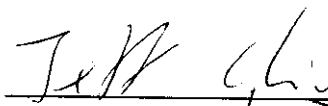
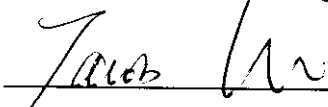
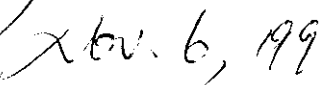


# ***EXHIBIT B***

## ***Test Report***

Report No.	A4915568
Specifications	FCC Part 15.109(g), Class B
Test Method	ANSI C63.4 1992
Applicant address	8/F, NO. 79, HSIN-TAI-WU RD., SEC. 1, HSI-CHIH, TAIPEI HSIEN, TAIWAN, R.O.C.
Applicant Items tested	AMAQUEST COMPUTER CORP. KEEP-IT-SAFE DISK ARRAY
Model No.	DA-950 (Sample # A49568)
Results	As detailed within this report
Sample received date	08/20/1998 (month / day / year)
Prepared by	 project engineer
Authorized by	 Vice General Manager (Jacob Lin )
Issue date	 (month / day / year) Nov. 6, 1998
Modifications	None
Tested by	Training Research Co., Ltd.
Office and Open site at	No. 15, Lane 530, Pa-Lian RD., Sec. 1, Hsi-Chih Town, Taipei Hsien, Taiwan, R.O.C.

**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.
- (3) This report is also against AS / NZS 3548.

★ FCC ID: NHZDA-950

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## ***Chapter 1 Introduction***

### ***Description of EUT:***

This Keep-It-Self Disk Array is a high-capacity 100% safe disk array that provides the safest storage environment possible for data-intensive users. Its specially designed power bus management solution guarantees maximum protection for both the power bus and data bus when hot-swapping hard drive. Its intelligent hot-swappable backplane design with rush current control and voltage regulation meets the highest " SCSI Bus Hot Plugging Standard Level 4". The dimension of EUT is adjustable that depends on the numbers of the hard disk drive contained in the EUT. The EUT is assembled by BP-9505 series, BP-9506 series, BP-9507 series, BP-9503 series, BP-9504 series, MR-9500 series, CTL-9500 series.

### ***Connections of EUT:***

- (1) The "Input" port of EUT connect with the "Output " port of the SCSI card installed in the PC.
- (2) The "Output" port of EUT is terminated.
- (3) Power jack of EUT connects with AC source.

### ***Test method:***

During testing, only DA-951 was tested.

While doing the conduction measurement, the two power modules of EUT were testing and recording separately.

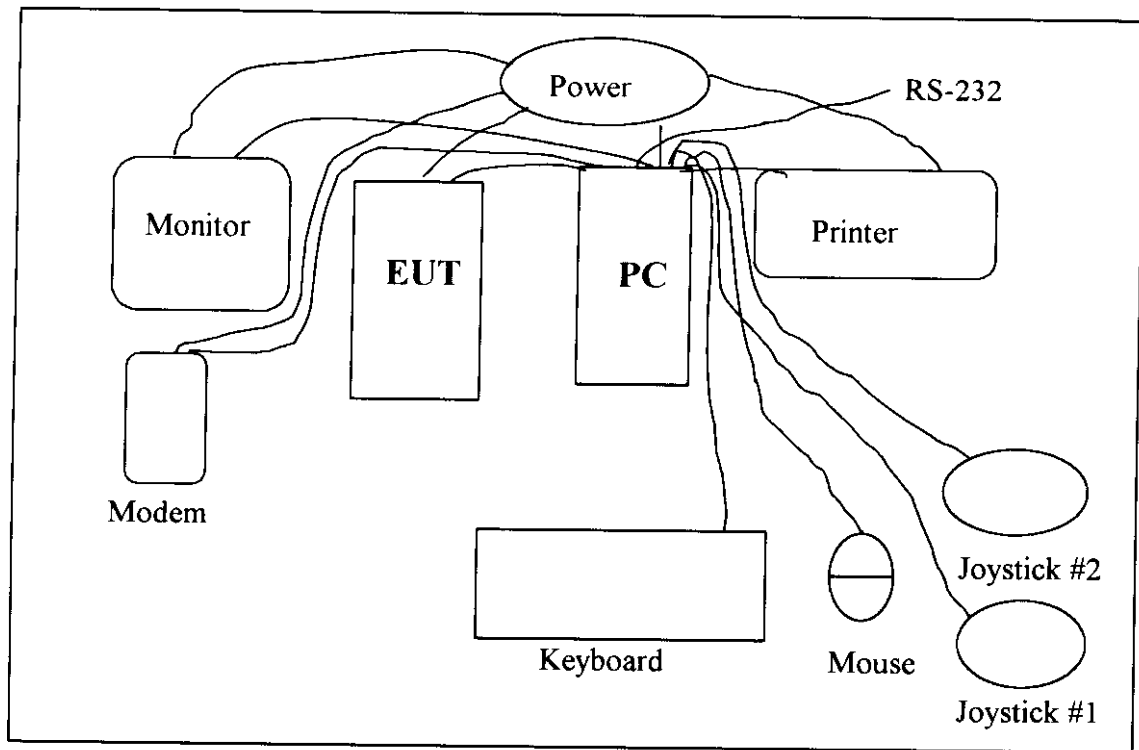
Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

During testing, the EUT was operated at "reading" continuously.

