Curtis-Straus Test Report

Report No EE1095-1

Client Beltronics USA, Inc.

5442 West Chester Road

West Chester, OH 45069

Phone (513)-870-8535 Fax (513)-870-8523

FRN 0007600588

Model **RX65**

FCC ID QL4G7M4

Equipment Type Radar Detector **Equipment Code CRD**

> Results As detailed within this report

Prepared by Evan Gould - Test Engineer

Authorized by Michael Buchholz – EMC Manager

Issue Date 1/17/05

Conditions of issue This Test Report is issued subject to the conditions stated in 'terms and conditions' section of this report.

Curtis-Straus LLC is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.



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Summary

This report is an application for Certification of a radar detector operating pursuant to 47 CFR 15.109(h). This report is designed to demonstrate the compliance of the RX65 with the requirements outlined in Part 15 (using the methods outlined in Part 2) of 47 CFR.

Statement of Conformity

47 CFR 15.109(h) states that "Radar detectors shall comply with the emissions limits...of [section 15.109(a)] over the frequency range of 11.7 – 12.2GHz." The applicable limit being 500μV/m measured at a distance of 3m. The Escort RX65 has been tested and found to comply with this requirement:

Test Methodology

Radiated emission testing was performed according to the procedures in ANSI C63.4 (2003). The testing was performed at a distance of 1 meter. The device's performance was investigated in the range 11.7-12.2GHz. The RX65 was powered by an HP E3612A variable DC power supply. Since the device is a hand-held unit, the emissions were maximized around the three orthogonal axes and the maximum reading was recorded. The integrated antenna cannot be maximized separately.



Test Equipment Used

REV. 21-DEC-2004

SPECTRUM ANALYZER	RANGE	MN	MFR	S	SN	ASSET	CALIBRATION DUE
Orange	9kHz-26.5GHz	E4407B	HP	US394	440975	00394	05-NOV-2005
OPEN AREA TEST SI	OPEN AREA TEST SITE (OATS)		IC CODE		VCCI	CODE	CALIBRATION DUE
SITE T	SITE T		IC 2762-T		R-9	905	25-MAR-2005
ANTENNA	RANGE	MN	MFR	SN		ASSET	CALIBRATION DUE
YELLOW HORN	1-18GHz	3115	EMCO	9608-48	398	00037	22-MAY-2005(EMI)
PREAMP	RANGE	MN		MFR	SN	ASSET	CALIBRATION DUE
ORANGE-BLACK	1-20GHz	SMC-12A		C-S	637367	00761	21-JUL-2005

Unless otherwise noted the calibration interval is one year. All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Emissions Measurements

<u>LIMIT</u>

Average: $500\mu V/m = 54dB\mu V/m @ 3m [15.109(a)]$

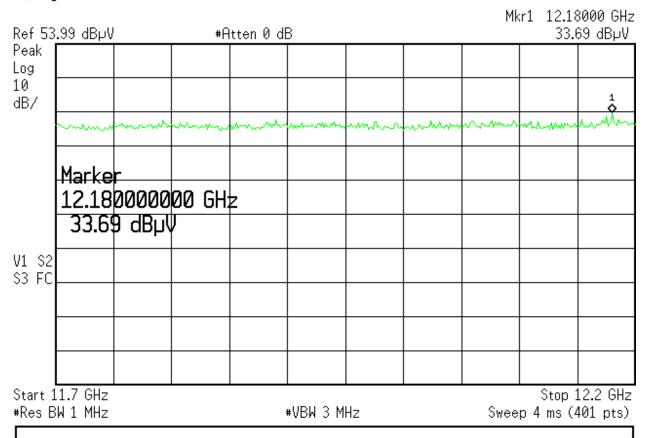
Note: If peak measurements meet the Average limit, then Average measurements are not required.

