

**FCC PART 15 SUBPART C**  
**EVALUATION REPORT**  
**RADIO FREQUENCY INTERFERENCE TEST**

Prepared for:

**DATA HUNTER**  
5132 Bolsa Avenue #102  
Huntington Beach, California 92649

Product Description:

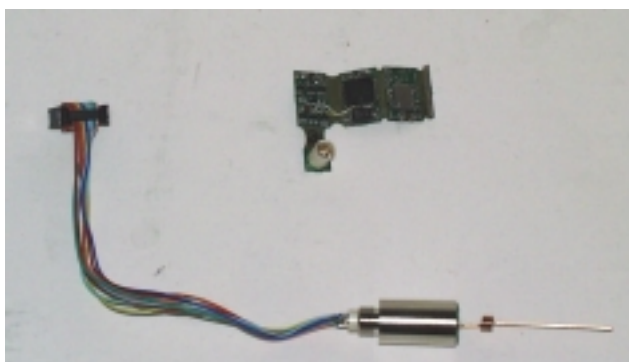
**Transmitter**

FCC ID. #:

**NJG-F916NB**

Model:

**Finger**



Test Completion Date:

**July 24, 2001**

# **TABLE OF CONTENTS**

- 1.0 LETTER OF CERTIFICATION**
- 2.0 SUMMARY OF TEST**
  - 2.1 ADMINISTRATIVE DATA AND TEST DESCRIPTION**
  - 2.2 TEST RESULT - CONDUCTED EMISSIONS**
  - 2.3 TEST RESULT - RADIATED EMISSIONS**
  - 2.4 MODIFICATIONS**
  - 2.5 INTENT TO INCORPORATE ENGINEERING REWORK**
  - 2.6 RECOMMENDATIONS**
- 3.0 TEST CONFIGURATION AND DESCRIPTION OF EUT**
  - 3.1 SKETCH OF EQUIPMENT AND CABLE CONFIGURATION**
  - 3.2.1 DESCRIPTION OF EUT**
  - 3.2.2 DESCRIPTION OF PERIPHERAL EQUIPMENT**
  - 3.3 TYPES OF CABLES USED**
  - 3.4 OPERATION MODES**
  - 3.5 PHOTOGRAPHS OF TEST SETUP AND EUT**
  - 3.6 DETAILED BLOCK DIAGRAM OF EUT**
- 4.0 TEST EQUIPMENT AND TEST SETUPS**
  - 4.1 LIST OF TEST EQUIPMENT USED AND CALIBRATION DATES**
  - 4.2 CONDUCTED EMISSIONS TEST SETUP**
  - 4.3 RADIATED EMISSIONS TEST SETUP**
- 5.0 TEST PROCEDURE**
  - 5.1 CONDUCTED EMISSIONS TEST**
  - 5.2 RADIATED PRELIMINARY TEST**
  - 5.3 RADIATED EMISSIONS TEST**
  - 5.4 FINAL RADIATED TESTING**
- 6.0 SAMPLE CALCULATIONS**
- 7.0 MEASUREMENTS AND UNCERTAINTIES**
- 8.0 LABELING AND NOTIFICATION REQUIREMENTS**

## **1.0 LETTER OF CERTIFICATION**

PDE Laboratories, Inc is accredited by the U.S. National Institute Standards Technology under NVLAP as suppliers of test results to the criteria established by ISO/IEC guide 25 and ISO 9002.

PDE Laboratories, Inc is approved by TUV Product Services as a test facility testing to the EMC DIRECTIVE 89/336/EEC.

PDE Laboratories, Inc is approved as a contractor to Radio Frequency investigation LTD, a UK Competent Body and by Radio Frequency Technologies LTD, a Competent Body of Ireland.

The data, data evaluation and equipment configuration represented herein are a true and accurate representation of the test sample (EUT), and of the radio frequency susceptibility characteristics and measurements obtained as of the dates and at the times of the test under the conditions specified.