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 --- a external Modem
  - \*Serial B port --- a 76 cm shielded RS232 cable
  - \*Printer port --- a Printer
  - \*Keyboard port --- a Keyboard
  - \*Mouse port --- a Mouse
  - \*Monitor port --- a monitor
- (Each port on PC is connected with suitable device)

### EUT:

- \*Input jack --- via 1m, shielded SCSI cable to SCSI card installed in PC.
- \*Output jack --- terminated
- \*Power cord --- non-shielded, 1.5 m

***List of support equipment***

**Conducted (Radiated) test:**

**PC : ACER**  
Model : VKT33T -X30 -0637X  
Serial No. : TV69584  
FCC ID : HLZV65X-IDCATX  
Power type : 110~120 / 220~240 VAC, Switching  
Power cord : non-Shielded, 1.7m long, Plastic, no ferrite core

**Monitor : HP**  
Model No. : D2084 (D2821)  
Serial No. : KR4397004 (TW73107071)  
FCC ID : CSYSC-428VSP (A3KM064)  
Power type : 110~120 / 220~240 VAC, Switching  
Power cord : Non-Shielded, 3m long, no ferrite core  
Data cable : Shielded, 1.8m long, with ferrite core

**Keyboard : HP ( Digital )**  
Model No. : C3757 #ABO (KB-5923)  
Serial No. : C3757-60423 (9S74904741)  
FCC ID : CIGE03614 ( E8HKB-5923 )  
Power type : By PC  
Data cable : Shielded, 1.8m long, with ferrite core

**Printer : HP**  
Model No. : C2642A  
Serial No. : SG69A196GV  
FCC ID : B94C2642X  
Power type : 230 VAC  
Power cord : Non-shielded, 2m long, no ferrite core  
Data cable : Shielded, 1.84m long ,no ferrite core (1.7m)

**Modem** : **ACEEX**  
Model No. : XDM-9624  
FCC ID : IFAXDM-9624  
Power type : 230VAC, 50HZ/ 9VAC, 1A  
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

**Mouse** : **Hewlett Packard mouse**  
Model No. : C3751B  
Serial No. : LZA2216003  
FCC ID : DZL211029  
Power type : Powered by PC  
Power Cable : Non – Shielded. 5.5' long, Plastic hoods, No ferrite bead

**SCSI Card** : **Adaptec**  
Model : AHA-2940UW  
FCC ID : FGT2940UW  
Serial No. : 945300-01  
Power Type : By PC  
Data Cable : Shielded, 1m long, Metal Hood, No Ferrite bead

## ***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 that 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 quasi-peak and 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	8591A	H P	2919A00263	01/07/98	01/07/99
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99
LISN (Support E.)	AC3-001	TRC	-----	05/15/98	05/15/99
Preamplifier	AC3-002	TRC	-----	05/15/98	05/15/99
Line switch box	AC3-003	TRC	-----	05/15/98	05/15/99

The level of confidence of 95%, the uncertainty of measurement of conducted emission is  $\pm 2.4$  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 anechoic chamber, and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits form the EUT.

***Final test:*** Final radiation measurements are made on a **10 – meter**, open-field test site. The EUT is placed on a nonconductive table that is 0.8m height, the top surface is 1.0 x 1.5 meter. All 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 HP 8594EM.

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 K Hz, 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 anechoic chamber will be taken as the final data.

***List of test Instrument:***

**Calibration Date**

<u>Instrument Name</u>	<u>Model No.</u>	<u>Brand</u>	<u>Serial No.</u>	<u>Last</u>	<u>Next</u>
Spectrum analyzer	8594EM	H P	3710A01203	10/22/97	10/22/98
RF Pre-selector	AC4-001	TRC	-----	05/15/98	05/15/99
Antenna (30M-2G Hz)	3141	EMCO	9711-1076	12/17/97	12/17/98
Open test side (Antenna, Amplify, cable calibrated together)				05/15/98	05/15/99

