CKC LABORATORIES, INC.
Testing the Future
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EMC/SAFETY

GTCO CALCOMP ADDENDUM TO FC01-016

FOR THE

DRAWINGBOARD INTERACTIVE 4256

FCC PART 15 SUBPART B SECTION 15.109 CLASS B, FCC PART 15 SUBPART C SECTIONS 15.207, 15.209 & 15.249

COMPLIANCE

DATE OF ISSUE: MAY 2, 2001

PREPARED FOR:

GTCO CalComp
14555 N. 82nd Street
Scottsdale, AZ 85260

P.O. No.: JD10684
W.O. No.: 75747

PREPARED BY:

Joyce Walker
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

Date of test: Jaunary 31 – February 16, 2001
& May 1, 2001

Report No.: FC01-016A

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

DATE OF TEST:	January 31 – February 16 and May 1, 2001
DATE OF RECEIPT:	January 31, 2001
PURPOSE OF TEST:	To demonstrate the compliance of the DrawingBoard Interactive 4256 with the requirements for FCC Part 15 Subpart B Section 15.109 Class B, FCC Part 15 Subpart C Sections 15.207, 15.209 & 15.249 devices. This addendum is to add 9 kHz- 30 MHz test data in order to show compliance to FCC Section 15.33.
TEST METHOD:	ANSI C63.4 1992
MANUFACTURER:	GTCO CalComp 14555 N. 82nd Street Scottsdale, AZ 85260
REPRESENTATIVE:	Ken Jacobson
TEST LOCATION:	CKC Laboratories, Inc. 22105 Wilson River Hwy Tillamook, OR 97141

SUMMARY OF RESULTS

As received, the GTCO CalComp DrawingBoard Interactive 4256 was found to be fully compliant with the following standards and specifications:

United States

- FCC Part 15 Subpart B Class B Section 15.109
- FCC Part 15 Subpart C Sections 15.207, 15.209 & 15.249
- ANSI C63.4 (1992) method

The results in this report apply only to the items tested, as identified herein.

Test Overview

Section	Test Type	Results
15.33	Frequency Ranges	Pass
15.35	Bandwidth Settings	Pass
15.203	Antenna Requirements	Pass
15.205	Restricted Band	Pass
15.207	Mains Conducted Emissions	Pass
15.215(c)	Additional Provisions to the General Radiated Emissions Limitations (Bandwidth)	Pass
15.249(a)	Field Strength of Fundamental Frequency	Pass
15.249(c)/15.209	Field Strength of Radiated Spurious Emissions	Pass

MODIFICATIONS REQUIRED FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

QUALITY ASSURANCE:

Dennis Ward, Quality Manager

Pat Andre, Corp. Technical Advisor/
EMC Consultant

TEST PERSONNEL:

Mike Wilkinson, Test Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was a production unit.

Electronic WhiteBoard.

The following model has been tested by CKC Laboratories:

5246

The following additional models are identical electrically to the one which was tested, or any differences between them do not affect their EMC characteristics, and therefore they comply to the level of testing equivalent to the tested models.

Model number 5246 does not exist, it was a typo error during testing. The Model number to be used should be Model 4256 for FCC ID: ECPRFDBI.

EQUIPMENT UNDER TEST

Junction Box for Host Computer
Manuf: GTCO CalComp
Model: Junction Box
Serial: None
FCC ID: ECPJUNCTIONBOX (pending)

Power Supply 120V
Manuf: Ault
Model: P48091000C0X06
Serial: None
FCC ID: NA

DrawingBoard Interactive 4256
Manuf: GTCO CalComp
Model: 4256
Serial: None
FCC ID: ECPRFDBI (pending)

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Printer
Manuf: HP
Model: 895Cxi
Serial: US8AM2Q0BK
FCC ID: DoC

Mouse
Manuf: HP
Model: 5182-8864
Serial: LZE01505537
FCC ID: DoC

Keyboard
Manuf: HP
Model: 5129
Serial: B01634962
FCC ID: DoC

Stylus
Manuf: GTCO CalComp
Model: CTW-DMS
Serial: None
FCC ID: DoC

Printer
Manuf: HP
Model: 895Cxi
Serial: MY97G1924Z
FCC ID: DoC

Monitor
Manuf: Mitsubishi
Model: FFF8705SKTK
Serial: 605501823
FCC ID: DoC

Computer
Manuf: HP
Model: 6730
Serial: KR02407056
FCC ID: DoC

MODE OF OPERATION

The EUT was set up to continuously transmit data. This data can be monitored via a computer connected to the junction box.

15.33 FREQUENCY RANGE TESTED

15.249(a)(c) Radiated Emissions:	9 kHz – 10 GHz
15.207 Conducted Emissions:	450 kHz – 30 MHz
15.109/15.209 Radiated Emissions:	9 kHz – 5 GHz

EUT OPERATING FREQUENCY

The fundamental is 916 MHz, operating in the 902-928 MHz range.

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

REPORT OF MEASUREMENTS

The following tables report the worst case emissions levels recorded during the tests performed on the DrawingBoard Interactive 4256. All readings taken were peak readings unless otherwise stated. The data sheets from which the emissions tables were compiled are contained in Appendix C.

Table 1: 15.249(a) Field Strength of Fundamental Frequency - Transmitter

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB	Dist dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
916.680	54.2	22.2	-27.6	7.5		56.3	94.0	-37.7	V
916.681	53.2	22.2	-27.6	7.5		55.3	94.0	-38.7	H

Test Method: ANSI C63.4 1992
Spec Limit: FCC Section 15.249(a)
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT is transmitting continuously at 916 MHz with modulation. The stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, serial and printer ports. The EUT is floor standing and is installed in an optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 70°F and the humidity was 40%. AC input was 120 V, 60 Hz. Frequency range investigated was 30 MHz to 10 GHz.

Table 2: 15.209/15.249(c) Six Highest Radiated Spurious Emission Levels - Transmitter									
	METER	CORRECTION FACTORS				CORRECTED	SPEC		
FREQUENCY MHz	READING dBµV	Ant dB	Amp dB	Cable dB	Dist dB	READING dBµV/m	LIMIT dBµV/m	MARGIN dB	NOTES
1833.359	48.8	27.2	-42.0	6.4		40.4	54.0	-13.6	H
1833.368	40.3	27.2	-42.0	6.4		31.9	54.0	-22.1	V
3666.753	29.9	31.4	-39.0	10.0		32.3	54.0	-21.7	V
4583.433	29.7	32.3	-40.0	10.4		35.1	54.0	-18.9	V
5500.113	24.9	33.9	-39.0	15.2		36.0	54.0	-18.0	V
6416.793	24.7	33.7	-38.9	13.7		33.2	54.0	-20.8	V

Test Method: ANSI C63.4 1992
Spec Limit: FCC Section 15.209/15.249(c)
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: Data in this table is comprised from several test data sheets. See Appendix C for individual test conditions.

Table 3: 15.207 Six Highest Conducted Emission Levels - Transmitter

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS T1co dB	L13W dB	dB	dB	CORRECTED READING dBµV	SPEC LIMIT dBµV	MARGIN dB	NOTES
0.454179	44.1	0.0	0.1			44.2	48.0	-3.8	W
0.483432	43.8	0.0	0.1			43.9	48.0	-4.1	W
0.495969	43.8	0.0	0.1			43.9	48.0	-4.1	W
0.510596	43.4	0.0	0.1			43.5	48.0	-4.5	W
0.516864	43.3	0.0	0.1			43.4	48.0	-4.6	W
0.556565	42.4	0.0	0.1			42.5	48.0	-5.5	W

Test Method: ANSI C63.4 1992
Spec Limit: FCC Section 15.207

NOTES: W = White Lead

COMMENTS: EUT is transmitting continuously at 916 MHz with modulation. The stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, serial and printer ports. The EUT is floor standing and is installed in an optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 70°F and the humidity was 40%. AC input was 120 V, 60 Hz. Frequency range investigated was 450 kHz to 30 MHz.

Table 4: 15.109/15.209 Six Highest Radiated Emission Levels - Receiver

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Bilog dB	Amp-A dB	Cable dB	Dist dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
74.228	49.2	6.9	-27.2	2.2		31.1	40.0	-8.9	H
74.238	52.2	6.9	-27.2	2.2		34.1	40.0	-5.9	HQ
261.400	46.8	12.6	-26.5	4.1		37.0	46.0	-9.0	H
298.384	46.6	13.1	-26.5	4.4		37.6	46.0	-8.4	V
298.390	45.7	13.1	-26.5	4.4		36.7	46.0	-9.3	V
899.327	34.1	22.8	-27.6	7.4		36.7	46.0	-9.3	V

Test Method: ANSI C63.4 1992
Spec Limit: FCC Section 15.109/15.209
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading

COMMENTS: Data in this table is comprised from several test data sheets. See Appendix C for individual test conditions.

