

Exhibit Q: Spurious Radiated Emissions

FCC ID: HN2WN-5MP01

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:

Highest gain Omni (072760)

Lowest gain of all antennas – ceiling mount (072761)

Highest gain Corner reflector (072762)

Integral Dipole (072664)

Data Rates Investigated:

Lowest (6 Mbit)

Middle (24 Mbit)

Highest (54 Mbit)

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

DC from E-net

120 V, 60 Hz

Enclosures Investigated:

WA22 (plastic)

WA21 (metal)

Frequency Range Investigated

Start Frequency

30 MHz

Stop Frequency

40 GHz

Software\Firmware Applied During Test

Exercise software

AP Monitor

Version

V5.97

Description

A notebook PC controls the radio through a serial port connection on the access point. Hyper Terminal running in Windows 98 address the AP monitor commands for setting the transmit channel and data rate.

Equipment Modifications

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

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
Omni antenna	Intermec	072760	N/A
Ceiling mount antenna	Intermec	072761	N/A
Corner reflector antenna	Intermec	072762	N/A
Two Integral omni antennas	Intermec	072664	N/A
EUT-802.11(a) radio	Intermec	WN-5MP01	none
Access Point with plastic enclosure	Intermec	WA22	002-087
Access Point with metal enclosure	Intermec	WA21	002-032
Laptop PC (config only)	Gateway	Solo 2500	BC699085606
Remote Power Bridge	Intermec	071579	U01156281006901

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Ethernet cable	No	7.5	No	Remote Power Bridge	WA22 Access Point
Ethernet cable	No	2	No	Laptop	WA21 Access Point
AC power	No	1.9	No	Remote Power Bridge	AC mains
AC power	No	2.0	No	WA21 Access Point	AC mains
Serial cable	Yes	1.5	No	Access Point	Laptop (for setup)
Antenna adapter cable	Yes	.75	No	Access Point	Antennas

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
Antenna, Horn	EMCO	3115	AHJ	05/23/2002	12 mo
5.25 GHz Notch Filter	K&L Microwave	8N50-5250/X200-0/0	HFK	08/14/02	12 mo
10 GHz High Pass Filter	K&L Microwave	1WP01-1500/E6000-0/0	HFJ	8/09/02	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P	AOP	07/09/2002	12 mo
Spectrum Analyzer	Tektronix	2784	AAO	03/08/2001	24 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
Pre-Amplifier	Miteq	JS4-26004000-40-SP	APV	06/26/2000	36 mo
Antenna, Horn	EMCO	3160-10	AHI	01/15/2000	36 mo
DC Power Supply	Topward	TPS-2000	TPD	NCR	0 mo

Test Description

Requirement: Per 15.407(b) The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the limits defined in 15.407 (b)(1-7).

All emissions outside the operational bands shall not exceed an EIRP of -27 dBm/MHz. In addition, the field strength of any spurious emissions or modulation products that fall in a restricted band, as defined in 47 CFR 15.205, shall comply with the following: the peak level must comply with the limits specified in 47 CFR 15.35(b), and the average level (taken with a 10Hz VBW) must comply with the limits specified in 15.209. In addition, all unwanted emissions below 1 GHz must comply with the general field strength limits of 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 lowest, middle, and highest data rates were tested. The EUT can be used in either the applicant's WA22 access point or the WA21 access point. The access points are the same except that the WA22 uses a plastic enclosure and the WA21 uses a metal enclosure. The EUT was tested in both enclosures. The EUT can be configured in the access points as a single unit or as a pair. It was tested with just one radio transmitting and with both radios transmitting simultaneously. The EUT was configured for the lowest, middle, and highest channel 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 (and notch 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** **Spurious Radiated Emissions** REV df2.06 08/16/2002

EUT:	WN-5MP01	Work Order:	INMC0024
Serial Number:		Date:	08/19/02
Customer:	INTERMEC Corporation	Temperature:	72
Attendees:	None	Humidity:	38%
Cust. Ref. No.:		Barometric Pressure:	30
Tested by:	Rod Peloquin	Power:	DC from E-net
		Job Site:	EV01

TEST SPECIFICATIONS	
Specification:	FCC Part 15.407(b)(6) / FCC Part 15.205 / 15.209
Method:	ANSI C63.4
Year:	2002
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
 Corner mount antenna

EUT OPERATING MODES
 Transmitting radio b

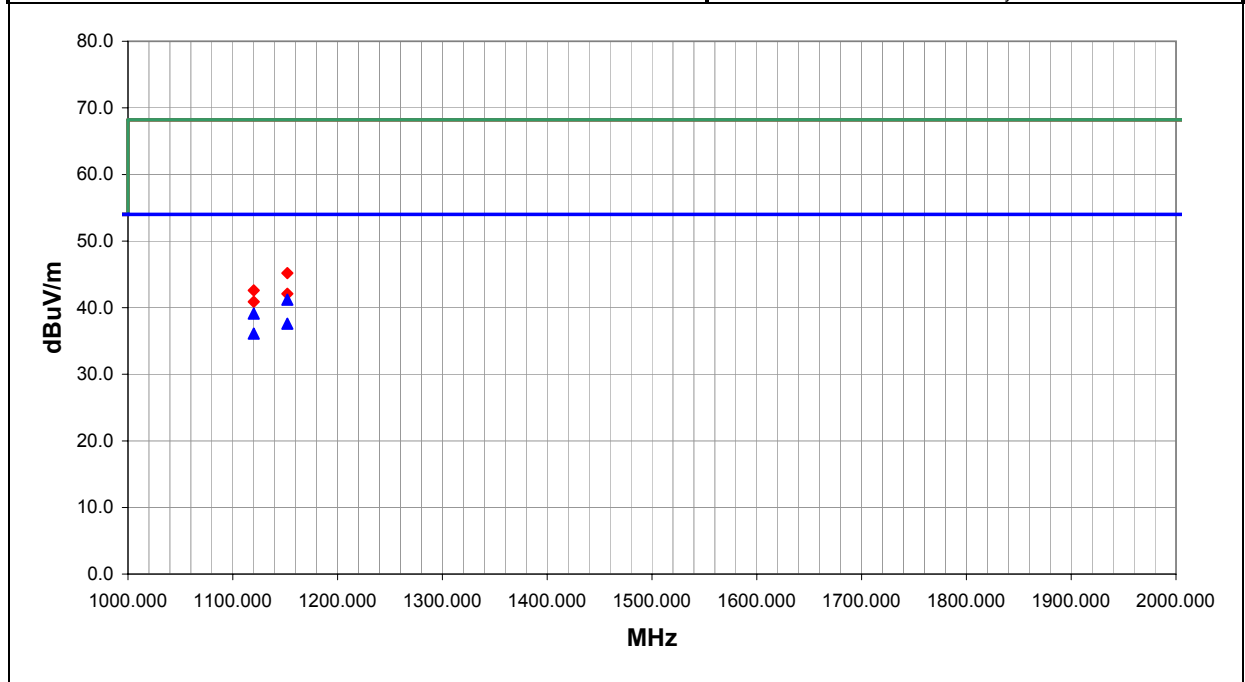
DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass	3	4