MEASUREMENTS

Radiated Emissions Table Curtis-Straus LLC									
Date:	30-Dec-04			Company:	Escort		٧	Vork Order:	E1095
Engineer:	Evan Gould		EUT Desc: RX65						
Frequency Range: 11.7-12.2GHz Measurement Distance: 1 m									
Notes:									
Antenna			Preamp	Antenna	Cable	Adjusted		FCC Class	В
Polarization	Frequency	Reading	Factor	Factor	Factor	Reading	Limit	Margin	Result
(H / V)	(MHz)	(dBµV)	(dB)	(dB/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)
noise floor	12180.0	33.7	21.5	39.2	3.0	54.4	63.5	-9.1	Pass
Table	e Result:	Pass	by	-9.1	dB	Wo	orst Freq:	12180.0	MHz
Test Site:	"T"	Pre-Amp:	Or-Blk	Cable:	7 Microflex	Analyzer:	Orange	Antenna:	Yellow Horn

ANALYZER PLOT

* Agilent 11:16:45 Dec 30, 2004



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Terms And Conditions

Paragraph 1. SERVICES. LABORATORY will:

Use the degree of care and skill ordinarily exercised by and consistent with the standards of the profession.

Perform all technical services in substantial accordance with the generally accepted laboratory principles and practices.

Retain all pertinent records relating to the services performed for a period of three (3) years following submission of the report describing 1.3 such services, during which period the records will be made available to CLIENT upon reasonable request.

Paragraph 2. CLIENT'S RESPONSIBILITIES. CLIENT or his authorized representative will:

Provide LABORATORY with all plans, schematics, specifications, addenda, change orders, drawings and other information for the proper 2.1

performance of technical services.

Designate a person to act as CLIENT's representative with respect to LABORATORY's services to be performed on behalf of the 2.2 CLIENT; such person or firm to have complete authority to transmit instructions, receive information and data, interpret and define CLIENT's policies and decisions with respect to the LABORATORY's work on behalf of the CLIENT and to order, at CLIENT's expense, such technical services as may be required.

Designate a person who is authorized to receive copies of LABORATORY's reports.

Undertake the following:

- (a) Secure and deliver to LABORATORY, without cost to LABORATORY, preliminary representative samples of the equipment proposed to require technical services, together with any relevant data.
- Furnish such labor and equipment needed by LABORATORY to handle samples at the LABORATORY and to facilitate the specified

Paragraph 3. GENERAL CONDITIONS:

LABORATORY, by the performance of services covered hereunder, does not in any way assume any of those duties or responsibilities customarily vested in the CLIENT, its employees, or any other party, agency or authority.

LABORATORY shall not be responsible for acts of omissions of any other party or parties involved in the design, manufacture or maintenance of the equipment or the failure of any employee, contractor or subcontractor to undertake any aspect of equipment's design, manufacture or maintenance.

3.3 LABORATORY is not authorized to revoke, alter, release, enlarge or release any requirement of the equipment's design, manufacture or maintenance unless specifically authorized by CLIENT or his authorized representative.

THE ONLY WARRANTY MADE BY LABORATORY IN CONNECTION WITH ITS SERVICE PERFORMED HEREUNDER IS

THAT IT WILL USE THAT DEGREE OF CARE AND SKILL AS SET FORTH IN PARAGRAPH I ABOVE. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED FOR SERVICES PROVIDED HEREUNDER.

Where the LABORATORY indicates that additional testing is advisable to obtain more valid or useful data, and where such testing has not been authorized, CLIENT agrees to view such test reports as inconclusive and preliminary. 3.5

The LABORATORY will supply technical service and prepare a report based solely on the sample submitted to the LABORATORY by the CLIENT. The CLIENT understands that application of the data to other devices is highly speculative and should be applied with 3.6 extreme caution.

The LABORATORY agrees to exercise ordinary care in receiving, preserving and shipping (F.O.B. Littleton, MA) any sample to be tested, but assumes no responsibility for damages, either direct or consequential, which arise from loss, damage or destruction of the samples due to the act of examination, modification or testing, or technical services or circumstances beyond LABORATORY's control.

3.8 The LABORATORY will hold samples for thirty (30) days after tests are completed, or until the CLIENT's outstanding debts to the LABORATORY are satisfied, whichever is later.