MEASUREMENT UNCERTAINTY

Associated with data in this report is a ± 4dB measurement uncertainty.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the DrawingBoard Interactive 4256 was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS

	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

A typical data sheet will display the following in column format:

#	Freq	Rdng	Amp-A	Bicon	Cbl-2	Cable	Corr	Spec	Margin	Polar
		Mag L	Bilog	Horn	L14b	L13W	1.5G	26.5	T1co	

means reading number.
Freq is the frequency in MHz of the obtained reading.
Rdng is the reading obtained on the spectrum analyzer in dBµV.
26.5, Pre-Amp is the preamplifier factor or gain in dB.
Mag L is the magnetic loop antenna factor in dB.
Bicon is the biconical antenna factor in dB.
Bilog is the biconilog antenna factor in dB.
Horn is the horn antenna factor in dB.
T1co, Cbl-2, Cable is the cable loss in dB of the coaxial cable on the OATS.
1.5G is the cable loss in dB of the high frequency coaxial cable on the OATS.
Corr is the corrected reading in dBµV/m (field strength).
Spec is the specification limit (dB) stated in the FCC regulations.
Margin is the closeness to the specified limit in dB; + is over and - is under the limit.
Polar is the polarity of the antenna with respect to earth.
L13W, L14b is the line impedance stabilization network factor in dB for conducted emissions.

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Appendix B were used to collect both the radiated and conducted emissions data for the DrawingBoard Interactive 4256. For frequencies below 30 MHz the magnetic loop antenna was used. For radiated measurements from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBµV, and a vertical scale of 10 dB per division.

FCC SECTION 15.35:
TABLE B: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE

TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	450 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	10 GHz	1 MHz

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the DrawingBoard Interactive 4256.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Radiated Emissions

During radiated emissions testing, the EUT was rolled out on a conducting, flush mounted turntable which was continuous with the ground plane. This configuration was used because the unit was a floor standing device.

During the preliminary radiated scan, the host PC was powered up and operating in its defined FCC test mode. For frequencies below 30 MHz the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable as needed. The test engineer maximized the readings with respect to the table rotation and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.

Mains Conducted Emissions

During conducted emissions testing, the EUT, as a floor standing unit, was located on top of insulating tile that was laid over the ground plane.

The vertical metal plane used for conducted emissions was grounded to the earth. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

For conducted emissions testing, a 30 to 50 second sweep time was used for automated measurements in the frequency bands of 450 kHz to 1.705 MHz, 1.705 MHz to 3 MHz, and 3 MHz to 30 MHz. All readings within 20 dB of the limit were recorded. At frequencies where the recorded emissions were close to the limit, further investigation was performed manually at a slower sweep rate.

TRANSMITTER CHARACTERISTICS

15.203 Antenna Requirements

Antenna Type: Integral
Connection to EUT: Integral, non-removable

The antenna is an integral part of the EUT and is NON-Removable; therefore the EUT complies with Section 15.203 of the FCC rules.

15.205 Restricted Bands

Operating frequency: 916 MHz.

The fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules.

Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

15.215 Additional Provisions to the General Radiated Emission Limitations

The fundamental frequency was kept within the central 80% of the permitted band in order to minimize the possibility of out-of-band operation. Refer to Appendix B for the test equipment used and Appendix C for the occupied bandwidth plot(s).

15.249(a) Power Output

The maximum field strength of the fundamental was measured to be 56.3 dBµV/m when measured at a test distance of three meters. This measurement was made with the EUT's integral antenna, as there is no provision for connecting an external antenna.

APPENDIX A

INFORMATION ABOUT THE EQUIPMENT UNDER TEST

INFORMATION ABOUT THE EQUIPMENT UNDER TEST	
Test Software/Firmware:	
CRT was displaying:	X-Y Data
Power Supply Manufacturer:	Ault/OEM (Dom.), Ault (Int.)
Power Supply Part Number:	AD-091AG or P4809100DC0X0G (Dom.) SC102TA090301 (Int.)
AC Line Filter Manufacturer:	N/A
AC Line Filter Part Number:	N/A
Line voltage used during testing:	120 V, 60 Hz

I/O PORTS	
Type	#
RS-232, 9 Pin D-Sub	1
USB	2
Parallel, 25 Pin D-Sub	3

CRYSTAL OSCILLATORS	
Type	Freq In MHz
Crystal	12
Crystal	0.03276
Crystal	10
Crystal	18.432
Crystal	3.686

PRINTED CIRCUIT BOARDS				
Function	Model & Rev	Clocks, MHz	Layers	Location
Controller	35-00172 Rev C	12, .03276,10	4	In Back
CopyBoard	35-00174 Rev B	18.432	4	In Back
RF Board	35-902764, Rev 02 (Dom.), Rev 00 (Int.)	3.686		In Back

CABLE INFORMATION

Cable #:	1	Cable(s) of this type:	1
Cable Type:	RS-232	Shield Type:	Spiral
Construction:		Length In Meters:	7.5
Connected To End (1):	DBi	Connected To End (2):	Computer
Connector At End (1):	9 Pin D-Sub	Connector At End (2):	9 Pin D-Sub
Shield Grounded At (1):	Chassis	Shield Grounded At (2):	Chassis
Part Number:		Number of Conductors:	8
Notes and/or description:			

Cable #:	2	Cable(s) of this type:	1
Cable Type:	USB	Shield Type:	Spiral
Construction:		Length In Meters:	5
Connected To End (1):	DBi	Connected To End (2):	Computer
Connector At End (1):	4 Pin Upstream	Connector At End (2):	4 Pin Downstream
Shield Grounded At (1):	Chassis	Shield Grounded At (2):	Chassis
Part Number:		Number of Conductors:	4
Notes and/or description:			

Cable #:	3	Cable(s) of this type:	1
Cable Type:	RS-232	Shield Type:	Spiral
Construction:		Length In Meters:	2
Connected To End (1):	DBi	Connected To End (2):	Computer
Connector At End (1):	25 Pin D-Sub	Connector At End (2):	25 Pin D-Sub
Shield Grounded At (1):	Chassis	Shield Grounded At (2):	Chassis
Part Number:		Number of Conductors:	25
Notes and/or description:	**Not Supplied with Product**		

