



# Atlas Compliance & Engineering, Inc.

## FCC Test Report

**FCC CFR 47 Part 15.207 and 15.209 COMPLIANCE**

• • • • • • • • • •

*CDVI*  
*31 Ave du General Leclerc*  
*PANTIN 93500 FRANCE*

*Product:*  
*Access Control System with Proximity Reader*  
*Model:*  
*UCA/3*

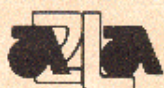
Test Report Number: 0134CDVuca3\_subc\_1  
Date of Report: September 24, 2001

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## Scope of Accreditation



### American Association for Laboratory Accreditation

#### SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25:1990 AND EN 45001

ATLAS COMPLIANCE & ENGINEERING, INC.  
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#### ELECTRICAL (EMC)

Valid to: December 31, 2001

Certificate Number: 1007-01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility tests:

| <u>Tests:</u>                                                  | <u>Standard(s):</u>                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Milpitas Facility</i></b>                                |                                                                                                                                                                                                                                                                                                    |
| Emissions (Conducted)                                          | CFR 47, FCC Parts 15 (using ANSI C63.4) & 18 (using FCC MP-5); AS/NZS 3548; CISPR 22 (1993, 1997); CISPR 11; EN 55011; EN 55013; EN 55014-1; EN 55015; EN 55022; EN 55103-1; EN 50081-1; EN 50081-2; ICES 001 & 003 (Issue 3); C108.8-M1983; C108.6-M91; CNS 13438; VCCI                           |
| Immunity                                                       | EN 55014-2; EN 55020; EN 55024; EN 55103-2; EN 50082-1; EN 50082-2                                                                                                                                                                                                                                 |
| Electrostatic Discharge (ESD)                                  | EN 61000-4-2                                                                                                                                                                                                                                                                                       |
| Radiated Immunity                                              | EN 61000-4-3                                                                                                                                                                                                                                                                                       |
| Electrical Fast Transient/Burst                                | EN 61000-4-4                                                                                                                                                                                                                                                                                       |
| Surge Immunity (Power Lines Only)                              | EN 61000-4-5                                                                                                                                                                                                                                                                                       |
| Conducted Immunity                                             | EN 61000-4-6                                                                                                                                                                                                                                                                                       |
| Power Frequency Magnetic Field Immunity                        | EN 61000-4-8                                                                                                                                                                                                                                                                                       |
| Voltage Dips, Short Interruptions, and Line Voltage Variations | EN 61000-4-11                                                                                                                                                                                                                                                                                      |
| Current Harmonics                                              | EN 61000-3-2                                                                                                                                                                                                                                                                                       |
| Voltage Fluctuations & Flicker                                 | EN 61000-3-3                                                                                                                                                                                                                                                                                       |
| Safety                                                         | UL 1950; EN 60950; IEC 60950                                                                                                                                                                                                                                                                       |
| <b><i>Royal Oaks Facility</i></b>                              |                                                                                                                                                                                                                                                                                                    |
| Emissions                                                      | CFR 47 Part 15 B & C (using ANSI C63.4) & 18 (using FCC MP-5); CISPR 22 (1993, 1997); CISPR 11; C108.8-M1983; C108.6-M91; ICES 001 & 003 (Issue 3); AS/NZS 3548; EN 55011; EN 55013; EN 55014-1; EN 55015; EN 55022; EN 55103-1; EN 50081-1; EN 50081-2; CNS 13438; VCCI V-1, V-2, V-3, V-4 (1999) |
| Safety                                                         | UL 1950; EN 60950; IEC 60950                                                                                                                                                                                                                                                                       |

On materials and products related to the following:

Industrial, Scientific, and Medical (ISM) Equipment; Information Technology Equipment (ITE); Household Appliances; Electric Tools and Similar Apparatus; Radio Frequency Devices; Digital Apparatus; Broadcast Receivers and Associated Equipment; Electrical Lighting and Similar Equipment; Professional Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus; and Electrical/Electronic Equipment.

Revised 3/21/00

*[Signature]*





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## General Information

|                               |                                                                                                                                                                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Report Number:           | 0134CDVuca3_subc_1                                                                                                                                                                                                                                     |
| Date Product Tested:          | August 7, 2001                                                                                                                                                                                                                                         |
| Date of Report:               | September 24, 2001                                                                                                                                                                                                                                     |
| Applicant:                    | CDVI<br>31 Ave du General Leclerc<br>PANTIN 93500 FRANCE                                                                                                                                                                                               |
| Contact Person                | Eric Assouline                                                                                                                                                                                                                                         |
| Equipment Tested:             | Access Control System with Proximity Reader                                                                                                                                                                                                            |
| Trade Name:                   | UCA/3                                                                                                                                                                                                                                                  |
| Model:                        | UCA/3                                                                                                                                                                                                                                                  |
| Purpose Of Test:              | To demonstrate the compliance of the Access Control System with Proximity Reader, UCA/3, with the requirements of FCC CFR 47 Part 15 Rules and Regulations to the limits of Subpart C 15.207 and 15.209 using the procedure stated in ANSI C63.4-1992. |
| Frequency Range Investigated: | 9 kHz to 1000 MHz                                                                                                                                                                                                                                      |
| Test Site Locations:          | OATS<br>Atlas Compliance & Engineering, Inc.<br>726 Hidden Valley Road<br>Watsonville, California 95076                                                                                                                                                |
| Test Personnel:               | Bruce Smith<br>EMC Engineer                                                                                                                                                                                                                            |



## Test Equipment

The following list contains the test equipment that was utilized in making the measurements in this report.

| Description _ Model                          | Serial                | Manufacturer           | Calibrated | Calibration Due |
|----------------------------------------------|-----------------------|------------------------|------------|-----------------|
| BiLog Antenna _ CBL6141                      | 4034                  | Chase Electronics Ltd. | 7/6/01     | 7/6/02          |
| Biconical Antenna _ SAS 200/540              | 272                   | A.H. Systems           | 12/8/00    | 12/8/01         |
| Log Periodic Antenna _ SAS 200/510           | 061                   | A.H. Systems           | 12/13/00   | 12/13/01        |
| Active Loop Antenna _ 6502                   | 9108-2669             | EMCO                   | 12/5/00    | 12/5/01         |
| LISN _ 3825/2                                | 9007-1683             | EMCO                   | 7/2/01     | 7/2/02          |
| LISN _ 4825/2                                | 9808-1088             | EMCO                   | 7/2/01     | 7/2/02          |
| Pre amp 100 kHz - 1300 MHz _ 8447D           | 2944A08506            | HP                     | 2/28/01    | 2/28/02         |
| EMI Test Receiver 9 kHz - 2500 MHz _<br>ESPC | DE15934<br>845296/024 | Rohde & Schwarz        | 3/6/01     | 3/6/02          |
| EMI Test Receiver 9 kHz - 2500 MHz _<br>ESPC | DE14459               | Rohde & Schwarz        | 9/21/00    | 9/21/01         |



## Test Configuration

|                |                                                           |
|----------------|-----------------------------------------------------------|
| Customer:      | CDVI                                                      |
| Test Date:     | August 7, 2001                                            |
| Specification: | FCC CRF 47 Part 15.209 Limits,<br>ANSI C63.4-1992 Methods |

### EUT Description / Note:

The EUT, UCA/3, an Access Control System with Proximity Reader, was tested connected to a DC power adapter. The port connections from the EUT to auxiliary push buttons and door strikes were connected to 22 AWG wires and positioned on the table. The EUT was attached to a vertical mount, as it would be in a normal installation.

### EUT Support Program

The UCA/3 reader was constantly operating waiting for a valid access card.

