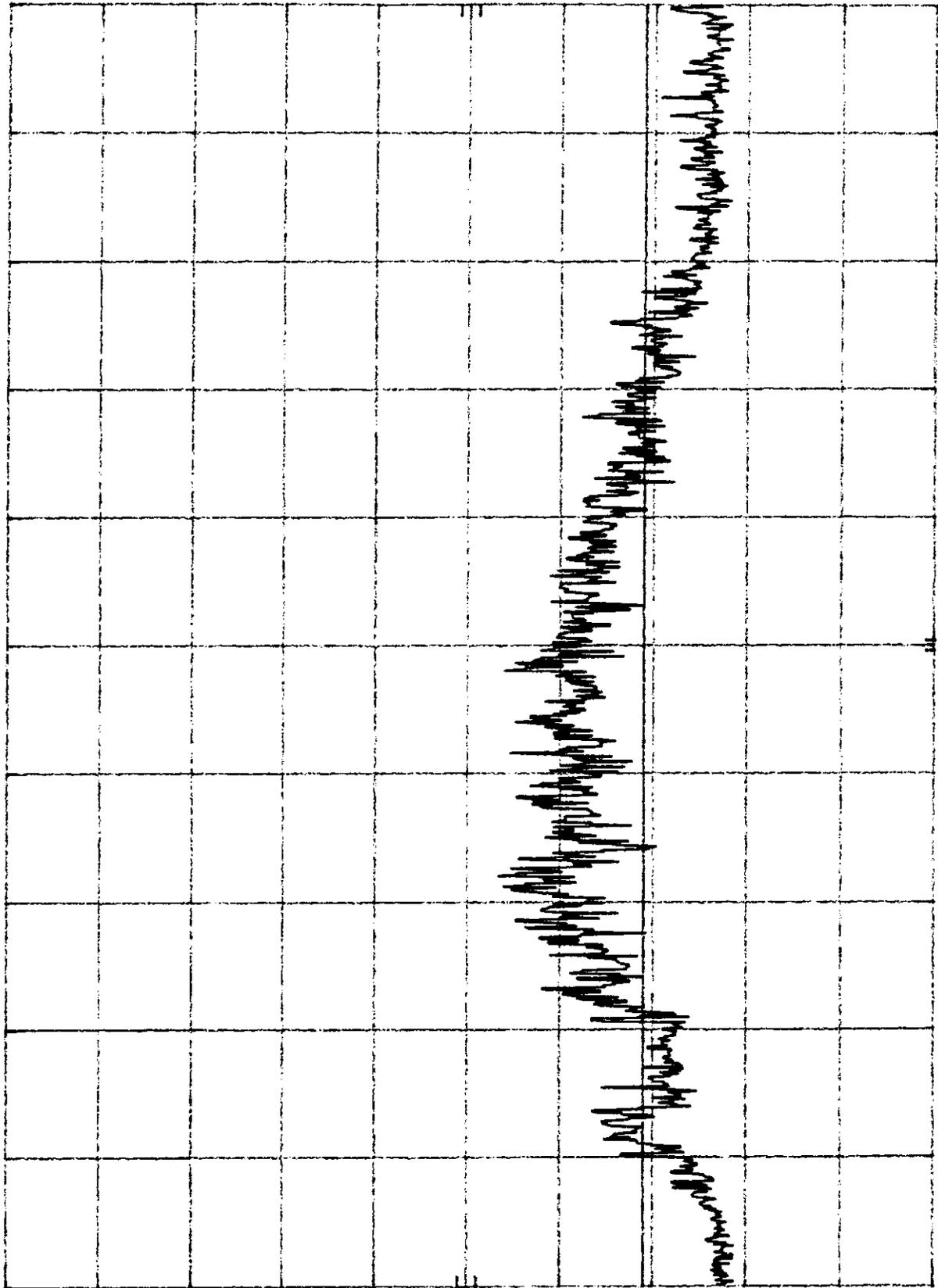
10 dB/

DL

21.0 dBµV

21.0 dBµV

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Radiated Emissions
Prescans
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START 30 MHz STOP 300 MHz
RES BW 30 KHZ VBW 100 KHZ
SWP 810 msec