PHOTOGRAPH SHOWING RADIATED EMISSIONS - TRANSMITTER

Transmitter Radiated Emissions - Front View

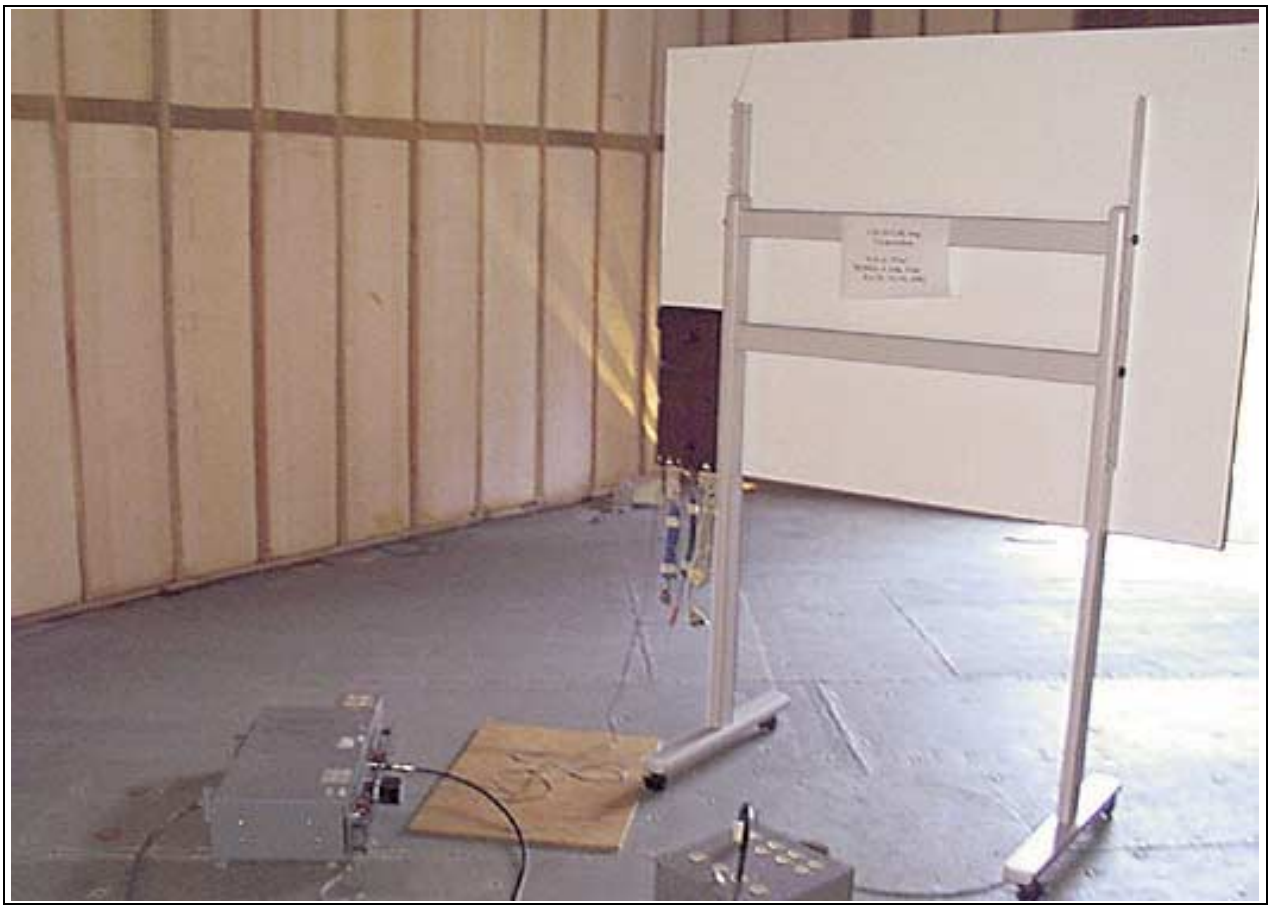
PHOTOGRAPH SHOWING RADIATED EMISSIONS - TRANSMITTER

Transmitter Radiated Emissions - Back View

PHOTOGRAPH SHOWING CONDUCTED EMISSIONS - TRANSMITTER

Transmitter Conducted Emissions - Front View

PHOTOGRAPH SHOWING CONDUCTED EMISSIONS - TRANSMITTER

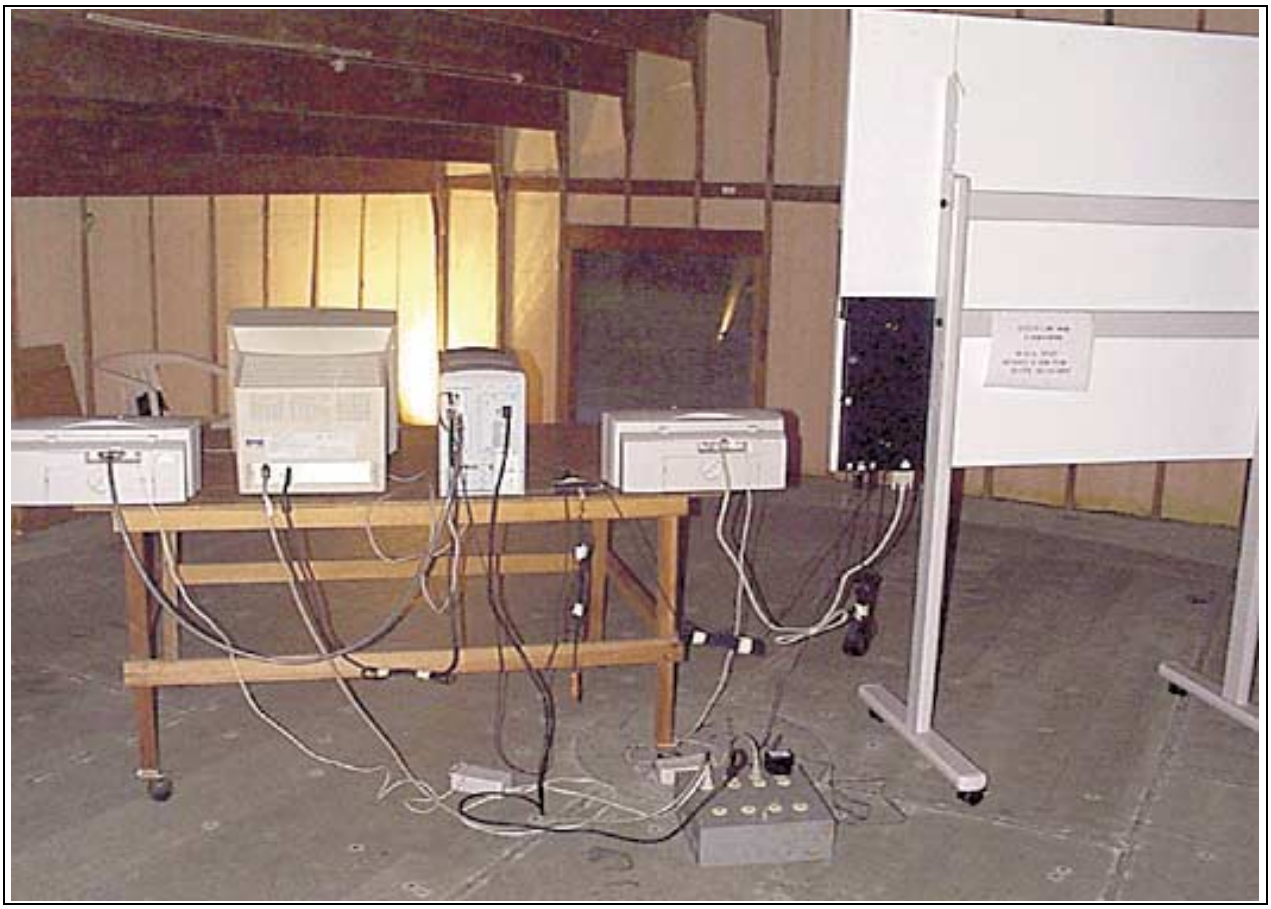


Transmitter Conducted Emissions - Back View

PHOTOGRAPH SHOWING RADIATED EMISSIONS - RECEIVER (SERIAL)

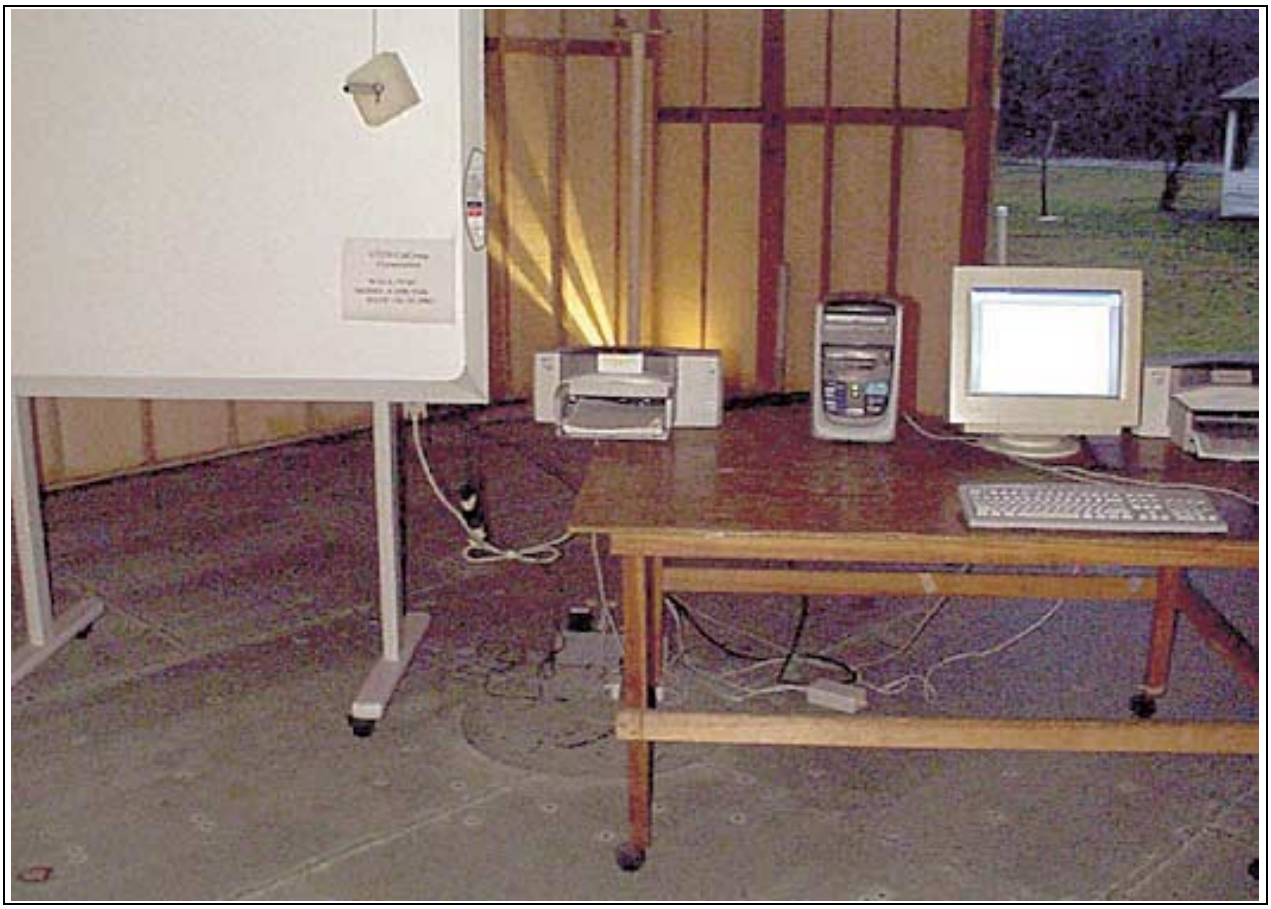
Receiver Radiated Emissions - Front View (Serial)