The CLIENT recognizes that generally accepted error variances apply and agrees to consider such error variances in its use of test data.

It is agreed between LABORATORY and CLIENT that no distribution of any tests, reports or analysis other than that described below shall be made to any third party without the prior written consent of both parties unless such distribution is mandated by operation of law. It is agreed that tests, reports, or analysis results may be disclosed to third party auditors of the laboratory at the laboratory facility in the course of accreditation maintenance audits. No reference to reports or technical services of the LABORATORY shall be made in any

advertising or promotional literature without the express written permission of the LABORATORY.

3.11 The CLIENT acknowledges that all employees of LABORATORY operate under employment contracts with the LABORATORY and

CLIENT agrees not to solicit employment of such employees or to solicit information related to other clients from said employees.

3.12 In recognition of the relative risks and benefits of the project to both CLIENT and LABORATORY, the risks have been allocated such that the CLIENT agrees, to the fullest extent permitted by law, to limit the liability of the LABORATORY to the CLIENT for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, including attorneys' fees and costs and expert witness fees and costs, so that the total aggregate liability of the LABORATORY to the CLIENT shall not exceed \$100,000, or the LABORATORY'S total fee for services rendered on this project, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Paragraph 4. INSURANCE:

LABORATORY shall secure and maintain throughout the full period of the services provided to the CLIENT adequate insurance to protect it from claims under applicable Workmen's Compensation Acts and also shall maintain one million dollars of general liability coverage to cover claims for bodily injury, death or property damage as may arise from the performance of its services

The CLIENT hereby warrants that it has sufficient insurance to protect its employees adequately under applicable Workmen's 4.2 Compensation Acts and for bodily injury, death, or property damage.

No insurance of whatever kind or type, which may be carried by either party is to be considered as in any way limiting any other party's responsibility for damages resulting from their operations or for furnishing work and materials.

Paragraph 5. PAYMENT:

CLIENT shall pay to LABORATORY such fees for services as previously agreed, orally or in writing, within 30 days of presentment of a bill for such services performed. In the event CLIENT ordered, orally or in writing, services but such services were not assigned a rate for billing, such services shall be billed at the LABORATORY's reasonable and customary rate.

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CLIENT shall be responsible for all shipping, customs and other expenses related to services provided by LABORATORY to the CLIENT, and shall fully insure any test sample or other equipment provided to LABORATORY by the CLIENT. Amounts overdue from CLIENT to LABORATORY shall be charged interest at a rate of 1½% per month.

Paragraph 6. ISO/IEC GUIDE 17025 ADDITIONS:

- CLIENT agrees that this test report will not be reproduced except in full, without written approval from the LABORATORY. CLIENT agrees that this test report shall not be used to claim product endorsement by A2LA or ANSI or any agency of the U.S. 6.2
- 6.3 CLIENT agrees that test results presented herein relate only to the sample tested by the LABORATORY.