The test results provided with this report indicate that the equipment tested is COMPLIANT with the following Rules and Regulations:

- 1) The Code of Federal Regulations 47, Part 15, Subpart C and ANSI C63.4

Tests Performed By:

---

Terry Reysbergen

Report Approved By:

---

David Feher

## **2.0 SUMMARY OF TEST**

### **2.1A ADMINISTRATIVE DATA**

DEVICE TESTED: Description: Low Powered Data Transmitter  
Model: Finger

ACCESSORIES: Works in conjunction with a corresponding data receiver. (Verified)

APPLICANT: DATA HUNTER  
5132 Bolsa Avenue #102  
Huntington Beach, California 92649

CONTACT: David Culp

MANUFACTURER: DATA HUNTER

### **2.1B TEST DESCRIPTION**

FREQUENCY RANGES: Conducted: 0.45 - 30.0 MHz  
Radiated: 30.0 - 1000 MHz

TEST LOCATION: 950 Calle Negocio, San Clemente, Calif. 92673

TEST DATES: July 24, 2001

PURPOSE OF TEST: To demonstrate compliance with the limits of FCC Part 15C

TESTS PERFORMED:

1. Conducted Emissions Per ANSI C63.4.
2. Radiated emissions Per ANSI C63.4 at 10 Meters.
3. Engineering Evaluations

All Measurement Data is acquired according to the content of ANSI C63.4. The Test Site Data and performance complies with ANSI C63.4, unless supplemented with additional requirements as noted in the test report.

## **2.2 TEST RESULTS - CONDUCTED EMISSIONS**

Conducted Emission Results - High or Supply Lead

N/A

**Although the EUT is powered from the host computer, it consumes an extremely low level of power from the connected data port. As such, it makes no discernible contribution to the conducted emissions profile of the host.**

## **2.2 TEST RESULTS - CONDUCTED EMISSIONS**

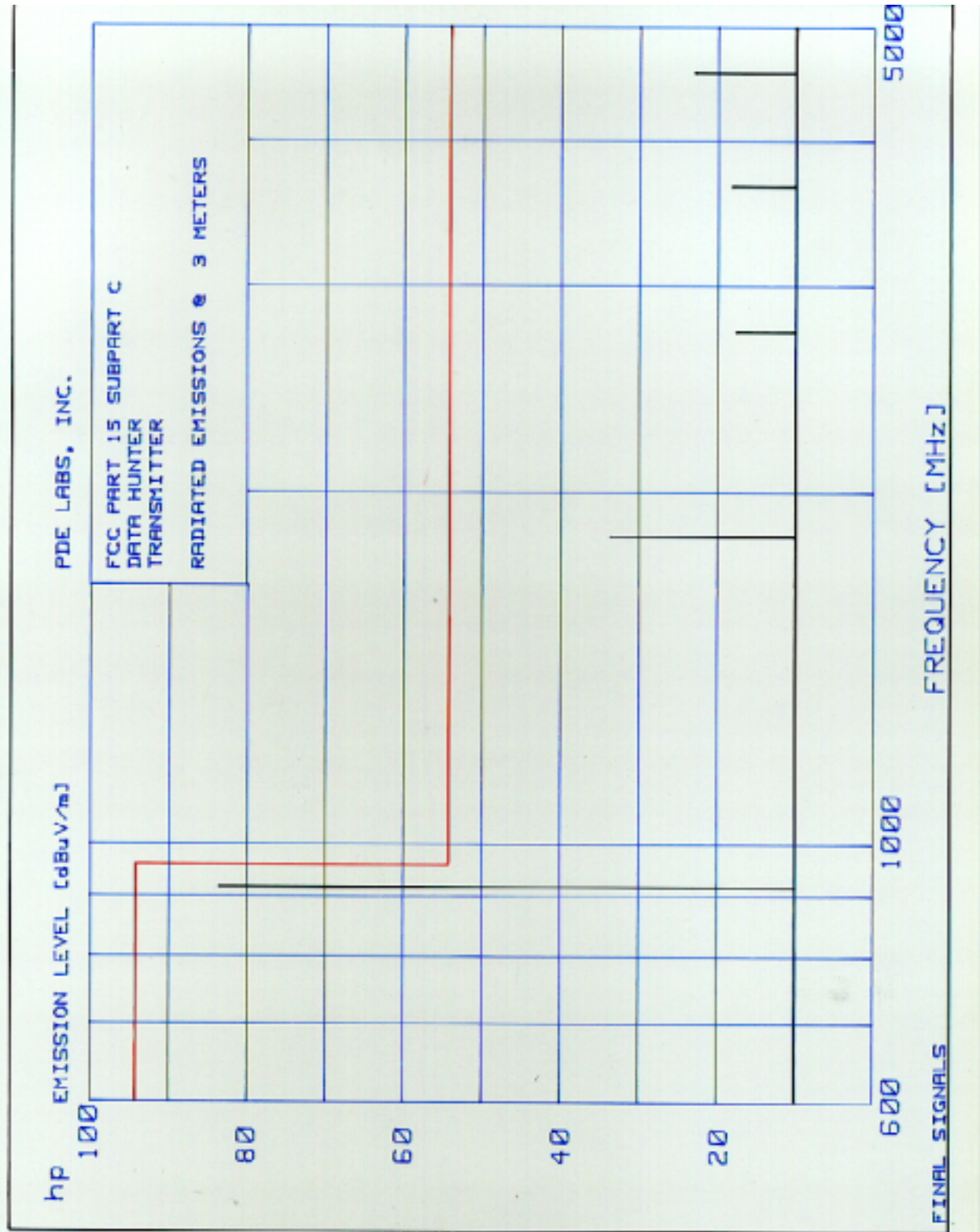
Conducted Emission Results – Low or Return Lead

