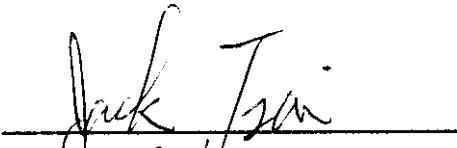
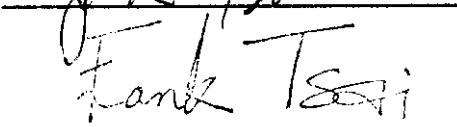


EXHIBIT B

Test Report

| | |
|------------------------|---|
| Report No. | D0215465 |
| Specifications | FCC Part 15.109(g), CISPR 22 |
| Test Method | ANSI C63.4 1992 |
| Applicant address | 15, LANE 768, PA-TEH RD., SEC. 4, TAIPEI 10565, TAIWAN, R.O.C. |
| Applicant Items tested | DATA TRONICS TECHNOLOGY, INC. |
| Model No. | USB Modem 5614UB, 5614SB (Sample # D02465) |
| Results | Compliance (As detailed within this report) |
| Sample received date | 06/25/99 (month / day / year) |
| Prepared by |  _____  _____ project engineer |
| Authorized by |  _____ General Manager (Frank Tsai) |
| Issue date | Jul. 19, 1999 (month / day / year) |
| Modifications | None |
| Tested by | Training Research Co., Ltd. |
| Office at | 2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan |
| Open site at | No. 5-3, Lane 21, Yen Chiu Yuan Rd., Sec. 4, Taipei, Taiwan |

Conditions of issue:

- (1) *This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.*
- (2) *This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.*

★ FCC ID: E205614UB

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Chapter 1 Introduction

Description of EUT:

This USB modem is a data communication device. It is designed to connect with PC or notebook via a USB cable and makes your data equipment available to transmit and receive data via the public telephone network.

Connections of EUT:

- (1) Plug the adaptor into the EUT.
- (2) Connect the EUT to USB Port A of PC via a USB cable.
- (3) Line jack of EUT connects with a line cable to the PABX located remotely.
- (4) Phone jack of EUT connects with a telephone set.

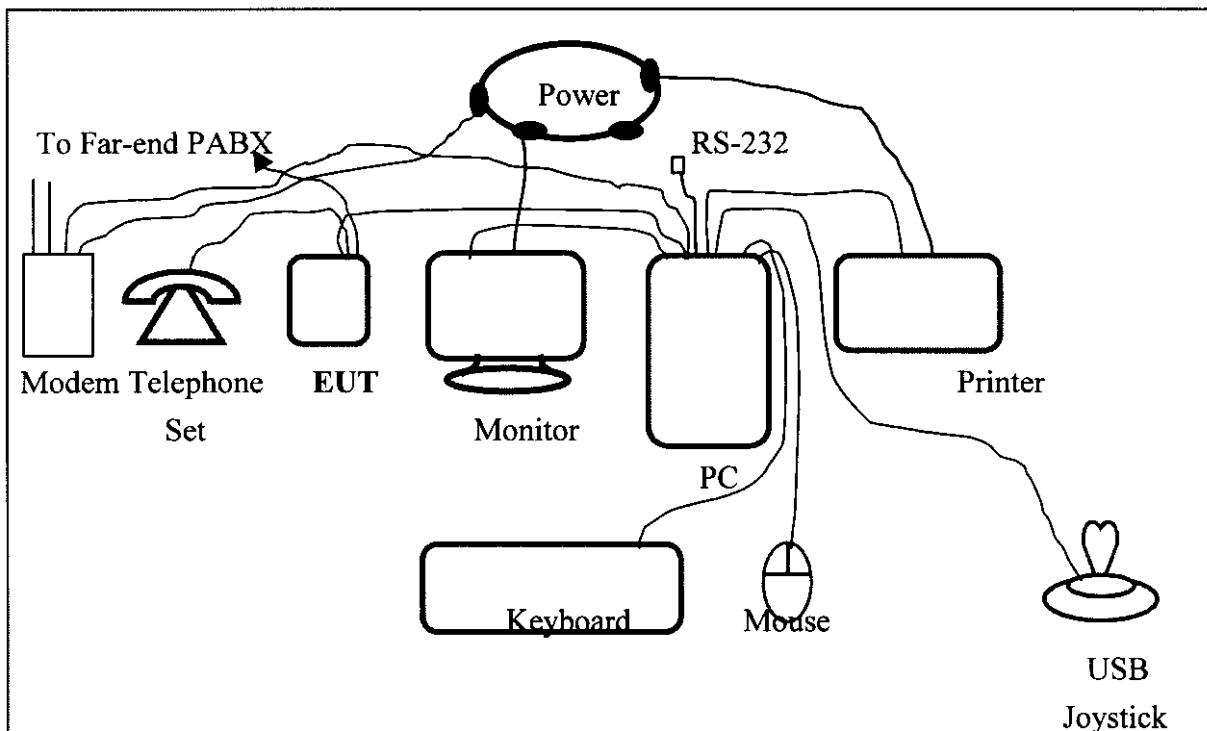
Test method:

Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

During testing, the EUT was operated at “transmitting” and “receiving” mode simultaneously.

While testing, the transmitting rate was set to “AUTO” which means it transmitted the test file depending on the telephone line condition, normally the operating rate is the highest speed. The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is showing in the next page.

Configuration of test setup*Connections:**PC:*

- *Serial A port --- 120 cm shielded cable connected to a modem.
 - *Serial B port --- 76 cm shielded cable left unterminal
 - *Printer port --- a printer with 1.2m length data cable
 - *Keyboard port --- a keyboard with 1m length
 - *Mouse port --- a mouse with 1m length
 - *Monitor port --- a monitor with 0.7m long of data cable
 - *USB port A --- a EUT with 182cm long, shielded and no ferrite bead data cable
 - *USB port B --- a joystick with 1.5m long, shielded and no ferrite bead data cable
- (Each port on PC is connected with suitable device)

EUT:

- *USB port --- 182 cm shielded cable connected to PC
- *Line jack --- via 15 m RJ11C cable to PABX located remotely
- *Phone jack --- via a 7 feet RJ11C cable to telephone set

List of support equipment**Conducted (Radiated) test:**

PC : **ACER Power 8000 (HP Brio 8410 6/350)**
Model No. : M11E/H71-X30-P4X (D6928A)
Serial No. : TM02607 (TW90400174)
FCC ID : N/A (Doc Approved)
檢磁 : 3872A827 (3872H013)
Power type : 100 ~ 230VAC / 50 ~ 60Hz, 5A, Switching
Power cord : Shielded, (Non-shielded), 1.8 m (2.30m) long, Plastic, No ferrite core

Monitor : **ACER (HP 15' Color Monitor)**
Model No. : 1555 (D2832A)
Serial No. : 91716023058320117495C431 (MY90615892)
FCC ID : JVP7254E (Doc Approved)
檢磁 : 4872A030 (4872A167)
Power type : 110 ~ 240 VAC / 50 ~ 60 Hz, Switching
Power cord : Shielded, 1.80m long, No ferrite core
Data cable : Shielded, 1.34m (1.50m) long, with ferrite core (two ferrite cores)

Keyboard : **ACER (HP)**
Model No. : 6311-C4C (SK-2501K)
Serial No. : 9132C0704C87L04379S00000 (M981216213)
FCC ID : Doc Approved (GYUR38SK)
檢磁 : 4862A064 (3862A621)
Power type : By PC
Data cable : Shielded, 1.8m (1.70m) long, with ferrite core

Mouse : **ACER (HP)**
Model No. : M-S42 (M-S34)
Serial No. : LZA83604858 (LZC84446151)
FCC ID : DZL211106 (DZL211029)
檢磁 : 4862A094 (4862A011)
Power type : By PC
Power cord : Non-shielded, 1.85m (1.80m) long, No ferrite core

Modem : **ACEEX**
Model No. : XDM-9624
FCC ID : IFAXDM-9624
Power type : 230V
Power cord : Non-shielded, 1.9m long, no ferrite cord
Data cable : RS232, Shielded, 1.2m long, no ferrite core
 RJ11C x 2, 7' long non-shielded, no ferrite core

PABX : **King Design**
Model No. : KD8705-A
Serial No. : GV101101186
Power type : 220 VAC 50Hz
Power cord : Non-shielded

Printer : **EPSON**
Model No. : P78PA (P70RA)
Serial No. : 0EE0014030 (10010386)
FCC ID : BKM9A8P70RA
Power type : 220VAC, 50Hz
Power cord : Non-shielded, 2m long, No ferrite core
Data cable : Shielded, 1.84m long, No ferrite core (1.7m)

USB Joystick : **Rockfire (Padix)**
Model No. : QF-305u (QF-305U, QF-307U, QF-606U, QF-707U) (Doc Approval)
Power type : Powered by PC
Power Cable : Shielded. 1.5M long, No ferrite bead data cable.

