



# Atlas Compliance & Engineering, Inc.

## FCC Test Report

**FCC CFR 47 Part 15.207, 15.209, and 15.249 COMPLIANCE**

• • • • • • • • • •

*Go Direct International Ltd.  
15 Emerson Road  
Milford, New Hampshire, 03055 USA*

*Product:  
PS2 RF Controller Base  
Model:  
RadioWave Receiver*

Test Report Number: 0337GDIdongle\_subc  
Date of Report: August 29, 2003

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## General Information

Test Report Number: 0337GDIdongle\_subc

Date Product Tested: August 26 & 27, 2003

Date of Report: August 29, 2003

Applicant: Go Direct International Ltd.  
15 Emerson Road  
Milford, New Hampshire, 03055 USA

Contact Person: Edward Hames

Equipment Tested: PS2 RF Controller Base

Trade Name: RadioWave Receiver Controller Base

Model: RadioWave Receiver

Purpose Of Test: To demonstrate the compliance of the PS2 RF Controller Base, RadioWave Receiver, with the requirements of FCC CFR 47 Part 15 Rules and Regulations to the limits of Subpart C 15.207, 15.209, and 15.249 using the procedure stated in ANSI C63.4-1992.

Frequency Range Investigated: 150 kHz to 10,000 MHz

FCC ID: REJGDR

Test Site Locations: Field Strength Measurement Facility:  
Atlas Compliance & Engineering, Inc.  
726 Hidden Valley Road  
Royal Oaks, California 95076

Conducted Interference and Immunity Measurement Facility:  
Atlas Compliance & Engineering, Inc.  
1792 Little Orchard St.  
San Jose, California 95125

Test Personnel: Mario E. Baraona Sr.  
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/Schaffner       | 7/6/03     | 7/6/04          |
| Horn Antenna _ 3115                       | 9003-3340                          | EMCO                  | 1/23/03    | 1/23/04         |
| Active Loop Antenna _ 6502                | 9108-2669                          | EMCO                  | 12/13/02   | 12/13/03        |
| Pre amp 9 kHz – 2 GHz _ CPA9231A          | 3323                               | Schaffner             | 5/24/03    | 5/24/04         |
| Pre amp 1 – 26.5 GHz _ 8449B              | 3008A00910                         | HP                    | 5/24/03    | 5/24/04         |
| EMI Test Receiver 9 kHz - 2500 MHz _ ESPC | DE15934                            | Rohde & Schwarz       | 6/11/03    | 6/11/04         |
| EMI Test Receiver 9 kHz - 2500 MHz _ ESPC | DE14459                            | Rohde & Schwarz       | 11/29/02   | 11/29/03        |
| EMI Receiver 100 Hz – 22 GHz _ 8566B      | 2542A13058 (IF)<br>2637A03426 (RF) | HP                    | 5/24/03    | 5/24/04         |
| LISN _ 3825/2                             | 9007-1683                          | EMCO                  | 9/11/03    | 9/11/04         |
| LISN _ 4825/2                             | 9808-1088                          | EMCO                  | 9/11/03    | 9/11/04         |
| Multimeter _ 75                           | 47410575                           | Fluke                 | 12/2/02    | 12/2/03         |
| Variable Transformer_PowerSat             | 8P124201                           | Superior Electric Co. | N/A        | N/A             |



## Test Configuration

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| Customer:      | Go Direct International Ltd.                                         |
| Test Date:     | August 26 & 27, 2003                                                 |
| Specification: | FCC CRF 47 Part 15.207 and 15.249<br>Limits, ANSI C63.4-1992 Methods |

### EUT Description / Note:

The EUT, RadioWave Receiver, a PS2 RF Controller Base, was powered up and in a continuous transmitting mode. The EUT is powered through the host game console. There was no change in the DC voltage of the EUT while the AC voltage was varied +/- 15% from the nominal voltage of 117 VAC. Conducted emissions testing was performed on the host unit with the EUT operating continuously. EUT frequencies of operation are 908.65, 909.69, 910.75, 911.80, 912.85, 913.90, 914.95, & 915.95 MHz.