A2LA Accreditation

		EN 55011 1991, 1998	Limits and methods of measurement of radio disturbance
SCOPE OF ACCE	REDITATION TO ISO/IEC 17025-1999	EN 33011 1991, 1998	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-
CURTIS-STRAUS ¹		SABS CISPR 11:1997	frequency equipment. Industrial, scientific and medical (ISM) radio-frequency equipment –
	527 Great Road Littleton, MA 01460		Electromagnetic disturbance characteristics Limits and methods of measurement
	inlan Phone: 978-486-8880	Canada ICES-001 1998	Industrial, scientific and medical radio frequency generators
ELECTRICAL		CNS13803 AS/NZS 2064: 1997	Industrial, Scientific and Medical Instrument Limits and methods of measurement of electromagnetic disturbance
Valid until: July 31, 2005	Certificate Number: 1627-01		characteristics of industrial, scientific and medical (ISM) radio- frequency equipment.
In recognition of the successful completion of	the A2LA evaluation process, accreditation is granted to this	CSA C108.8 - M1983	Electromagnetic Emission from Data Processing Equipment and Electronic Office Machines
laboratory to perform the following Electroma	gnetic Compatibility (EMC), Telecommunications, and Product	CISPR 13:1996, 1998, 2001	Limits and methods of measurement of radio interference
Safety tests:			characteristics of sound and television broadcast receivers and associated equipment.
Electromagnetic Compatibility (EMC) Radiated emissions testing (electric and magnetic enditions)	etic fields); Conducted emissions testing (voltage and current);	EN 55013: 1990, 2001	Sound and television broadcast receivers and associated equipment: Electromagnetic compatibility. Part 1: Specification for limits and
Electrostatic Discharge testing; Electrical Fast	Transient testing; Radiated Immunity testing; Conducted Immunity		methods of measurement of radio disturbance characteristics of
testing; RF Power measurements; Frequency S	Dips, Interrupts and Voltage Variations testing; Magnetic Immunity Stability measurements; Longitudinal Induction measurements;	EN 55013 Amend 12 1994	broadcast receivers and associated equipment. Limits and methods of measurement of radio disturbance
Harmonic emissions testing; Light flicker testi measurements	ng; Low frequency disturbance voltage testing; Disturbance Power		characteristics of broadcast receivers and associated equipment. Amendment 12
EMC Standards	Title	SABS CISPR 13: 1996	Limits and methods of measurement of radio interference characteristics of sound and television broadcast receivers and
	THE .		associated equipment.
Emissions CISPR 22 1997 with amendments 1 and 2	Limits and methods of measurement of radio disturbance	CNS 13439 AS/NZS 1053: 1999	Broadcast receiver and associated equipment Limits and methods of measurement of radio interference characteristics of sound and
CNS13438 1994	characteristics of information technology equipment. Limits and methods of measurement of radio interference	CISPR 14 1993	television broadcast receivers and associated equipment. Limits and methods of measurement of radio disturbance
EN55022:1994 and 1998	characteristics of information technology equipment.	(except discontinuous disturbances)	characteristics of electrical motor- operated and thermal appliances for
	Limits and methods of measurement of radio disturbance characteristics of information technology equipment.	EN 55014 1993, 1997	household and similar purposes, electric tools and electric apparatus. Limits and methods of measurement of radio disturbance (except
SABS CISPR 22:1997	Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement	discontinuous disturbances)	characteristics of electrical motor- operated and thermal appliances for household and similar purposes, electric tools and similar electric
Canada ICES-003 1997 AS/NZS 3548 1995	Digital apparatus Australian/New Zealand Standard Limits and methods of	AS/NZS 1044: 1995	apparatus. Limits and methods of measurement of radio disturbance (except
120,1423 3370 1773	measurement of radio disturbance characteristics of information	discontinuous disturbances)	characteristics of electrical motor- operated and thermal appliances for
CISPR 11 1990, 1997, 1999	technology equipment Limits and methods of measurement of electromagnetic		household and similar purposes, electric tools and similar electric apparatus.
	disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment.	Immunity	
	(1511) Italio requeste, equipment.	CNS13783-1 SABS CISPR 14-1 1993	Household Electrical Appliances
		SABS CISPR 14-1 1993	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus Part 1: Emission –
Note: This accreditation covers testing perform located at 168 Ayer Rd, Littleton, MA 01460	rmed at the laboratory listed above and the satellite facility	SABS CISPR 14-2 1997 + A1:2001	Product family standard Electromagnetic compatibility – Requirements for household
, , , , , , , , , , , , , , , , , , , ,			appliances, electric tools and similar apparatus Part 2: Immunity - Product family standard
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		(A2LA Cert. No. 1627-01) 10/31/03	Page 2 of 11
CISPR 14-2 1996, 1997 + A1:2001	Immunity requirements for household appliances, tools and similar apparatus.	EN 61000-6-1: 1997, 2001	Electromagnetic Compatibility (EMC)- Part 6: Generic standards- Section 1: Immunity for residential, commercial and light-industrial
CISPR 20: 1995, 2002 with amendment 3	Limits and methods of measurement of immunity characteristics	EN (1000 (2, 1000 2001	environments
(associated group only)	of sound and television broadcast receivers and associated equipment.	EN 61000-6-2: 1998, 2001	Electromagnetic Compatibility (EMC)- Part 6: Generic standards- Section 2: Immunity for industrial environments
