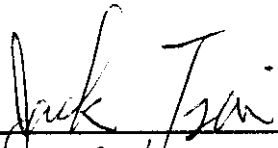


EXHIBIT B

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	DATATRONICS TECHNOLOGY, INC. USB Modem
Model No.	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:

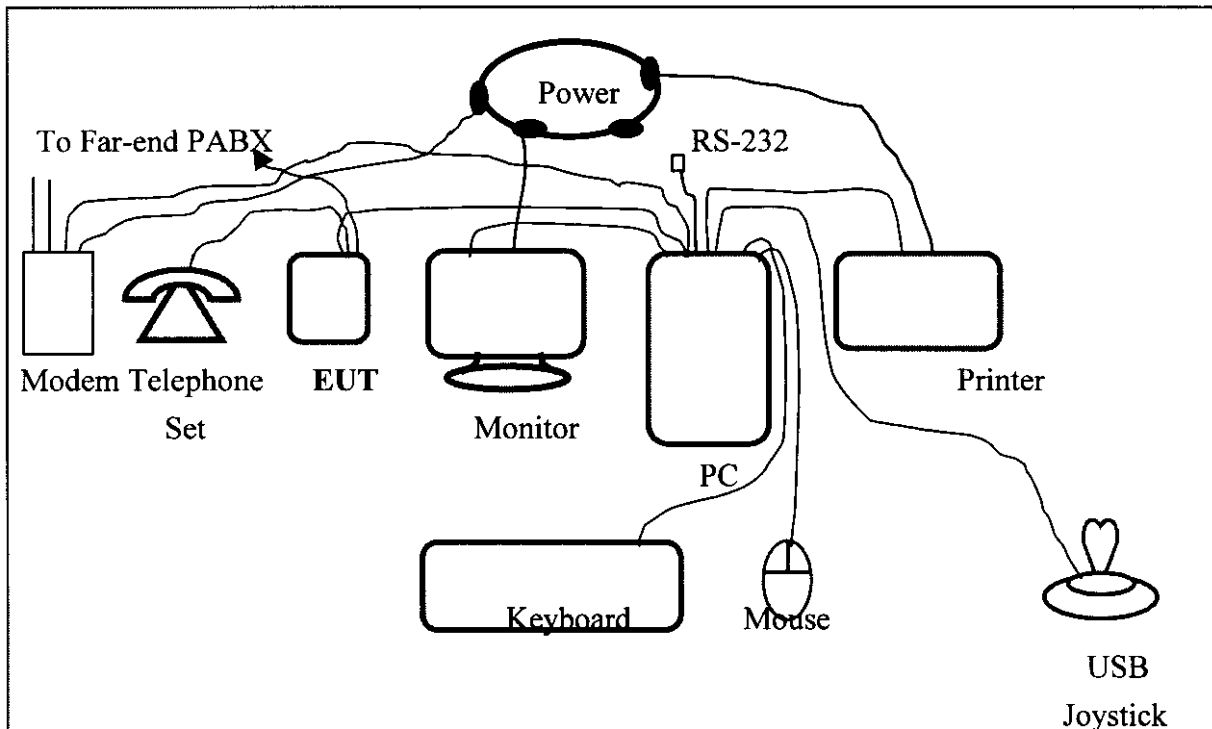
Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

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 unterminated
 - *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>	
				<u>Last time</u>	<u>Next time</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 form 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 form 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:

Instrument Name	Model No.	Brand	Serial No.	<u>Calibration Date</u>	
				Last time	Next time
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

<i>Frequency (KHz)</i>	<i>Amplitude (dBuV)</i>	<i>Limit (dBuV/m)</i>	<i>Margin (dB)</i>
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

<i>Frequency (KHz)</i>	<i>Amplitude (dBuV)</i>	<i>Limit (dBuV/m)</i>	<i>Margin (dB)</i>
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
