Exhibit N: Field Strength of Fundamental

FCC ID: OXZSTDPREVIEW

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:
Single

Operating Modes Investigated:
Typical

Antennas Investigated:
Integral Antenna

Data Rates Investigated:
Maximum

Output Power Setting(s) Investigated:
Maximum

Power Input Settings Investigated:
12 Vdc

Software\Firmware Applied During Test			
Exercise software	Standard Production Firmware	Version	Unknown
Description			
The system was tested using standard operating production software to exercise the functions of the device during the testing.			

Equipment Modifications

The following modifications were made to achieve compliance: A ferrite bead was added to the sensor cable.

EUT and Peripherals

Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT	Preco, Inc.	SPV 2020	none
Display Unit	Preco, Inc.	Preview	none
DC Supply	Hewlett Packard	6654A	TPC

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Sensor	PA	0.9	Yes	EUT	Display Cable
Display	PA	8.5m	No	Display Unit	Sensor Cable
DC Leads	No	1.2	No	DC supply	Sensor Cable

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	Tektronix	2784	AAO	03/08/2001	24 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

Test Description

Requirement: The field strength of the fundamental (transmit) frequency shall meet the limits as defined in 47 CFR 15.249. If average emission measurements are employed, the provisions in 15.35 for averaging pulsed emissions and for limiting peak emissions apply.

Configuration: The antenna to be used with the EUT was tested. The EUT was configured for continuous modulated operation at its single transmit frequency.

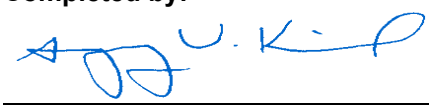
The field strength of the transmit frequency was maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT in 3 orthogonal planes (per ANSI C63.4:1992).

To determine the “true peak level”, the measurement procedure described by Andy Leimer of the FCC OET Laboratory (FCC Procedure for Pulsed Signals.txt, dated 11/16/99) was used. Per step (C), if the emission is viewed in pulse spectrum mode, the level of the fundamental emissions is measured using analyzer settings as listed in the Hewlett Packard Application Note 150-2 (*Spectrum Analysis…Pulsed RF*, Nov. 1971) such that a true pulse spectrum is obtained (RBW greater than PRF). The video bandwidth should be equal to, or greater than the RBW. The pulse repetition frequency (PRF) was measured to be 2.78 MHz; therefore a 3 MHz resolution bandwidth (RBW) and a 7 MHz video bandwidth (VBW) were used to measure the fundamental emission. A pulse desensitization factor in dB (calculated from Equation 10 in HP Note 150-2) is added to this measured level to obtain the “true peak level”. The pulse width was measured to be 14.1 nS; therefore a 24 dB pulse desensitization factor was used (k = 1.5, B = 3 MHz).

The average level of the fundamental emission is the “true peak level” measured above minus the calculated duty cycle factor in dB. The duty cycle correction factor is calculated from Equation 4 in HP Note 150-2. The pulse width was measured to be 14.1 nS and the PRF = 2.78 MHz; therefore a 28 dB duty cycle correction factor was used.

The main lobe of the fundamental emission lies entirely within the specified frequency band.

Completed by:



NORTHWEST EMC

Field Strength of Fundamental

REV df3.03 12/16/2002

EUT:	SPV 2020			Work Order:	PRCO0010
Serial Number:	none			Date:	12/27/02
Customer:	Preco, Inc.			Temperature:	68
Attendees:	none			Humidity:	34%
Cust. Ref. No.:				Barometric Pressure	29.97
Tested by:	Greg Kiemel	Power:	12 Vdc	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC 15.249	Year:	2002
Method:	ANSI C63.4	Year:	2000

SAMPLE CALCULATIONS

Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Pulse Desensitization Factor - Duty Cycle Correction Factor

Duty Cycle Correction Factor = 20 * log (pulse width * pulse repetition frequency)

Pulse Desensitization Factor = 20 * log (pulse width * k * resolution bandwidth), where k = 1.5

COMMENTS

EUT power provided by 12 Vdc lab power supply. Ferrite bead on cable harness. Resolution Bandwidth = 3 MHz, Video Bandwidth = 7 MHz