### EUT Modifications for Compliance

There were no modifications performed on the EUT. The test results state the emission levels of the EUT in the condition as it was received on June 14, 2001.



## EUT Support Devices

*Table 1 - Support Equipment Used For Test*

| <b>Model:</b> | <b>Description:</b>                                                       | <b>S/N</b> | <b>FCC ID#</b> |
|---------------|---------------------------------------------------------------------------|------------|----------------|
| MGT12500R     | MG Electronics, Plug In Class 2 Fully Regulated Power Supply, 12VDC 500mA | N/A        | N/A            |
| GR            | CDVI Electric strike door latch                                           | N/A        | N/A            |

## I/O Ports and Cables

*Table 2 - EUT Port Termination's*

| <b>I/O Port</b> | <b>Cable Type</b> | <b>Length</b> | <b>Connector</b> | <b>Termination</b>   |
|-----------------|-------------------|---------------|------------------|----------------------|
| 1               | 22 AWG            | 6 FT          | Terminal Strip   | Power Supply, 10     |
| 2               | 22 AWG            | 6 FT          | Terminal Strip   | Power Supply, Strike |
| 3               |                   |               | Terminal Strip   |                      |
| 4               |                   |               | Terminal Strip   |                      |
| 5               |                   |               | Terminal Strip   |                      |
| 6               |                   |               | Terminal Strip   |                      |
| 7               |                   |               | Terminal Strip   |                      |
| 8               |                   |               | Terminal Strip   |                      |
| 9               |                   |               | Terminal Strip   |                      |
| 10              | 22 AWG            | 6 FT          | Terminal Strip   | Power Supply, 1      |
| 11              | 22 AWG            | 6 FT          | Terminal Strip   | Strike               |
| 12              |                   |               | Terminal Strip   |                      |
| 13              |                   |               | Terminal Strip   |                      |
| 14              |                   |               | Terminal Strip   |                      |
| 15              |                   |               | Terminal Strip   |                      |
| 16              | 22 AWG            | 6 FT          | Terminal Strip   | None                 |
| 17              | 22 AWG            | 6 FT          | Terminal Strip   | None                 |
| 18              |                   |               | Terminal Strip   |                      |
| 19              |                   |               | Terminal Strip   |                      |
| 20              |                   |               | Terminal Strip   |                      |
| 21              |                   |               | Terminal Strip   |                      |
| 22              |                   |               | Terminal Strip   |                      |
| 23              |                   |               | Terminal Strip   |                      |
| 24              |                   |               | Terminal Strip   |                      |

*Table 3 - Host Port Termination's*

| <b>I/O Port</b> | <b>Cable Type</b> | <b>Length</b> | <b>Connector</b> | <b>Termination</b> |
|-----------------|-------------------|---------------|------------------|--------------------|
| Not Applicable  |                   |               |                  |                    |