### EUT Support Program

The EUT was constantly at 908.65 MHz. The other frequencies between 908.65 MHz and 915.96 MHz were tested to find maximum emissions, 908.65 MHz was where the maximum emission level was observed. Band edge measurements were taken with the EUT operating throughout 908.58 MHz and 915.96 MHz with FSK modulation.

### 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 August 26, 2003.



## EUT Support Devices

*Table 1 - Support Equipment Used For Test*

| <b>Model:</b> | <b>Description:</b>      | <b>S/N</b> | <b>FCC ID#</b> |
|---------------|--------------------------|------------|----------------|
| SCPH_39001    | Sony, PlayStation 2 NTSC | U9242211   | DoC            |
| 14AF-41       | Toshiba Color TV         | 15611401 A | DoC            |

## 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> |
|-----------------|-------------------|---------------|------------------|--------------------|
| Player port     | Shielded          | 10 inch       | 9 pin Sony       | Port 1             |

*Table 3 - Host Port Termination's*

| <b>I/O Port</b> | <b>Cable Type</b>         | <b>Length</b> | <b>Connector</b> | <b>Termination</b> |
|-----------------|---------------------------|---------------|------------------|--------------------|
| AV              | Triple Coax, Ferrite Bead | 8 FT          | RCA (3x)         | Monitor            |
| Power           | Non-Shielded              | 7 FT          | IEC              | Power Mains        |