EUT OPERATING MODES

Transmitting with pulse modulated carrier: pulse width = 14 nS, pulse repetition frequency = 2.78 MHz,

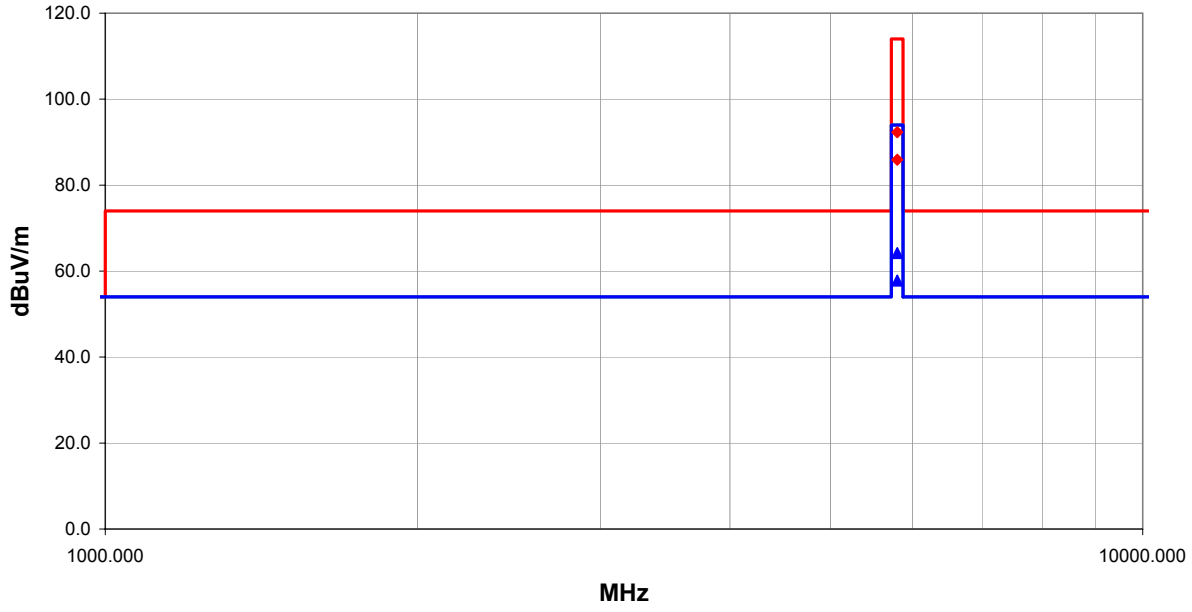
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Test Distance (m)	Run #
Pass	3	2

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Pulse Desensitization Factor	Duty Cycle Correction Factor (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
5800.000	59.0	9.3	0.0	1.4	24.0	0.0	H-Horn	PK	0.0	92.3	114.0	-21.7
5800.000	52.6	9.3	340.0	1.2	24.0	0.0	V-Horn	PK	0.0	85.9	114.0	-28.1
5800.000	59.0	9.3	0.0	1.4	24.0	28.1	H-Horn	AV	0.0	64.2	94.0	-29.8
5800.000	52.6	9.3	340.0	1.2	24.0	28.1	V-Horn	AV	0.0	57.8	94.0	-36.2

NORTHWEST EMC

Main Lobe Bandwidth of the Fundamental

Rev BETA 01/30/01

EUT:	SPV 2020			Work Order:	PRCO0010
Serial Number:	none			Date:	12/27/02
Customer:	Preco, Inc.			Temperature:	68 F
Attendees:	none	Tested by:	Greg Kiemel	Humidity:	38% RH
Customer Ref. No.:	N/A	Power:	12 Vdc%	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.249	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

COMMENTS

EUT OPERATING MODES

Transmitting with pulse modulation

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The main lobe of the fundamental emission is contained within the specified band of 5.725 to 5.875 GHz