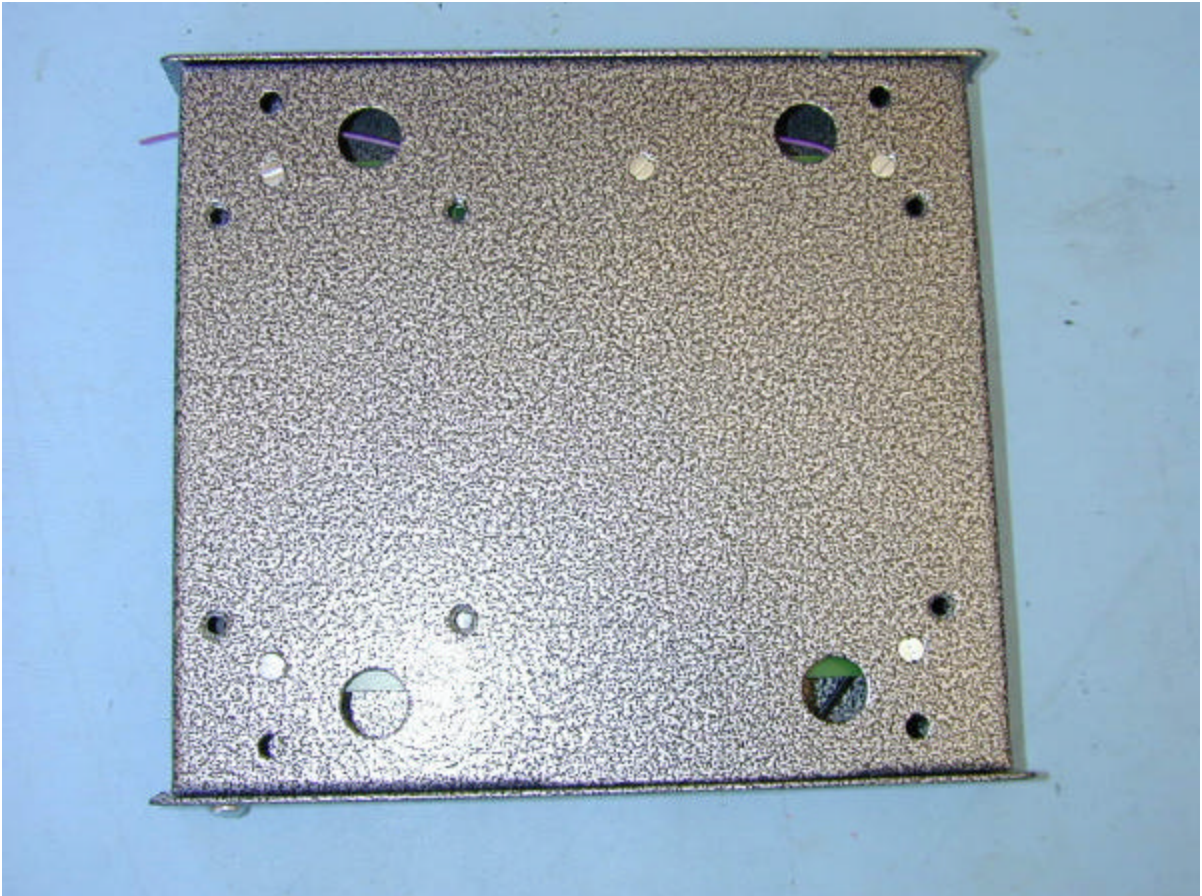


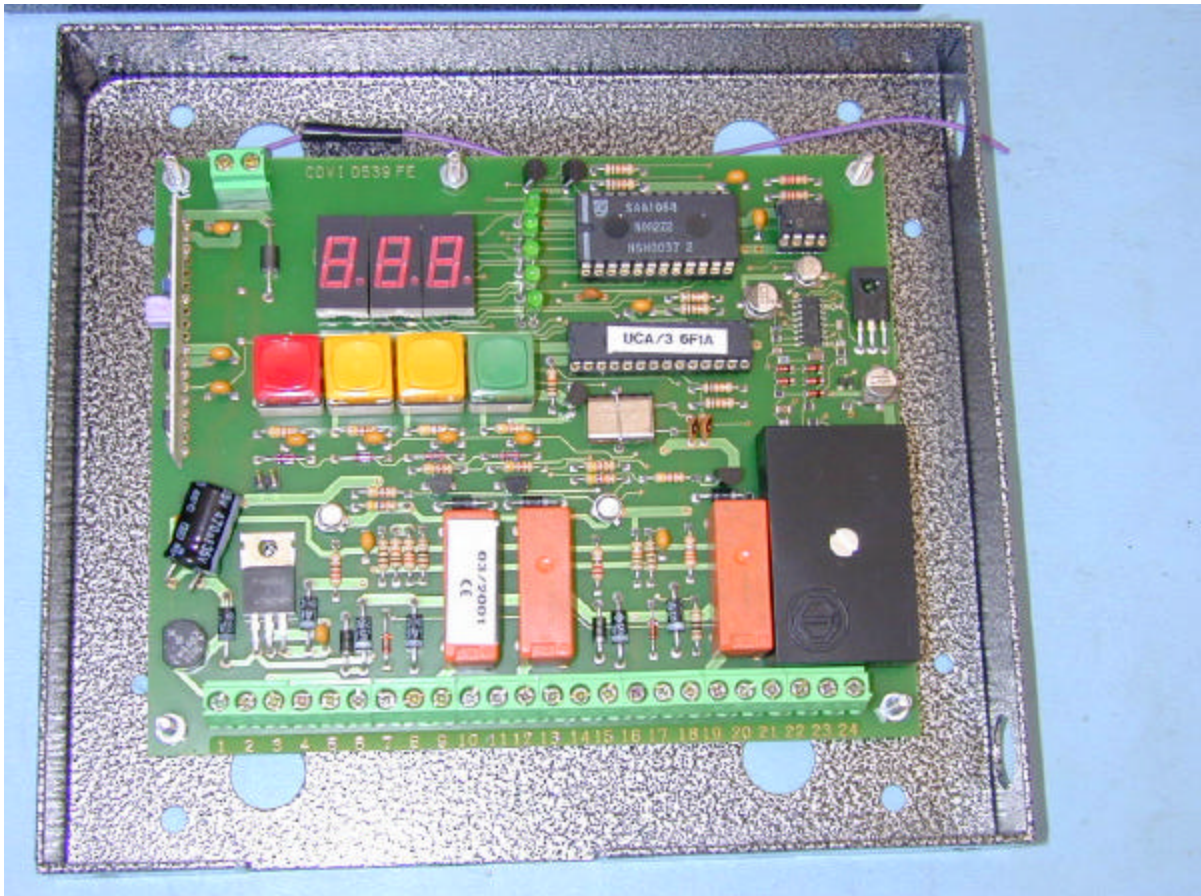
## Equipment Under Test

The photographs below show the condition of the EUT for test.