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
1152.000	47.3	-6.1	0.0	1.3	3.0	0.0	V-Horn	AV	0.0	41.2	54.0	-12.8	"High Channel"
1120.000	45.5	-6.4	313.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.1	54.0	-14.9	"High Channel"
1152.000	43.7	-6.1	60.0	1.1	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	"High Channel"
1120.000	42.5	-6.4	309.0	1.6	3.0	0.0	H-Horn	AV	0.0	36.1	54.0	-17.9	"High Channel"
1152.000	51.3	-6.1	0.0	1.3	3.0	0.0	V-Horn	PK	0.0	45.2	68.2	-23.0	"High Channel"
1120.000	49.0	-6.4	313.0	1.1	3.0	0.0	V-Horn	PK	0.0	42.6	68.2	-25.6	"High Channel"
1152.000	48.2	-6.1	60.0	1.1	3.0	0.0	H-Horn	PK	0.0	42.1	68.2	-26.1	"High Channel"
1120.000	47.3	-6.4	309.0	1.6	3.0	0.0	H-Horn	PK	0.0	40.9	68.2	-27.3	"High Channel"

EMC Spurious Radiated Emissions

EUT: WN-SMP01	Work Order: INMC0024
Serial Number:	Date: 08/21/02
Customer: INTERMEC Corporation	Temperature: 75 F
Attendees: None	Humidity: 44%
Cust. Ref. No.:	Barometric Pressure: 30.01
Tested by: Rod Peloquin	Power: DC from E-net
	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC Part 15.407(b)(6) / FCC Part 15.205 / 15.209	Year: Current 47CFR
Method: ANSI C63.4	Year: 2000