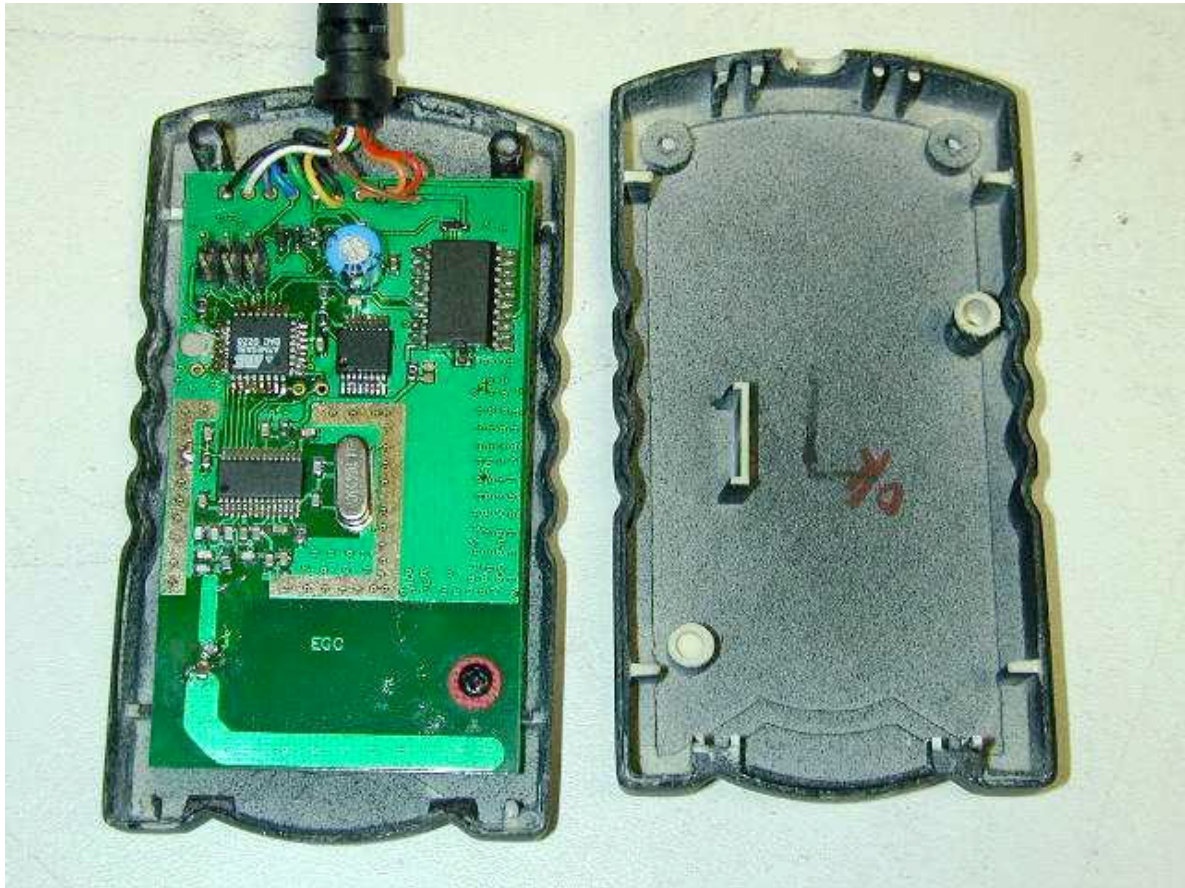


## Equipment Under Test

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

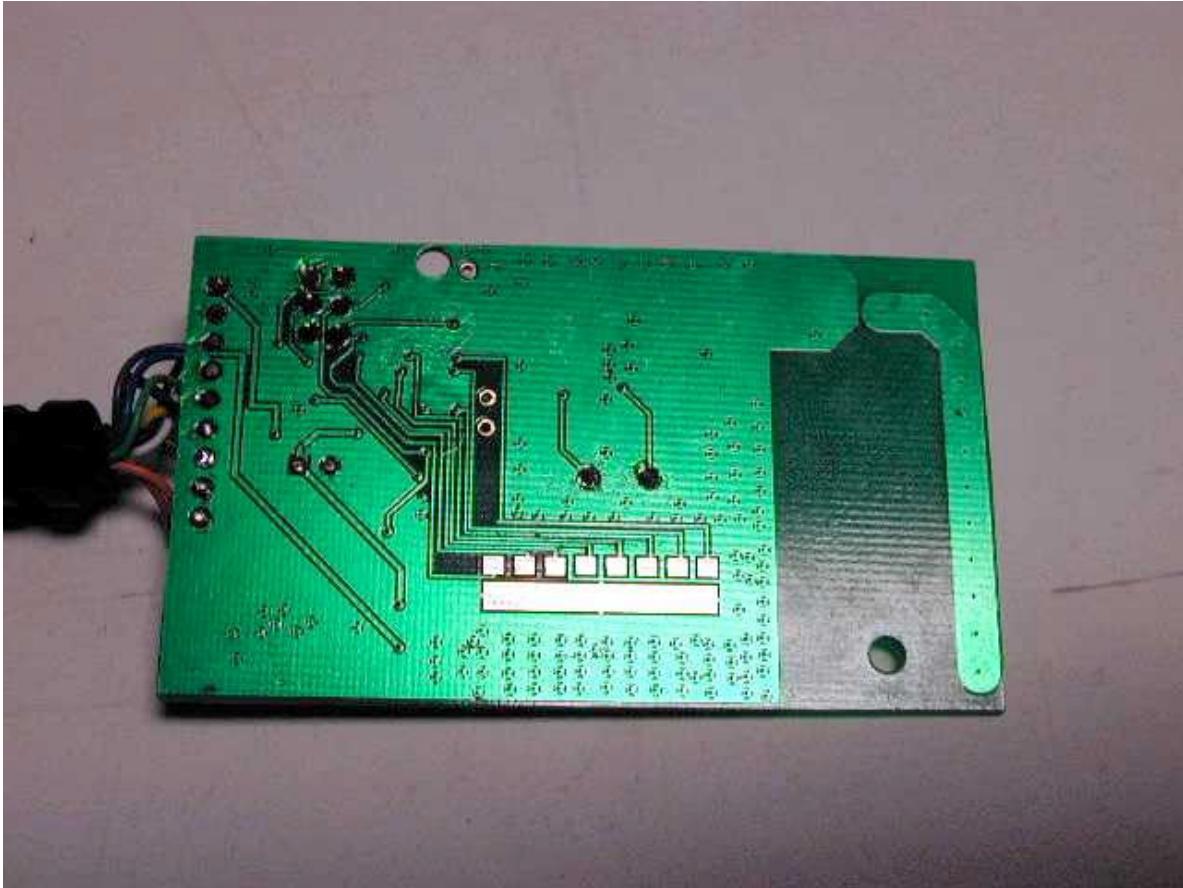










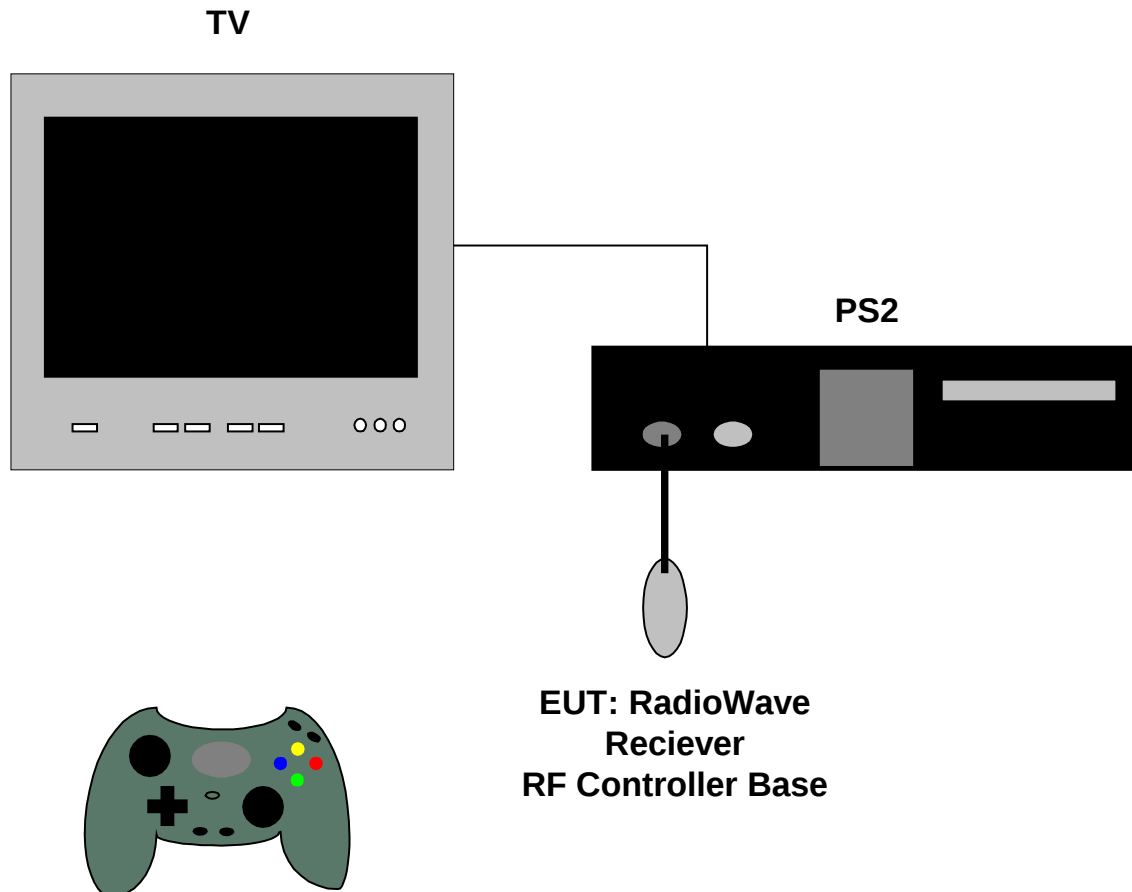




## Equipment Block Diagram

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 at 3 Meters.







The photographs below show worst case setup for radiated emission testing at 3 Meters and 10 Meters with a loop antenna.







## 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 or HP 8566B. 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 meters from the EUT as noted in the test data.

For radiated emissions testing, scans in the frequency range of 4 MHz to 10000 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, between 30 MHz and 1000 MHz was measured at a bandwidth of 120 kHz and between 1000 MHz and above was measured at a bandwidth of 1 MHz. Measurements were made employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz, and above 1GHz 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 3 meters.