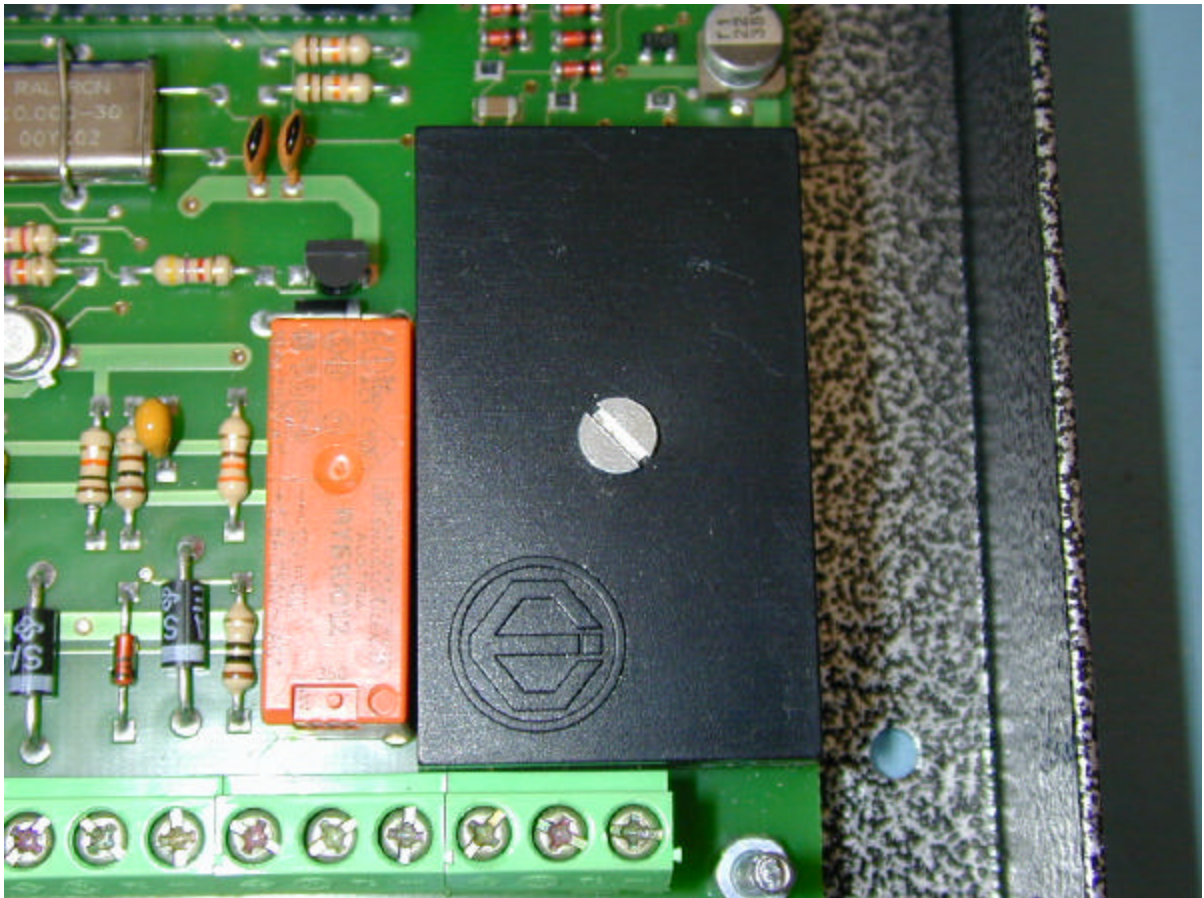






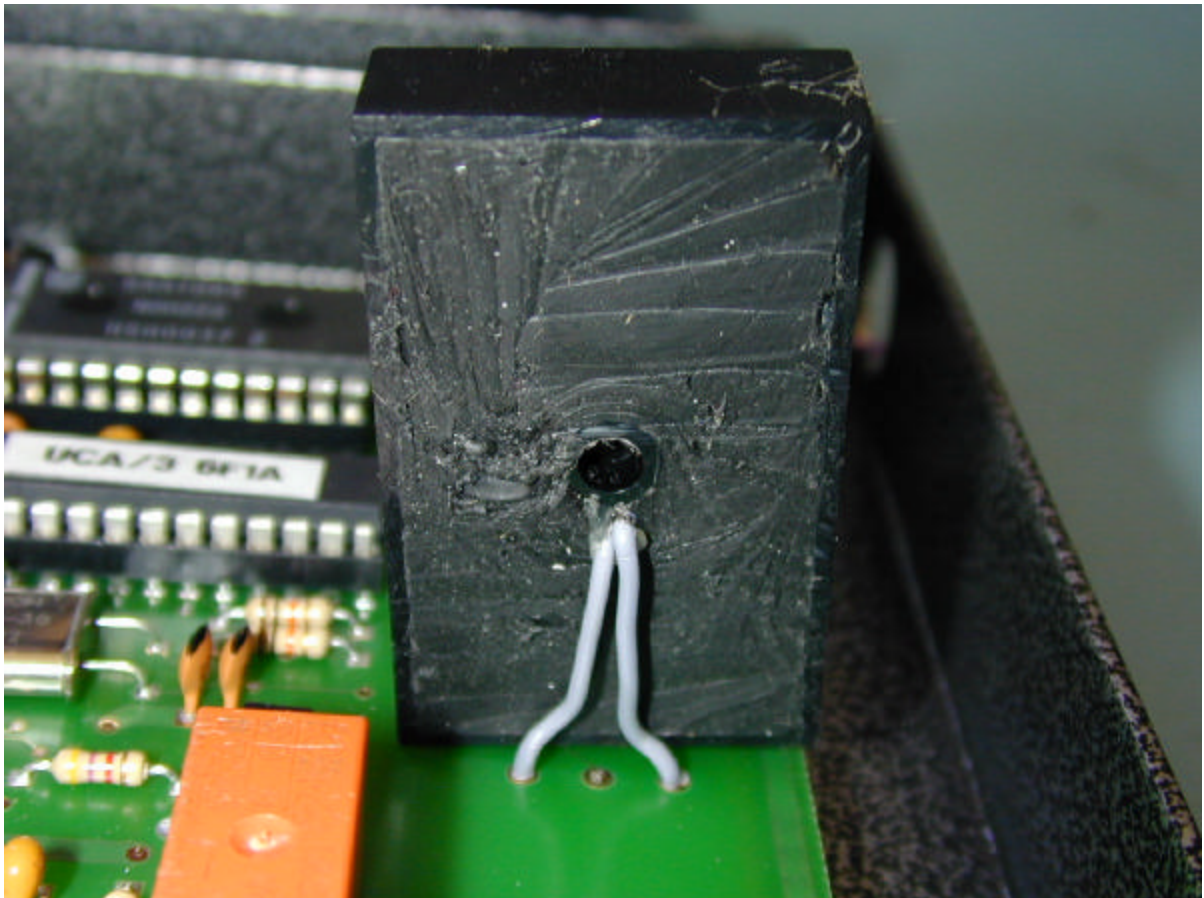


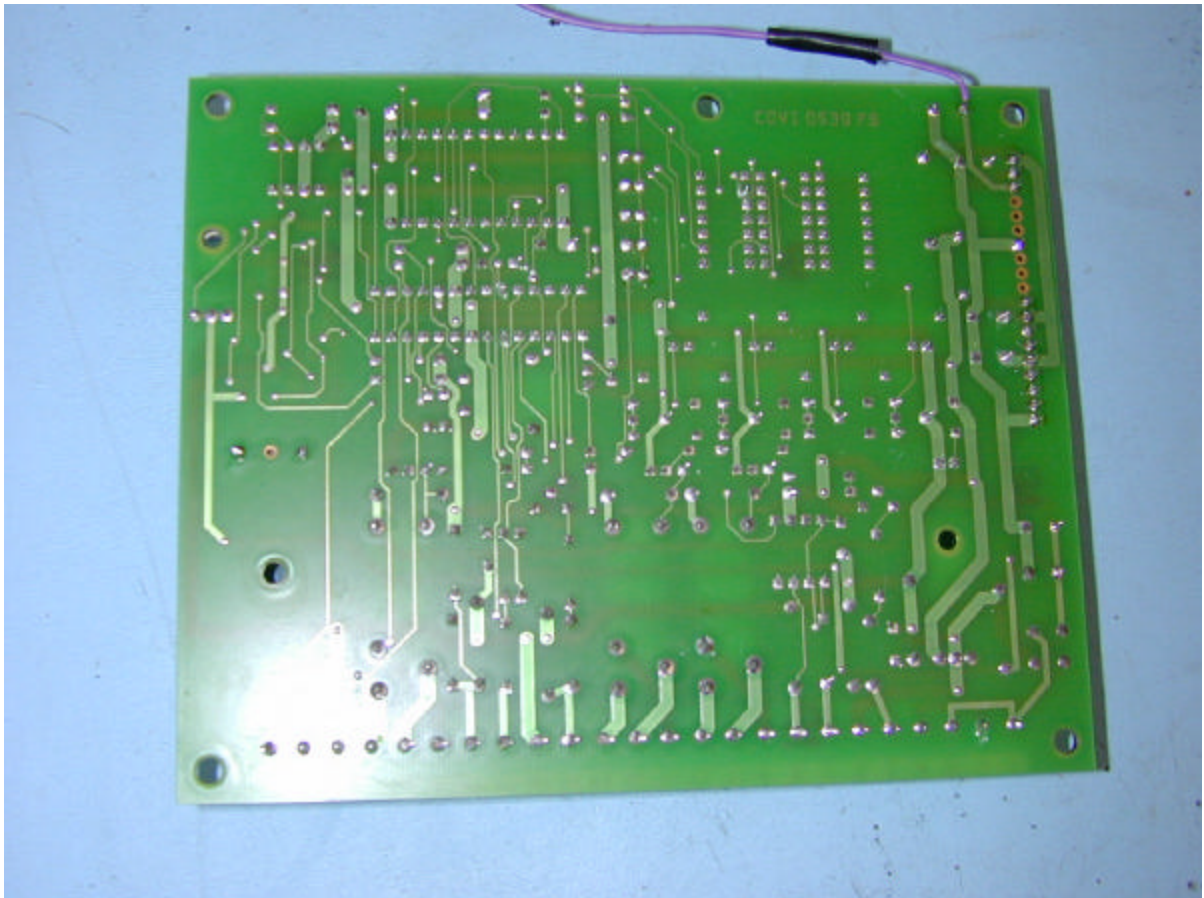






Production products will be potted (as shown).









Power Adapter.

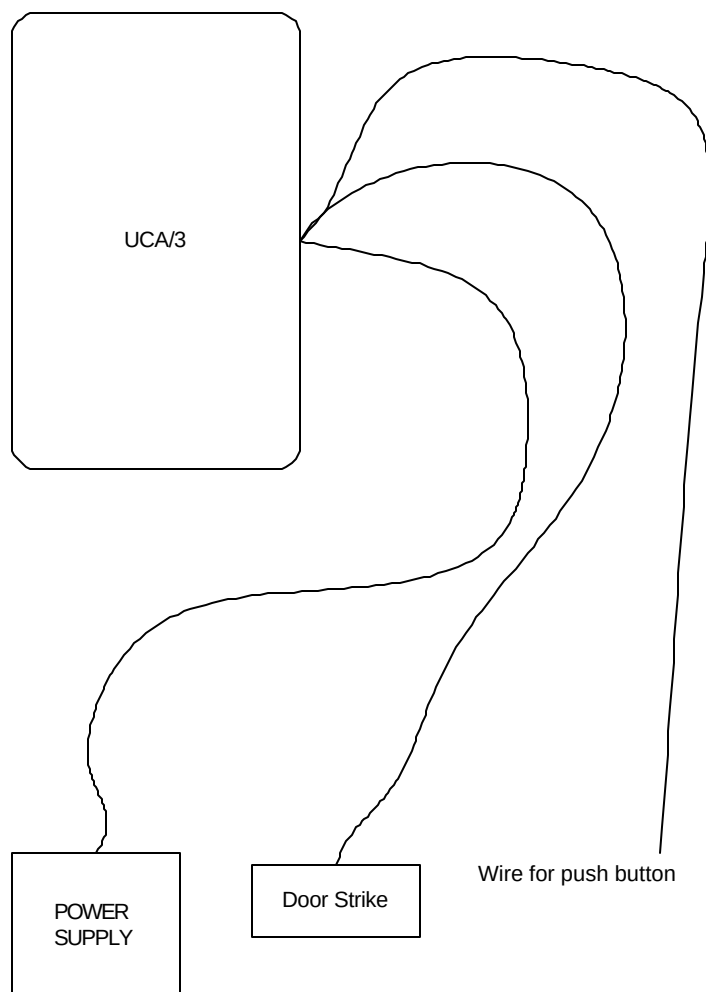




## Equipment Block Diagram

Following is the block diagram of the test setup. Refer to TEST CONFIGURATION pages for port connections and information.