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

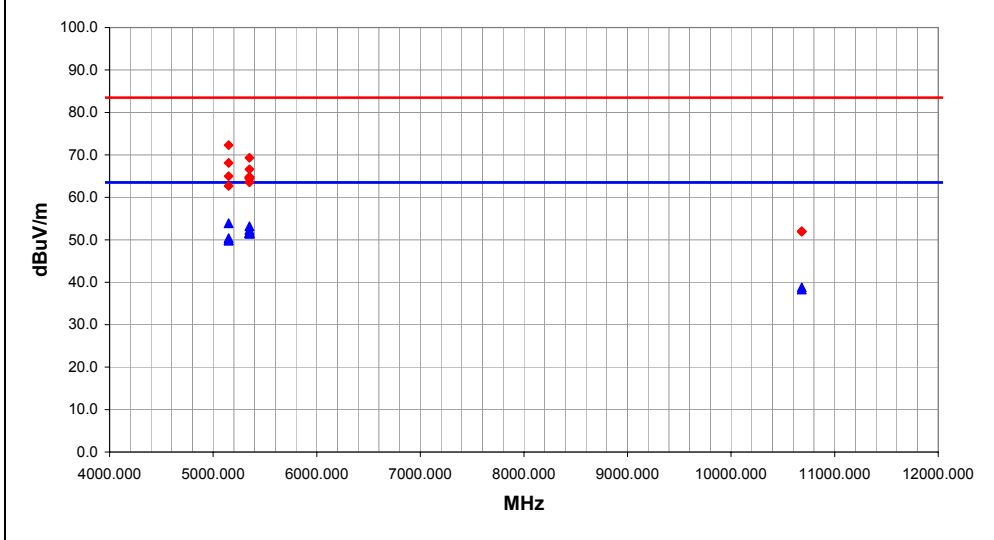
EUT OPERATING MODES
 See notes

DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass	1	19

Other

Rod Peloquin
 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
5150.000	18.2	35.7	215.0	1.0	1.0	0.0	V-Horn	AV	0.0	53.9	63.5	-9.6	"Integral antennas, low channel, 6Mbps data rate"
5350.000	16.9	36.3	243.0	1.0	1.0	0.0	V-Horn	AV	0.0	53.2	63.5	-10.3	"Corner mount antenna, high channel, 6Mbps data rate"
5350.000	16.0	36.3	236.0	1.0	1.0	0.0	V-Horn	AV	0.0	52.3	63.5	-11.2	"Integral antenna, high channel, 6Mbps data rate"
5350.000	15.4	36.3	256.0	1.0	1.0	0.0	V-Horn	AV	0.0	51.7	63.5	-11.8	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	15.3	36.3	180.0	1.1	1.0	0.0	H-Horn	AV	0.0	51.6	63.5	-11.9	"Integral antenna, high channel, 6Mbps data rate"
5350.000	15.3	36.3	295.0	1.0	1.0	0.0	V-Horn	AV	0.0	51.6	63.5	-11.9	"Integral antenna, high channel, 54Mbps data rate"
5350.000	15.2	36.3	199.0	1.0	1.0	0.0	H-Horn	AV	0.0	51.5	63.5	-12.0	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	15.2	36.3	80.0	1.1	1.0	0.0	H-Horn	AV	0.0	51.5	63.5	-12.0	"Integral antenna, high channel, 54Mbps data rate"
5350.000	15.2	36.3	360.0	1.0	1.0	0.0	H-Horn	AV	0.0	51.5	63.5	-12.0	"Corner mount antenna, high channel, 6Mbps data rate"
5150.000	14.7	35.7	146.0	1.1	1.0	0.0	H-Horn	AV	0.0	50.4	63.5	-13.1	"Integral antennas, low channel, 6Mbps data rate"
5150.000	14.2	35.7	194.0	1.0	1.0	0.0	V-Horn	AV	0.0	49.9	63.5	-13.6	"Integral antenna, low channel, 54Mbps data rate"
5150.000	14.1	35.7	141.0	1.1	1.0	0.0	H-Horn	AV	0.0	49.8	63.5	-13.7	"Integral antennas, low channel, 54Mbps data rate"
10681.750	31.6	7.2	20.0	1.2	1.0	0.0	V-Horn	AV	0.0	38.8	63.5	-24.7	"Corner mount antenna, high channel, 6Mbps data rate"
10681.750	31.1	7.2	180.0	1.1	1.0	0.0	H-Horn	AV	0.0	38.3	63.5	-25.2	"Corner mount antenna, high channel, 6Mbps data rate"
5150.000	36.6	35.7	201.0	1.0	1.0	0.0	V-Horn	PK	0.0	72.3	83.5	-11.2	"Integral antennas, low channel, 6Mbps data rate"
5350.000	33.0	36.3	236.0	1.0	1.0	0.0	V-Horn	PK	0.0	69.3	83.5	-14.2	"Integral antenna, high channel, 6Mbps data rate"
5150.000	32.4	35.7	194.0	1.0	1.0	0.0	V-Horn	PK	0.0	68.1	83.5	-15.4	"Integral antenna, low channel, 54Mbps data rate"
5350.000	30.3	36.3	243.0	1.0	1.0	0.0	V-Horn	PK	0.0	66.6	83.5	-16.9	"Corner mount antenna, high channel, 6Mbps data rate"
5150.000	29.3	35.7	146.0	1.1	1.0	0.0	H-Horn	PK	0.0	65.0	83.5	-18.5	"Integral antennas, low channel, 6Mbps data rate"
5350.000	28.5	36.3	256.0	1.0	1.0	0.0	V-Horn	PK	0.0	64.8	83.5	-18.7	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	28.5	36.3	199.0	1.0	1.0	0.0	H-Horn	PK	0.0	64.8	83.5	-18.7	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	28.2	36.3	180.0	1.1	1.0	0.0	H-Horn	PK	0.0	64.5	83.5	-19.0	"Integral antenna, high channel, 6Mbps data rate"
5350.000	28.1	36.3	360.0	1.0	1.0	0.0	H-Horn	PK	0.0	64.4	83.5	-19.1	"Corner mount antenna, high channel, 6Mbps data rate"
5350.000	27.3	36.3	80.0	1.1	1.0	0.0	H-Horn	PK	0.0	63.6	83.5	-19.9	"Integral antenna, high channel, 54Mbps data rate"
5350.000	27.3	36.3	295.0	1.0	1.0	0.0	V-Horn	PK	0.0	63.6	83.5	-19.9	"Integral antenna, high channel, 54Mbps data rate"
5150.000	27.0	35.7	141.0	1.1	1.0	0.0	H-Horn	PK	0.0	62.7	83.5	-20.8	"Integral antennas, low channel, 54Mbps data rate"
10681.750	44.8	7.2	20.0	1.2	1.0	0.0	V-Horn	PK	0.0	52.0	83.5	-31.5	"Corner mount antenna, high channel, 6Mbps data rate"
10681.750	44.7	7.2	180.0	1.1	1.0	0.0	H-Horn	PK	0.0	51.9	83.5	-31.6	"Corner mount antenna, high channel, 6Mbps data rate"

NORTHWEST **EMC Effective Radiated Power Data Sheet** REV d2.06 08/16/2002

EUT: WN-SMP01	Work Order: INMC0024
Serial Number:	Date: 08/21/02
Customer: INTERMEC Corporation	Temperature: 75 F
Attendees: None	Humidity: 44%
Cust. Ref. No.:	Barometric Pressure: 30.01
Tested by: Rod Peloquin	Power: DC from E-net
	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC Part 15.407(b)(1-4)	Year: Current 47CFR
Method: ANSI C63.4	Year: 2000

SAMPLE CALCULATIONS
 EIRP = Signal Generator Output (dBm) - Cable Loss(dB) + Gain of Reference Antenna (dBi)