## 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 150 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:

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

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                              |

**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.



*Table 5 - Radiated Emission Limits,  
 Operation within the bands 902 – 928 MHz, 2400 – 2483.5 MHz,  
 5725 – 5875 MHz, and 24.0 – 24.25 GHz.*

| Frequency<br>MHz | Field Strength of<br>fundamental millivolts/meter | Field Strength of<br>harmonics microvolts/meter |
|------------------|---------------------------------------------------|-------------------------------------------------|
| 902 – 928        | 50                                                | 500                                             |
| 2400 – 2483.5    | 50                                                | 500                                             |
| 5725 – 5875      | 50                                                | 500                                             |
| 24000 – 24250    | 250                                               | 2500                                            |

**NOTE:**

- Field strength limits are specified at a distance of 3 meters..
- Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.
- As shown in 15.35(b), for frequencies above 1000 MHz, the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

*Table 6 - Conducted Limits*

| Frequency<br>MHz | Limit<br>Quasi-Peak dBμV | Limit<br>Average dBμV |
|------------------|--------------------------|-----------------------|
| 0.15-0.50        | 66-56                    | 56-46                 |
| 0.50-5           | 56                       | 46                    |
| 5-30             | 60                       | 50                    |

**NOTE:**

- The lower limit shall apply at the transition frequencies.
- Both Quasi-Peak and Average limits for power line conducted testing must be met.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.



## Report of Measurements 15.249 Radiated Data

The following tables reports the results of the radiated measurements for the PS2 RF Controller Base, RadioWave Receiver.

*Table 7 - Radiated Emission Level*

| 15.249 Limit<br>dB $\mu$ V/m | Fundamental<br>Frequency<br>MHz | Level<br>dB $\mu$ V/m | Detector | Azimuth,<br>Height | Antenna | Polarity | Margin<br>dB |
|------------------------------|---------------------------------|-----------------------|----------|--------------------|---------|----------|--------------|
| 94 @ 3 meters                | 908.65                          | 88.61                 | QP       | 120, 1.2M          | BiLog   | H        | -5.39        |
|                              |                                 | 79.05                 | QP       | 320, 1M            | BiLog   | V        | -14.95       |

| 15.249 Limit<br>dB $\mu$ V/m | Harmonic<br>Frequency<br>MHz | Level<br>dB $\mu$ V | Detector | Test<br>Distance | Antenna | Polarity | Margin<br>dB |
|------------------------------|------------------------------|---------------------|----------|------------------|---------|----------|--------------|
| 54 @ 3 meters                | 1816.88                      | 34                  | AV       | 300, 1M          | Horn    | H        | -20.10       |
|                              |                              | 35.1                | AV       | 5, 1M            | Horn    | V        | -19.00       |
| 54 @ 3 meters                | 2725.32                      | 26.4                | AV       | 310, 1M          | Horn    | H        | -24.14       |
|                              |                              | 26.8                | AV       | 175, 1.1M        | Horn    | V        | -23.24       |
| 54 @ 3 meters                | 3633.76                      | 26.2                | AV       | 310, 1M          | Horn    | H        | -20.42       |
|                              |                              | 26                  | AV       | 175, 1.1M        | Horn    | V        | -20.62       |
| 54 @ 3 meters                | 4542.2                       | 25.9                | AV       | 0, 1M            | Horn    | H        | -19.98       |
|                              |                              | 28.8                | AV       | 120, 1M          | Horn    | V        | -20.08       |
| 54 @ 3 meters                | 5450.6                       | 24.9                | AV       | 0, 1M            | Horn    | H        | -17.74       |
|                              |                              | 24.7                | AV       | 290, 1M          | Horn    | V        | -19.94       |
| 54 @ 3 meters                | 6359.1                       | 25                  | AV       | 0, 1M            | Horn    | H        | -17.17       |
|                              |                              | 25                  | AV       | 290, 1M          | Horn    | V        | -17.18       |
| 54 @ 3 meters                | 7267.52                      | 26                  | AV       | 0, 1M            | Horn    | H        | -14.38       |
|                              |                              | 25.4                | AV       | 290, 1M          | Horn    | V        | -15.00       |
| 54 @ 3 meters                | 8175.96                      | 27.1                | AV       | 0, 1M            | Horn    | H        | -12.36       |
|                              |                              | 26                  | AV       | 290, 1M          | Horn    | V        | -13.46       |
| 54 @ 3 meters                | 9084.4                       | 27                  | AV       | 0, 1M            | Horn    | H        | -10.91       |
|                              |                              | 26.8                | AV       | 290, 1M          | Horn    | V        | -11.11       |