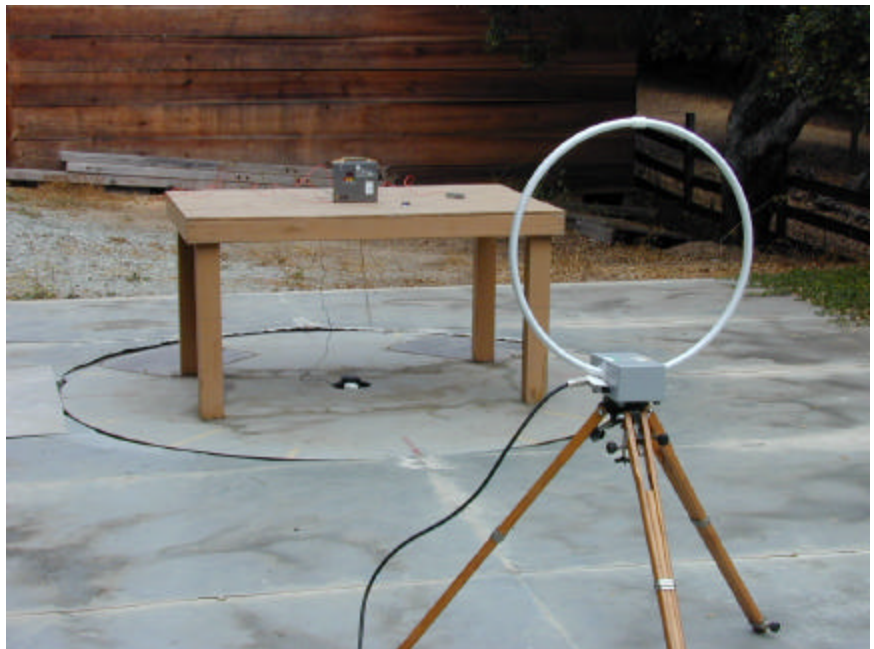
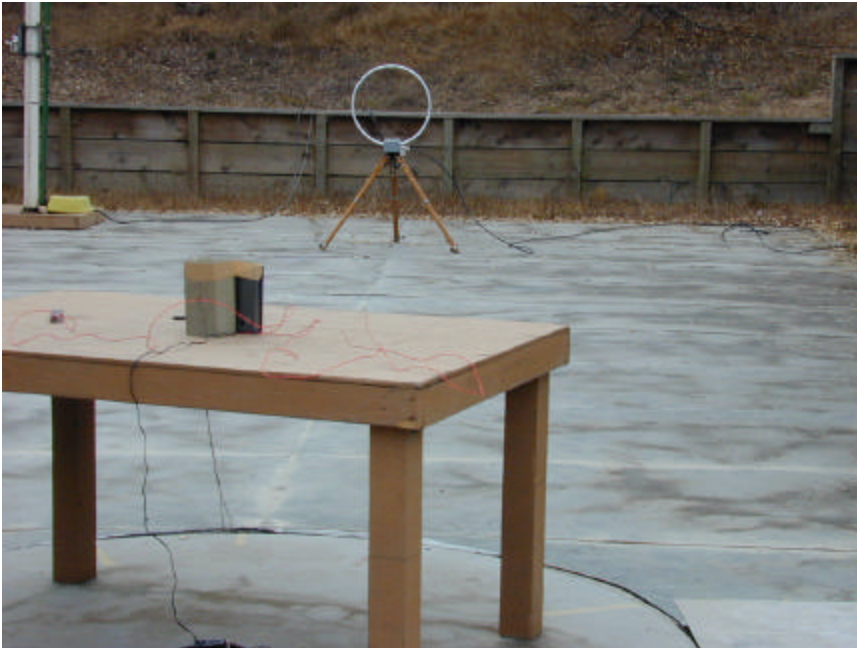
*Figure 1 - Test Setup Diagram*

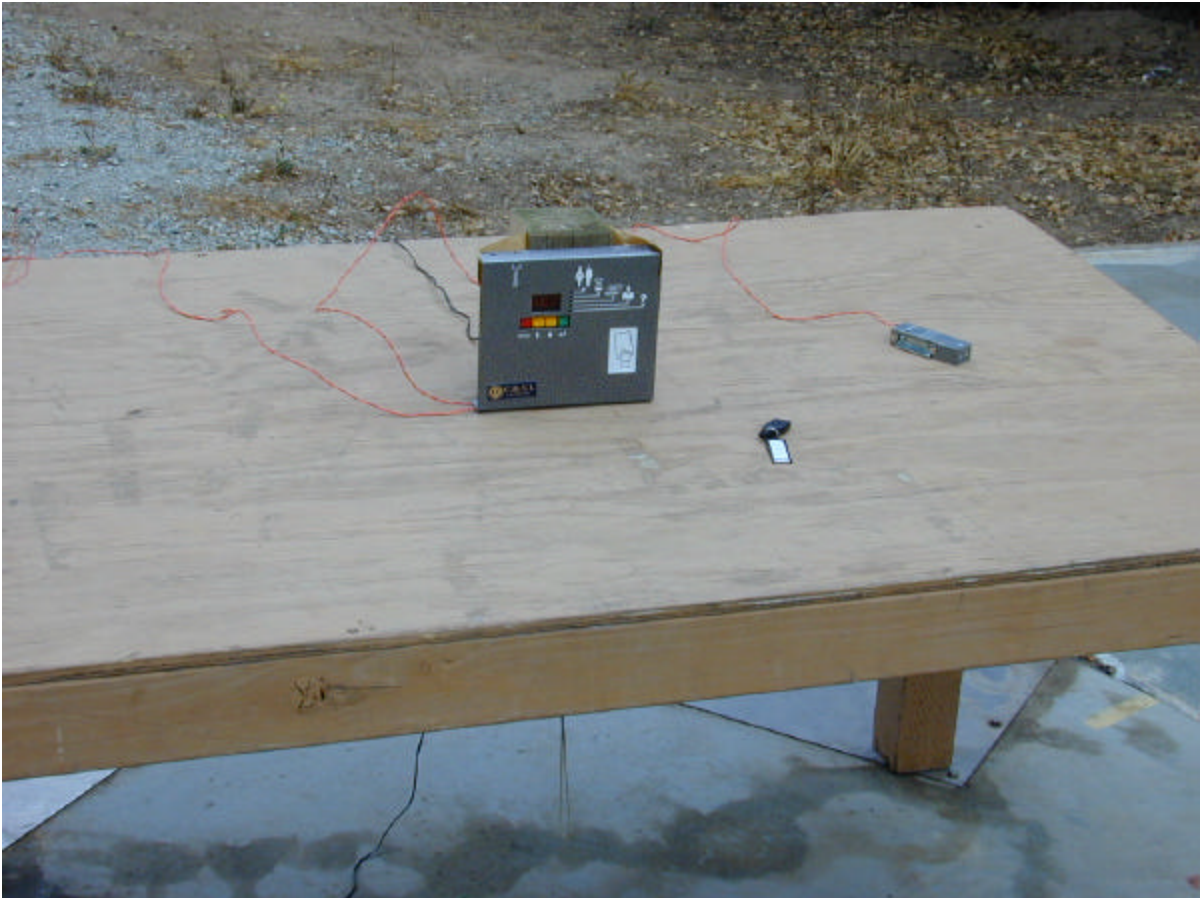




## Test Setup (Radiated Emissions)

The photographs below show worst case setup for radiated emission testing.