EN 55020: 1995, 2002 (associated group only)	Electromagnetic immunity of broadcast receivers and Associated equipment.	EN 50091-2 1996	Specification for Uninterruptible Power Systems (UPS). Part 2: EMC requirements
CISPR 24	Information technology equipment – Immunity characteristics – Limits and methods of measurement	EN 55024 1998	Information technology equipment – Immunity Characteristics – Limits and methods of measurement.
SABS CISPR 24 1997	Information technology equipment - Immunity characteristics -	EN 55103-1 1997	Electromagnetic Compatibility - Product family standard for audio,
AS/NZS 3200.1.2: 1995	Limits and methods of measurement Approval and test specification – Medical electrical Equipment		video, audio-visual and entertainment lighting control apparatus for professional use. Part 1: Emission
	 General requirements for safety – Collateral Standard: Electromagnetic compatibility – Requirements and tests. 	EN 55103-2 1997 (excluding Annex A3)	Electromagnetic Compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control professional use.
European Union Basic EMC Standards		EN 61326 1998	Part 2: Immunity Electrical equipment for measurement, control and laboratory use –
EN 61000-4-2: 1995, 1999, 2001	Electromagnetic compatibility (EMC). Part 4: Testing and		EMC requirements
	measurement techniques. Section 2: Electrostatic discharge		
	immunity test – Basic EMC Publication	EN 61547 1996	Equipment for general lighting purposes – EMC immunity requirements
EN 61000-4-3:1997, 1998, 2002 AS/NZS 61000.4.3 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and	EN 50130-4 1996	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family
AS/NZS 61000.4.3 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test	EN 50130-4 1996	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems.
	immunity test.— Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast	EN 50130-4 1996 EN 55104 1995	Equipment for general lighting purposes – EMC immunity requirements. Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard.
AS/NZS 61000.4.3 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic fled immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC publication	EN 50130-4 1996	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household
AS:NZS 61000.4.3 1999 EN 61000-4-4 1995 EN 61000-4-5 1995 AS:NZS 61000.4.5 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test.	EN 50130-4 1996 EN 55104 1995	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety
AS/NZS 61000.4.3 1999 EN 61000-4-4 1995 EN 61000-4-5 1995	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests
AS/NZS 61000.4.3 1999 EN 61000-4.4 1995 EN 61000-4.5 1995 AS/NZS 61000.4.5 1999 EN 61000-4.6 1996	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted disturbances, induce by radio-frequency fields. Electromagnetic compatibility (EMC). Part 4: Testing and	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002 IEC 1800-3 1995	Equipment for general lighting purposes – EMC immunity requirements requirements: Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests Adjustable speed electrical power drive systems. Part 3: EMC product standard including specific test methods.
AS/NZS 61000.4.3 1999 EN 61000.4.4 1995 EN 61000.4.5 1995 AS/NZS 61000.4.5 1999 EN 61000.4-6 1996 AS/NZS 61000.4.6 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC, publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted disturbances, induce by radio-frequency fields.	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests Adjustable speed electrical power drive systems. Part 3: EMC product
AS/NZS 61000.4.3 1999 EN 61000.4.4 1995 EN 61000.4.5 1995 AS/NZS 61000.4.5 1999 EN 61000.4-6 1996 AS/NZS 61000.4.6 1999	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic fled immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transient/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted disturbances, induce by radio-frequency fields. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 8: Power frequency magnetic field immunity test. (EMC) Part 4: Testing and measurement techniques. Section 11:	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002 IEC 1800-3 1995	Equipment for general lighting purposes – EMC immunity requirements Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests Adjustable speed electrical power drive systems. Part 3: EMC product standard including specific test methods. Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 2: Harmonics Disturbances in supply systems caused by household appliances and
AS:NZS 61000.4.3 1999 EN 61000-4-4 1995 EN 61000-4-5 1995 AS:NZS 61000.4.5 1999 EN 61000-4-6 1996 AS:NZS 61000.4.6 1999 EN 61000-4-8 1994 EN 61000-4-11 1994	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transien/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted disturbances, induce by radio-frequency fields. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 8: Power frequency magnetic field immunity test. (EMC) Part 4: Testing and measurement techniques. Section 11: Voltage dips, short interruptions and voltage Variations immunity tests.	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002 IEC 1800-3 1995 EN 60555 Part 2 1987 EN 60555 Part 3 1987 EN 61000-3-2: 1995, 2000	Equipment for general lighting purposes – EMC immunity requirements requirements: Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests Adjustable speed electrical power drive systems. Part 3: EMC product standard including specific test methods. Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 2: Harmonics Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 3: Voltage fluctuations. Electromagnetic compatibility (EMC). Part 3: Limits Section 2: Limits