|               |                 |       |    |           |       |   |        |
|---------------|-----------------|-------|----|-----------|-------|---|--------|
| 46 @ 3 meters | Bandedge<br>902 | 33.69 | QP | 130, 1.2M | BiLog | V | -12.31 |
| 46 @ 3 meters | Bandedge<br>928 | 19.51 | QP | 120, 1.2M | BiLog | H | -26.49 |

Test Method: ANSI C63.4-1992  
 Spec Limit: FCC 15.249  
 No other emissions were observed.

Note: PK = Peak  
 H = Horizontal  
 V = Vertical

COMMENTS: System continuously running. Ambient temperature 68°F and relative humidity of 35%. Test distance of 3 meters. Quasi-peak and average detectors were not used since the peak readings were under the limits (unless noted otherwise). No emissions observed after the third harmonic, measurements taken are baseline measurements after the forth harmonic. Band edge measurements were taken with FSK modulation.



## Report of Measurements 15.209 Radiated Data

*Table 8 - Radiated Emission Level Below 30 MHz*

| 15.209 Limit<br>dBμV/M | Unwanted<br>Frequency<br>MHz | Level<br>dBμV | Detector | Test<br>Distance<br>in Meters | Margin<br>dB | Antenna |
|------------------------|------------------------------|---------------|----------|-------------------------------|--------------|---------|
| 49.5 @ 10 meters       | 4.005                        | 9.90          | QP       | 10                            | -39.60       | Loop    |
| 49.5 @ 10 meters       | 11.945                       | 8.89          | QP       | 10                            | -40.61       | Loop    |
| 49.5 @ 10 meters       | 14.765                       | 9.47          | QP       | 10                            | -40.03       | Loop    |
| 49.5 @ 10 meters       | 29.465                       | 10.52         | QP       | 10                            | -38.98       | Loop    |

Exploratory radiated emissions measurements were performed from 4 MHz to 30 MHz at 10 Meter and 3 Meter distances. The loop antenna was placed at 1 Meter height and was rotated about its vertical axis. The EUT was also rotated 360 degrees in front of the antenna.

Limit was extrapolated at 40 db/decade for measurement at 10 Meters. Emissions were at the noise floor. No other emissions were observed.

*Table 9 - Radiated Emission Level Below 1000 MHz*

| Frequency<br>MHz | QP Level<br>dBμV | QP Limit<br>dBμV | Margin<br>dB | Azimuth,<br>Height | Antenna,<br>Polarization |
|------------------|------------------|------------------|--------------|--------------------|--------------------------|
| 71.96            | 31.56            | 40.00            | -8.44        | 95, 1.7M           | Bilog, V                 |
| 432.0            | 36.51            | 47.00            | -10.49       | 135, 2.4M          | Bilog, V                 |
| 727.32           | 34.03            | 47.00            | -12.97       | 180, 2.2M          | Bilog, V                 |
| 801.06           | 35.45            | 47.00            | -11.55       | 170, 2M            | Bilog, V                 |
| 432.0            | 34.97            | 47.00            | -12.03       | 45, 3M             | Bilog, H                 |
| 727.32           | 37.32            | 47.00            | -9.68        | 185, 3.2M          | Bilog, H                 |
| 801.06           | 32.77            | 47.00            | -4.23        | 190, 3M            | Bilog, H                 |
| 890.45           | 36.82            | 47.00            | -10.18       | 45, 1.5M           | Bilog, H                 |

|                    |                   |             |              |                 |                  |               |
|--------------------|-------------------|-------------|--------------|-----------------|------------------|---------------|
| <u>Start Freq.</u> | <u>Stop Freq.</u> | <u>Step</u> | <u>IF BW</u> | <u>Detector</u> | <u>Scan-Time</u> | <u>Atten.</u> |
| 30MHz              | 1000MHz           | 25kHz       | 120kHz       | PK              | 10msec           | 0dB           |