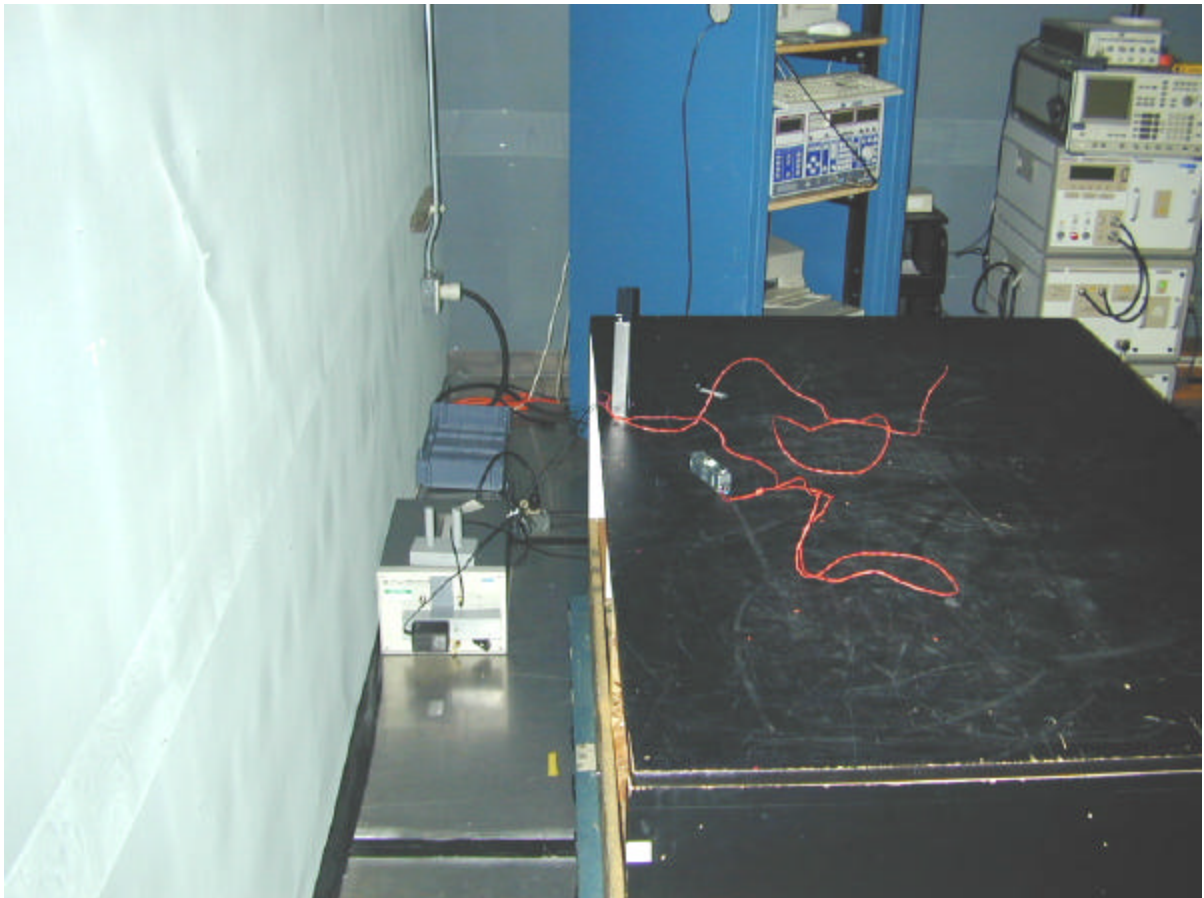




## Test Setup (Conducted Emissions)

The photograph below shows worst case setup for line conducted testing.







## Test Methods for Emissions

The test procedure stated in ANSI C63.4-1992 was used to collect the test data. The radiated emission data of the EUT was taken with the Rohde & Schwarz EMI Test Receiver. Incorporating the application of correction factors programmed into the Test Receiver and verified for distance, antenna, cable loss, and amplifier gain, the data was reduced as shown in the Sample Calculations. These correction factors are available upon request. The corrected data was then compared to the emission limits to determine compliance.

During radiated emission testing, the EUT was placed on a nonconductive rotating table 0.8 meter above the conductive grid. The nonconductive table dimensions were 1 meter deep by 1.5 meters wide at 0.8 meter high. The EUT is centered on the tabletop and the measurement antenna was placed 3 or 10 meters from the EUT as noted in the test data.

For radiated emissions testing, scans in the frequency range of 9 kHz to 1000 MHz were made. Each frequency between 9 kHz and 150 kHz was measured at a bandwidth of 200 Hz, between 150 kHz and 30 MHz was measured at a bandwidth of 10 kHz and between 30 MHz and 1000 MHz was measured at a bandwidth of 120 kHz. Measurements were made employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz and 110-490 kHz, which employed an average detector. All readings within 10 dB of the limits were recorded, and those emissions were then measured using the appropriate detector and bandwidth for a 2-second measurement time.

Measurements were made at a distance of 10 meters and 3 meters and pursuant to section 15.31-(f) (2) the measurement results were extrapolated to the specified distance by making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor of 40dB/decade.

## Conducted Emission Testing

For the conducted emissions testing, the EMCO LISN, Model No. 3825/2, was used for the EUT and the EMCO LISN, Model No. 4825/2, was used for the support equipment. During conducted emission testing the EUT was located on a wooden test bench measuring 0.8 meter high, 1 meter deep, and 1.5 meters in width. The vertical conducting surface was 0.4 meter from the back of the test bench. The LISNs were placed on the ground plane of the test area in accordance with ANSI C63.4-1992.

The metal plane used for conducted emission testing was grounded to the earth by a heavy gage braided wire attached to the plane. All other objects were kept a minimum of 1 meter away from the EUT during the conducted test.

For conducted emissions testing a scan of the frequency band 450 kHz to 30 MHz was made stepping every 5 kHz. Each frequency was measured at a bandwidth of 10 kHz for 20 msec. Due to the narrow specification of a 6 dB drop, the 10 kHz bandwidth



meets the requirements of CISPR 16, band B (150 kHz to 30 MHz) and VDE 0876 as well as of various military standards that require tolerances of 10% for a 10 kHz measurement bandwidth. All readings within 25 dB of the limits were recorded, and those emissions were then measured using the CISPR quasi-peak detector at a bandwidth of 10 kHz for a 2 second measurement time. All emissions within 6 dB of the limit were examined with additional measurements to ensure compliance with the FCC 15.207 limits. The results of the conducted emissions test are shown in Tables 8 and 9 and Figures 3 and 4.

## Temperature and Humidity

The ambient temperature of the actual EUT was within the range of 10° to 40° C (50° to 104° F) unless the particular equipment requirements specify testing over a different temperature range. The humidity levels were within the range of 10% to 90% relative humidity unless the EUT operating requirements call for a different level.

## Sample Calculations

An example of how the EMI Test Receiver reading is converted using correction factors is given for the emissions recorded in Table 6. These correction factors are programmed into the EMI Test Receiver and verified. For radiated emissions in dB $\mu$ V/m, the EMI Test Receiver reading in dB $\mu$ V is corrected by using the following formula:

$$\begin{aligned} &\text{Meter Reading (dB}\mu\text{V)} \\ &+ \text{Antenna Factor (dB)} \\ &+ \text{Cable Loss (dB)} \\ &= \text{Corrected Reading (dB}\mu\text{V/m)} \end{aligned}$$

This reading is then compared to the applicable specification limits and the difference will determine compliance. For conducted emissions, no correction factors are needed when a 50  $\mu$ H LISN is used.