7r00100

March 27, 1998

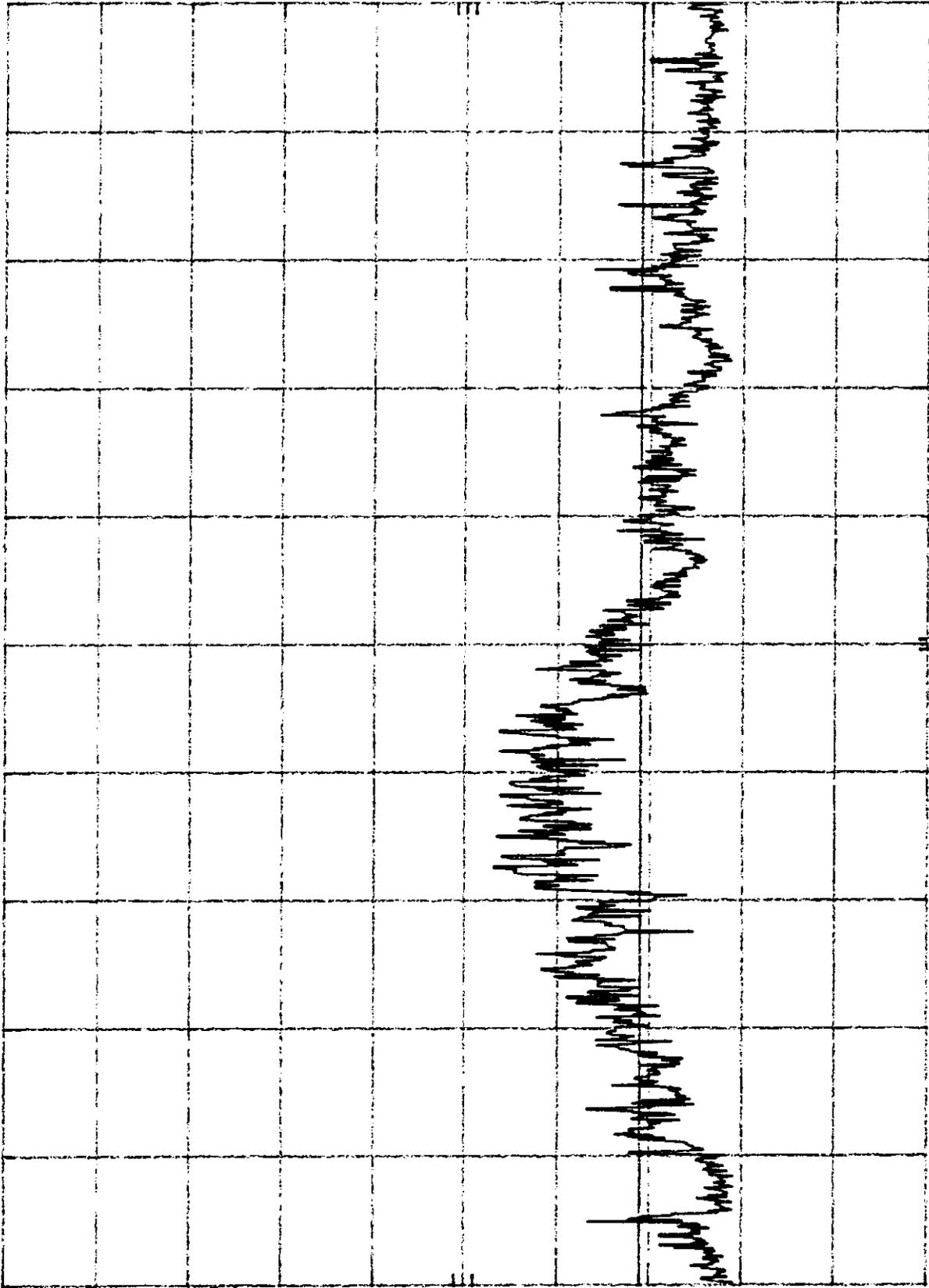
Vertical Prescan

REF 90.0 dBμV ATTEN 0 dB

hp

10 dB/

DL
21.0
dBμV



STOP 300 MHz
SWP 810 meec

VBW 100 KHZ

RES BW 30 KHZ

SIARI 30 MHz

7r00109

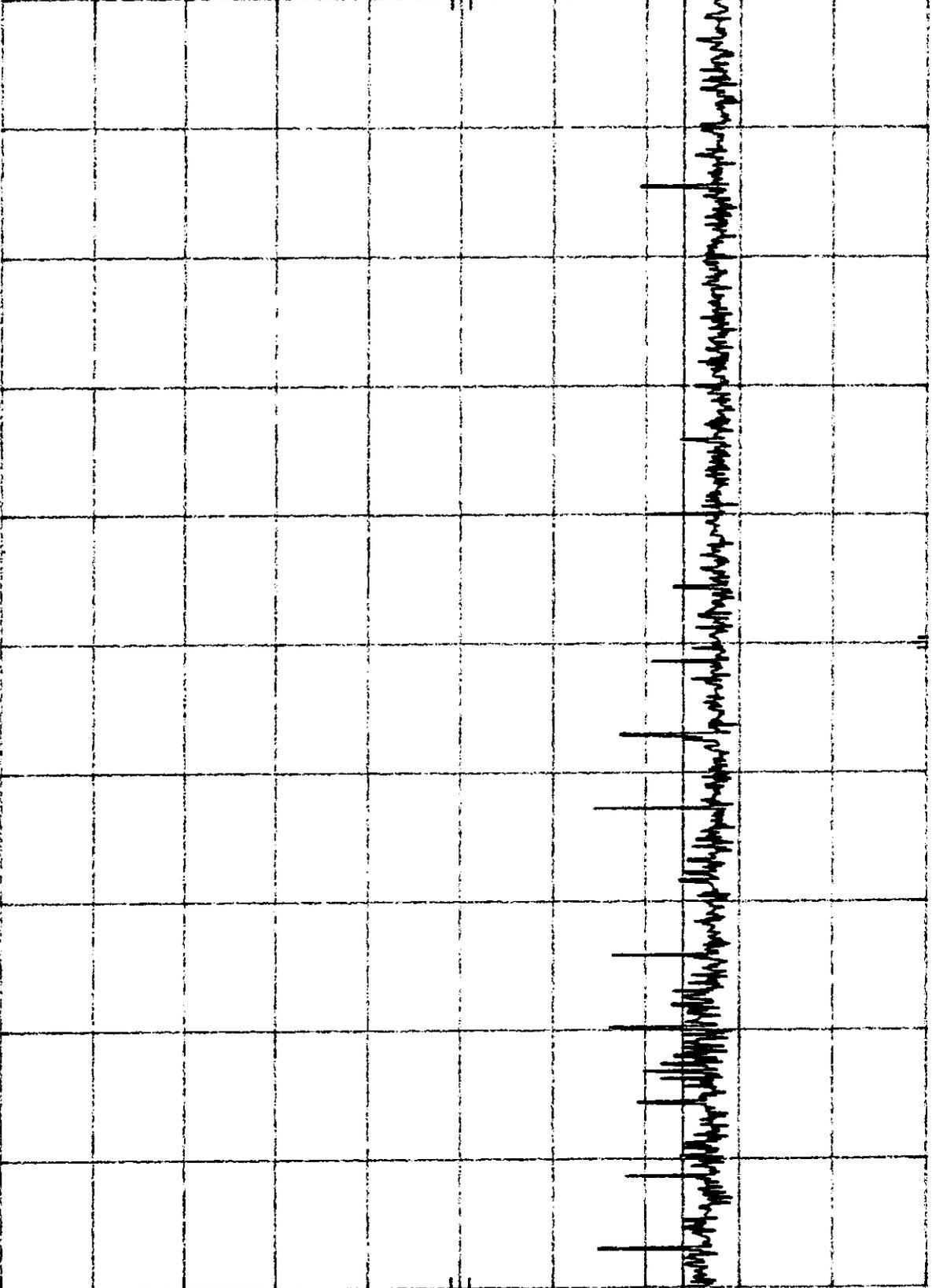
March 27, 1998

Vertical Prescan

REF 90.0 dBµV ATTEN 0 dB

hp

10 dB/



DL
16.0
dBµV

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Radiated Emissions
Prescans
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STOP 1.000 GHZ
SWP 2.10 sec
RES BW 300 MHZ
VBW 100 KHZ

EQUIPMENT: *The American Biometric Company "BioMouse Plus"*
 FCC ID: *NEWAB2*

Prescan Data

Project Number : ABCTEST
 Project Filename : ABCTEST.LST
 Date : March 24, 1998
 Start Frequency : 30 MHz
 Stop Frequency : 1000 MHz
 Display Line Value: 21 dBuV

Vertical Prescan

Top 6 Emissions below 300 MHz from
 the vertical prescan list:

- 180.05 MHz, 33 dBuV.
- 160.03 MHz, 30.4 dBuV.
- 64.61935 MHz, 29.9 dBuV.
- 139.8446 MHz, 29 dBuV.
- 128.87 MHz, 28.6 dBuV.
- 140.01 MHz, 28.4 dBuV.

Full Emission List below 300 MHz:

- 40.68 MHz, 21.2 dBuV. Peak.
- 40.95 MHz, 21.7 dBuV. Peak.
- 43.49 MHz, 21 dBuV. Peak.
- 60.5499 MHz, 23.7 dBuV. Peak.
- 60.63988 MHz, 21 dBuV. Peak.
- 60.65988 MHz, 21.6 dBuV. Peak.
- 60.68988 MHz, 22.9 dBuV. Peak.
- 60.73987 MHz, 21.4 dBuV. Peak.
- 60.78986 MHz, 23 dBuV. Peak.
- 60.82985 MHz, 21.8 dBuV. Peak.
- 60.85985 MHz, 23.8 dBuV. Peak.
- 60.88984 MHz, 22.8 dBuV. Peak.
- 60.97983 MHz, 23.8 dBuV. Peak.
- 60.99982 MHz, 21.8 dBuV. Peak.
- 61.01982 MHz, 24.1 dBuV. Peak.
- 61.03982 MHz, 23.8 dBuV. Peak.
- 61.07981 MHz, 21 dBuV. Peak.
- 61.1198 MHz, 23.5 dBuV. Peak.
- 61.1398 MHz, 24 dBuV. Peak.
- 61.1598 MHz, 24.9 dBuV. Peak.
- 61.19979 MHz, 23.9 dBuV. Peak.
- 61.22979 MHz, 23.2 dBuV. Peak.
- 61.24978 MHz, 23.3 dBuV. Peak.
- 61.28978 MHz, 24.4 dBuV. Peak.
- 61.32977 MHz, 24.2 dBuV. Peak.
- 61.36976 MHz, 22.4 dBuV. Peak.
- 61.38976 MHz, 23.4 dBuV. Peak.
- 61.43975 MHz, 23.8 dBuV. Peak.
- 61.45975 MHz, 24.5 dBuV. Peak.
- 61.48974 MHz, 21.2 dBuV. Peak.
- 61.54973 MHz, 23.1 dBuV. Peak.
- 61.56973 MHz, 22.7 dBuV. Peak.
- 61.58973 MHz, 22.8 dBuV. Peak.
- 61.61972 MHz, 24 dBuV. Peak.
- 61.64972 MHz, 23.3 dBuV. Peak.
- 61.68971 MHz, 22.7 dBuV. Peak.
- 61.70971 MHz, 23.5 dBuV. Peak.
- 61.7297 MHz, 22.1 dBuV. Peak.