**N/A**

**Although the EUT is powered from the host computer, it consumes an extremely low level of power from the connected data port. As such, it makes no discernible contribution to the conducted emissions profile of the host.**

### 2.3 TEST RESULTS - RADIATED EMISSIONS

Measurements taken at 3 Meters.



## PRODUCT RADIATED EMISSIONS

| No | Emission<br>Frequency<br>MHz | Spec<br>Limit<br>dB | Measurements |            |      | Site |           |            | Corr<br>Factor<br>dB | Comments                 |
|----|------------------------------|---------------------|--------------|------------|------|------|-----------|------------|----------------------|--------------------------|
|    |                              |                     | ABS<br>UV/m  | dLim<br>dB | Mode | Pol  | Hgt<br>Cm | AZM<br>deg |                      |                          |
| 1  | 916.466                      | 94.0                | 83.3         | -10.7      | PK   | V    | 171       | 4          | 10.8                 | Carrier                  |
| 2  | 1832.98                      | 53.9                | 33.5         | -20.4      | PK   | V    |           |            | -7.1                 | 2 <sup>nd</sup> Harmonic |
| 3  | 2749.50                      | 53.9                | 17.5         | -36.4      | PK   | V    |           |            | -4.7                 | 3 <sup>rd</sup> Harmonic |
| 4  | 3666.00                      | 53.9                | 18.1         | -35.8      | PK   | V    |           |            | -3.4                 | 4 <sup>th</sup> Harmonic |
| 5  | 4582.50                      | 53.9                | 22.8         | -31.1      | PK   | V    |           |            | -1.3                 | 5 <sup>th</sup> Harmonic |

\*\*\* No emissions were detected above the 5<sup>th</sup> Harmonic

## 2.4 MODIFICATIONS

None required to demonstrate compliance. Product compliant as tested.

## 2.5 INTENT TO INCORPORATE ENGINEERING REWORK (If required by 2.4 above)

### INTENT TO INCORPORATE ENGINEERING REWORK

This is a letter of Intent to Incorporate the Engineering Rework as described in the above referenced PDE Laboratories. Test Report, Section 2.4, to achieve compliance with the intent of the testing as documented. I, the undersigned have the responsibility for marketing the device tested, and have implemented procedures to monitor the quality of the product (device tested), during continued manufacturing processes and possible product changes or enhancements, and take the responsibility to monitor continued compliance through periodic re-testing during the life of product (device tested), and re-testing any new configuration which might alter the status of the product's continued compliance to the applicable Rules and Regulations.

[ NOT APPLICABLE FOR THIS TEST REPORT ]