COMMENTS
 See notes

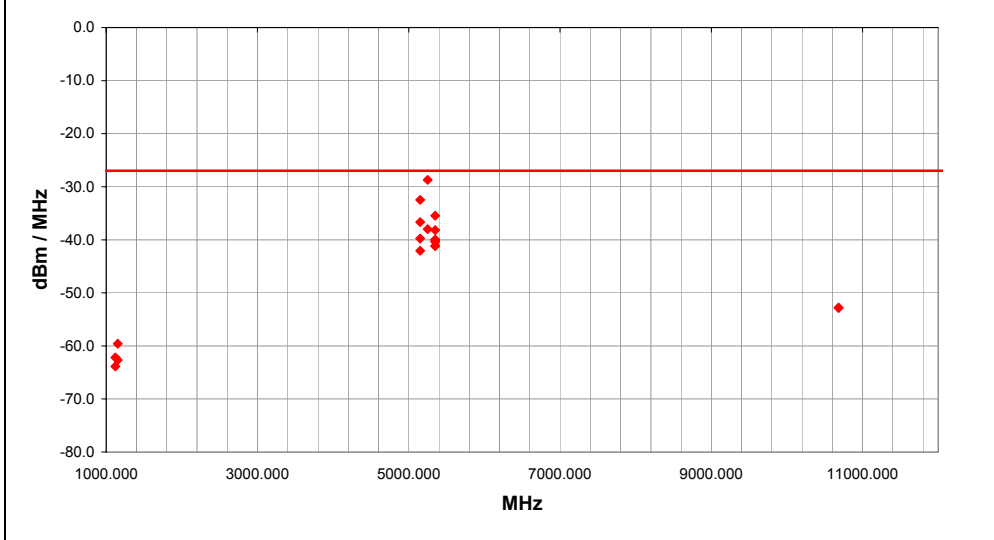
EUT OPERATING MODES
 See notes

DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass		19

Other

Rod Peloquin
 Tested By:



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm/MHz)	Spec. Limit (dBm/MHz)	Compared to Spec. (dB)	Comments
5250.000	258.0	1.1	V-Horn	PK	-28.7	-27.0	-1.7	"Corner mount antenna, low channel, 6Mbps data rate"
5150.000	201.0	1.0	V-Horn	PK	-32.5	-27.0	-5.5	"Integral antennas, low channel, 6Mbps data rate"
5350.000	236.0	1.0	V-Horn	PK	-35.5	-27.0	-8.5	"Integral antenna, high channel, 6Mbps data rate"
5150.000	194.0	1.0	V-Horn	PK	-36.7	-27.0	-9.7	"Integral antenna, low channel, 54Mbps data rate"
5250.000	255.0	1.0	H-Horn	PK	-38.0	-27.0	-11.0	"Corner mount antenna, low channel, 6Mbps data rate"
5350.000	243.0	1.0	V-Horn	PK	-38.2	-27.0	-11.2	"Corner mount antenna, high channel, 6Mbps data rate"
5150.000	146.0	1.1	H-Horn	PK	-39.8	-27.0	-12.8	"Integral antennas, low channel, 6Mbps data rate"
5350.000	256.0	1.0	V-Horn	PK	-40.0	-27.0	-13.0	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	199.0	1.0	H-Horn	PK	-40.0	-27.0	-13.0	"Corner mount antenna, high channel, 54Mbps data rate"
5350.000	180.0	1.1	H-Horn	PK	-40.3	-27.0	-13.3	"Integral antenna, high channel, 6Mbps data rate"
5350.000	360.0	1.0	H-Horn	PK	-40.4	-27.0	-13.4	"Corner mount antenna, high channel, 6Mbps data rate"
5350.000	80.0	1.1	H-Horn	PK	-41.2	-27.0	-14.2	"Integral antenna, high channel, 54Mbps data rate"
5350.000	295.0	1.0	V-Horn	PK	-41.2	-27.0	-14.2	"Integral antenna, high channel, 54Mbps data rate"
5150.000	141.0	1.1	H-Horn	PK	-42.1	-27.0	-15.1	"Integral antennas, low channel, 54Mbps data rate"
10681.750	20.0	1.2	V-Horn	PK	-52.8	-27.0	-25.8	"Corner mount antenna, high channel, 6Mbps data rate"
10681.750	180.0	1.1	H-Horn	PK	-52.9	-27.0	-25.9	"Corner mount antenna, high channel, 6Mbps data rate"
1152.000	0.0	1.3	V-Horn	PK	-59.6	-27.0	-32.6	"Corner mount antenna, high channel, 6Mbps data rate"
1120.000	313.0	1.1	V-Horn	PK	-62.2	-27.0	-35.2	"Corner mount antenna, high channel, 6Mbps data rate"
1152.000	60.0	1.1	H-Horn	PK	-62.7	-27.0	-35.7	"Corner mount antenna, high channel, 6Mbps data rate"
1120.000	309.0	1.6	H-Horn	PK	-63.9	-27.0	-36.9	"Corner mount antenna, high channel, 6Mbps data rate"

EUT: WN-5MP01		Work Order: INMC0045
Serial Number:		Date: 10/12/02
Customer: INTERMEC Corporation		Temperature: 72
Attendees: None		Humidity: 32%
Cust. Ref. No.:		Barometric Pressure: 30.41
Tested by: Rod Peloquin	Power: DC from E-net	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC Part 15.407(b)(1-4)	Year: 2000
Method: ANSI C63.4	Year: 1992

SAMPLE CALCULATIONS

EIRP = Signal Generator Output (dBm) - Cable Loss (dB) + Gain of Reference Antenna (dBi)