- 61.7497 MHz, 21.9 dBuV. Peak.
- 61.7697 MHz, 23.4 dBuV. Peak.
- 61.82969 MHz, 22.9 dBuV. Peak.
- 61.84968 MHz, 21 dBuV. Peak.
- 61.86968 MHz, 24.4 dBuV. Peak.
- 61.91967 MHz, 23.6 dBuV. Peak.
- 61.96966 MHz, 23.9 dBuV. Peak.
- 61.98966 MHz, 21.8 dBuV. Peak.
- 62.02965 MHz, 23.1 dBuV. Peak.
- 62.05965 MHz, 21.4 dBuV. Peak.
- 62.09964 MHz, 21.1 dBuV. Peak.
- 62.12963 MHz, 24.7 dBuV. Peak.
- 62.14963 MHz, 23 dBuV. Peak.
- 62.20962 MHz, 22.1 dBuV. Peak.
- 62.24961 MHz, 24 dBuV. Peak.
- 62.26961 MHz, 21.6 dBuV. Peak.
- 62.28961 MHz, 22.6 dBuV. Peak.
- 62.3596 MHz, 24 dBuV. Peak.
- 62.38959 MHz, 23.9 dBuV. Peak.
- 62.40959 MHz, 23.1 dBuV. Peak.
- 62.42958 MHz, 21.1 dBuV. Peak.
- 62.47958 MHz, 22.2 dBuV. Peak.
- 62.51957 MHz, 21.7 dBuV. Peak.
- 62.58956 MHz, 22.4 dBuV. Peak.
- 62.65955 MHz, 21.6 dBuV. Peak.
- 62.79952 MHz, 21.9 dBuV. Peak.
- 62.82952 MHz, 21.1 dBuV. Peak.
- 62.84951 MHz, 22.3 dBuV. Peak.
- 62.9295 MHz, 23.4 dBuV. Peak.
- 62.97949 MHz, 21.4 dBuV. Peak.
- 62.99949 MHz, 23.1 dBuV. Peak.
- 63.08947 MHz, 21.8 dBuV. Peak.
- 63.12947 MHz, 21.3 dBuV. Peak.
- 63.15946 MHz, 21.2 dBuV. Peak.
- 63.23945 MHz, 22.6 dBuV. Peak.
- 63.25945 MHz, 24.5 dBuV. Peak.
- 63.28944 MHz, 23 dBuV. Peak.
- 63.33943 MHz, 21.9 dBuV. Peak.
- 63.35943 MHz, 23.4 dBuV. Peak.
- 63.37943 MHz, 21.3 dBuV. Peak.
- 63.39942 MHz, 21.9 dBuV. Peak.
- 63.44941 MHz, 21.7 dBuV. Peak.
- 63.47941 MHz, 21.3 dBuV. Peak.
- 63.5294 MHz, 22.7 dBuV. Peak.
- 63.57939 MHz, 21.7 dBuV. Peak.
- 63.60939 MHz, 23.1 dBuV. Peak.
- 63.63938 MHz, 21.7 dBuV. Peak.
- 63.66938 MHz, 24 dBuV. Peak.
- 63.68937 MHz, 23.2 dBuV. Peak.
- 63.72937 MHz, 23 dBuV. Peak.
- 63.74936 MHz, 22.9 dBuV. Peak.
- 63.77936 MHz, 25.2 dBuV. Peak.
- 63.82935 MHz, 21.9 dBuV. Peak.
- 63.84935 MHz, 21.9 dBuV. Peak.
- 63.87934 MHz, 25.3 dBuV. Peak.
- 63.90934 MHz, 21.3 dBuV. Peak.
- 63.90934 MHz, Broadband start frequency.
- 64.61935 MHz, 29.9 dBuV. Broadband peak.
- 68.17023 MHz, Broadband end frequency.
- 68.20023 MHz, 24.5 dBuV. Peak.
- 68.25024 MHz, 24.7 dBuV. Peak.
- 68.29025 MHz, 25.2 dBuV. Peak.
- 68.34026 MHz, 23.3 dBuV. Peak.
- 68.36027 MHz, 23.7 dBuV. Peak.
- 68.41028 MHz, 23.6 dBuV. Peak.
- 68.43028 MHz, 24.6 dBuV. Peak.
- 68.4903 MHz, 23.8 dBuV. Peak.
- 68.5103 MHz, 25 dBuV. Peak.
- 68.60032 MHz, 22.8 dBuV. Peak.
- 68.64033 MHz, 21.1 dBuV. Peak.
- 68.67033 MHz, 26.1 dBuV. Peak.
- 68.73035 MHz, 24.6 dBuV. Peak.
- 68.76035 MHz, 25.4 dBuV. Peak.
- 68.80036 MHz, 22.2 dBuV. Peak.
- 68.84037 MHz, 22.3 dBuV. Peak.
- 68.88038 MHz, 22.2 dBuV. Peak.
- 68.91039 MHz, 24.2 dBuV. Peak.
- 68.95039 MHz, 23.3 dBuV. Peak.
- 68.9804 MHz, 22.6 dBuV. Peak.
- 69.0004 MHz, 23.8 dBuV. Peak.
- 69.07042 MHz, 22.9 dBuV. Peak.
- 69.10043 MHz, 21.7 dBuV. Peak.
- 69.12043 MHz, 23 dBuV. Peak.
- 69.14043 MHz, 23.1 dBuV. Peak.
- 69.16044 MHz, 21.9 dBuV. Peak.
- 69.22045 MHz, 23 dBuV. Peak.
- 69.30047 MHz, 21.8 dBuV. Peak.
- 69.32047 MHz, 21.1 dBuV. Peak.
- 69.35048 MHz, 23.8 dBuV. Peak.
- 69.40049 MHz, 21.3 dBuV. Peak.
- 69.4405 MHz, 22.5 dBuV. Peak.
- 69.48051 MHz, 22.2 dBuV. Peak.
- 69.54052 MHz, 21.4 dBuV. Peak.
- 69.57053 MHz, 22.4 dBuV. Peak.
- 69.62054 MHz, 21.5 dBuV. Peak.
- 69.71056 MHz, 23 dBuV. Peak.
- 69.73056 MHz, 21.4 dBuV. Peak.
- 69.77057 MHz, 23.3 dBuV. Peak.
- 69.79057 MHz, 21.9 dBuV. Peak.
- 69.83058 MHz, 22.2 dBuV. Peak.
- 69.88059 MHz, 22.4 dBuV. Peak.
- 69.9106 MHz, 21 dBuV. Peak.
- 69.9306 MHz, 21.9 dBuV. Peak.
- 69.97061 MHz, 23.1 dBuV. Peak.
- 70.04 MHz, 23.1 dBuV. Peak.
- 70.17 MHz, 22.8 dBuV. Peak.
- 70.56 MHz, 23.4 dBuV. Peak.
- 71.56 MHz, 21.4 dBuV. Peak.
- 72.52 MHz, 22.1 dBuV. Peak.
- 72.75 MHz, 21.5 dBuV. Peak.
- 73.1 MHz, 21 dBuV. Peak.
- 73.69 MHz, 21.6 dBuV. Peak.
- 73.82 MHz, 21.1 dBuV. Peak.
- 111.2903 MHz, 26.5 dBuV. Peak.
- 111.3303 MHz, 27.7 dBuV. Peak.
- 111.4703 MHz, 21.2 dBuV. Peak.
- 111.5703 MHz, 22.8 dBuV. Peak.
- 112.4205 MHz, 22.8 dBuV. Peak.
- 112.7106 MHz, 25.3 dBuV. Peak.
- 112.7406 MHz, 21.6 dBuV. Peak.
- 112.9306 MHz, 22.2 dBuV. Peak.
- 113.0207 MHz, 22.6 dBuV. Peak.
- 113.3007 MHz, 21.6 dBuV. Peak.
- 114.2509 MHz, 24.3 dBuV. Peak.
- 114.2709 MHz, 23.4 dBuV. Peak.
- 114.541 MHz, 26.9 dBuV. Peak.
- 114.841 MHz, 22.9 dBuV. Peak.

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115.1111 MHz, 21.3 dBuV. Peak.
115.1411 MHz, 23.3 dBuV. Peak.
115.4412 MHz, 22.3 dBuV. Peak.
115.5012 MHz, 25 dBuV. Peak.
115.5212 MHz, 24.7 dBuV. Peak.
115.5912 MHz, 25.4 dBuV. Peak.
115.6212 MHz, 21.1 dBuV. Peak.
115.8213 MHz, 22.6 dBuV. Peak.
116.0113 MHz, 22.6 dBuV. Peak.
116.0913 MHz, 26.1 dBuV. Peak.
116.1113 MHz, 28.3 dBuV. Peak.
116.2013 MHz, 26.4 dBuV. Peak.
116.6814 MHz, 21.8 dBuV. Peak.
116.7014 MHz, 25.5 dBuV. Peak.
116.9715 MHz, 26.5 dBuV. Peak.
117.1015 MHz, 21.1 dBuV. Peak.
117.2416 MHz, 22.1 dBuV. Peak.
117.2616 MHz, 21.7 dBuV. Peak.
117.3616 MHz, 21.9 dBuV. Peak.
117.5416 MHz, 21.4 dBuV. Peak.
117.6516 MHz, 24.5 dBuV. Peak.
117.9217 MHz, 22.1 dBuV. Peak.
117.9517 MHz, 22 dBuV. Peak.
117.9717 MHz, 23 dBuV. Peak.
118.8619 MHz, 24.2 dBuV. Peak.
118.8819 MHz, 22.4 dBuV. Peak.
119.0819 MHz, 21.4 dBuV. Peak.
119.102 MHz, 23 dBuV. Peak.
119.122 MHz, 22.4 dBuV. Peak.
119.142 MHz, 21.9 dBuV. Peak.
119.162 MHz, 21.4 dBuV. Peak.
119.192 MHz, 22.3 dBuV. Peak.
119.252 MHz, 22.2 dBuV. Peak.
119.342 MHz, 24.3 dBuV. Peak.
119.372 MHz, 24.7 dBuV. Peak.
119.402 MHz, 26.9 dBuV. Peak.
119.472 MHz, 24.2 dBuV. Peak.
120.0121 MHz, 27.1 dBuV. Peak.
120.34 MHz, 21.6 dBuV. Peak.
123.93 MHz, 22.8 dBuV. Peak.
123.96 MHz, 24.1 dBuV. Peak.
124.03 MHz, 21.6 dBuV. Peak.
125.52 MHz, 23.1 dBuV. Peak.
127.04 MHz, 26.5 dBuV. Peak.
127.24 MHz, 22.3 dBuV. Peak.
127.32 MHz, 22 dBuV. Peak.
128.29 MHz, 21.9 dBuV. Peak.
128.87 MHz, 28.6 dBuV. Peak.
129.83 MHz, 24.1 dBuV. Peak.
129.96 MHz, 21.8 dBuV. Peak.
130.02 MHz, 22.7 dBuV. Peak.
130.4098 MHz, 27.2 dBuV. Peak.
131.9389 MHz, 21.6 dBuV. Peak.
132.2288 MHz, 21.7 dBuV. Peak.
133.0983 MHz, 21.8 dBuV. Peak.
133.2182 MHz, 22.2 dBuV. Peak.
133.2782 MHz, 21.5 dBuV. Peak.
133.3581 MHz, 22.8 dBuV. Peak.
133.3881 MHz, 21.5 dBuV. Peak.
135.2671 MHz, 22.2 dBuV. Peak.
135.3171 MHz, 23.1 dBuV. Peak.
136.2066 MHz, 21.9 dBuV. Peak.
136.2865 MHz, 21.1 dBuV. Peak.
136.4764 MHz, 25.7 dBuV. Peak.
136.4964 MHz, 22.4 dBuV. Peak.