## FCC Part 15 Subpart C 15.207 and 15.209 Limits

*Table 4 - Radiated Emission Limits, General Requirements*

| Frequency<br>MHz | Field Strength<br>$\mu\text{V/m}$ | Measurement Distance<br>Meters |
|------------------|-----------------------------------|--------------------------------|
| 0.009 – 0.490    | 2400/F(kHz)                       | 300                            |
| 0.490 – 1.705    | 24000/F(kHz)                      | 30                             |
| 1.705 – 30       | 30                                | 30                             |
| 30 – 88          | 100                               | 3                              |
| 88 – 216         | 150                               | 3                              |
| 216 – 960        | 200                               | 3                              |
| Above 960        | 500                               | 3                              |

*Table 5 - Conducted Limits*

| Frequency<br>MHz | Limit<br>Quasi-Peak dB $\mu\text{V}$ | Limit<br>$\mu\text{V}$ |
|------------------|--------------------------------------|------------------------|
| 0.45-30          | 48                                   | 250                    |

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closest point of any part of the device or system.
3. The level of any unwanted emissions from an intentional radiator operating under these general provisions shall not exceed the level of the fundamental emission.
4. The emission limits shown are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.



## Report of Measurements Radiated Data

The following table reports the results of the radiated measurements for the Access Control System with Proximity Reader, UCA/3.

*Table 6 - Radiated Emission Level*

| 15.209 Limit<br>dBμV/m | Fundamental<br>Frequency<br>kHz | Level<br>dBμV/m | Detector | Test<br>Distance | Corrected<br>Level<br>dBμV/m | Margin<br>dB | Antenna |
|------------------------|---------------------------------|-----------------|----------|------------------|------------------------------|--------------|---------|
| 25.95 @ 300 meters     | 121                             | 58.21           | AV       | 3                | -41.69                       | 67.64        | Loop    |

| 15.209 Limit<br>dBμV/m | Unwanted<br>Frequency<br>kHz | Level<br>dBμV | Detector | Test<br>Distance | Corrected<br>Level<br>dBμV | Margin<br>dB | Antenna |
|------------------------|------------------------------|---------------|----------|------------------|----------------------------|--------------|---------|
| 19.93 @ 300 meters     | 242                          | 42.13         | AV       | 3                | -57.77                     | 77.70        | Loop    |
| 16.41 @ 300 meters     | 363                          | 38.42         | AV       | 3                | -61.48                     | 77.89        | Loop    |
| 13.91 @ 300 meters     | 484                          | 37.63         | AV       | 3                | -62.27                     | 76.18        | Loop    |
| 31.97 @ 30 meters      | 605                          | 50.95         | QP       | 3                | 1.00                       | 30.97        | Loop    |
| 30.39 @ 30 meters      | 726                          | 38.03         | QP       | 3                | -11.92                     | 42.31        | Loop    |
| 29.05 @ 30 meters      | 847                          | 35.77         | QP       | 3                | -14.18                     | 43.23        | Loop    |
| 27.89 @ 30 meters      | 968                          | 53.65         | QP       | 3                | 3.70                       | 24.19        | Loop    |
| 26.86 @ 30 meters      | 1089                         | 54.18         | QP       | 3                | 4.23                       | 22.63        | Loop    |
| 25.95 @ 30 meters      | 1210                         | 45.94         | QP       | 3                | -4.01                      | 29.96        | Loop    |

Test Method: ANSI C63.4-1992  
 Spec Limit: FCC 15.209  
 No other emissions were observed.

Note: AV = Average  
 QP = Quasi Peak

COMMENTS: System continuously running. Ambient temperature 69°F and relative humidity of 46%. Test distance of 3 meters was due to the presents of ambient radio noise. Corrected levels are extrapolated at 49.95 dB/decade derived by taking measurements at two distances at one radial (see 15.31 (f)(2)).

### Calculation of limit at 121.0 kHz:

Limit in microvolts/meter  
 $2400/121 = 19.8347 \mu\text{V/m}$  at 300 meters  
 Convert to dBμV  
 $20 \log 19.8347 \mu\text{V/m} = 25.9485 \text{ dB}\mu\text{V/m}$  at 300 meters



**Calculation of extrapolation factor at 121.0 kHz, 3 meter to 10 meter distance:**

The reading level in dB at 10 meter subtracted from the level in dB at 3 meter

$$58.21 - 32.09 = 26.12$$

Subtract the log of the two distances

$$\text{Log}(10) - \text{Log}(3) =$$

$$1 - 0.477121 = 0.522879$$

Divide the ratio of the readings by the ratio of the distance

$$26.12 / 0.522879 = 49.95$$

Actual Extrapolation Factor derived from measurements at 3 meters and 10 meters on fundamental frequency

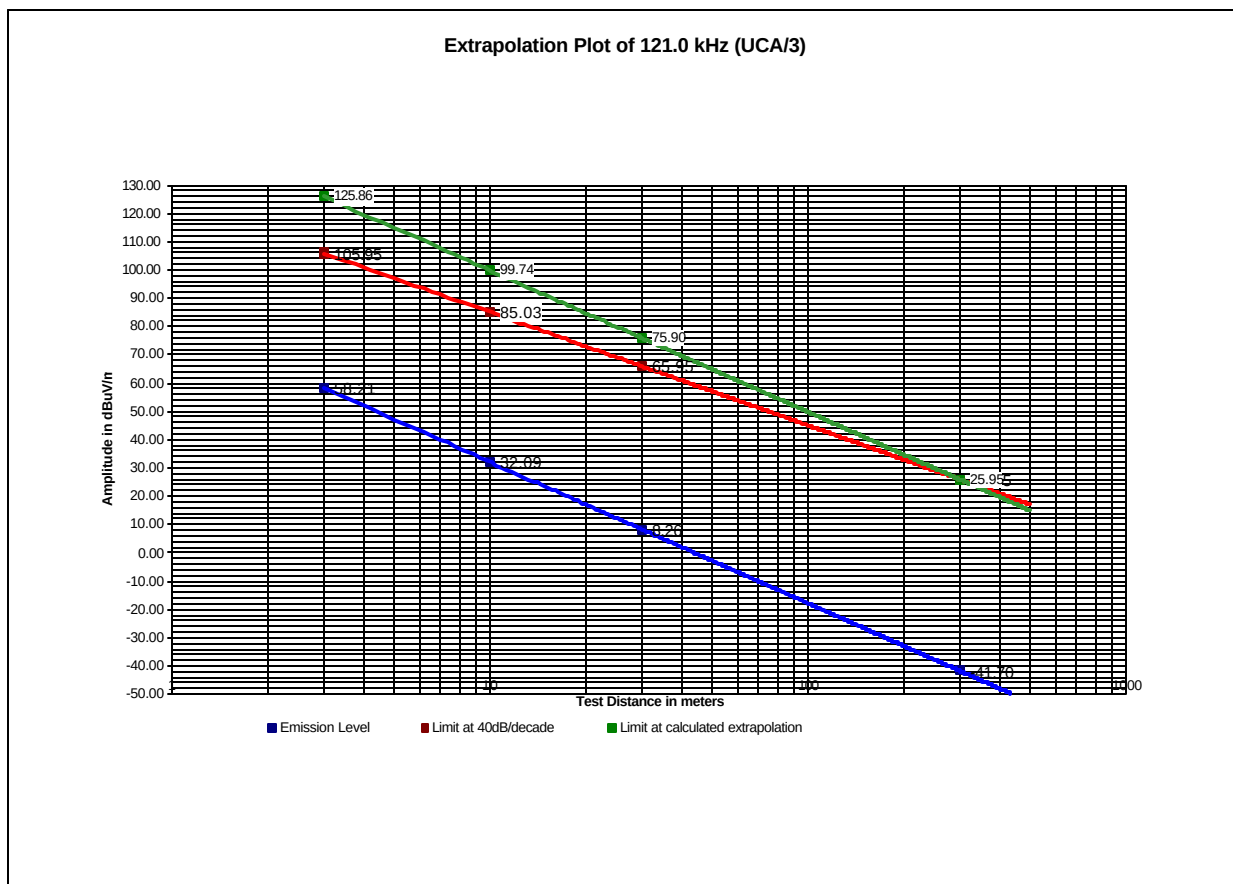
**49.95 dB/decade**

Levels at 3 and 10 meters were measured, levels at 30 and 300 meters are calculated.

