Exhibit O: Spurious Radiated Emissions

FCC ID: HN22011B

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:
Low
Mid
High

Operating Modes Investigated:
Typical

Antennas Investigated:
Internal (Folded Monopole)
External (Tuned Dipole)

Data Rates Investigated:
Maximum

Output Power Setting(s) Investigated:
Maximum

Power Input Settings Investigated:
Battery
120V, 60 Hz

Frequency Range Investigated			
Start Frequency	30 MHz	Stop Frequency	25GHz

Software\Firmware Applied During Test			
Exercise software	80211test	Version	Unknown
Description			
The system was tested using special software. The 802.11(b) test software configured the radio to transmit at low, mid, or high channels.			

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

Spurious Radiated Emissions

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
EUT	INTERMEC	700C	EV00I3
Power Supply	ELPAC	FW1812	004678
External Antenna (Tuned Dipole)	Mobilemark	805-606	None
Internal Antenna (Folded Monopole)	SeaRay	805-608	None

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC	PA	1.85	PA	Power Supply	EUT
AC	No	2.0	No	Power Supply	AC Mains

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Pre-Amplifier	Amplifier Research	LN1000A	APS	12/03/2001	12 mo
Antenna, Biconilog	EMCO	3141	AXE	12/31/2001	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P	AOP	07/09/2002	12 mo
Antenna, Horn	EMCO	3115	AHC	08/12/2002	12 mo
Spectrum Analyzer	Tektronix	2784	AAO	03/08/2001	24 mo
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	07/09/2002	12 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	01/17/2000	36 mo
Antenna, Horn	EMCO	3160-09	AHG	01/15/2000	36 mo
DC Power Supply	Topward	TPS-2000	TPD	NCR	0 mo
High Pass Filter	RLC Electronics	F-100-4000-5-R (HPF>	HFF	02/04/2002	12 mo

Test Description

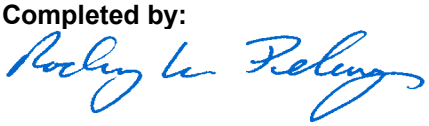
Requirement: Per 15.247(c), the field strength of any spurious emissions or modulation products that fall in a restricted band, as defined in 47 CFR 15.205, is measured. The peak level must comply with the limits specified in 47 CFR 15.35(b). The average level (taken with a 10Hz VBW) must comply with the limits specified in 15.209.

Configuration: The highest gain of each type of antenna to be used with the EUT was tested. In addition, the lowest gain of all the antennas to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.4:1992). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Bandwidths Used for Measurements

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 – 0.15	1.0	0.2	0.2
0.15 – 30.0	10.0	9.0	9.0
30.0 – 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.			

Completed by:



NORTHWEST EMC

OATS DATA SHEET

REV df2.02 05/20/2002

EUT:	700C	Work Order:	INMC0019
Serial Number:	EV00I3	Date:	6/10/02 - 9/22/02
Customer:	INTERMEC Corporation	Temperature:	73
Attendees:	None	Humidity:	35%
Cust. Ref. No.:		Barometric Pressure	30.26
Tested by:	Greg Kiemel	Power: 120V, 60 Hz	Job Site: EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15.247(c)	Year:	2002
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

See notes below

EUT OPERATING MODES

Modulated at maximum data rate

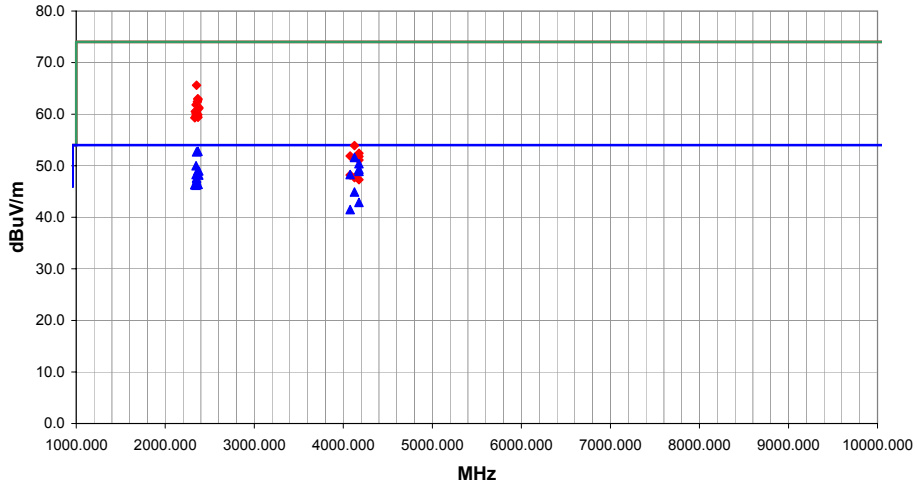
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Test Distance (m)	Run #
Pass	3	6