AS/NZS 61000.4.3 1999 EN 61000-4-4 1995 EN 61000-4-5 1995 AS/NZS 61000.4-5 1999 EN 61000-4-6 1996 AS/NZS 61000.4-6 1999 EN 61000-4-8 1994	immunity test – Basic EMC Publication Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 3: Radiated, radio-frequency, electromagnetic field immunity test Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 4: Electrical fast transien/burst immunity test – Basic EMC publication (EMC) Part 4: Testing and measurement techniques. Section 5: Surge immunity test. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 6: Immunity to conducted disturbances, induce by radio-frequency fields. Electromagnetic compatibility (EMC). Part 4: Testing and measurement techniques. Section 8: Power frequency magnetic field immunity test. (EMC) Part 4: Testing and measurement techniques. Section 11: Voltage dips, short interruptions and voltage Variations immunity tests. Electromagnetic compatibility (EMC). Part 2: Environment, Section 2: Compatibility (EMC). Part 2: Environment, Section 2: Compatibility levels for low-frequency conducted	EN 50130-4 1996 EN 55104 1995 EN 50083-2 1995 EN 60601-1-2: 1993, 2002 IEC 1800-3 1995 EN 60555 Part 2 1987 EN 60555 Part 3 1987 EN 61000-3-2: 1995, 2000 ASA/XZS 61000.3.2 1998 EN 61000-3-3: 1995	Equipment for general lighting purposes – EMC immunity requirements requirements: Alarm Systems. Part 4: Electromagnetic compatibility. Product family standard: Immunity requirements for components of fire, intruder and social alarm systems. Electromagnetic compatibility immunity – requirements for household appliances, tools and similar apparatus. Product family standard. Cabled distribution systems for television and sound signals. Part 2: Electromagnetic compatibility for equipment. Medical electrical equipment Part 1: general requirements for safety Section 2: Collateral standard: Electromagnetic compatibility – requirements and tests Adjustable speed electrical power drive systems. Part 3: EMC product standard including specific test methods. Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 2: Harmonics Disturbances in supply systems caused by household appliances and similar electrical equipment. Part 3: Voltage fluctuations. Electromagnetic compatibility (EMC). Part 3: Limits Section 2: Limits for harmonic current emissions
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VCCI V-3/99.05 1999 VCCI V-4/99.05 1999	Technical Requirements	HKTA 2028	Network connection specification for connection of CPE to the PTNs in
vCC1 V=4/77.03 1777	Instruction for Test Conditions for Requirement under Test	HKTA 2029	Hong Kong using digital leased circuits at data rate of 1544 kbit/s Network connection specification for connection of CPE to the PTNs in Hong Kong using digital leased circuits at data rate of 2048 kbit/s
Telecommunications		TBR 1:1995	Attachment requirements for terminal equipment to be connected to
power (metallic and longitudinal); Frequency m	methods; Lightning surge; Drop testing; Balance testing; Signal easurements; Pulse templates; Leakage testing; Impedance uding volume control; Protocol analysis and Jitter testing.		circuit switched data networks and leased circuits using a CCITT Recommendation X.21 interface, or at an interface physically, functionally and electrically compatible with CCITT Recommendation X.21 but operating at any data signaling rate up to, and including,
Telecom Standards	<u>Title</u>		1 984 kbit/s
FCC 47 CFR Part 68 Telephone	Connection of terminal equipment to the telephone Terminal Equipment network. Analog and Digital Equipment. TCB Scope C1.	TBR 2 : 1997	Attachment requirements for Data Terminal Equipment (DTE) to connect to Packet Switched Public Data Networks (PSPDNs) for CCITT Recommendation X.25 interfaces at data signaling rates up to 1 920 kbit's utilizing interfaces derived from CCITT Recommendations
CS-03 Issue 8 1996 through amendment 5	Specification for terminal equipment, terminal systems, Network protection devices, connection arrangements and hearing aids compatibility.		X.21 and X.21 bit
TIA/EIA TSB31-B 1998	Bulletin Part 68 Rationale and Measurement Guidelines (Feb 1998)		
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Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access IEC 60950 2000 EN 60950 1997, 1998, 2000 IEC 60950-1 2001 Safety of information technology equipment Safety of information technology equipment, including TBR 3: 1995 + Amdt: 1997 Electrical business equipment. TBR 4: 1995 + Amdt: 1997 Integrated Services Digital Network (ISDN); Attachment UL 60950-1 2003 integrated services Digital NetWork (ISDIN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN primary rate access Business Telecommunications (BT); Open Network Provision (ONP) technical requirements; 2 048 kbit/s digital unstructured leased line (D2048U) Attachment requirements for terminal CSA C22.2 No. 60950-00 CSA C22.2 No. 60950-1 03 Approval and test specification – Safety of information technology equipment including electrical business Equipment. TBR 012: 1993 + Amdt: 1996 AS/NZS 3260 1993 Approval and test specification – Safety of information technology equipment including electrical business equipment – Alphabetical reference index to IEC 950 (Supplement to AS/NZS 3260:1993) AS/NZS 3260 Supp 1 1996 equipment
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Terminal Equipment (TE); Attachment requirements for pan-Australian Communications Authority – Safety requirements for customer equipment. Telephone Equipment ACA TS 001 1997 TBR 21: 1998 UL 1459 1995 Safety requirements for electrical equipment for measurement, control European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE IEC 1010-1 1990 Safety requirements for electrical equipment for measurement, control and laboratory use, Part 1: General requirements.