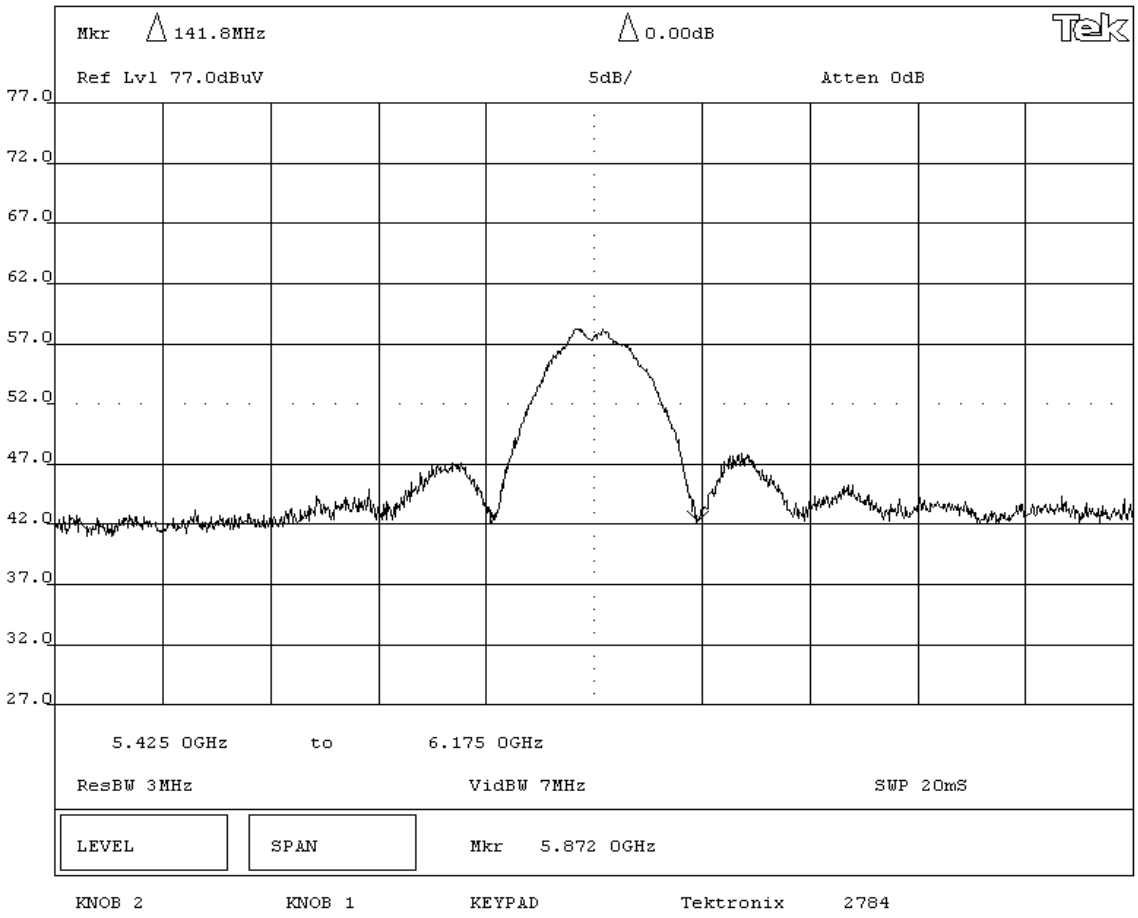
RESULTS	Bandwidth
Pass	141.8 MHz

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Channel Bandwidth



NORTHWEST EMC

Pulse Repetition Frequency

Rev BETA 01/30/01

EUT:	SPV 2020			Work Order:	PRCO0010
Serial Number:	none			Date:	12/27/02
Customer:	Preco, Inc.			Temperature:	68 F
Attendees:	none	Tested by:	Greg Kiemel	Humidity:	38% RH
Customer Ref. No.:	N/A	Power:	12 Vdc%	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	47 CFR 15.249	Year:	Most Current	Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

COMMENTS

EUT OPERATING MODES

Transmitting with pulse modulation

DEVIATIONS FROM TEST STANDARD

None

REQUIREMENTS

The field strength of the fundamental is measured using a RBW greater than the pulse repetition frequency

RESULTS	PRF
Pass	2.78 MHz

SIGNATURE

Tested By: _____

DESCRIPTION OF TEST

Pulse Repetition Frequency