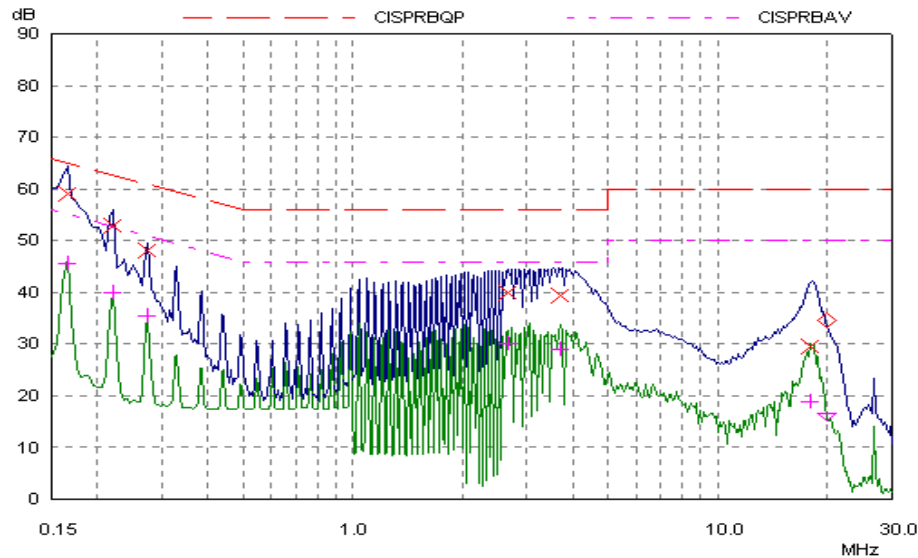
Test Method: ANSI C63.4-1992  
 Spec Limit: FCC 15.209

Note: AV = Average  
 QP = Quasi Peak



## Conducted Data for FCC Class B Line

Figure 2 - Line Scan



Pre-Scan Settings:

| Start Freq. | Stop Freq. | Step | IF BW | Detector | Scan-Time | Atten. |
|-------------|------------|------|-------|----------|-----------|--------|
| 0.15MHz     | 30MHz      | 5kHz | 9kHz  | PK/AV    | 20msec    | 0dB    |