136.5364 MHz, 22.9 dBuV. Peak.
136.6863 MHz, 21.1 dBuV. Peak.
136.7563 MHz, 25.1 dBuV. Peak.
136.7962 MHz, 21.5 dBuV. Peak.
136.8362 MHz, 21.5 dBuV. Peak.
137.9156 MHz, 21.5 dBuV. Peak.
137.9756 MHz, 22.8 dBuV. Peak.
138.1155 MHz, 25.1 dBuV. Peak.
138.3154 MHz, 21 dBuV. Peak.
138.3754 MHz, 24.6 dBuV. Peak.
138.6452 MHz, 21.3 dBuV. Peak.
138.9151 MHz, 21.3 dBuV. Peak.
139.5447 MHz, 22.3 dBuV. Peak.
139.5647 MHz, 22.8 dBuV. Peak.
139.8146 MHz, 26 dBuV. Peak.
139.8446 MHz, 29 dBuV. Peak.
139.8846 MHz, 22.2 dBuV. Peak.
139.9345 MHz, 22.8 dBuV. Peak.
139.9645 MHz, 21 dBuV. Peak.
140.0345 MHz, 27.6 dBuV. Peak.
140.01 MHz, 28.4 dBuV. Peak.
140.7995 MHz, 21.1 dBuV. Peak.
141.0394 MHz, 21.5 dBuV. Peak.
141.3392 MHz, 23.7 dBuV. Peak.
141.3692 MHz, 26.1 dBuV. Peak.
141.6591 MHz, 27.2 dBuV. Peak.
141.9489 MHz, 21.8 dBuV. Peak.
142.1288 MHz, 22.6 dBuV. Peak.
142.6185 MHz, 25.5 dBuV. Peak.
142.8784 MHz, 21.3 dBuV. Peak.
142.9084 MHz, 24.6 dBuV. Peak.
143.1882 MHz, 25.5 dBuV. Peak.
144.1477 MHz, 21.3 dBuV. Peak.
144.1777 MHz, 22.2 dBuV. Peak.
144.3576 MHz, 23.9 dBuV. Peak.
144.4475 MHz, 21.6 dBuV. Peak.
144.7474 MHz, 21.2 dBuV. Peak.
145.0172 MHz, 21.9 dBuV. Peak.
145.0372 MHz, 22 dBuV. Peak.
160.03 MHz, 30.4 dBuV. Peak.
180.05 MHz, 33 dBuV. Peak.
200.04 MHz, 24.4 dBuV. Peak.
200.12 MHz, 24.2 dBuV. Peak.

Top 6 Emissions above 300 MHz from the vertical prescan list:

499.87 MHz, 17.3 dBuV.
300.03 MHz, 17.2 dBuV.
300.26 MHz, 17.1 dBuV.
333.26 MHz, 16.6 dBuV.
400 MHz, 16.2 dBuV.
499.95 MHz, 16.1 dBuV.

Full Emission List above 300 MHz:

300.03 MHz, 17.2 dBuV. Peak.
300.26 MHz, 17.1 dBuV. Peak.
320.05 MHz, 16 dBuV. Peak.
333.08 MHz, 17.1 dBuV. Peak.
333.26 MHz, 16.6 dBuV. Peak.
400 MHz, 16.2 dBuV. Peak.
499.87 MHz, 17.3 dBuV. Peak.
499.93 MHz, 16 dBuV. Peak.
499.95 MHz, 16.1 dBuV. Peak.

500.04 MHz, 16.1 dBuV. Peak.

Horizontal Prescan

Top 6 Emissions below 300 MHz from the horizontal prescan list:

180.01 MHz, 38.4 dBuV.
160.03 MHz, 33.9 dBuV.
106.2513 MHz, 32.3 dBuV.
116.0913 MHz, 31.6 dBuV.
114.551 MHz, 31 dBuV.
127.0615 MHz, 30.4 dBuV.

Full Emission List below 300 MHz:

62.68954 MHz, 21.2 dBuV. Peak.
62.76953 MHz, 21.4 dBuV. Peak.
62.79952 MHz, 22 dBuV. Peak.
63.03948 MHz, 21.2 dBuV. Peak.
63.05948 MHz, 21.8 dBuV. Peak.
63.25945 MHz, 21.5 dBuV. Peak.
63.29944 MHz, 21.9 dBuV. Peak.
63.32943 MHz, 21.9 dBuV. Peak.
63.36943 MHz, 21.9 dBuV. Peak.
63.40942 MHz, 21.3 dBuV. Peak.
63.46941 MHz, 21 dBuV. Peak.
63.5094 MHz, 22.7 dBuV. Peak.
63.56939 MHz, 22.4 dBuV. Peak.
63.58939 MHz, 21.9 dBuV. Peak.
63.62938 MHz, 22.2 dBuV. Peak.
63.66938 MHz, 22.9 dBuV. Peak.
63.72937 MHz, 21.3 dBuV. Peak.
63.74936 MHz, 21.3 dBuV. Peak.
63.80935 MHz, 22.4 dBuV. Peak.
63.99932 MHz, 21.9 dBuV. Peak.
64.03933 MHz, 23.2 dBuV. Peak.
64.07934 MHz, 22.7 dBuV. Peak.
64.10934 MHz, 22 dBuV. Peak.
64.12935 MHz, 21.4 dBuV. Peak.
64.15936 MHz, 22.5 dBuV. Peak.
64.20937 MHz, 21.5 dBuV. Peak.
64.24937 MHz, 24 dBuV. Peak.
64.29939 MHz, 21.2 dBuV. Peak.
64.31939 MHz, 21.3 dBuV. Peak.
64.40941 MHz, 22 dBuV. Peak.
64.46942 MHz, 23.3 dBuV. Peak.
64.51943 MHz, 22.6 dBuV. Peak.
64.56944 MHz, 21.9 dBuV. Peak.
64.59945 MHz, 24.3 dBuV. Peak.
64.63946 MHz, 24.5 dBuV. Peak.
64.67947 MHz, 21.4 dBuV. Peak.
64.76949 MHz, 23.1 dBuV. Peak.
64.8395 MHz, 22.2 dBuV. Peak.
64.93952 MHz, 22.4 dBuV. Peak.
64.97953 MHz, 21.1 dBuV. Peak.
65.06955 MHz, 21.6 dBuV. Peak.
65.13956 MHz, 21.8 dBuV. Peak.
65.2996 MHz, 21 dBuV. Peak.
65.36961 MHz, 21.9 dBuV. Peak.
65.40962 MHz, 22.1 dBuV. Peak.
65.43963 MHz, 23.4 dBuV. Peak.
65.48964 MHz, 22.1 dBuV. Peak.