PHOTOGRAPH SHOWING RADIATED EMISSIONS - RECEIVER (SERIAL)



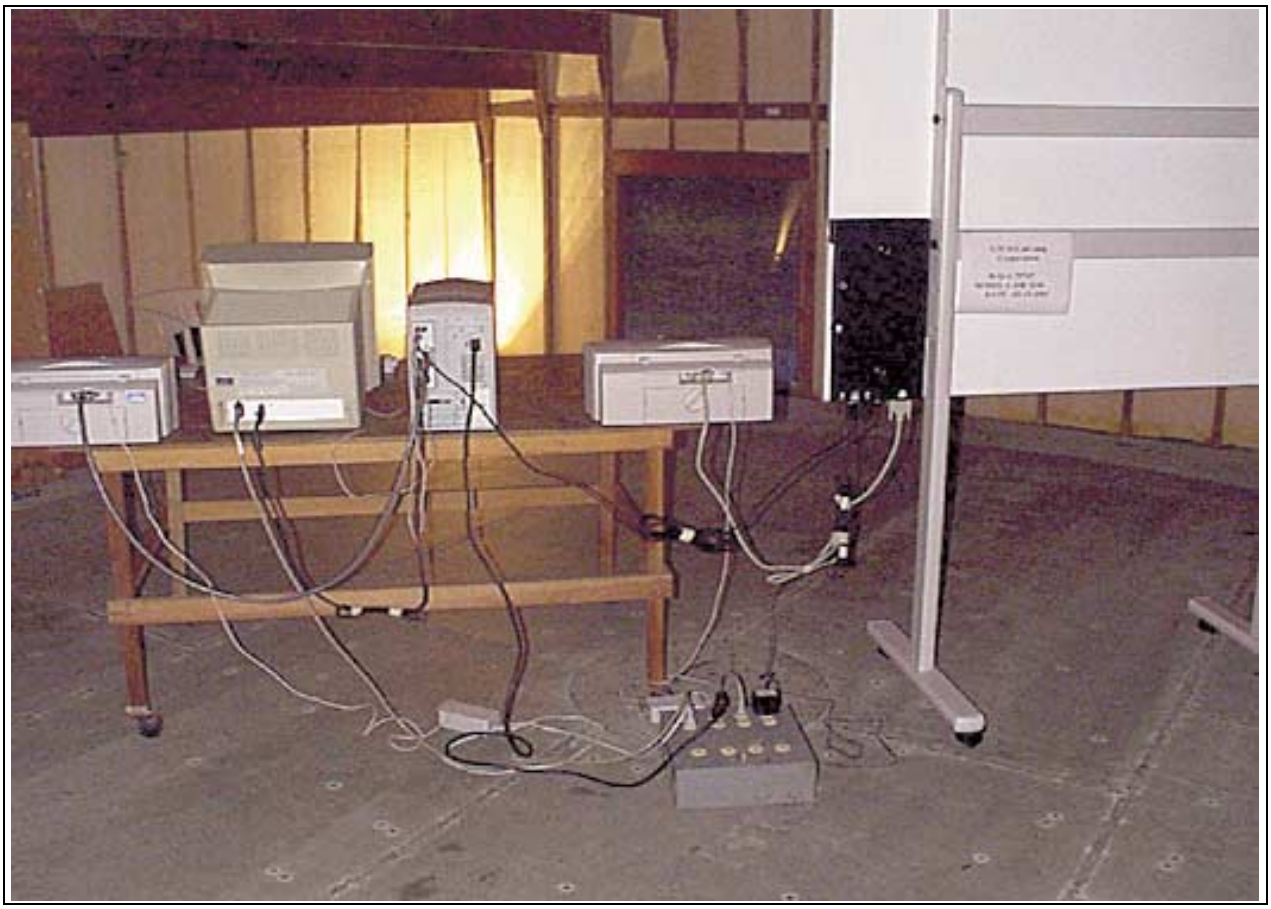
Receiver Radiated Emissions - Back View (Serial)

PHOTOGRAPH SHOWING RADIATED EMISSIONS - RECEIVER (USB)



Receiver Radiated Emissions - Front View (USB)

PHOTOGRAPH SHOWING RADIATED EMISSIONS - RECEIVER (USB)



Receiver Radiated Emissions - Back View (USB)

APPENDIX B

TEST EQUIPMENT LIST

Bandwidth and Band Edge - Transmitter

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM EMC Analyzer	3624A00159	09/21/2000	09/21/2001	2111

Radiated Spurious Emissions - Transmitter

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM EMC Analyzer	3624A00159	09/21/2000	09/21/2001	2111
HP 8447D Amplifier	2727A05392	02/14/2000	02/14/2001	10
Chase CBL6111C Bilog Antenna	2455	06/17/2000	06/17/2001	1992
HP 84300-80037 1.5 GHz High Pass Filter	3643A00027	03/02/2000	03/02/2001	2116
HP 83017A Amplifier 26GHz	0000009002	01/18/2001	01/18/2002	2114
EMCO 3115 1-18 GHz Horn Antenna	9006-3413	05/02/2000	05/02/2001	327
HP 8574A EMI Receiver	3010A01076	07/25/2000	07/25/2001	42
EMCO 6502 Mag Loop Antenna	2156	01/16/2001	01/16/2002	52

Mains Conducted Emissions – Transmitter

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM EMC Analyzer	3624A00159	09/21/2000	09/21/2001	2111
Fischer LISN	None	01/04/2001	01/04/2002	11
Fischer LISN	None	01/04/2001	01/04/2002	12
Fischer LISN	None	01/04/2001	01/04/2002	13
Fischer LISN	None	01/04/2001	01/04/2002	14