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2366.800	32.5	0.3	59.0	1.2	3.0	20.0	V-Horn	AV	0.0	52.8	54.0	-1.2	"mid channel, internal antenna"
2351.900	32.4	0.3	79.0	1.2	3.0	20.0	V-Horn	AV	0.0	52.7	54.0	-1.3	"mid channel, internal antenna"
4125.920	45.6	6.0	177.0	1.5	3.0	0.0	H-Horn	AV	0.0	51.6	54.0	-2.4	"high channel, internal antenna"
4175.912	44.5	5.9	84.0	1.1	3.0	0.0	V-Horn	AV	0.0	50.4	54.0	-3.6	"high channel, internal antenna"
2345.992	31.1	-1.1	148.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.0	54.0	-4.0	"low channel, internal antenna"
4175.912	43.4	5.9	185.0	1.3	3.0	0.0	H-Horn	AV	0.0	49.3	54.0	-4.7	"low channel, internal antenna"
2366.600	30.1	-1.1	276.0	1.1	3.0	20.0	V-Horn	AV	0.0	49.0	54.0	-5.0	"low channel, external antenna"
2375.999	30.2	-1.2	107.0	2.5	3.0	20.0	H-Horn	AV	0.0	49.0	54.0	-5.0	"low channel, external antenna"
4175.912	43.0	5.9	180.0	1.3	3.0	0.0	H-Horn	AV	0.0	48.9	54.0	-5.1	"mid channel, internal antenna"
2360.660	29.5	-1.1	152.0	1.3	3.0	20.0	V-Horn	AV	0.0	48.4	54.0	-5.6	"mid channel, internal antenna"
4075.908	42.3	6.0	343.0	1.3	3.0	0.0	H-Horn	AV	0.0	48.3	54.0	-5.7	"high channel, internal antenna"
2345.980	29.4	-1.1	91.0	1.1	3.0	20.0	H-Horn	AV	0.0	48.3	54.0	-5.7	"high channel, internal antenna"
2376.657	29.4	-1.2	168.0	1.6	3.0	20.0	V-Horn	AV	0.0	48.2	54.0	-5.8	"low channel, external antenna"
2352.000	28.7	-1.1	110.0	2.6	3.0	20.0	H-Horn	AV	0.0	47.6	54.0	-6.4	"low channel, external antenna"
2351.900	26.8	0.3	169.0	2.2	3.0	20.0	H-Horn	AV	0.0	47.1	54.0	-6.9	"high channel, internal antenna"
2337.300	27.6	-1.2	79.0	1.2	3.0	20.0	H-Horn	AV	0.0	46.4	54.0	-7.6	"high channel, internal antenna"
2366.600	27.5	-1.1	107.0	2.6	3.0	20.0	H-Horn	AV	0.0	46.4	54.0	-7.6	"high channel, internal antenna"
2366.800	26.1	0.3	48.0	1.3	3.0	20.0	H-Horn	AV	0.0	46.4	54.0	-7.6	"high channel, internal antenna"
2331.987	27.5	-1.2	103.0	1.4	3.0	20.0	H-Horn	AV	0.0	46.3	54.0	-7.7	"mid channel, internal antenna"
2346.651	27.3	-1.1	124.0	2.6	3.0	20.0	H-Horn	AV	0.0	46.2	54.0	-7.8	"mid channel, internal antenna"
4125.920	38.9	6.0	197.0	1.4	3.0	0.0	V-Horn	AV	0.0	44.9	54.0	-9.1	"high channel, external antenna"
4175.912	37.0	5.9	123.0	1.2	3.0	0.0	V-Horn	AV	0.0	42.9	54.0	-11.1	"high channel, internal antenna"
4075.908	35.5	6.0	278.0	1.2	3.0	0.0	V-Horn	AV	0.0	41.5	54.0	-12.5	"high channel, internal antenna"