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| | | |
|--------------------------------|--------------------------------|--------------------------------|
| 65.51965 MHz, 22.8 dBuV. Peak. | 104.471 MHz, 21.6 dBuV. Peak. | 111.5203 MHz, 21.6 dBuV. Peak. |
| 65.53965 MHz, 23.4 dBuV. Peak. | 104.8811 MHz, 21.5 dBuV. Peak. | 111.5703 MHz, 25.3 dBuV. Peak. |
| 65.58966 MHz, 22.1 dBuV. Peak. | 105.0111 MHz, 22.9 dBuV. Peak. | 111.5903 MHz, 26.7 dBuV. Peak. |
| 65.64967 MHz, 24.8 dBuV. Peak. | 105.1211 MHz, 21.8 dBuV. Peak. | 111.6604 MHz, 21.9 dBuV. Peak. |
| 65.68968 MHz, 22.3 dBuV. Peak. | 105.1511 MHz, 23.4 dBuV. Peak. | 111.8004 MHz, 21.8 dBuV. Peak. |
| 65.70969 MHz, 21.5 dBuV. Peak. | 105.7312 MHz, 24.6 dBuV. Peak. | 112.1305 MHz, 22.3 dBuV. Peak. |
| 65.73969 MHz, 22.4 dBuV. Peak. | 106.0013 MHz, 22.3 dBuV. Peak. | 112.1605 MHz, 21.6 dBuV. Peak. |
| 65.7697 MHz, 22.1 dBuV. Peak. | 106.0813 MHz, 21.8 dBuV. Peak. | 112.2305 MHz, 23.9 dBuV. Peak. |
| 65.82971 MHz, 21.9 dBuV. Peak. | 106.2313 MHz, 24.7 dBuV. Peak. | 112.4405 MHz, 22.1 dBuV. Peak. |
| 65.84972 MHz, 23.5 dBuV. Peak. | 106.2513 MHz, 32.3 dBuV. Peak. | 112.7106 MHz, 27.1 dBuV. Peak. |
| 65.90973 MHz, 21.1 dBuV. Peak. | 106.3614 MHz, 30.3 dBuV. Peak. | 112.7406 MHz, 28.8 dBuV. Peak. |
| 65.94974 MHz, 21.2 dBuV. Peak. | 106.5614 MHz, 21.9 dBuV. Peak. | 112.9406 MHz, 27.9 dBuV. Peak. |
| 65.96974 MHz, 21.6 dBuV. Peak. | 106.6214 MHz, 22.1 dBuV. Peak. | 113.0006 MHz, 22.3 dBuV. Peak. |
| 66.05976 MHz, 23.3 dBuV. Peak. | 106.6414 MHz, 23 dBuV. Peak. | 113.0207 MHz, 23.3 dBuV. Peak. |
| 66.09977 MHz, 22.3 dBuV. Peak. | 106.7715 MHz, 21.1 dBuV. Peak. | 113.3107 MHz, 21.4 dBuV. Peak. |
| 66.15978 MHz, 21.1 dBuV. Peak. | 106.8615 MHz, 21 dBuV. Peak. | 114.2609 MHz, 25.2 dBuV. Peak. |
| 66.18979 MHz, 22.3 dBuV. Peak. | 106.9415 MHz, 23.9 dBuV. Peak. | 114.2909 MHz, 22.5 dBuV. Peak. |
| 66.20979 MHz, 22.4 dBuV. Peak. | 107.6616 MHz, 21.4 dBuV. Peak. | 114.551 MHz, 31 dBuV. Peak. |
| 66.2498 MHz, 21.7 dBuV. Peak. | 107.8117 MHz, 23.7 dBuV. Peak. | 114.851 MHz, 23.5 dBuV. Peak. |
| 66.35983 MHz, 21.7 dBuV. Peak. | 107.8717 MHz, 22.1 dBuV. Peak. | 115.1311 MHz, 22.8 dBuV. Peak. |
| 66.39983 MHz, 21.4 dBuV. Peak. | 107.9717 MHz, 21.2 dBuV. Peak. | 115.4212 MHz, 21.3 dBuV. Peak. |
| 66.43984 MHz, 21.2 dBuV. Peak. | 108.0117 MHz, 21 dBuV. Peak. | 115.4412 MHz, 21 dBuV. Peak. |
| 66.55987 MHz, 21.4 dBuV. Peak. | 108.1217 MHz, 23.6 dBuV. Peak. | 115.5312 MHz, 27.7 dBuV. Peak. |
| 66.67989 MHz, 22.9 dBuV. Peak. | 108.1417 MHz, 24.5 dBuV. Peak. | 115.9113 MHz, 22.1 dBuV. Peak. |
| 66.7099 MHz, 21.8 dBuV. Peak. | 108.1718 MHz, 24.2 dBuV. Peak. | 116.0013 MHz, 24.9 dBuV. Peak. |
| 66.81992 MHz, 21.7 dBuV. Peak. | 108.1918 MHz, 25 dBuV. Peak. | 116.0613 MHz, 21.5 dBuV. Peak. |
| 67.04997 MHz, 21.6 dBuV. Peak. | 108.2218 MHz, 26 dBuV. Peak. | 116.0913 MHz, 31.6 dBuV. Peak. |
| 67.08998 MHz, 22.4 dBuV. Peak. | 108.2818 MHz, 22.4 dBuV. Peak. | 116.1613 MHz, 27.6 dBuV. Peak. |
| 67.18 MHz, 21 dBuV. Peak. | 108.3318 MHz, 21.4 dBuV. Peak. | 116.4014 MHz, 21.5 dBuV. Peak. |
| 67.32003 MHz, 22.1 dBuV. Peak. | 108.3918 MHz, 22.8 dBuV. Peak. | 116.6714 MHz, 24.1 dBuV. Peak. |
| 67.39005 MHz, 22.9 dBuV. Peak. | 108.4118 MHz, 21 dBuV. Peak. | 116.9515 MHz, 24.4 dBuV. Peak. |
| 67.96017 MHz, 21.3 dBuV. Peak. | 108.4318 MHz, 23.5 dBuV. Peak. | 117.2416 MHz, 21.7 dBuV. Peak. |
| 68.20022 MHz, 21.1 dBuV. Peak. | 108.4718 MHz, 23 dBuV. Peak. | 117.2616 MHz, 21.1 dBuV. Peak. |
| 84.38 MHz, 21 dBuV. Peak. | 108.5218 MHz, 23 dBuV. Peak. | 117.5316 MHz, 21.9 dBuV. Peak. |
| 85.92 MHz, 21.1 dBuV. Peak. | 108.7519 MHz, 22.5 dBuV. Peak. | 117.6416 MHz, 22.7 dBuV. Peak. |
| 87.06 MHz, 22 dBuV. Peak. | 108.8319 MHz, 23.7 dBuV. Peak. | 117.6616 MHz, 23 dBuV. Peak. |
| 87.16 MHz, 22.7 dBuV. Peak. | 109.0119 MHz, 22.2 dBuV. Peak. | 117.7517 MHz, 21 dBuV. Peak. |
| 87.74 MHz, 22.6 dBuV. Peak. | 109.0419 MHz, 22.3 dBuV. Peak. | 117.8217 MHz, 22.9 dBuV. Peak. |
| 88 MHz, 22.5 dBuV. Peak. | 109.0719 MHz, 23.2 dBuV. Peak. | 117.9317 MHz, 22.1 dBuV. Peak. |
| 88.87 MHz, 21.5 dBuV. Peak. | 109.132 MHz, 21.7 dBuV. Peak. | 117.9517 MHz, 23.1 dBuV. Peak. |
| 95.59 MHz, 22.5 dBuV. Peak. | 109.182 MHz, 24.4 dBuV. Peak. | 117.9717 MHz, 24.4 dBuV. Peak. |
| 96.58 MHz, 21.8 dBuV. Peak. | 109.252 MHz, 23 dBuV. Peak. | 118.8019 MHz, 26.5 dBuV. Peak. |
| 97.81 MHz, 21.6 dBuV. Peak. | 109.302 MHz, 25.7 dBuV. Peak. | 118.8219 MHz, 24 dBuV. Peak. |
| 98.39 MHz, 21.2 dBuV. Peak. | 109.342 MHz, 23 dBuV. Peak. | 118.8519 MHz, 23.2 dBuV. Peak. |
| 98.6 MHz, 22.3 dBuV. Peak. | 109.372 MHz, 26.3 dBuV. Peak. | 119.0619 MHz, 25.8 dBuV. Peak. |
| 98.69 MHz, 25.1 dBuV. Peak. | 109.442 MHz, 23.3 dBuV. Peak. | 119.122 MHz, 22.9 dBuV. Peak. |
| 98.94 MHz, 22 dBuV. Peak. | 109.542 MHz, 21.7 dBuV. Peak. | 119.162 MHz, 21.5 dBuV. Peak. |
| 99 MHz, 22.1 dBuV. Peak. | 109.5721 MHz, 23.4 dBuV. Peak. | 119.192 MHz, 21.9 dBuV. Peak. |
| 99.16 MHz, 21.3 dBuV. Peak. | 109.6121 MHz, 24.3 dBuV. Peak. | 119.312 MHz, 22.4 dBuV. Peak. |
| 99.96 MHz, 25.2 dBuV. Peak. | 109.6721 MHz, 23.9 dBuV. Peak. | 119.352 MHz, 21.7 dBuV. Peak. |
| 100.02 MHz, 23.7 dBuV. Peak. | 109.7021 MHz, 23.6 dBuV. Peak. | 119.392 MHz, 25.3 dBuV. Peak. |
| 100 MHz, 24.8 dBuV. Peak. | 109.7221 MHz, 25.5 dBuV. Peak. | 119.452 MHz, 21.9 dBuV. Peak. |
| 100.2201 MHz, 23.4 dBuV. Peak. | 109.7421 MHz, 25 dBuV. Peak. | 119.542 MHz, 21.3 dBuV. Peak. |
| 101.7604 MHz, 26.7 dBuV. Peak. | 109.8921 MHz, 24.2 dBuV. Peak. | 120.0121 MHz, 27.8 dBuV. Peak. |
| 101.7904 MHz, 23.2 dBuV. Peak. | 109.9221 MHz, 23.2 dBuV. Peak. | 120.01 MHz, 28.3 dBuV. Peak. |
| 101.9404 MHz, 21 dBuV. Peak. | 109.9621 MHz, 22.2 dBuV. Peak. | 120.3001 MHz, 22.2 dBuV. Peak. |
| 102.0504 MHz, 25 dBuV. Peak. | 110.16 MHz, 22.3 dBuV. Peak. | 120.3301 MHz, 23.2 dBuV. Peak. |
| 102.2105 MHz, 21.3 dBuV. Peak. | 110.9102 MHz, 24.2 dBuV. Peak. | 120.3501 MHz, 24.1 dBuV. Peak. |
| 102.3305 MHz, 23.7 dBuV. Peak. | 111.1603 MHz, 21.1 dBuV. Peak. | 120.5301 MHz, 22.5 dBuV. Peak. |
| 102.3505 MHz, 21.3 dBuV. Peak. | 111.2003 MHz, 24.7 dBuV. Peak. | 120.5801 MHz, 22.8 dBuV. Peak. |
| 102.8006 MHz, 21.6 dBuV. Peak. | 111.2703 MHz, 21.5 dBuV. Peak. | 120.6101 MHz, 24.6 dBuV. Peak. |
| 103.0207 MHz, 23 dBuV. Peak. | 111.3103 MHz, 23.5 dBuV. Peak. | 120.6802 MHz, 24 dBuV. Peak. |
| 103.2207 MHz, 21.7 dBuV. Peak. | 111.3603 MHz, 22.2 dBuV. Peak. | 120.7002 MHz, 22.1 dBuV. Peak. |
| 103.2407 MHz, 22.8 dBuV. Peak. | 111.4403 MHz, 23.7 dBuV. Peak. | 120.8602 MHz, 21.2 dBuV. Peak. |
| 103.3107 MHz, 24.2 dBuV. Peak. | 111.4603 MHz, 23.3 dBuV. Peak. | 120.9002 MHz, 21.2 dBuV. Peak. |