COMMENTS

High channel, corner mount antennas

EUT OPERATING MODES

Transmitting on both radios

DEVIATIONS FROM TEST STANDARD

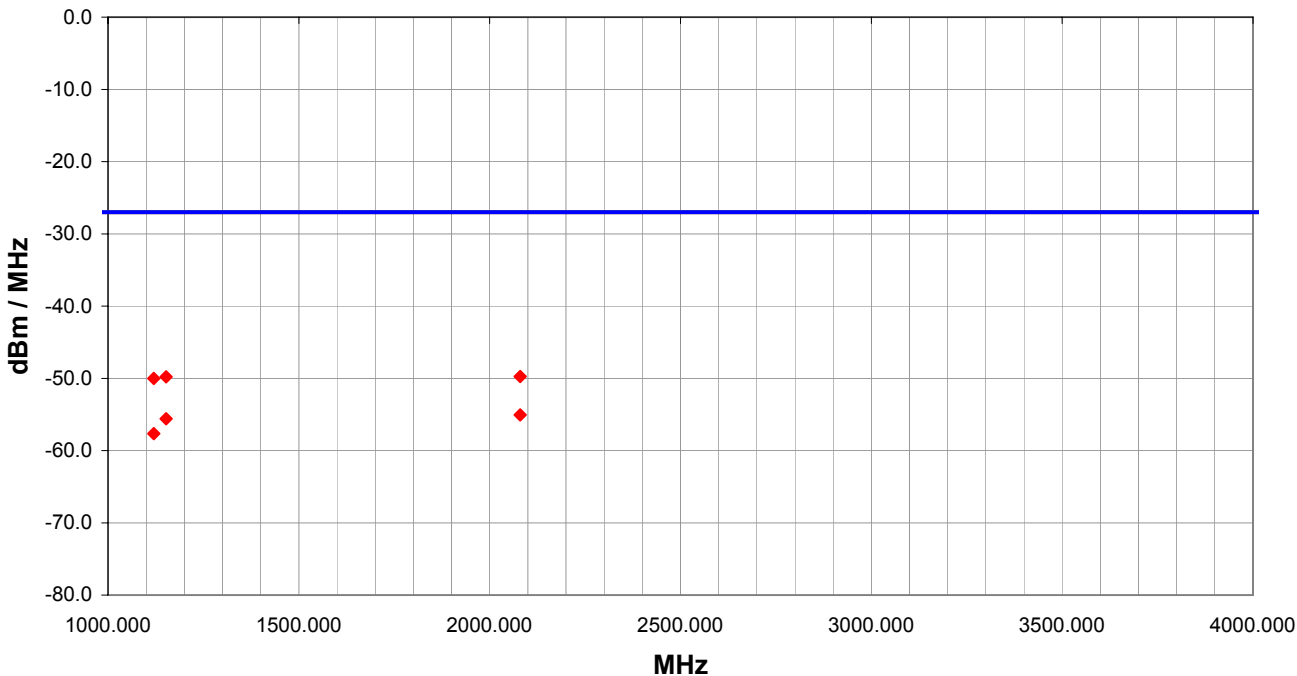
No deviations.

RESULTS	Test Distance (m)	Run #
Pass		2

Other



 Tested By:



Freq (MHz)		Azimuth (degrees)	Height (meters)		Polarity	Detector		EIRP (dBm/MHz)	Spec. Limit (dBm/MHz)	Compared to Spec. (dB)
2080.000		134.0	1.5		V-Horn	PK		-49.7	-27.0	-22.7
1152.000		195.0	1.4		V-Horn	PK		-49.8	-27.0	-22.8
1120.000		279.0	1.2		V-Horn	PK		-50.0	-27.0	-23.0
2080.000		125.0	2.8		H-Horn	PK		-55.1	-27.0	-28.1
1152.000		174.0	1.3		H-Horn	PK		-55.6	-27.0	-28.6
1120.000		299.0	1.1		H-Horn	PK		-57.6	-27.0	-30.6

Effective Radiated Power Data Sheet

EUT: WN-5MP01	Work Order: INMC0045
Serial Number:	Date: 10/12/02
Customer: INTERMEC Corporation	Temperature: 68
Attendees: None	Humidity: 46%
Cust. Ref. No.:	Barometric Pressure: 30.41
Tested by: Rod Peloquin	Power: DC from E-net
	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC 15.407(b)(1-4)	Year: Current 47CFR
Method: ANSI C63.4	Year: 2000

SAMPLE CALCULATIONS

EIRP = Signal Generator Output (dBm) - Cable Loss (dB) + Gain of Reference Antenna (dBi)

COMMENTS

EUT OPERATING MODES

Transmitting on both radios

DEVIATIONS FROM TEST STANDARD

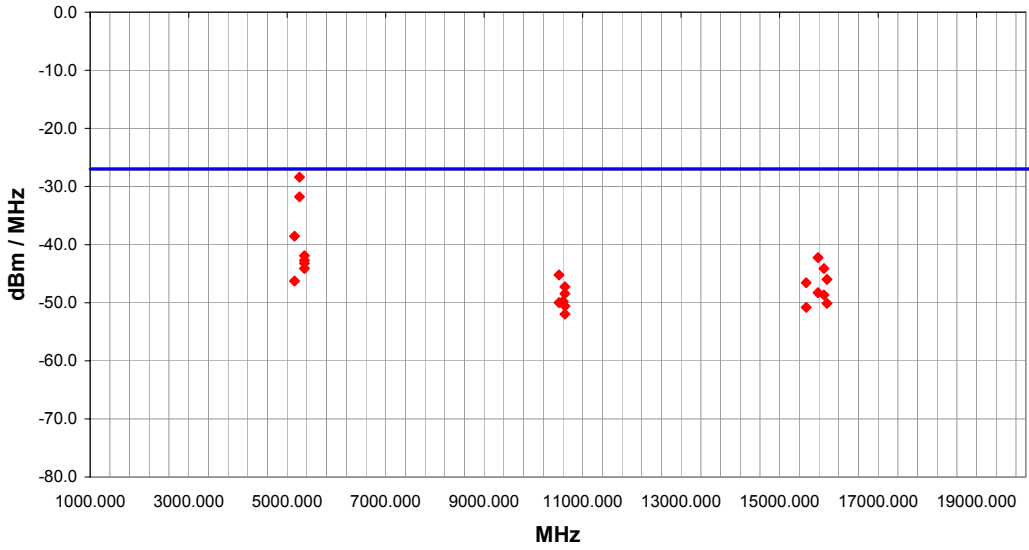
No deviations.