Safety requirements for electrical equipment for measurement, control and laboratory use, Part 1: General requirements. IEC 61010-1 1993 symptotic record supporting the voice telephony service) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signaling
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Safety of laser products Part 1: equipment Classification, requirements
and user's guide.
Safety of laser products – Part 2: Safety of optical communication EN 60825-1 1994 IEC 60825-1 2001 IEC 60825-2 2000-5 systems IEC 60825-4 1997-11 Safety of laser products – Part 4: Laser guards Safety of household and similar electrical appliances Product Safety Standards Specific Product Safety Standards Safety of information technology equipment including Includes Amendments 1, 2, 3, and 4 electrical business equipment. Safety of information technology equipment, including IEC 950 1991 UL 1950 1998 lectrical business equipment.
Safety of Information Technology Equipment (UL 1950) CSA C22.2 No.950-95 UL 60950 2000 Safety of information technology equipment (A2LA Cert. No. 1627-01) 10/31/03 Page 9 of 11 (A2LA Cert. No. 1627-01) 10/31/03 Page 10 of 11 UL 61010A-1: 2002 Electrical equipment for laboratory use; part 1: General requirements Safety requirements for electrical equipment for measurement, EN 61010-1 : 2001 control, and laboratory use - Part 1: General requirements Safety information technology equipment AS/NZS 60950 : 2000 Environmental Standards GR-63-CORE NEBS Requirements: Physical Protection Environmental conditions and environmental tests For telecommunications equipment ETS 300 019 (vibration up to 1000Hz) ² Environmental testing is performed at the satellite facility located at 168 Ayer Rd, Littleton, MA 01460 (A2LA Cert. No. 1627-01) 10/31/03 Page 11 of 11