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120.9202 MHz, 21.3 dBuV. Peak.
 120.9602 MHz, 21.7 dBuV. Peak.
 120.9802 MHz, 21.8 dBuV. Peak.
 121.0002 MHz, 22.8 dBuV. Peak.
 121.0702 MHz, 21.9 dBuV. Peak.
 121.8204 MHz, 21.3 dBuV. Peak.
 121.8704 MHz, 21.1 dBuV. Peak.
 121.8904 MHz, 21.7 dBuV. Peak.
 121.9304 MHz, 21.6 dBuV. Peak.
 122.1605 MHz, 21.2 dBuV. Peak.
 122.2905 MHz, 22.3 dBuV. Peak.
 122.3205 MHz, 21.9 dBuV. Peak.
 122.3505 MHz, 21.7 dBuV. Peak.
 122.3905 MHz, 26.3 dBuV. Peak.
 122.4705 MHz, 23.5 dBuV. Peak.
 122.4905 MHz, 22.4 dBuV. Peak.
 122.5105 MHz, 23.9 dBuV. Peak.
 122.5406 MHz, 24.4 dBuV. Peak.
 122.6506 MHz, 22 dBuV. Peak.
 123.6708 MHz, 24.1 dBuV. Peak.
 123.7008 MHz, 21.5 dBuV. Peak.
 123.7508 MHz, 21.4 dBuV. Peak.
 123.9909 MHz, 21.2 dBuV. Peak.
 124.3309 MHz, 21.6 dBuV. Peak.
 125.2411 MHz, 22.2 dBuV. Peak.
 125.4712 MHz, 21 dBuV. Peak.
 125.5212 MHz, 26.7 dBuV. Peak.
 125.7312 MHz, 23.2 dBuV. Peak.
 125.8713 MHz, 21.1 dBuV. Peak.
 125.9013 MHz, 23 dBuV. Peak.
 126.2013 MHz, 21 dBuV. Peak.
 126.4914 MHz, 24.4 dBuV. Peak.
 127.0615 MHz, 30.4 dBuV. Peak.
 127.3416 MHz, 25.2 dBuV. Peak.
 128.3115 MHz, 23.4 dBuV. Peak.
 128.8912 MHz, 30.2 dBuV. Peak.
 129.4609 MHz, 21.2 dBuV. Peak.
 129.8507 MHz, 25 dBuV. Peak.
 129.9506 MHz, 22 dBuV. Peak.
 130.01 MHz, 24.4 dBuV. Peak.
 130.2998 MHz, 23.4 dBuV. Peak.
 130.3898 MHz, 28.3 dBuV. Peak.
 130.4697 MHz, 23 dBuV. Peak.
 130.6996 MHz, 21.4 dBuV. Peak.
 131.5691 MHz, 23 dBuV. Peak.
 131.5991 MHz, 22.1 dBuV. Peak.
 131.839 MHz, 23.5 dBuV. Peak.
 131.9089 MHz, 21.3 dBuV. Peak.
 131.9589 MHz, 21.3 dBuV. Peak.
 132.1488 MHz, 23.8 dBuV. Peak.
 132.2388 MHz, 26.6 dBuV. Peak.
 133.1383 MHz, 24.1 dBuV. Peak.
 133.4081 MHz, 22.2 dBuV. Peak.
 133.7879 MHz, 21.1 dBuV. Peak.
 135.2571 MHz, 21.2 dBuV. Peak.
 136.4165 MHz, 22.3 dBuV. Peak.
 136.5864 MHz, 21 dBuV. Peak.
 136.7163 MHz, 21.7 dBuV. Peak.
 136.7563 MHz, 23.5 dBuV. Peak.
 139.8346 MHz, 22.1 dBuV. Peak.
 139.8646 MHz, 21.9 dBuV. Peak.
 140 MHz, 27.6 dBuV. Peak.
 141.3492 MHz, 24.1 dBuV. Peak.
 141.5891 MHz, 22.6 dBuV. Peak.
 141.6391 MHz, 23.9 dBuV. Peak.
 141.6691 MHz, 24.2 dBuV. Peak.
 142.2288 MHz, 21 dBuV. Peak.
 142.6086 MHz, 24.8 dBuV. Peak.
 142.6285 MHz, 24.9 dBuV. Peak.
 142.8684 MHz, 21.7 dBuV. Peak.
 142.8884 MHz, 24.2 dBuV. Peak.
 142.9184 MHz, 24.6 dBuV. Peak.
 143.1782 MHz, 23.7 dBuV. Peak.
 143.1982 MHz, 24.8 dBuV. Peak.
 143.4981 MHz, 21.1 dBuV. Peak.
 143.578 MHz, 21.5 dBuV. Peak.
 144.1677 MHz, 23.4 dBuV. Peak.
 144.3576 MHz, 22.6 dBuV. Peak.
 144.4675 MHz, 23.6 dBuV. Peak.
 144.7474 MHz, 23.9 dBuV. Peak.
 145.0272 MHz, 23.9 dBuV. Peak.
 146.1866 MHz, 22.2 dBuV. Peak.
 146.2066 MHz, 23.1 dBuV. Peak.
 146.2366 MHz, 21.4 dBuV. Peak.
 146.2865 MHz, 21.7 dBuV. Peak.
 146.3065 MHz, 22.7 dBuV. Peak.
 146.5564 MHz, 21.3 dBuV. Peak.
 146.5764 MHz, 23.2 dBuV. Peak.
 146.6763 MHz, 21.8 dBuV. Peak.
 147.256 MHz, 21.9 dBuV. Peak.
 147.4059 MHz, 21.7 dBuV. Peak.
 147.5458 MHz, 24 dBuV. Peak.
 147.7257 MHz, 25.4 dBuV. Peak.
 147.7757 MHz, 21.5 dBuV. Peak.
 147.8057 MHz, 21.8 dBuV. Peak.
 147.8457 MHz, 23.8 dBuV. Peak.
 148.0256 MHz, 22.7 dBuV. Peak.
 148.1355 MHz, 23.4 dBuV. Peak.
 148.2754 MHz, 21 dBuV. Peak.
 148.4154 MHz, 23 dBuV. Peak.
 148.6852 MHz, 21.6 dBuV. Peak.
 149.3349 MHz, 22.5 dBuV. Peak.
 150.88 MHz, 21.5 dBuV. Peak.
 151.93 MHz, 21.2 dBuV. Peak.
 152.53 MHz, 21.9 dBuV. Peak.
 157.25 MHz, 21.9 dBuV. Peak.
 157.54 MHz, 22.1 dBuV. Peak.
 157.85 MHz, 22 dBuV. Peak.
 159.08 MHz, 25.2 dBuV. Peak.
 159.65 MHz, 22.7 dBuV. Peak.
 160.03 MHz, 33.9 dBuV. Peak.
 160.29 MHz, 21.4 dBuV. Peak.
 160.6 MHz, 23.1 dBuV. Peak.
 161.65 MHz, 22.1 dBuV. Peak.
 161.73 MHz, 21.4 dBuV. Peak.
 165.61 MHz, 21.2 dBuV. Peak.
 167.18 MHz, 21.1 dBuV. Peak.
 167.31 MHz, 21.1 dBuV. Peak.
 168.75 MHz, 22.1 dBuV. Peak.
 170.02 MHz, 23.8 dBuV. Peak.
 170.01 MHz, 22.1 dBuV. Peak.
 170.2998 MHz, 21.7 dBuV. Peak.
 171.5491 MHz, 23.3 dBuV. Peak.
 171.839 MHz, 24.7 dBuV. Peak.
 172.7885 MHz, 22.8 dBuV. Peak.
 173.2282 MHz, 24.4 dBuV. Peak.
 173.3182 MHz, 22.2 dBuV. Peak.
 173.3681 MHz, 22 dBuV. Peak.
 173.3881 MHz, 22.2 dBuV. Peak.
 173.7279 MHz, 21.2 dBuV. Peak.
 173.8479 MHz, 21.3 dBuV. Peak.
 174.1677 MHz, 22 dBuV. Peak.
 174.5975 MHz, 22.2 dBuV. Peak.
 174.7574 MHz, 21.3 dBuV. Peak.
 174.8873 MHz, 23.2 dBuV. Peak.
 175.0972 MHz, 21.1 dBuV. Peak.
 175.1372 MHz, 21.9 dBuV. Peak.
 175.1971 MHz, 25.2 dBuV. Peak.
 175.7468 MHz, 21.9 dBuV. Peak.
 175.7668 MHz, 21.7 dBuV. Peak.
 176.0467 MHz, 24.3 dBuV. Peak.
 176.1966 MHz, 21.1 dBuV. Peak.
 176.2366 MHz, 21 dBuV. Peak.
 176.2565 MHz, 21.6 dBuV. Peak.
 176.2965 MHz, 21.2 dBuV. Peak.
 176.3265 MHz, 23.2 dBuV. Peak.
 176.3665 MHz, 24.4 dBuV. Peak.
 176.4165 MHz, 22.2 dBuV. Peak.
 176.5364 MHz, 24.5 dBuV. Peak.
 176.8062 MHz, 23.1 dBuV. Peak.
 176.9062 MHz, 21.8 dBuV. Peak.
 176.9762 MHz, 23.1 dBuV. Peak.
 177.0961 MHz, 21.1 dBuV. Peak.
 177.256 MHz, 24 dBuV. Peak.
 177.3659 MHz, 22.2 dBuV. Peak.
 177.3959 MHz, 24.7 dBuV. Peak.
 177.5159 MHz, 21.6 dBuV. Peak.
 177.5458 MHz, 22.3 dBuV. Peak.
 177.5658 MHz, 21 dBuV. Peak.
 177.6858 MHz, 23.9 dBuV. Peak.
 177.8257 MHz, 23.7 dBuV. Peak.
 177.8457 MHz, 21.8 dBuV. Peak.
 177.8857 MHz, 24.9 dBuV. Peak.
 177.9256 MHz, 21.9 dBuV. Peak.
 177.9756 MHz, 21.2 dBuV. Peak.
 178.2255 MHz, 21.5 dBuV. Peak.
 178.2754 MHz, 22 dBuV. Peak.
 178.7552 MHz, 21.4 dBuV. Peak.
 179.135 MHz, 21.5 dBuV. Peak.
 179.3349 MHz, 21.2 dBuV. Peak.
 179.6047 MHz, 21.3 dBuV. Peak.
 179.9045 MHz, 23.5 dBuV. Peak.
 180.01 MHz, 38.4 dBuV. Peak.
 180.1799 MHz, 22.6 dBuV. Peak.
 180.6196 MHz, 21.9 dBuV. Peak.
 180.9595 MHz, 21.5 dBuV. Peak.
 181.819 MHz, 21.9 dBuV. Peak.
 182.5386 MHz, 22.2 dBuV. Peak.
 182.7085 MHz, 21 dBuV. Peak.
 182.8284 MHz, 23.1 dBuV. Peak.
 183.608 MHz, 21.9 dBuV. Peak.
 183.7479 MHz, 23.2 dBuV. Peak.
 183.8379 MHz, 22.6 dBuV. Peak.
 183.9078 MHz, 22.1 dBuV. Peak.
 184.3176 MHz, 23.2 dBuV. Peak.
 184.3476 MHz, 24.6 dBuV. Peak.
 184.4875 MHz, 21.2 dBuV. Peak.
 184.6174 MHz, 21.6 dBuV. Peak.
 184.9073 MHz, 21.3 dBuV. Peak.
 184.9573 MHz, 21.4 dBuV. Peak.
 185.1671 MHz, 21.5 dBuV. Peak.
 185.1971 MHz, 21 dBuV. Peak.
 185.487 MHz, 21 dBuV. Peak.
 185.6269 MHz, 21.1 dBuV. Peak.
 186.0167 MHz, 21.7 dBuV. Peak.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