Chapter 2 *Conducted emission test*

Test condition and setup:

All the equipment is placed and setup according to the ANSI C63.4 - 1992.

The EUT is assembled on a wooden table which is 80 cm high, is placed 40 cm from the back-wall which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and spectrum.

The spectrum scans from 150KHz to 30MHz. Conducted emission levels are detected at max. peak mode. But if the max. peak mode failed or over average limit, it will be measured by average detection mode.

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

List of test Instrument:

| <u>Instrument Name</u> | <u>Model No.</u> | <u>Brand</u> | <u>Serial No.</u> | <u>Calibration Date</u> | |
|------------------------|------------------|--------------|-------------------|-------------------------|----------|
| Spectrum analyzer | 8591EM | H P | 3619A00821 | 10/29/98 | 10/29/99 |
| LISN (EUT) | 3825/2 | EMCO | 9411-2284 | 05/20/99 | 05/20/00 |
| LISN (Support E.) | 3825/2 | EMCO | 9210-2007 | 05/20/99 | 05/20/00 |
| Preamplifier | 8447F | H P | 2944A03706 | 05/20/99 | 05/20/00 |
| Line switch box | AC1-003 | TRC | ----- | 05/20/99 | 05/20/00 |
| Line selector | AC1-002 | TRC | ----- | 05/20/99 | 05/20/00 |

The level of confidence of 95% , the uncertainty of measurement of conducted emission is ± 2.4 dB.

Test Result: Pass (Appendix A)

Chapter 3 Radiated emission test

Test condition and setup:

Pretest : Prior to the final test (OATS test) ,the EUT is placed in a shielded enclosure, and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits from the EUT.

Final test: Final radiation measurements is made on a **10 - meter**, open-field test site. The EUT is placed on a nonconductive table which is 0.8 m height, the top surface is 1.0 x 1.5 meter. All the placement is according to ANSI C63.4 - 1992.

The spectrum is examined from 30 MHz to 1000 MHz measured by HP spectrum.

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum analyzer.

Measure more than six top marked frequencies generated from pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading. The spectrum analyzer's 6dB bandwidth is set to 120 KHz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambient, the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambient , the data from shield room will be taken as the final data.

List of test Instrument:

| <u>Instrument Name</u> | <u>Model No.</u> | <u>Brand</u> | <u>Serial No.</u> | <u>Calibration Date</u> | <u>Next time</u> |
|--|------------------|--------------|-------------------|-------------------------|------------------|
| Spectrum analyzer | 8591EM | H P | 3710A01203 | 01/29/99 | 01/29/00 |
| Spectrum analyzer | 8568B | H P | 3004A18617 | 05/18/99 | 05/18/00 |
| Quasi-peak Adapter | 85650A | H P | 2521A00984 | 05/18/99 | 05/18/00 |
| RF Pre-selector | 85685A | H P | 2947A01011 | 05/18/99 | 05/18/00 |
| Antenna (30M-1.5G Hz)VULB 9160 | M.E. | | 3064 | 01/20/99 | 01/20/00 |
| Open test side (Antenna, Amplify, cable calibrated together) | | | | 05/20/99 | 05/20/00 |

The level of confidence of 95%, the uncertainty of measurement of radiated emission is ± 4.96 dB.

Test Result: Pass (Appendix B)

Appendix A**Conducted Emission Test Result:**

Testing room : Temperature : 23 ° C

Humidity : 65 % RH

Line 1

| Frequency (KHz) | Amplitude (dBuV) | Limit (dBuV/m) | Margin (dB) |
|----------------------------|-----------------------------|---------------------------|------------------------|
| 153.00 | 47.89 | 55.91 | -8.02 |
| 156.00 | 48.34 | 55.83 | -7.49 |
| 612.00 | 37.76 | 46.00 | -8.24 |
| 744.00 | 37.61 | 46.00 | -8.39 |
| 868.00 | 37.27 | 46.00 | -8.73 |
| 935.00 | 36.55 | 46.00 | -9.45 |
| 1003.00 | 37.11 | 46.00 | -8.89 |
| 1135.00 | 37.02 | 46.00 | -8.98 |
| 1324.00 | 38.00 | 46.00 | -8.00 |
| 14390.00 | 40.53 | 50.00 | -9.47 |