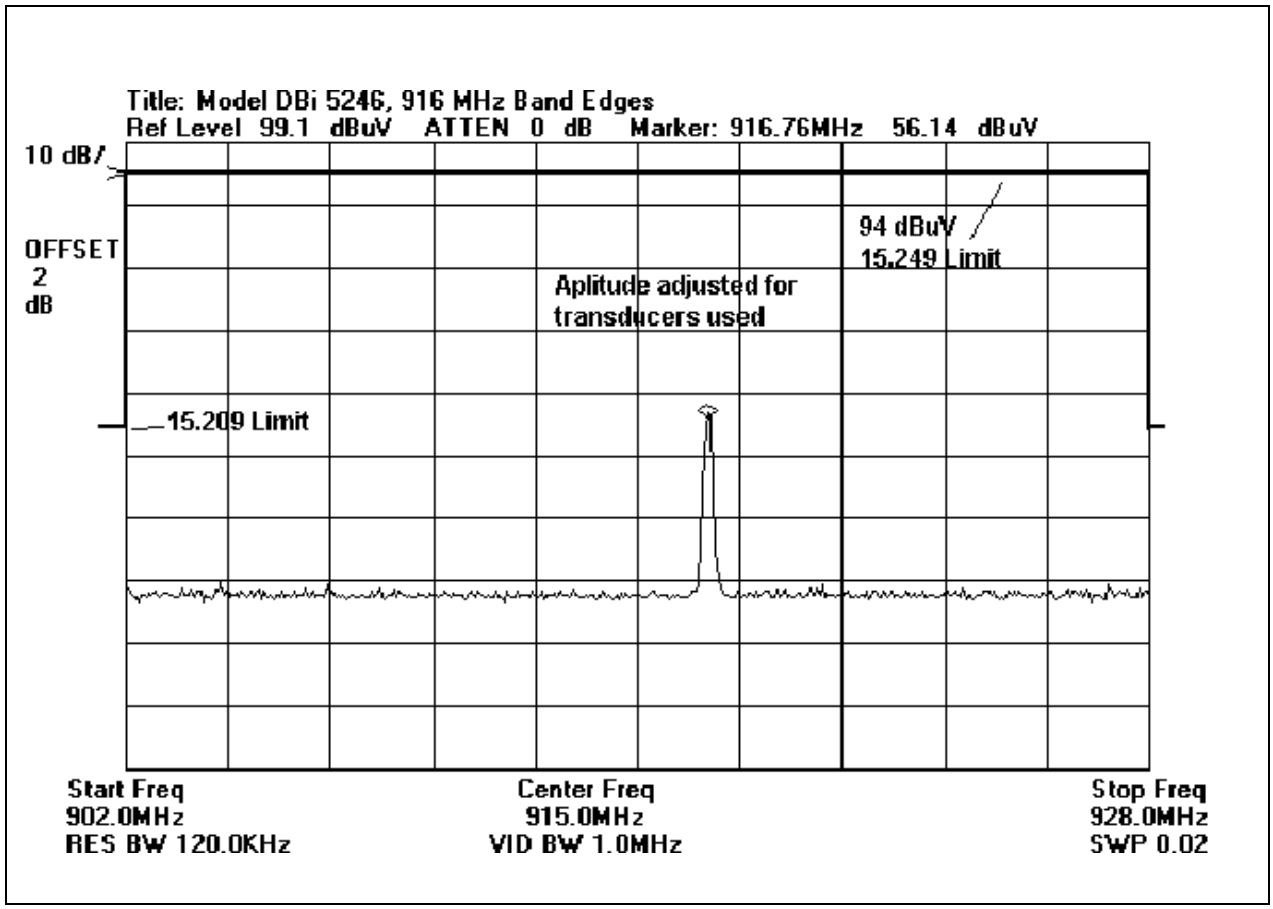
Radiated Spurious Emissions -Receiver

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM EMC Analyzer	3624A00159	09/21/2000	09/21/2001	2111
HP 8447D Amplifier	2727A05392	09/26/2000	09/26/2001	10
Chase CBL6111C Bilog Antenna	2455	06/17/2000	06/17/2001	1992
HP 83017A Amplifier 26GHz	0000009002	01/18/2001	01/18/2002	2114
EMCO 3115 1-18 GHz Horn Antenna	9006-3413	05/02/2000	05/02/2001	327
HP 8574A EMI Receiver	3010A01076	07/25/2000	07/25/2001	42
EMCO 6502 Mag Loop Antenna	2156	01/16/2001	01/16/2002	52

APPENDIX C

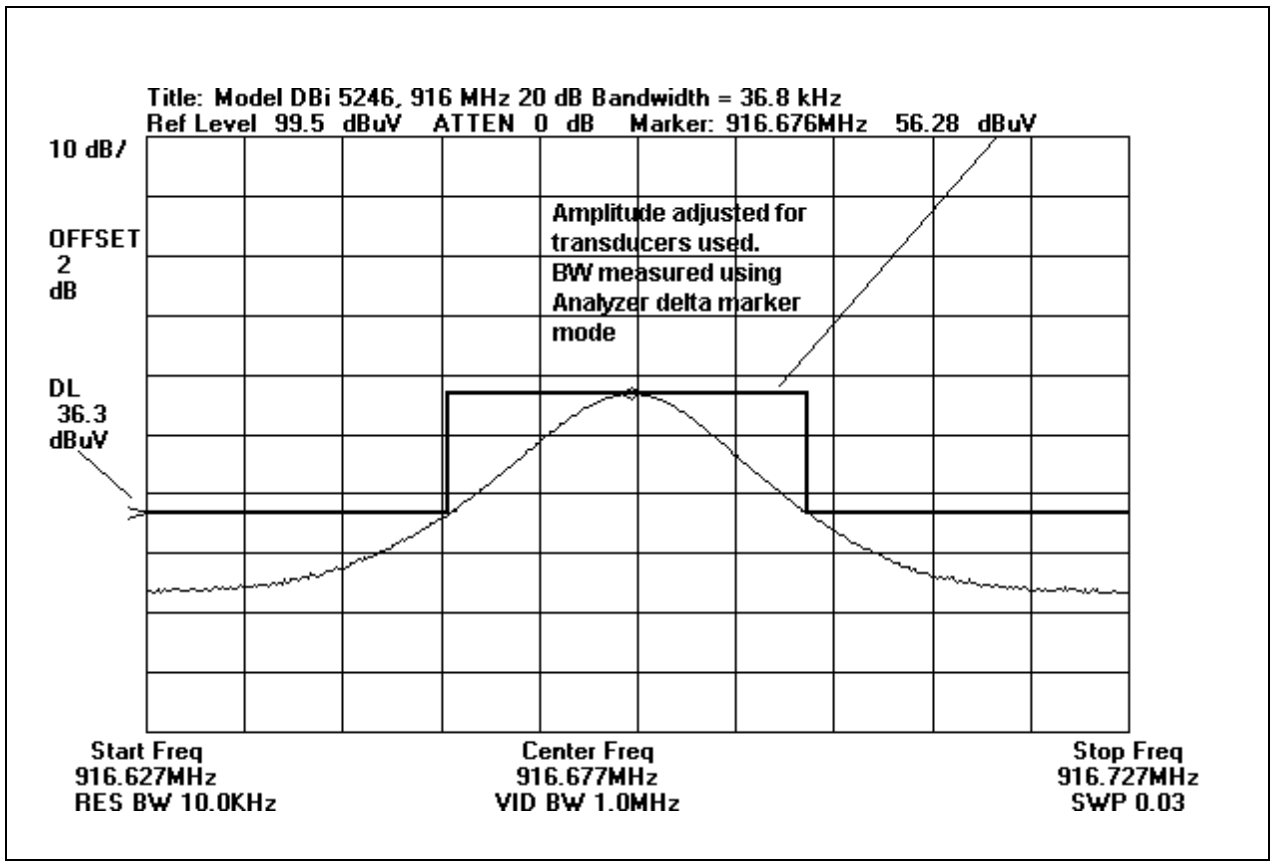
MEASUREMENT DATA SHEETS

15.215(C) BAND EDGE PLOT



Band Edge Plot

15.215(c) OCCUPIED BANDWIDTH PLOT - 916 MHz



Bandwidth Plot

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, Or 97141 • 503 842-5577

Customer: **GTCO CalComp Corporation**
Specification: **FCC15.209**
Work Order #: **75747** Date: 05/01/2001
Test Type: **Maximized Emissions** Time: 10:52:01
Equipment: **Drawing Board Interactive** Sequence#: 34
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DBi 5246
S/N: none

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Drawing Board Interactive*	GTCO CalComp	DBi 5246	none
Power Supply 120V	Ault	P48091000C0X06	none

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	none

Test Conditions / Notes:

EUT is transmitting continuously at 916 MHz with modulation. The Stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, Serial & Printer Ports. The EUT is floor standing and is installed in a optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 67°F and the humidity was 47%. AC input was 120 V, 60 Hz. Frequency range investigated was 9 kHz to 33 MHz. All readings are ambient readings.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Mag L dB	Cable dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	800.000k	35.4	+10.8	+0.6			+0.0	46.8	69.6	-22.8	None
2	1.750M	29.1	+10.7	+0.7			+0.0	40.5	70.0	-29.5	None
3	21.250M	25.8	+10.1	+1.4			+0.0	37.3	70.0	-32.7	None
4	3.950M	24.9	+10.6	+0.8			+0.0	36.3	70.0	-33.7	None
5	356.000k	40.0	+10.8	+0.5			+0.0	51.3	96.6	-45.3	None
6	206.880k	43.0	+10.9	+0.4			+0.0	54.3	101.3	-47.0	None
7	9.000M	0.0	+11.0	+1.1			+0.0	12.1	70.0	-57.9	None
8	22.730k	44.5	+15.0	+0.3			+0.0	59.8	120.5	-60.7	None
9	113.180k	33.0	+11.2	+0.3			+0.0	44.5	106.5	-62.0	None
10	55.000k	24.6	+12.8	+0.3			+0.0	37.7	112.8	-75.1	None