186.1466 MHz, 22.8 dBuV. Peak.
186.1666 MHz, 22.1 dBuV. Peak.
186.8162 MHz, 21.9 dBuV. Peak.
187.1161 MHz, 21.1 dBuV. Peak.
187.256 MHz, 21.8 dBuV. Peak.
187.4059 MHz, 22.2 dBuV. Peak.
187.5658 MHz, 22 dBuV. Peak.
187.6958 MHz, 22.4 dBuV. Peak.
187.9656 MHz, 21.1 dBuV. Peak.
189.6047 MHz, 21.3 dBuV. Peak.
191.96 MHz, 21.3 dBuV. Peak.
192.54 MHz, 22.3 dBuV. Peak.

196.69 MHz, 21.5 dBuV. Peak.
197.12 MHz, 21.4 dBuV. Peak.
199.89 MHz, 22.9 dBuV. Peak.
199.91 MHz, 24.6 dBuV. Peak.
199.98 MHz, 27.8 dBuV. Peak.
199.99 MHz, 27.8 dBuV. Peak.
200.02 MHz, 28.5 dBuV. Peak.
200.12 MHz, 23.3 dBuV. Peak.

Top Emissions above 300 MHz from the
horizontal prescan list:

300.02 MHz, 17.8 dBuV.
333.38 MHz, 16.6 dBuV.
333.28 MHz, 16.5 dBuV.
333.19 MHz, 16.2 dBuV.

Full Emission List above 300 MHz:

300.02 MHz, 17.8 dBuV. Peak.
333.19 MHz, 16.2 dBuV. Peak.
333.28 MHz, 16.5 dBuV. Peak.
333.38 MHz, 16.6 dBuV. Peak.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Section 6. Sample Calculations

Conducted Emissions:

If the Quasi-Peak to Average ratio is greater than 6 dB, then the emission is classified as broadband and its Quasi-Peak level is reduced by 13 dB for comparison to the limit.

i.e. Quasi-Peak level = 40 dB μ V
 Average level = 34 dB μ V
 Corrected level = 40 - 13 = 27 dB μ V