Blue Trace: Peak Measurement

Green Trace: Average Measurement

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

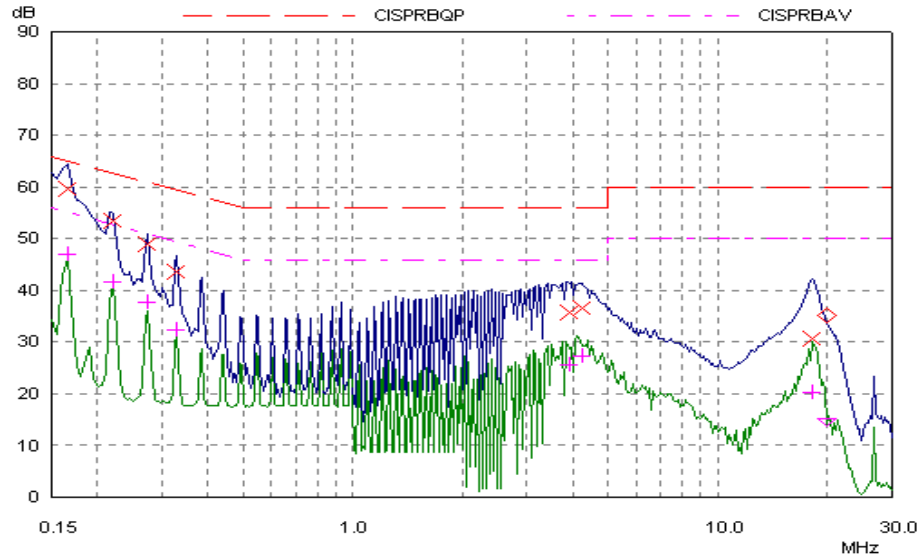
Table 10 - Line Scan Data

| Freq.<br>MHz | Level<br>dB $\mu$ V | Detector | Limit<br>dB $\mu$ V | Margin<br>dB | Phase | PE  |
|--------------|---------------------|----------|---------------------|--------------|-------|-----|
| 0.165        | 59.19               | QP       | 65.21               | -6.02        | L1    | gnd |
| 0.22         | 52.86               | QP       | 62.82               | -9.96        | L1    | gnd |
| 0.275        | 48.05               | QP       | 60.97               | -12.92       | L1    | gnd |
| 2.68         | 39.90               | QP       | 56.00               | -16.10       | L1    | gnd |
| 3.72         | 39.47               | QP       | 56.00               | -16.53       | L1    | gnd |
| 18.06        | 29.46               | QP       | 60.00               | -30.54       | L1    | gnd |
| 0.165        | 45.66               | AV       | 55.21               | -9.55        | L1    | gnd |
| 0.22         | 39.94               | AV       | 52.82               | -12.88       | L1    | gnd |
| 0.275        | 35.60               | AV       | 50.97               | -15.37       | L1    | gnd |
| 2.68         | 30.26               | AV       | 46.00               | -15.74       | L1    | gnd |
| 3.72         | 29.15               | AV       | 46.00               | -16.85       | L1    | gnd |
| 18.06        | 18.77               | AV       | 50.00               | -31.23       | L1    | gnd |



## Conducted Data for FCC Class B Neutral

Figure 3 - Neutral Scan



Pre-Scan Settings:

|                    |                   |             |              |                 |                  |               |
|--------------------|-------------------|-------------|--------------|-----------------|------------------|---------------|
| <u>Start Freq.</u> | <u>Stop Freq.</u> | <u>Step</u> | <u>IF BW</u> | <u>Detector</u> | <u>Scan-Time</u> | <u>Atten.</u> |
| 0.15MHz            | 30MHz             | 5kHz        | 9kHz         | PK/AV           | 20msec           | 0dB           |

Blue Trace: Peak Measurement

Green Trace: Average Measurement

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

Table 11 - Neutral Scan Data

| Freq.<br>MHz | Level<br>dB $\mu$ V | Detector | Limit<br>dB $\mu$ V | Margin<br>dB | Phase | PE  |
|--------------|---------------------|----------|---------------------|--------------|-------|-----|
| 0.165        | 59.63               | QP       | 65.21               | -5.58        | N     | gnd |
| 0.22         | 53.48               | QP       | 62.82               | -9.34        | N     | gnd |
| 0.275        | 49.12               | QP       | 60.97               | -11.85       | N     | gnd |
| 0.33         | 43.78               | QP       | 59.45               | -15.67       | N     | gnd |
| 3.94         | 35.87               | QP       | 56.00               | -20.13       | N     | gnd |
| 4.27         | 36.68               | QP       | 56.00               | -19.32       | N     | gnd |
| 18.34        | 30.81               | QP       | 60.00               | -29.19       | N     | gnd |
| 0.165        | 46.92               | AV       | 55.21               | -8.29        | N     | gnd |
| 0.22         | 41.65               | AV       | 52.82               | -11.17       | N     | gnd |
| 0.275        | 37.86               | AV       | 50.97               | -13.11       | N     | gnd |
| 0.33         | 32.38               | AV       | 49.45               | -17.07       | N     | gnd |
| 3.94         | 25.59               | AV       | 46.00               | -20.41       | N     | gnd |
| 4.27         | 27.46               | AV       | 46.00               | -18.54       | N     | gnd |
| 18.34        | 20.20               | AV       | 50.00               | -29.80       | N     | gnd |



## COMPLIANCE VERIFICATION REPORT

# TEST CERTIFICATE

APPLICANT: Go Direct International Ltd.  
15 Emerson Road  
Milford, New Hampshire, 03055 USA

Trade Name: PS2 RF Controller Base

Model: RadioWave Receiver

### 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 15.249 and 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, 15.209, and 15.249 Rules and Regulations.

On this Date: August 29, 2003

Mario E. Baraona Sr.  
Atlas Compliance & Engineering, Inc.

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

\_\_\_\_\_  
Signature

Go Direct International Ltd. Representative