RESULTS	Test Distance (m)	Run #
Pass		2

Other



 Tested By:



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm/MHz)	Spec. Limit (dBm/MHz)	Compared to Spec. (dB)	Comments
5250.000	165.0	1.0	V-Horn	PK	-28.4	-27.0	-1.4	"low channel, corner mount antennas"
5250.000	135.0	1.0	H-Horn	PK	-31.8	-27.0	-4.8	"low channel, corner mount antennas"
5150.000	0.0	1.1	V-Horn	PK	-38.5	-27.0	-11.5	"low channel, dipole antennas"
5350.000	350.0	1.0	V-Horn	PK	-41.9	-27.0	-14.9	"high channel, dipole antennas"
5350.000	190.0	1.0	H-Horn	PK	-43.2	-27.0	-16.2	"high channel, corner mount antennas"
5350.000	200.0	1.2	V-Horn	PK	-42.7	-27.0	-15.7	"high channel, corner mount antennas"
5350.000	0.0	1.0	H-Horn	PK	-44.1	-27.0	-17.1	"high channel, dipole antennas"
5150.000	0.0	1.0	H-Horn	PK	-46.3	-27.0	-19.3	"low channel, dipole antennas"
10520.000	135.0	1.3	V-Horn	PK	-45.2	-27.0	-18.2	"low channel, corner mount antennas"
15780.000	185.0	1.0	H-Horn	PK	-42.2	-27.0	-15.2	"low channel, corner mount antennas"
15900.000	180.0	1.0	H-Horn	PK	-44.1	-27.0	-17.1	"mid channel, corner mount antennas"
10600.000	170.0	1.1	V-Horn	PK	-49.8	-27.0	-22.8	"mid channel, corner mount antennas"
10640.000	90.0	1.3	H-Horn	PK	-47.2	-27.0	-20.2	"high channel, ceiling mount antennas"
10640.000	135.0	1.0	V-Horn	PK	-50.6	-27.0	-23.6	"high channel, corner mount antennas"
15960.000	175.0	1.0	H-Horn	PK	-46.0	-27.0	-19.0	"high channel, corner mount antennas"
15540.000	45.0	1.0	V-Horn	PK	-46.6	-27.0	-19.6	"low channel, dipole antennas"
10640.000	95.0	1.3	H-Horn	PK	-48.4	-27.0	-21.4	"high channel, corner mount antennas"
10640.000	260.0	1.0	V-Horn	PK	-52.0	-27.0	-25.0	"high channel, ceiling mount antennas"
10600.000	140.0	1.2	H-Horn	PK	-49.8	-27.0	-22.8	"mid channel, corner mount antennas"
10520.000	135.0	1.0	H-Horn	PK	-50.0	-27.0	-23.0	"low channel, corner mount antennas"
15780.000	140.0	1.0	V-Horn	PK	-48.3	-27.0	-21.3	"low channel, corner mount antennas"
15900.000	170.0	1.0	V-Horn	PK	-48.7	-27.0	-21.7	"mid channel, corner mount antennas"
15960.000	180.0	1.0	V-Horn	PK	-50.1	-27.0	-23.1	"high channel, corner mount antennas"
15540.000	225.0	1.0	H-Horn	PK	-50.8	-27.0	-23.8	"low channel, dipole antennas"

EUT:	WN-5MP01	Work Order:	INMC0045
Serial Number:		Date:	10/12/02
Customer:	INTERMEC Corporation	Temperature:	72
Attendees:	None	Humidity:	32%
Cust. Ref. No.:		Barometric Pressure:	30.41
Tested by:	Rod Peloquin	Power:	DC from E-net
		Job Site:	EV01

TEST SPECIFICATIONS	
Specification:	FCC Part 15.407(b)(6) / FCC Part 15.205 / 15.209
Method:	ANSI C63.4
Year:	2000
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
 High channel, corner mount antennas

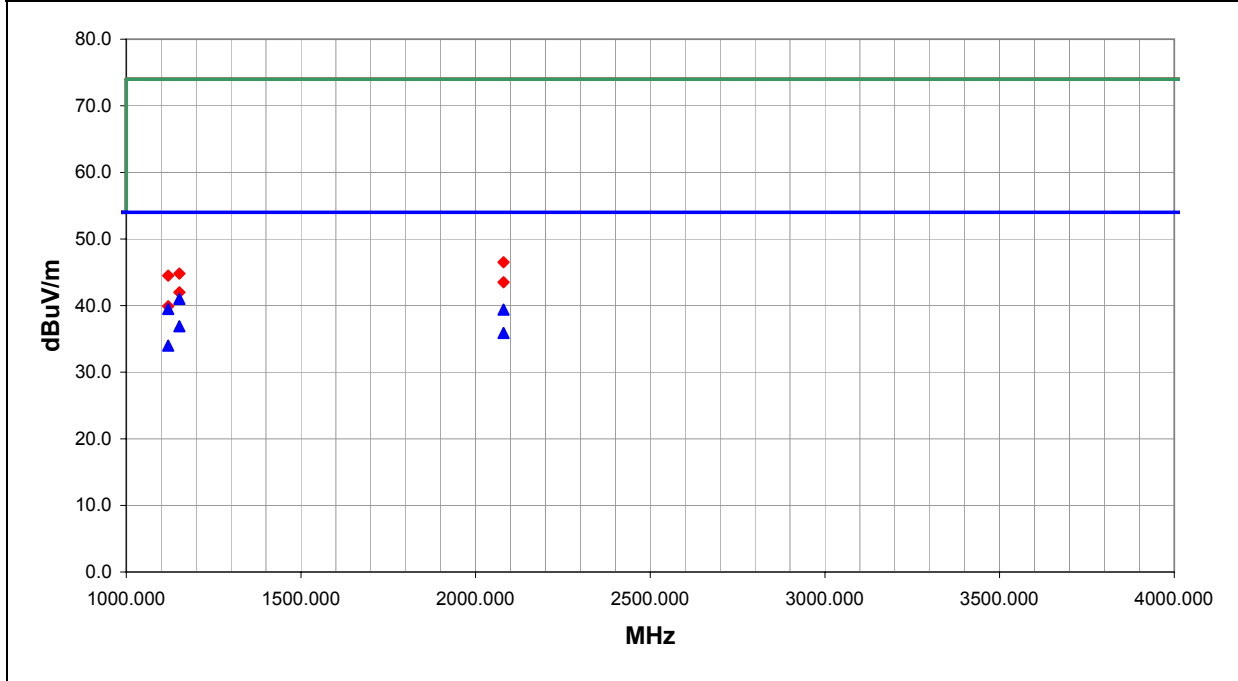
EUT OPERATING MODES
 Transmitting on both radios

DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass	3	2

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)
1152.000	47.2	-6.2	195.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.0	54.0	-13.0
1120.000	46.0	-6.5	279.0	1.2	3.0	0.0	V-Horn	AV	0.0	39.5	54.0	-14.5
2080.000	39.8	-0.4	134.0	1.5	3.0	0.0	V-Horn	AV	0.0	39.4	54.0	-14.6
1152.000	43.1	-6.2	174.0	1.3	3.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1
2080.000	36.3	-0.4	125.0	2.8	3.0	0.0	H-Horn	AV	0.0	35.9	54.0	-18.1
1120.000	40.5	-6.5	299.0	1.1	3.0	0.0	H-Horn	AV	0.0	34.0	54.0	-20.0
2080.000	46.9	-0.4	134.0	1.5	3.0	0.0	V-Horn	PK	0.0	46.5	74.0	-27.5
1152.000	51.0	-6.2	195.0	1.4	3.0	0.0	V-Horn	PK	0.0	44.8	74.0	-29.2
1120.000	51.0	-6.5	279.0	1.2	3.0	0.0	V-Horn	PK	0.0	44.5	74.0	-29.5
2080.000	43.9	-0.4	125.0	2.8	3.0	0.0	H-Horn	PK	0.0	43.5	74.0	-30.5
1152.000	48.2	-6.2	174.0	1.3	3.0	0.0	H-Horn	PK	0.0	42.0	74.0	-32.0
1120.000	46.4	-6.5	299.0	1.1	3.0	0.0	H-Horn	PK	0.0	39.9	74.0	-34.1

EMC Spurious Radiated Emissions

EUT: WN-5MP01		Work Order: INMC0045
Serial Number:		Date: 10/12/02
Customer: INTERMEC Corporation		Temperature: 68
Attendees: None		Humidity: 46%
Cust. Ref. No.:		Barometric Pressure: 30.41
Tested by: Rod Peloquin	Power: DC from E-net	Job Site: EV01

TEST SPECIFICATIONS	
Specification: FCC Part 15.407(b)(6) / FCC Part 15.205 / 15.209	Year: Current 47CFR
Method: ANSI C63.4	Year: 2000

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

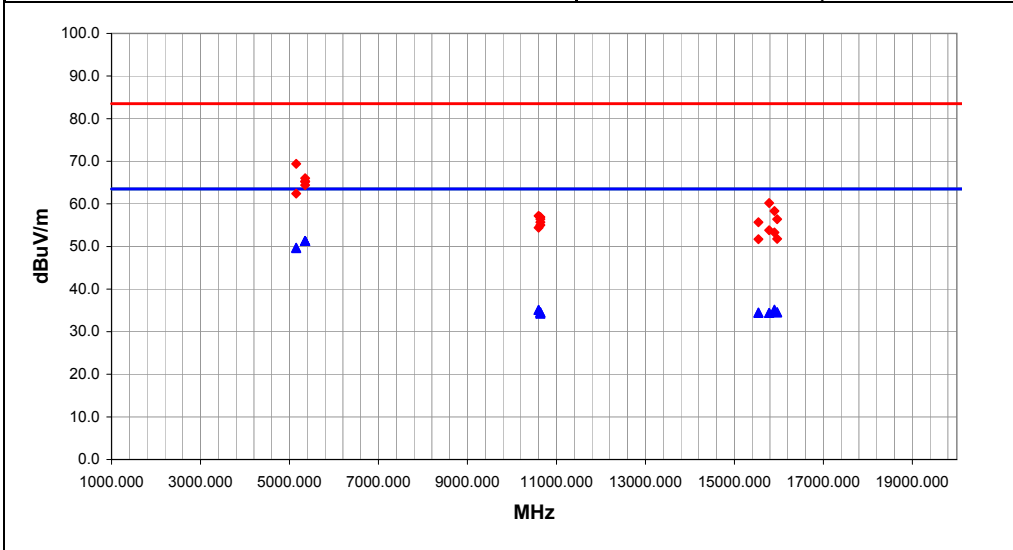
EUT OPERATING MODES
 Transmitting on both radios

DEVIATIONS FROM TEST STANDARD
 No deviations.