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, OR 97141 • 800 500-4EMC

Customer: **GTCO CalComp Corporation**
Specification: **FCC15.249**
Work Order #: **75747** Date: 02/01/2001
Test Type: **Maximized Emissions** Time: 11:36:40
Equipment: **Drawing Board Interactive** Sequence#: 3
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DrawingBoard Interactive 5246
S/N: None

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
DrawingBoard Interactive 5246*	GTCO CalComp	DrawingBoard Interactive 5246	None
Power Supply 120V	Ault	P48091000C0X06	None

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	None

Test Conditions / Notes:

EUT is transmitting continuously at 916 MHz with modulation. The stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, serial and printer ports. The EUT is floor standing and is installed in an optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 70°F and the humidity was 40%. AC input was 120 V, 60 Hz. Frequency range investigated was 30 MHz to 10 GHz. No emissions were found in the restricted bands per 15.209.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Cbl-2 Bilog dB	Cable Cable dB	Horn 1.5 G dB	Amp-A 26.5 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	1833.359M	48.8	+5.1 +0.0	+0.6 +0.0	+27.2 +0.7	+0.0 -42.0	+0.0	40.4	54.0	-13.6	Horiz
2	5500.113M	24.9	+10.5 +0.0	+4.7 +0.0	+33.9 +1.0	+0.0 -39.0	+0.0	36.0	54.0	-18.0	Vert
3	4583.433M	29.7	+9.5 +0.0	+3.0 +0.0	+32.3 +0.6	+0.0 -40.0	+0.0	35.1	54.0	-18.9	Vert
4	6416.793M	24.7	+11.4 +0.0	+1.6 +0.0	+33.7 +0.7	+0.0 -38.9	+0.0	33.2	54.0	-20.8	Vert
5	3666.753M	29.9	+8.1 +0.0	+1.5 +0.0	+31.4 +0.4	+0.0 -39.0	+0.0	32.3	54.0	-21.8	Vert
6	1833.368M	40.3	+5.1 +0.0	+0.6 +0.0	+27.2 +0.7	+0.0 -42.0	+0.0	31.9	54.0	-22.1	Vert
7	3666.790M	29.1	+8.1 +0.0	+1.5 +0.0	+31.4 +0.4	+0.0 -39.0	+0.0	31.5	54.0	-22.5	Horiz
8	2750.073M	32.1	+6.6 +0.0	+0.8 +0.0	+29.1 +0.3	+0.0 -41.0	+0.0	27.9	54.0	-26.1	Vert
9	916.680M	54.2	+0.0 +22.2	+0.0 +7.5	+0.0 +0.0	-27.6 +0.0	+0.0	56.3	94.0 Transmitter Fundamental	-37.7	Vert
10	916.681M	53.2	+0.0 +22.2	+0.0 +7.5	+0.0 +0.0	-27.6 +0.0	+0.0	55.3	94.0 Transmitter Fundamental	-38.7	Horiz

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, OR 97141 • 800 500-4EMC

Customer: **GTCO CalComp Corporation**
Specification: **FCC B COND**
Work Order #: **75747** Date: 2/1/2001
Test Type: **Conducted Emissions** Time: 12:00:19
Equipment: **Drawing Board Interactive** Sequence#: 4
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DrawingBoard Interactive 5246
S/N: None

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
DrawingBoard Interactive 5246*	GTCO CalComp	DrawingBoard Interactive 5246	None
Power Supply 120V	Ault	P48091000C0X06	None

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	None

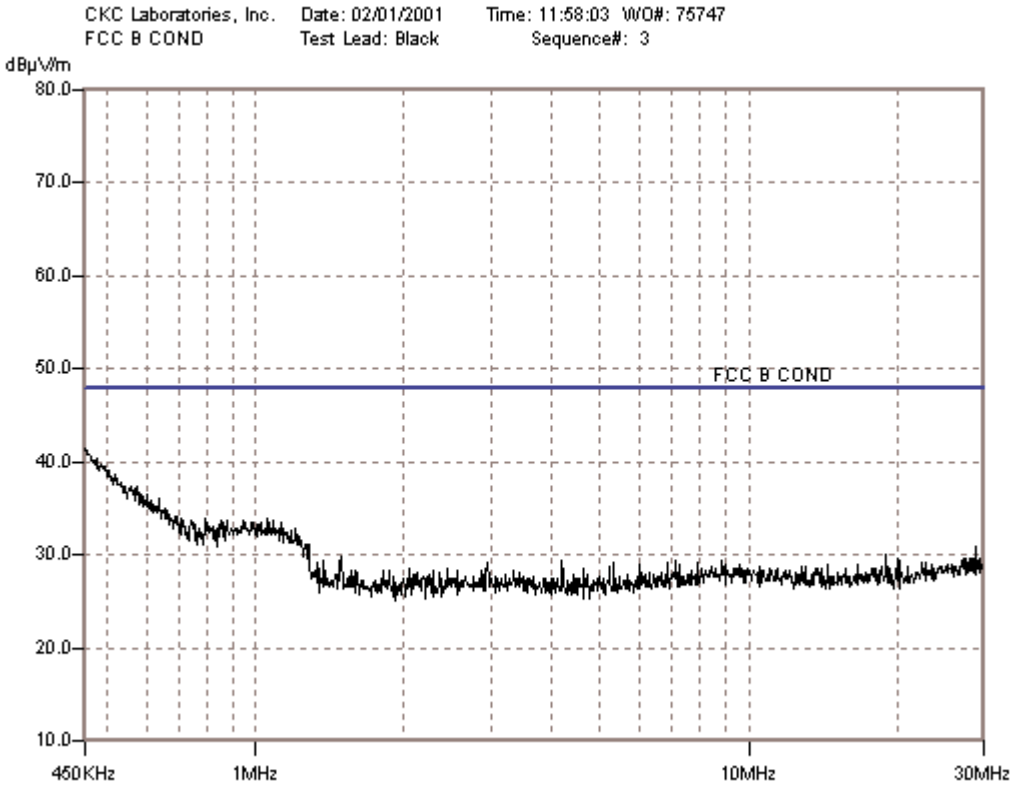
Test Conditions / Notes:

EUT is transmitting continuously at 916 MHz with modulation. The stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, serial and printer ports. The EUT is floor standing and is installed in an optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 70°F and the humidity was 40%. AC input was 120 V, 60 Hz. Frequency range investigated was 450 kHz to 30 MHz.

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 co dB	dB	L14b dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	450.000k	41.4	+0.0		+0.1		+0.0	41.5	48.0	-6.5	Black
2	477.164k	40.2	+0.0		+0.1		+0.0	40.3	48.0	-7.7	Black
3	485.522k	39.7	+0.0		+0.1		+0.0	39.8	48.0	-8.2	Black
4	506.417k	39.0	+0.0		+0.1		+0.0	39.1	48.0	-8.9	Black
5	500.148k	39.0	+0.0		+0.1		+0.0	39.1	48.0	-8.9	Black
6	516.864k	38.5	+0.0		+0.1		+0.0	38.6	48.0	-9.4	Black
7	523.133k	38.1	+0.0		+0.1		+0.0	38.2	48.0	-9.8	Black
8	560.744k	37.3	+0.0		+0.1		+0.0	37.4	48.0	-10.6	Black
9	544.028k	37.3	+0.0		+0.1		+0.0	37.4	48.0	-10.6	Black
10	575.370k	37.1	+0.1		+0.1		+0.0	37.3	48.0	-10.7	Black