*Table 7 – 121.0 kHz Extrapolation Factor Data*

| Distance in meters            | 3      | 10    | 30    | 300    |
|-------------------------------|--------|-------|-------|--------|
| Level dBuV/m                  | 58.21  | 32.09 | 8.26  | -41.70 |
| Limit dBuV/m (40dB/decade)    | 105.95 | 85.03 | 65.95 | 25.95  |
| Limit dBuV/m (49.95dB/decade) | 125.86 | 99.74 | 75.90 | 25.95  |

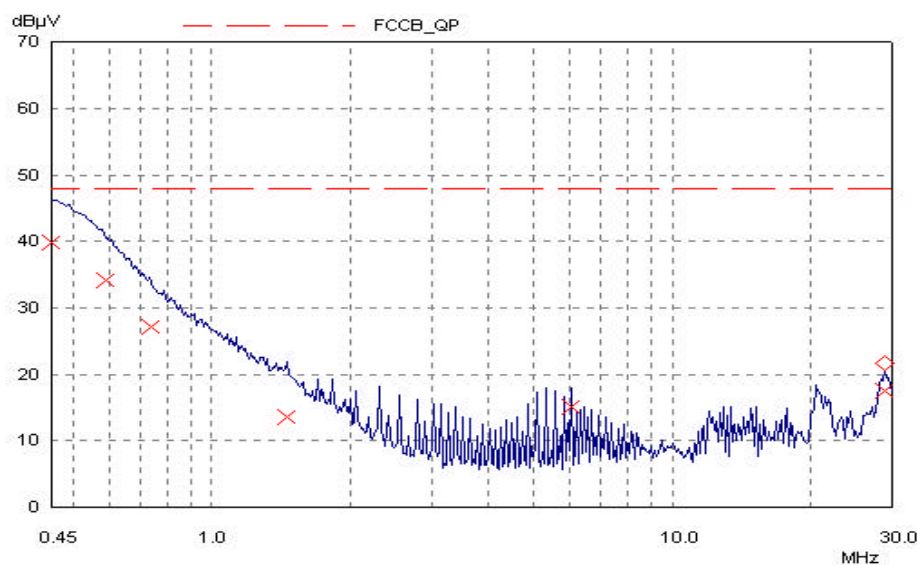
*Figure 2 - Extrapolation Factor Plot*





## Conducted Data for FCC Part 15.207(a), Line

Figure 3 - Line Scan



Pre-Scan Settings:

| Start Freq. | Stop Freq. | Step | IF BW | Detector | Scan-Time | Atten. |
|-------------|------------|------|-------|----------|-----------|--------|
| 0.45MHz     | 30MHz      | 5kHz | 10kHz | PK       | 20msec    | 0dB    |

Blue Trace: Peak Measurement

Final Measurement: x = QP at 2 second measurement time.

Table 8 - Line Scan Data

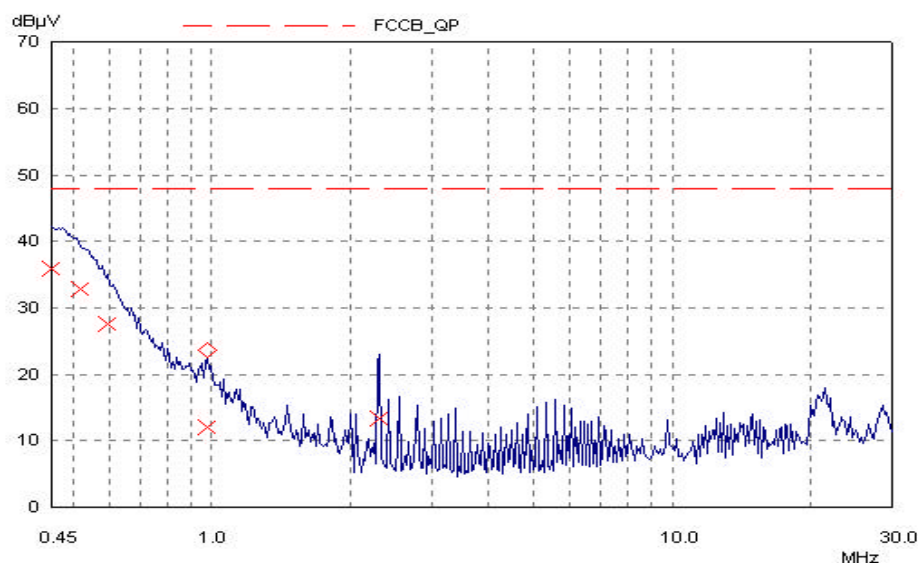
| Freq.<br>MHz | Level<br>dBμV | Detector | Limit<br>dBμV | Margin<br>dB | Phase | PE  |
|--------------|---------------|----------|---------------|--------------|-------|-----|
| 0.45         | 39.90         | QP       | 48.00         | 8.10         | L1    | gnd |
| 0.59         | 34.26         | QP       | 48.00         | 13.74        | L1    | gnd |
| 0.735        | 27.24         | QP       | 48.00         | 20.76        | L1    | gnd |
| 1.455        | 13.55         | QP       | 48.00         | 34.45        | L1    | gnd |
| 6.07         | 15.17         | QP       | 48.00         | 32.83        | L1    | gnd |
| 29.015       | 17.62         | QP       | 48.00         | 30.38        | L1    | gnd |





## Conducted Data for FCC Part 15.207(a), Neutral

Figure 4 - Neutral Scan



Pre-Scan Settings:

| Start Freq. | Stop Freq. | Step | IF BW | Detector | Scan-Time | Atten. |
|-------------|------------|------|-------|----------|-----------|--------|
| 0.45MHz     | 30MHz      | 5kHz | 10kHz | PK       | 20msec    | 0dB    |

Blue Trace: Peak Measurement

Final Measurement: x = QP at 2 second measurement time.

Table 9 - Neutral Scan Data

| Freq.<br>MHz | Level<br>dBμV | Detector | Limit<br>dBμV | Margin<br>dB | Phase | PE  |
|--------------|---------------|----------|---------------|--------------|-------|-----|
| 0.45         | 35.91         | QP       | 48.00         | 12.09        | N     | gnd |
| 0.52         | 32.92         | QP       | 48.00         | 15.08        | N     | gnd |
| 0.595        | 27.70         | QP       | 48.00         | 20.30        | N     | gnd |
| 0.975        | 12.09         | QP       | 48.00         | 35.91        | N     | gnd |
| 2.305        | 13.47         | QP       | 48.00         | 34.53        | N     | gnd |



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## COMPLIANCE VERIFICATION REPORT

# TEST CERTIFICATE

APPLICANT: CDVI  
31 Ave du General Leclerc  
PANTIN 93500 FRANCE

Trade Name: Access Control System with Proximity Reader

Model: UCA/3

### I HEREBY CERTIFY THAT:

The measurements shown in this report were made in accordance with the procedures indicated and that the energy emitted by this equipment, as received, was found to be within the FCC CFR 47 Part 15 Subpart C section 15.209 for Radiated emissions and FCC CFR 47 Part 15 Subpart C section 15.207 for Conducted emissions. Additionally, it should be noted that the results in this report apply only to the items tested, as identified herein.

### I FURTHER CERTIFY THAT:

On the basis of the measurements taken at the test site, the equipment tested is capable of operation in compliance with the requirements set forth in FCC CFR 47 Part 15.207 and 15.209 Rules and Regulations.

On this Date: September 24, 2001

\_\_\_\_\_  
Bruce Smith

Atlas Compliance & Engineering, Inc.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

CDVI Representative