---

Signature

---

Date

---

Name

---

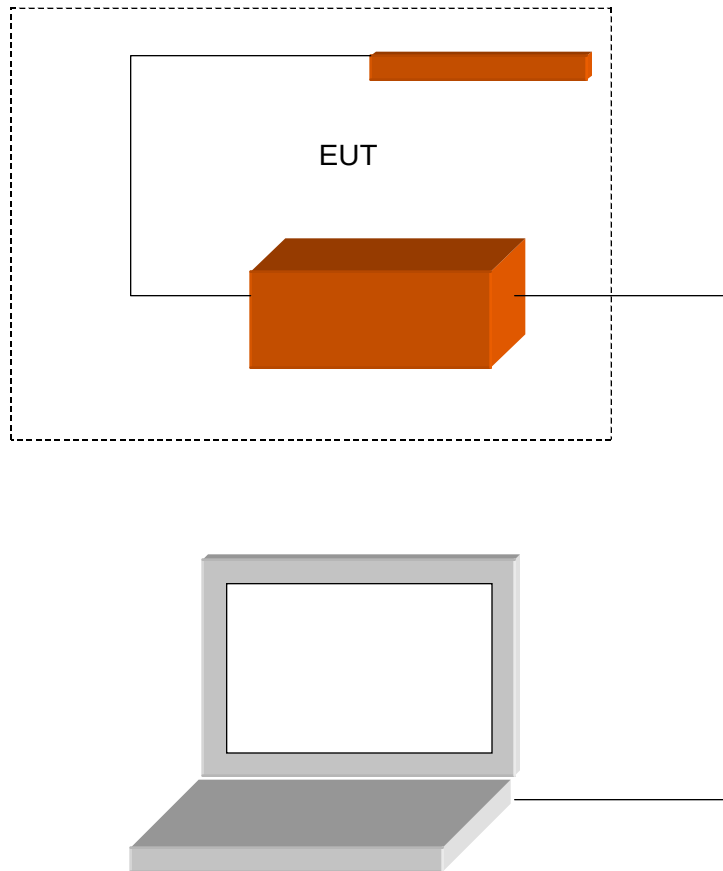
Title

## **2.6 RECOMMENDATIONS**

None. Refer to paragraph 2.4 for any applicable comments.

### 3.0 DESCRIPTION OF EUT CONFIGURATION

#### 3.1 SKETCH OF EQUIPMENT AND CABLE CONFIGURATION



## 3.2 DESCRIPTION OF EUT AND PERIPHERAL EQUIPMENT

### 3.2.1 DESCRIPTION OF EUT

The EUT is a DATA HUNTER low powered short range data transmitter  
Model: Finger

|               |                       |
|---------------|-----------------------|
| Equipment:    | Transmitter           |
| Manufacturer: | DATA HUNTER           |
| Model No.:    | Finger                |
| Serial No.:   | Engineering Prototype |

|                          |                                                                      |
|--------------------------|----------------------------------------------------------------------|
| Internal<br>Frequencies: | 916.5MHz plus or minus for the Local Oscillator<br>heterodyne action |
|--------------------------|----------------------------------------------------------------------|

|               |                   |
|---------------|-------------------|
| Power Supply: | Internal          |
|               | Manufacturer: N/A |
|               | Model No.:        |

RFI Suppression Features:

|                   |     |
|-------------------|-----|
| Powerline Filter: | N/A |
| Ferrites :        | N/A |

Internal Components: N/A

|               |     |
|---------------|-----|
| Equipment:    | N/A |
| Manufacturer: |     |
| Model No.:    |     |
| Serial No.:   |     |
| Located:      |     |

### 3.2.2 DESCRIPTION OF PERIPHERAL EQUIPMENT

- 1)      Equipment      Computer  
         Manufacturer: IBM  
         Model No.:    Thinkpad  
         Serial No:      N/A

### 3.3 TYPES OF CABLES USED:

#### Power Cords

- 1)      Unit:              N/A  
         Manufacturer:  
         Shielded:  
         Length:

#### I/O Cables - External

- 1)      Connection:    Computer to EUT  
         Manufacturer: Generic  
         Shielded:     Yes  
         Connectors:   Serial  
         Length:       5m  
  
         :

### 3.4 OPERATING MODES

The DATA HUNTER 's Transmitter, Model: Finger operated continuously during all tests.

The DATA HUNTER , Model: Finger operated continuously during all tests. An associated receiver was used to verify transmission but, unto itself, was not subjected to any compliance testing during this process.

Absolute emission level measurements were made with various orientations of the unit relative to the receiving antenna. Prior to actual OATS testing, a near-field RF probe was used to exhaustively survey the EUT for their internal Local Oscillator and clock frequencies. The emissions were quite weak.

All final data was taken with the EUT in the above mode of operation. The position of the peripherals (if required in the test set up) and interconnect cables (if required in the test set up) were varied to provide generally the highest emissions prior to the final tests.

Absolute emission level measurements were made in an automatic orientation fashion such that the EUT was uniquely positioned for each of the significant emissions detected in the prescan evaluation. Those data are hereby recorded.