11	567.012k	37.1	+0.0	+0.1	+0.0	37.2	48.0	-10.8	Black
12	600.444k	36.3	+0.1	+0.1	+0.0	36.5	48.0	-11.5	Black
13	585.818k	36.2	+0.1	+0.1	+0.0	36.4	48.0	-11.6	Black
14	635.966k	35.9	+0.1	+0.1	+0.0	36.1	48.0	-11.9	Black
15	610.892k	35.6	+0.1	+0.1	+0.0	35.8	48.0	-12.2	Black
16	621.339k	35.2	+0.1	+0.1	+0.0	35.4	48.0	-12.6	Black
17	652.682k	34.7	+0.1	+0.1	+0.0	34.9	48.0	-13.1	Black
18	644.324k	34.6	+0.1	+0.1	+0.0	34.8	48.0	-13.2	Black
19	658.950k	34.5	+0.1	+0.1	+0.0	34.7	48.0	-13.3	Black
20	671.487k	34.1	+0.1	+0.1	+0.0	34.3	48.0	-13.7	Black
21	690.293k	34.0	+0.1	+0.1	+0.0	34.2	48.0	-13.8	Black
22	686.114k	34.0	+0.1	+0.1	+0.0	34.2	48.0	-13.8	Black
23	1.056M	33.6	+0.3	+0.1	+0.0	34.0	48.0	-14.0	Black
24	709.098k	33.8	+0.1	+0.1	+0.0	34.0	48.0	-14.0	Black
25	790.589k	33.6	+0.2	+0.1	+0.0	33.9	48.0	-14.1	Black
26	715.367k	33.6	+0.1	+0.1	+0.0	33.8	48.0	-14.2	Black
27	874.169k	33.4	+0.2	+0.1	+0.0	33.7	48.0	-14.3	Black
28	851.184k	33.4	+0.2	+0.1	+0.0	33.7	48.0	-14.3	Black
29	941.033k	33.3	+0.2	+0.1	+0.0	33.6	48.0	-14.4	Black
30	738.351k	33.4	+0.1	+0.1	+0.0	33.6	48.0	-14.4	Black


CKC Laboratories, Inc.
Date: 02/01/2001
Time: 11:58:03
WO#: 75747
FCC B COND
Test Lead: Black
Sequence#: 3
dBµV/m
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
FCC B COND
450KHz
1MHz
10MHz
30MHz

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, OR 97141 • 800 500-4EMC

Customer: **GTCO CalComp Corporation**
Specification: **FCC B COND**
Work Order #: **75747** Date: 2/1/2001
Test Type: **Conducted Emissions** Time: 12:42:33
Equipment: **Drawing Board Interactive** Sequence#: 5
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DrawingBoard Interactive 5246
S/N: None

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
DrawingBoard Interactive 5246*	GTCO CalComp	DrawingBoard Interactive 5246	None
Power Supply 120V	Ault	P48091000C0X06	None

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	None

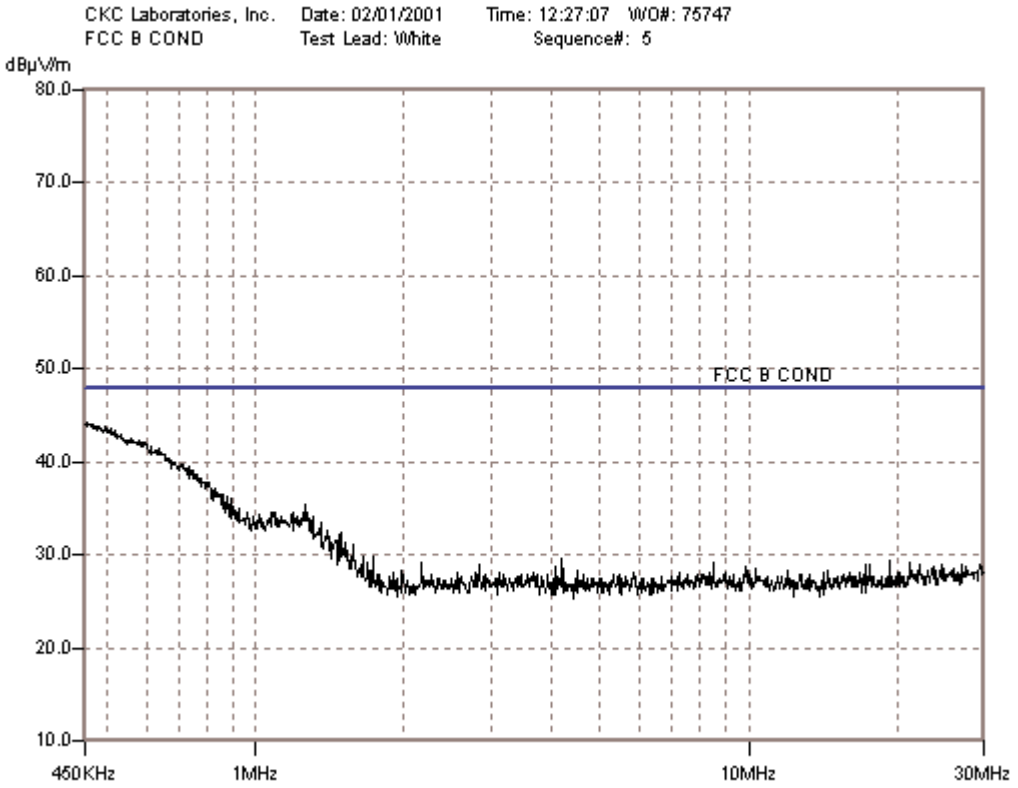
Test Conditions / Notes:

EUT is transmitting continuously at 916 MHz with modulation. The stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, serial and printer ports. The EUT is floor standing and is installed in an optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 70°F and the humidity was 40%. AC input was 120 V, 60 Hz. Frequency range investigated was 450 kHz to 30 MHz.

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 co dB	L13w dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	454.179k	44.1	+0.0	+0.1			+0.0	44.2	48.0	-3.8	White
2	495.969k	43.8	+0.0	+0.1			+0.0	43.9	48.0	-4.1	White
3	483.432k	43.8	+0.0	+0.1			+0.0	43.9	48.0	-4.1	White
4	510.596k	43.4	+0.0	+0.1			+0.0	43.5	48.0	-4.5	White
5	516.864k	43.3	+0.0	+0.1			+0.0	43.4	48.0	-4.6	White
6	556.565k	42.4	+0.0	+0.1			+0.0	42.5	48.0	-5.5	White
7	552.386k	42.3	+0.0	+0.1			+0.0	42.4	48.0	-5.6	White
8	592.086k	41.9	+0.1	+0.1			+0.0	42.1	48.0	-5.9	White
9	612.981k	41.4	+0.1	+0.1			+0.0	41.6	48.0	-6.4	White
10	635.966k	41.3	+0.1	+0.1			+0.0	41.5	48.0	-6.5	White

11	675.666k	39.9	+0.1	+0.1		+0.0	40.1	48.0	-7.9	White
12	709.098k	39.5	+0.1	+0.1		+0.0	39.7	48.0	-8.3	White
13	734.172k	39.4	+0.1	+0.1		+0.0	39.6	48.0	-8.4	White
14	740.441k	38.8	+0.1	+0.1		+0.0	39.0	48.0	-9.0	White
15	757.157k	38.5	+0.1	+0.1		+0.0	38.7	48.0	-9.3	White
16	763.425k	38.4	+0.1	+0.1		+0.0	38.6	48.0	-9.4	White
17	775.962k	38.0	+0.2	+0.1		+0.0	38.3	48.0	-9.7	White
18	796.857k	37.6	+0.2	+0.1		+0.0	37.9	48.0	-10.1	White
19	790.589k	37.6	+0.2	+0.1		+0.0	37.9	48.0	-10.1	White
20	803.126k	37.4	+0.2	+0.1		+0.0	37.7	48.0	-10.3	White
21	830.289k	36.8	+0.2	+0.1		+0.0	37.1	48.0	-10.9	White
22	819.842k	36.7	+0.2	+0.1		+0.0	37.0	48.0	-11.0	White
23	859.542k	36.1	+0.2	+0.1		+0.0	36.4	48.0	-11.6	White
24	872.079k	36.0	+0.2	+0.1		+0.0	36.3	48.0	-11.7	White
25	888.795k	35.8	+0.2	+0.1		+0.0	36.1	48.0	-11.9	White
26	880.437k	35.2	+0.2	+0.1		+0.0	35.5	48.0	-12.5	White
27	1.259M	35.1	+0.2	+0.1		+0.0	35.4	48.0	-12.6	White
28	903.422k	34.9	+0.2	+0.1		+0.0	35.2	48.0	-12.8	White
29	922.227k	34.8	+0.2	+0.1		+0.0	35.1	48.0	-12.9	White
30	959.838k	34.3	+0.2	+0.1		+0.0	34.6	48.0	-13.4	White


CKC Laboratories, Inc.
Date: 02/01/2001
Time: 12:27:07
WO#: 75747
FCC B COND
Test Lead: White
Sequence#: 5
dBµV/m
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
FCC B COND
450KHz
1MHz
10MHz
30MHz