RESULTS	Test Distance (m)	Run #
Pass	1	2

Other

Rod Peloquin
 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
5350.000	15.0	36.3	190.0	1.0	1.0	0.0	H-Horn	AV	0.0	51.3	63.5	-12.2	"high channel, corner mount antennas"
5350.000	15.0	36.3	200.0	1.2	1.0	0.0	V-Horn	AV	0.0	51.3	63.5	-12.2	"high channel, corner mount antennas"
5350.000	15.0	36.3	0.0	1.0	1.0	0.0	H-Horn	AV	0.0	51.3	63.5	-12.2	"high channel, dipole antennas"
5350.000	15.0	36.3	350.0	1.0	1.0	0.0	V-Horn	AV	0.0	51.3	63.5	-12.2	"high channel, dipole antennas"
5150.000	14.0	35.7	0.0	1.1	1.0	0.0	V-Horn	AV	0.0	49.7	63.5	-13.8	"low channel, dipole antenna"
5150.000	13.9	35.7	0.0	1.0	1.0	0.0	H-Horn	AV	0.0	49.6	63.5	-13.9	"low channel, dipole antennas"
15900.000	25.8	9.4	180.0	1.0	1.0	0.0	H-Horn	AV	0.0	35.2	63.5	-28.3	"mid channel, corner mount antennas"
10600.000	28.0	7.1	170.0	1.1	1.0	0.0	V-Horn	AV	0.0	35.1	63.5	-28.4	"mid channel, corner mount antennas"
10600.000	28.0	7.1	140.0	1.2	1.0	0.0	H-Horn	AV	0.0	35.1	63.5	-28.4	"mid channel, corner mount antennas"
15900.000	25.6	9.4	170.0	1.0	1.0	0.0	V-Horn	AV	0.0	35.0	63.5	-28.5	"mid channel, corner mount antenna"
10640.000	27.5	7.1	95.0	1.3	1.0	0.0	H-Horn	AV	0.0	34.6	63.5	-28.9	"high channel, corner mount antennas"
15960.000	25.3	9.3	180.0	1.0	1.0	0.0	V-Horn	AV	0.0	34.6	63.5	-28.9	"high channel, corner mount antenna"
10640.000	27.4	7.1	135.0	1.0	1.0	0.0	V-Horn	AV	0.0	34.5	63.5	-29.0	"high channel, corner mount antennas"
15540.000	25.1	9.4	45.0	1.0	1.0	0.0	V-Horn	AV	0.0	34.5	63.5	-29.0	"low channel, dipole antennas"
15960.000	25.2	9.3	175.0	1.0	1.0	0.0	H-Horn	AV	0.0	34.5	63.5	-29.0	"high channel, corner mount antennas"
15540.000	25.0	9.4	225.0	1.0	1.0	0.0	H-Horn	AV	0.0	34.4	63.5	-29.1	"low channel, dipole antennas"
15780.000	25.2	9.2	140.0	1.0	1.0	0.0	V-Horn	AV	0.0	34.4	63.5	-29.1	"low channel, corner mount antennas"
15780.000	25.2	9.2	185.0	1.0	1.0	0.0	H-Horn	AV	0.0	34.4	63.5	-29.1	"low channel, corner mount antennas"
10640.000	27.3	7.1	260.0	1.0	1.0	0.0	V-Horn	AV	0.0	34.4	63.5	-29.1	"high channel, ceiling mount antennas"
10640.000	27.1	7.1	90.0	1.3	1.0	0.0	H-Horn	AV	0.0	34.2	63.5	-29.3	"high channel, ceiling mount antennas"
5150.000	33.7	35.7	0.0	1.1	1.0	0.0	V-Horn	PK	0.0	69.4	83.5	-14.1	"low channel, dipole antennas"
5350.000	29.7	36.3	350.0	1.0	1.0	0.0	V-Horn	PK	0.0	66.0	83.5	-17.5	"high channel, dipole antennas"
5350.000	29.0	36.3	190.0	1.0	1.0	0.0	H-Horn	PK	0.0	65.3	83.5	-18.2	"high channel, corner mount antennas"
5350.000	28.9	36.3	200.0	1.2	1.0	0.0	V-Horn	PK	0.0	65.2	83.5	-18.3	"high channel, corner mount antennas"
5350.000	28.1	36.3	0.0	1.0	1.0	0.0	H-Horn	PK	0.0	64.4	83.5	-19.1	"high channel, dipole antennas"
5150.000	26.7	35.7	0.0	1.0	1.0	0.0	H-Horn	PK	0.0	62.4	83.5	-21.1	"low channel, dipole antennas"
15780.000	51.0	9.2	185.0	1.0	1.0	0.0	H-Horn	PK	0.0	60.2	83.5	-23.3	"low channel, corner mount antennas"
15900.000	48.9	9.4	180.0	1.0	1.0	0.0	H-Horn	PK	0.0	58.3	83.5	-25.2	"mid channel, corner mount antennas"
10600.000	50.1	7.1	170.0	1.1	1.0	0.0	V-Horn	PK	0.0	57.2	83.5	-26.3	"mid channel, corner mount antennas"
10640.000	49.8	7.1	90.0	1.3	1.0	0.0	H-Horn	PK	0.0	56.9	83.5	-26.6	"high channel, ceiling mount antennas"
10640.000	49.3	7.1	135.0	1.0	1.0	0.0	V-Horn	PK	0.0	56.4	83.5	-27.1	"high channel, corner mount antennas"
15960.000	47.1	9.3	175.0	1.0	1.0	0.0	H-Horn	PK	0.0	56.4	83.5	-27.1	"high channel, corner mount antennas"
15540.000	46.3	9.4	45.0	1.0	1.0	0.0	V-Horn	PK	0.0	55.7	83.5	-27.8	"low channel, dipole antennas"
10640.000	48.6	7.1	95.0	1.3	1.0	0.0	H-Horn	PK	0.0	55.7	83.5	-27.8	"high channel, corner mount antennas"
10640.000	47.9	7.1	260.0	1.0	1.0	0.0	V-Horn	PK	0.0	55.0	83.5	-28.5	"high channel, ceiling mount antennas"
10600.000	47.3	7.1	140.0	1.2	1.0	0.0	H-Horn	PK	0.0	54.4	83.5	-29.1	"mid channel, corner mount antennas"
15780.000	44.6	9.2	140.0	1.0	1.0	0.0	V-Horn	PK	0.0	53.8	83.5	-29.7	"low channel, corner mount antennas"
15900.000	43.9	9.4	170.0	1.0	1.0	0.0	V-Horn	PK	0.0	53.3	83.5	-30.2	"mid channel, corner mount antennas"
15960.000	42.5	9.3	180.0	1.0	1.0	0.0	V-Horn	PK	0.0	51.8	83.5	-31.7	"high channel, corner mount antennas"
15540.000	42.3	9.4	225.0	1.0	1.0	0.0	H-Horn	PK	0.0	51.7	83.5	-31.8	"low channel, dipole antennas"