Line 2

| Frequency (KHz) | Amplitude (dBuV) | Limit (dBuV/m) | Margin (dB) |
|----------------------------|-----------------------------|---------------------------|------------------------|
| 154.00 | 49.76 | 55.89 | -6.13 |
| 161.00 | 47.42 | 55.69 | -8.27 |
| 612.00 | 37.02 | 46.00 | -8.98 |
| 744.00 | 36.62 | 46.00 | -9.38 |
| 868.00 | 36.60 | 46.00 | -9.40 |
| 1063.00 | 36.86 | 46.00 | -9.14 |
| 1199.00 | 36.54 | 46.00 | -9.46 |
| 1324.00 | 36.71 | 46.00 | -9.29 |
| 14390.00 | 40.72 | 50.00 | -9.28 |
| 14950.00 | 40.56 | 50.00 | -9.44 |

* The reading amplitudes are all under average limit.

Appendix B

Radiated Emission Test Result: (Horizontal)

Test Conditions:

| | |
|-------------------------------------|--------------------|
| Testing room : Temperature : 28 ° C | Humidity : 70 % RH |
| Testing site : Temperature : 30 ° C | Humidity : 81 % RH |

| Frequency | Reading Amplitude | Ant. Height | Table | Correction Factors | Corrected Amplitude | Class B Limit | Margin |
|-----------|-------------------|-------------|--------|--------------------|---------------------|---------------|--------|
| MHz | dBuV | m | degree | dB/m | dBuV/m | dBuV/m | dB |

| | | | | | | | |
|---------|-------|------|-----|-------|-------|-------|-------|
| 423.320 | 34.90 | 2.57 | 284 | -3.65 | 31.25 | 37.00 | -5.75 |
| 451.550 | 30.80 | 2.56 | 9 | -2.61 | 28.19 | 37.00 | -8.81 |
| 479.770 | 30.80 | 1.00 | 251 | -1.38 | 29.42 | 37.00 | -7.58 |
| 507.990 | 29.70 | 2.56 | 37 | -0.76 | 28.94 | 37.00 | -8.06 |
| 536.210 | 33.80 | 2.57 | 309 | 0.11 | 33.91 | 37.00 | -3.09 |
| 665.080 | 26.30 | 2.56 | 290 | 3.05 | 29.35 | 37.00 | -7.65 |
| 831.360 | 24.40 | 4.00 | 49 | 7.05 | 31.45 | 37.00 | -5.55 |
| *** | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Note:

1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss - Amplitude gain)
(For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

Radiated Emission Test Result: (Vertical)

| Frequency | Reading Amplitude | Ant. Height | Table | Correction Factors | Corrected Amplitude | Class B limit | Margin |
|-----------|-------------------|-------------|--------|--------------------|---------------------|---------------|--------|
| MHz | dBuV | m | degree | dB/m | dBuV/m | dBuV/m | dB |

| | | | | | | | |
|---------|-------|------|-----|--------|-------|-------|-------|
| 36.000 | 38.50 | 1.00 | 259 | -10.08 | 28.42 | 30.00 | -1.58 |
| 76.010 | 43.30 | 2.56 | 19 | -17.06 | 26.24 | 30.00 | -3.76 |
| 130.020 | 43.90 | 1.00 | 287 | -16.30 | 27.60 | 30.00 | -2.40 |
| 148.880 | 41.30 | 4.00 | 71 | -14.68 | 26.62 | 30.00 | -3.38 |
| 150.000 | 39.00 | 1.00 | 342 | -14.60 | 24.40 | 30.00 | -5.60 |
| 152.020 | 42.40 | 2.56 | 330 | -14.50 | 27.90 | 30.00 | -2.10 |
| 155.420 | 39.90 | 1.00 | 231 | -14.33 | 25.57 | 30.00 | -4.43 |
| 169.330 | 40.50 | 1.00 | 87 | -13.63 | 26.87 | 30.00 | -3.13 |
| *** | | | | | | | |
| | | | | | | | |