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, Or 97141 • 503 842-5577

Customer: **GTCO CalComp Corporation**
Specification: **FCC15.209**
Work Order #: **75747** Date: 5/1/2001
Test Type: **Maximized Emissions** Time: 10:55:18
Equipment: **Drawing Board Interactive** Sequence#: 35
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DBi 5246
S/N: none

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Drawing Board Interactive*	GTCO CalComp	DBi 5246	none
Power Supply 120V	Ault	P48091000C0X06	none

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	none

Test Conditions / Notes:

EUT is in receive only mode at 916 MHz. The Stylus is placed in contact with the writing surface of the EUT to initiate transmit. Unterminated cables are connected to the EUT USB, Serial & Printer Ports. The EUT is floor standing and is installed in a optional stand with the lower edge of the EUT 80 cm above the ground plane. The temperature was 67°F and the humidity was 47%. AC input was 120 V, 60 Hz. Frequency range investigated was 9 kHz to 33 MHz All readings are ambient readings.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Mag L dB	Cable dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	800.000k	35.0	+10.8	+0.6			+0.0	46.4	69.6	-23.2	None
2	1.750M	31.2	+10.7	+0.7			+0.0	42.6	70.0	-27.4	None
3	3.950M	25.3	+10.6	+0.8			+0.0	36.7	70.0	-33.3	None
4	21.250M	25.1	+10.1	+1.4			+0.0	36.6	70.0	-33.4	None
5	9.000M	22.5	+11.0	+1.1			+0.0	34.6	70.0	-35.4	None
6	370.000k	40.6	+10.8	+0.5			+0.0	51.9	96.2	-44.3	None
7	216.960k	44.0	+10.9	+0.4			+0.0	55.3	100.9	-45.6	None
8	56.440k	40.5	+12.8	+0.3			+0.0	53.6	112.6	-59.0	None
9	22.500k	43.6	+15.0	+0.3			+0.0	58.9	120.5	-61.6	None
10	112.500k	14.1	+11.2	+0.3			+0.0	25.6	106.6	-81.0	None

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, OR 97141 • 800 500-4EMC

Customer: **GTCO CalComp Corporation**
Specification: **FCC 15.109**
Work Order #: **75747** Date: 02/15/2001
Test Type: **Maximized Emissions** Time: 17:01:43
Equipment: **Drawing Board Interactive** Sequence#: 25
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DrawingBoard Interactive 5246
S/N: None

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
DrawingBoard Interactive 5246*	GTCO CalComp	DrawingBoard Interactive 5246	None
Power Supply 120V	Ault	P48091000C0X06	None
Junction Box	GTCO CalComp	Junction Box	None

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	None
Printer	HP	895Cxi	MY97G1924Z
Printer	HP	895Cxi	US8AM2Q0BK
Computer	HP	6730	KR02407056
Keyboard	HP	5129	B01634962
Mouse	HP	5182-8864	LZE01505537
Monitor	Mitsubishi	FFF8705SKTK	605501823

Test Conditions / Notes:

EUT is in receive only mode at 916 MHz. The stylus is in contact with the writing surface of the EUT. The Dbi5246 is connected to the Junction Box via a serial cable and the Junction Box is connected to the computer Serial port via a GTCO supplied cable assembly. The computer is running "InterWrite" software. The non-functional USB port of the Junction Box has an unterminated 1.5-meter USB cable attached. The Dbi5246 USB port has an unterminated USB cable attached (Dbi5246 is functioning in the serial mode) A printer is connected to the Dbi5246 Printer port via a parallel cable 1.5 meters long A printer is connected to the computer LPT1 port via a parallel cable 1.5 meters long. The temperature was 70°F and the humidity was 40%. Dbi5246 is powered by 120 V, 60 Hz. The Junction Box is powered from the computer Keyboard port. Frequency range investigated was 30 MHz to 5 GHz.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	Bilog		Amp-A	Cable	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	74.238M	52.2			-27.2	+2.2	+0.0	34.1	40.0	-5.9	Horiz
	QP		+6.9								
2	298.384M	46.6			-26.5	+4.4	+0.0	37.6	46.0	-8.4	Vert
			+13.1								
3	261.400M	46.8			-26.5	+4.1	+0.0	37.0	46.0	-9.0	Horiz
			+12.6								
4	144.040M	46.5			-26.9	+3.1	+0.0	33.9	43.5	-9.6	Vert
			+11.2								
5	88.500M	48.8			-27.0	+2.5	+0.0	32.9	43.5	-10.6	Vert
			+8.6								

6	299.900M	43.9	+13.1	-26.5	+4.4	+0.0	34.9	46.0	-11.1	Horiz
7	240.054M	45.0	+11.7	-26.5	+3.9	+0.0	34.1	46.0	-11.9	Vert
8	204.065M	45.5	+9.1	-26.7	+3.7	+0.0	31.6	43.5	-11.9	Vert
9	163.000M	43.4	+10.3	-26.8	+3.3	+0.0	30.2	43.5	-13.3	Vert
10	336.170M	40.6	+13.9	-26.6	+4.5	+0.0	32.4	46.0	-13.6	Vert
11	111.400M	42.4	+10.7	-27.1	+2.7	+0.0	28.7	43.5	-14.8	Vert
12	501.800M	35.5	+17.7	-27.8	+5.6	+0.0	31.0	46.0	-15.0	Vert
13	1095.000M	31.7	+24.1	-27.0	+8.5	+0.0	37.3	54.0	-16.7	Vert

Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, OR 97141 • 800 500-4EMC

Customer: **GTCO CalComp Corporation**
Specification: **FCC 15.109**
Work Order #: **75747** Date: 02/16/2001
Test Type: **Maximized Emissions** Time: 10:33:13
Equipment: **Drawing Board Interactive** Sequence#: 26
Manufacturer: GTCO CalComp Tested By: Mike Wilkinson
Model: DrawingBoard Interactive 5246
S/N: None

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
DrawingBoard Interactive 5246*	GTCO CalComp	DrawingBoard Interactive 5246	None
Power Supply 120V	Ault	P48091000C0X06	None

Support Devices:

Function	Manufacturer	Model #	S/N
Stylus	GTCO CalComp	CTW-DMS	None
Printer	HP	895Cxi	MY97G1924Z
Printer	HP	895Cxi	US8AM2Q0BK
Computer	HP	6730	KR02407056
Keyboard	HP	5129	B01634962
Mouse	HP	5182-8864	LZE01505537
Monitor	Mitsubishi	FFF8705SKTK	605501823

Test Conditions / Notes:

EUT is in receive only mode at 916 MHz. The stylus is in contact with the writing surface of the EUT. The Dbi5246 is connected to the computer USB port via a 15 foot USB cable. The computer is running "InterWrite" software. The non-functional USB port of the Junction Box has an unterminated 1.5-meter USB cable attached. The Dbi5246 Serial port has an unterminated Serial cable attached (Dbi5246 is functioning in the USB mode) A printer is connected to the Dbi5246 Printer port via a parallel cable 1.5 meters long A printer is connected to the computer LPT1 port via a parallel cable 1.5 meters long. The temperature was 70°F and the humidity was 40%. Dbi5246 is powered by 120 V, 60 Hz. The Junction Box is powered from the computer Keyboard port. Frequency range investigated was 30 MHz to 5 GHz.

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Bilog dB	dB	Amp-A dB	Cable dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	74.228M	49.2	+6.9		-27.2	+2.2	+0.0	31.1	40.0	-8.9	Horiz
2	899.327M	34.1	+22.8		-27.6	+7.4	+0.0	36.7	46.0	-9.3	Vert
3	298.390M	45.7	+13.1		-26.5	+4.4	+0.0	36.7	46.0	-9.3	Vert
4	74.233M	48.1	+6.9		-27.2	+2.2	+0.0	30.0	40.0	-10.0	Vert
5	111.150M	44.9	+10.7		-27.1	+2.7	+0.0	31.2	43.5	-12.3	Vert
6	181.700M	44.6	+8.9		-26.7	+3.5	+0.0	30.3	43.5	-13.2	Vert

7	240.600M	42.6	+11.8	-26.5	+3.9	+0.0	31.8	46.0	-14.2	Vert
8	1253.000M	28.0	+25.7	-26.7	+9.2	+0.0	36.2	54.0	-17.8	Vert
9	333.800M	31.5	+13.9	-26.6	+4.5	+0.0	23.3	46.0	-22.7	Vert