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

***Test Result: Pass (Appendix B)***

## Appendix A

### Conducted Emission Test Result: ( Power 1 )

Testing room : Temperature : 24 ° C      Humidity : 52 % RH

#### Line 1

FREQUENCY ( KHz )	READING AMPLITUDE			LIMIT		MARGIN ( dB )
	Peak	Quasi-peak	Average	Quasi-Peak	Average	
302	49.48	*** **	*** **	61.66	51.66	-2.17
405	54.24	51.55	46.71	58.71	48.71	-2.00
473	42.21	*** **	*** **	56.77	46.77	-4.56
508	52.54	48.89	44.02	56.00	46.00	-1.98
604	43.55	*** **	*** **	56.00	46.00	-2.45
714	46.27	43.01	37.42	56.00	46.00	-2.99
808	47.25	42.25	36.10	56.00	46.00	-3.75
910	42.65	*** **	*** **	56.00	46.00	-3.35
1015	40.77	*** **	*** **	56.00	46.00	-5.23
1623	41.26	*** **	*** **	56.00	46.00	-4.74

#### Line 2

FREQUENCY ( KHz )	READING AMPLITUDE			LIMIT		MARGIN ( dB )
	Peak	Quasi-peak	Average	Quasi-Peak	Average	
304	50.70	*** **	*** **	61.60	51.60	-0.90
408	53.69	51.56	46.69	58.63	48.63	-1.94
473	43.08	*** **	*** **	56.77	46.77	-3.70
508	52.91	49.03	43.94	56.00	46.00	-2.06
590	41.69	*** **	*** **	56.00	46.00	-4.31
608	44.82	*** **	*** **	56.00	46.00	-1.18
641	40.96	*** **	*** **	56.00	46.00	-5.04
714	45.79	*** **	*** **	56.00	46.00	-0.21
813	46.64	42.45	36.65	56.00	46.00	-3.55
916	42.58	*** **	*** **	56.00	46.00	-3.42

\* The reading amplitudes are all under average limit.

( Power 2 )

*Line 1*

FREQUENCY ( KHz )	READING AMPLITUDE			LIMIT		MARGIN ( dB )
	Peak	Quasi-peak	Average	Quasi-Peak	Average	
392	50.21	47.58	42.15	59.09	49.09	-1.51
425	40.99	*** **	*** **	58.14	48.14	-7.16
493	53.19	50.39	45.15	56.20	46.20	-1.05
534	39.93	*** **	*** **	56.00	46.00	-6.07
590	47.69	44.90	39.01	56.00	46.00	-1.10
688	46.03	42.90	37.43	56.00	46.00	-3.10
788	43.27	*** **	*** **	56.00	46.00	-2.73
1274	39.48	*** **	*** **	56.00	46.00	-6.52
1374	40.02	*** **	*** **	56.00	46.00	-5.98
1478	40.22	*** **	*** **	56.00	46.00	-5.78

*Line 2*

FREQUENCY ( KHz )	READING AMPLITUDE			LIMIT		MARGIN ( dB )
	Peak	Quasi-peak	Average	Quasi-Peak	Average	
297	44.60	*** **	*** **	61.80	51.80	-7.20
392	50.48	47.51	42.11	59.09	49.09	-1.58
425	42.27	*** **	*** **	58.14	48.14	-5.87
493	53.42	50.40	45.11	56.20	46.20	-1.09
538	39.98	*** **	*** **	56.00	46.00	-6.02
590	48.34	45.29	39.70	56.00	46.00	-0.71
688	45.79	*** **	*** **	56.00	46.00	-0.21
788	42.74	*** **	*** **	56.00	46.00	-3.26
1468	39.07	*** **	*** **	56.00	46.00	-6.93
1574	39.16	*** **	*** **	56.00	46.00	-6.84

\* The reading amplitudes are all under average limit.

## **Appendix B**

### **Radiated Emission Test Result: (Horizontal)**

Test Conditions:

Testing room : Temperature : 29 ° C      Humidity : 39 % RH

Testing site : Temperature : 28 ° C      Humidity : 53 % 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

600.020	41.12	0.99	317	-14.55	26.57	37.00	-10.43
869.500	48.60	0.99	29	-19.07	29.53	37.00	-7.47
872.450	51.83	0.99	324	-19.05	32.78	37.00	-4.22
898.040	47.53	2.50	38	-18.74	28.79	37.00	-8.21
991.330	44.66	0.99	2	-15.42	29.24	37.00	-7.76
***							

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

40.010	52.18	0.99	137	-25.84	26.34	30.00	-3.66
42.960	51.98	0.99	156	-26.06	25.92	30.00	-4.08
47.990	48.58	2.52	163	-26.45	22.13	30.00	-7.87
726.010	44.74	2.51	162	-15.28	29.46	37.00	-7.54
734.480	42.85	2.51	71	-15.41	27.44	37.00	-9.56
***							

***Final statement:***

***This test report, measurements made by TRC are traceable to the NIST.***