Radiated Emissions

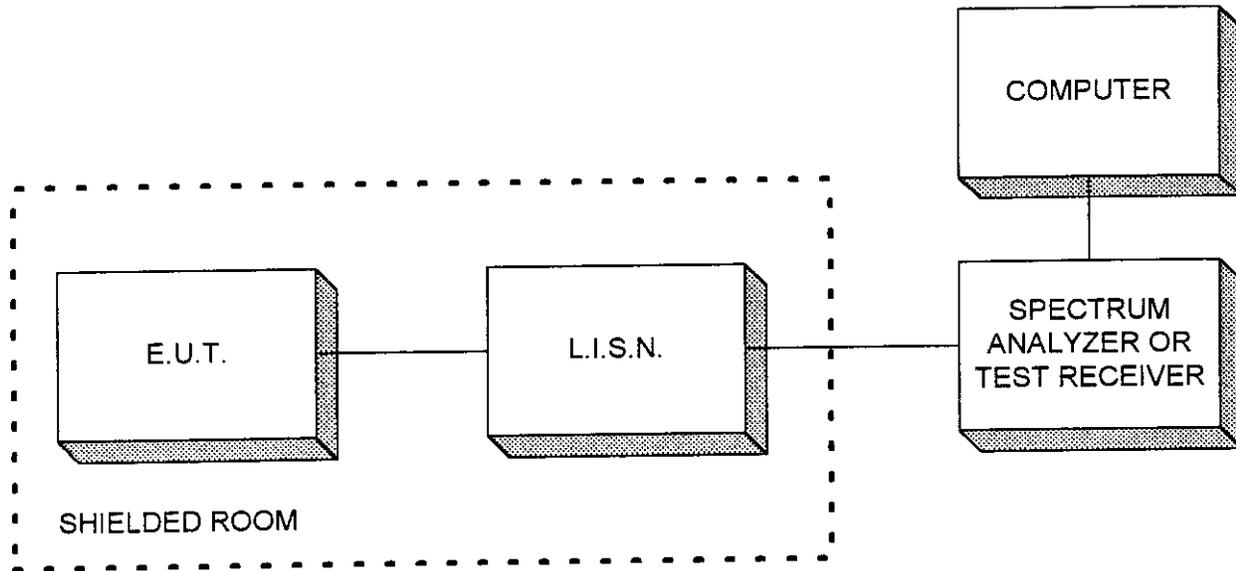
Emissions are measured at a distance of 3 meters and corrected for antenna factor and cable loss.

i.e. Received Signal = 25 dB μ V @ 100 MHz
 Antenna Factor & Cable Loss = 9.8 dB
 Field Intensity = 25 + 9.8 = 34.8 dB μ V/m @ 3 m

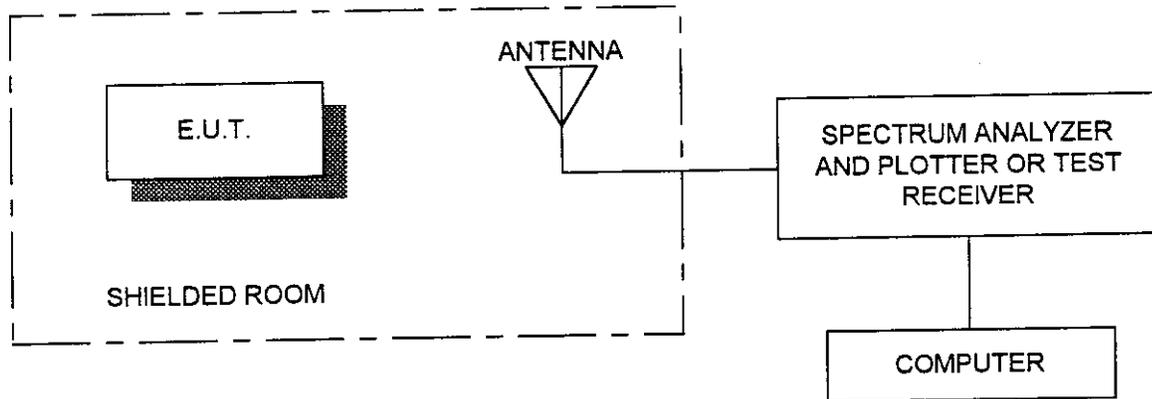
EQUIPMENT: *The American Biometric Company "BioMouse Plus"*
FCC ID: NEWAB2

Section 7. Block Diagrams

Conducted Emissions

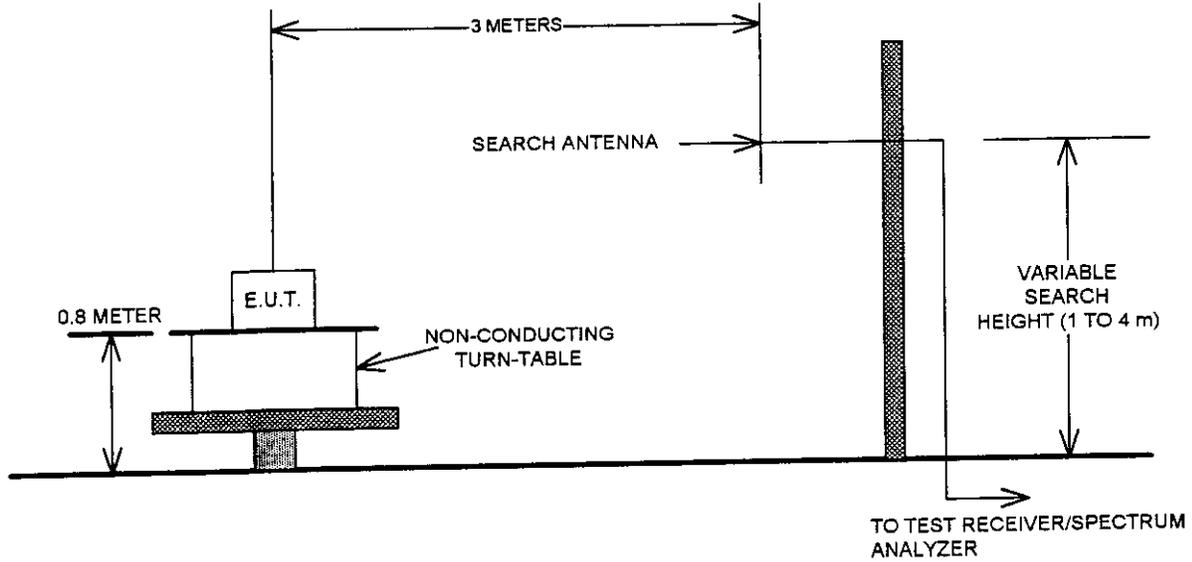


Radiated Prescan



EQUIPMENT: *The American Biometric Company "BioMouse Plus"*
FCC ID: *NEWAB2*

Outdoor Test Site For Radiated Emissions



The spectrum was searched up to the 10th harmonic of the fundamental frequency of operation.

EQUIPMENT: The American Biometric Company "BioMouse Plus"
FCC ID: NEWAB2

Section 8. Test Equipment List

Equipment List - Conducted Emissions - Shielded Room #1

| CAL Cycle | Equipment | Manufacturer | Model # | Serial/Asset # | Last Cal. | Next Cal. |
|-----------|----------------------------|------------------------|----------|----------------|-------------|-------------|
| 1 Year | LISN | Rohde & Schwarz | ESH2-Z5 | 890485/017 | July 25/97 | July 25/98 |
| 1 Year | LISN(peripheral) | Tegam | 95300-50 | T-109014/15 | July 25/97 | July 25/98 |
| 1 Year | Spectrum analyzer | Hewlett-Packard | 8566B | 2311A02238 | Sept. 30/97 | Sept. 30/98 |
| 1 Year | Spectrum analyzer display | Hewlett-Packard | 8566B | 2314A04759 | Sept. 30/97 | Sept. 30/98 |
| 1 Year | Quasi-peak adapter | Hewlett-Packard | 85650A | 2043A00302 | Sept. 30/97 | Sept. 30/98 |
| | International Power Supply | California Instruments | 1001WP | FA000965 | N/A | N/A |
| | Plotter | Hewlett-Packard | 7470A | 2210A08836 | N/A | N/A |
| 1 Year | Transient Limiter | Hewlett-Packard | 1194 7A | 3107A01766 | July 23/97 | July 23/98 |

Equipment List - Radiated Emissions

| CAL Cycle | Equipment | Manufacturer | Model # | Serial/Asset # | Last Cal. | Next Cal. |
|-----------|---------------------------|-----------------|---------|----------------|-------------|-------------|
| | Biconilog Antenna | EMCO | 3143 | 9404-1039 | NCR | NCR |
| 1 Year | Dipole Antenna Set | EMCO | 3121C | 1029 | Oct. 28/97 | Oct. 28/98 |
| 1 Year | Spectrum Analyzer | Hewlett-Packard | 8566B | 2311A02238 | Sept. 30/97 | Sept. 30/98 |
| 1 Year | Spectrum Analyzer Display | Hewlett-Packard | 8566B | 2314A04759 | Sept. 30/97 | Sept. 30/98 |
| 1 Year | Quasi-Peak Adapter | Hewlett Packard | 85650A | 2043A00302 | Sept. 30/97 | Sept.30/98 |
| | Plotter | Hewlett Packard | 7470A | 2210A08836 | N/A | N/A |
| 1 Year | Biconical (1) Antenna | EMCO | 3109 | 9204-2708 | July 11/97 | July 11/98 |
| 1 Year | Log Periodic Antenna | EMCO | LPA-25 | 1141 | July 10/97 | July 10/98 |

Note: N/A = Not Applicable
NCR = No Cal Required