2351.900	45.3	0.3	78.0	1.2	3.0	20.0	V-Horn	PK	0.0	65.6	74.0	-8.4	"high channel, external antenna"
2366.600	44.1	-1.1	276.0	1.1	3.0	20.0	V-Horn	PK	0.0	63.0	74.0	-11.0	"high channel, internal antenna"
2366.800	42.5	0.3	59.0	1.2	3.0	20.0	V-Horn	PK	0.0	62.8	74.0	-11.2	"high channel, internal antenna"
2360.660	43.5	-1.1	152.0	1.3	3.0	20.0	V-Horn	PK	0.0	62.4	74.0	-11.6	"high channel, internal antenna"
2345.992	42.9	-1.1	148.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.8	74.0	-12.2	"high channel, internal antenna"
2376.657	42.5	-1.2	168.0	1.6	3.0	20.0	V-Horn	PK	0.0	61.3	74.0	-12.7	"high channel, internal antenna"
2375.999	42.3	-1.2	107.0	2.5	3.0	20.0	H-Horn	PK	0.0	61.1	74.0	-12.9	"high channel, internal antenna"
2352.000	41.8	-1.1	110.0	2.6	3.0	20.0	H-Horn	PK	0.0	60.7	74.0	-13.3	"high channel, internal antenna"
2337.300	41.7	-1.2	79.0	1.2	3.0	20.0	H-Horn	PK	0.0	60.5	74.0	-13.5	"high channel, internal antenna"
2351.900	39.9	0.3	169.0	2.2	3.0	20.0	H-Horn	PK	0.0	60.2	74.0	-13.8	"high channel, internal antenna"
2345.980	41.2	-1.1	91.0	1.1	3.0	20.0	H-Horn	PK	0.0	60.1	74.0	-13.9	"high channel, internal antenna"
2366.600	41.0	-1.1	107.0	2.6	3.0	20.0	H-Horn	PK	0.0	59.9	74.0	-14.1	"mid channel, external antenna"
2346.651	40.8	-1.1	124.0	2.6	3.0	20.0	H-Horn	PK	0.0	59.7	74.0	-14.3	"high channel, external antenna"
2366.800	39.1	0.3	48.0	1.3	3.0	20.0	H-Horn	PK	0.0	59.4	74.0	-14.6	"low channel, external antenna"
2331.987	40.5	-1.2	103.0	1.4	3.0	20.0	H-Horn	PK	0.0	59.3	74.0	-14.7	"mid channel, external antenna"
4125.920	47.9	6.0	177.0	1.5	3.0	0.0	H-Horn	PK	0.0	53.9	74.0	-20.1	"high channel, external antenna"
4175.912	46.5	5.9	84.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.4	74.0	-21.6	"low channel, external antenna"
4075.908	45.9	6.0	343.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.9	74.0	-22.1	"mid channel, external antenna"
4175.912	45.9	5.9	180.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.8	74.0	-22.2	"low channel, external antenna"
4175.912	45.2	5.9	185.0	1.3	3.0	0.0	H-Horn	PK	0.0	51.1	74.0	-22.9	"high channel, external antenna"
4075.908	42.2	6.0	278.0	1.2	3.0	0.0	V-Horn	PK	0.0	48.2	74.0	-25.8	"low channel, external antenna"
4125.920	41.7	6.0	197.0	1.4	3.0	0.0	V-Horn	PK	0.0	47.7	74.0	-26.3	"mid channel, external antenna"
4175.912	41.4	5.9	123.0	1.2	3.0	0.0	V-Horn	PK	0.0	47.3	74.0	-26.7	"high channel, external antenna"