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EMC/SAFETY

ADDENDUM TO FC03-046

FOR THE

BRAKELIGHT SIGNAL TRANSMITTER SYSTEM, BX88188

FCC PART 15 SUBPART C SECTIONS 15.209, 15.249, SUBPART B SECTION 15.109 AND RSS 210

COMPLIANCE

DATE OF ISSUE: AUGUST 12, 2003

PREPARED FOR:

Genesys Development Systems
6209 East Sierra Marina
Mesa, AZ 85215

W.O. No.: 80891

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

Date of test: July 22-23, 2003

Report No.: FC03-046A

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	July 22-23, 2003
DATE OF RECEIPT:	July 22, 2003
PURPOSE OF TEST:	To demonstrate the compliance of the Brakelight Signal Transmitter System, BX88188 with the requirements for FCC Part 15 Subpart C Sections 15.209, 15.249, Subpart B Section 15.109 and RSS 210 devices. **Addendum A** is to include 15.31(e) data.
TEST METHOD:	ANSI C63.4 (1992), RSS 212
MANUFACTURER:	Genesys Development Systems 6209 East Sierra Marina Mesa, AZ 85215
REPRESENTATIVE:	Robert Donaldson
TEST LOCATION:	CKC Laboratories, Inc. 5473A Clouds Rest Mariposa, CA 95338

SUMMARY OF RESULTS

As received, the Genesys Development Systems Brakelight Signal Transmitter System, BX88188 was found to be fully compliant with the following standards and specifications:

FCC	Canadian RSS 210 Section	Test Description
15.109	ICES-003	Radiated Emissions
15.249(a)	6.2.2(m1)(1)	Field Strength Limitations
15.249(b)	NA	Point-to-Point Operations Limitations
15.249(c)	6.2.2(m1)(2)	Test Distance Requirement
15.249(d)	6.2.2(m1)(3)	Spurious Emissions Attenuation Requirement
15.249(e)	6.2.2(m1)(4)	Detector Functions
15.249(e)	NA	Peak to Average Limit Requirement
NA	6.2.2(m1)(5)	Cross Reference
NA	5.9.1	99% Emissions Bandwidth Requirement
NA	5.9.2	Emissions Designator
ANSI C63.4 (1992)	RSS 212	Test Method
FCC Site File 90477	Industry of Canada File No. IC 3082-B	

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply. Conducted emissions not required for this device.

APPROVALS

QUALITY ASSURANCE:

Steve Behm, Director of Engineering Services and Quality Assurance

Joyce Walker, Quality Assurance Administrative Manager

Mike Wilkinson, Lab Manager

TEST PERSONNEL:

Randy Clark, EMC Engineer

FCC 15.31(e) Voltage Variation

FREQUENCY MHz	CORRECTED READING dBµV/m 85%	CORRECTED READING dBµV/m 100%	CORRECTED READING dBµV/m 115%	SPEC LIMIT dBµV/m
916.438	91.5	92.4	91.0	93.9

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.31(e)
Test Distance: 3 meters

Test Conditions: EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Frequency Range Investigated: Carrier Frequency.

FCC 15.31(m) Number Of Channels
This device operates on a single channel.

FCC 15.33(a) Frequency Ranges Tested
15.109 Radiated Emissions: 30 kHz – 5 GHz
15.209/15.249 Radiated Emissions: 9 kHz – 10 GHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
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	1 GHz	10 GHz	1 MHz

FCC 15.203 Antenna Requirements
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.

FCC 15.205 Restricted Bands
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.

Eut Operating Frequency
The EUT was operating at 916.438 MHz.

Temperature And Humidity During Testing
The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION
The EUT tested by CKC Laboratories was representative of a production unit. The EUT transmits a discrete signal using FSK. The device has a power output of 0dbm. Its intended purpose is for transmitting the brake signal in a towed vehicle, and illuminating a LED in the towing vehicle.

EQUIPMENT UNDER TEST

Brakelight Signal Transmitter
Manuf: Genesys Development Systems
Model: BX88188
Serial: BX8818800000100001
FCC ID: pending

PERIPHERAL DEVICES

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

Brakelight Signal Receiver
Manuf: Genesys Development Systems
Model: BX88188
Serial: BX8818800000200001
FCC ID: DoC

REPORT OF MEASUREMENTS

The following tables report the worst case emissions levels recorded during the tests performed on the EUT. 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: FCC 15.109 Six Highest Radiated Emission Levels

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB	dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
825.000	19.2	21.8	-27.7	5.6		18.9	46.0	-27.1	V
825.000	18.6	21.8	-27.7	5.6		18.3	46.0	-27.7	H
905.000	19.7	22.9	-27.3	6.2		21.5	46.0	-24.5	V
905.000	18.7	22.9	-27.3	6.2		20.5	46.0	-25.5	H
916.450	20.1	23.0	-27.3	6.2		22.0	46.0	-24.0	V
916.450	19.5	23.0	-27.3	6.2		21.4	46.0	-24.6	H

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart B Section 15.109 Class B
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Testing performed with the receiver latched, this represents worst case emissions. In order to attain a latched configuration, input power is supplied to both transmitter and reciever, then the input power to the transmitter is disconnected. Both the transmitter and reciever are located on the table. Frequency Range Investigated: 30MHz to 5GHz. **Data represent ambient signal levels. No EUT emissions detected within 20dB of the limit in this frequency range.**

Table 2: FCC 15.249 (a) Fundamental Emission Levels

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
916.438	90.5	23.0	-27.3	6.2		92.4	93.9	-1.5	V
916.438	90.3	23.0	-27.3	6.2		92.2	93.9	-1.7	H
916.438	90.2	23.0	-27.3	6.2		92.1	93.9	-1.8	H
916.438	88.6	23.0	-27.3	6.2		90.5	93.9	-3.4	V

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.249 (a)
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Frequency Range Investigated: Carrier Frequency.

Table 3: FCC 15.249 (d)/15.209 Six Highest Radiated Emission Levels

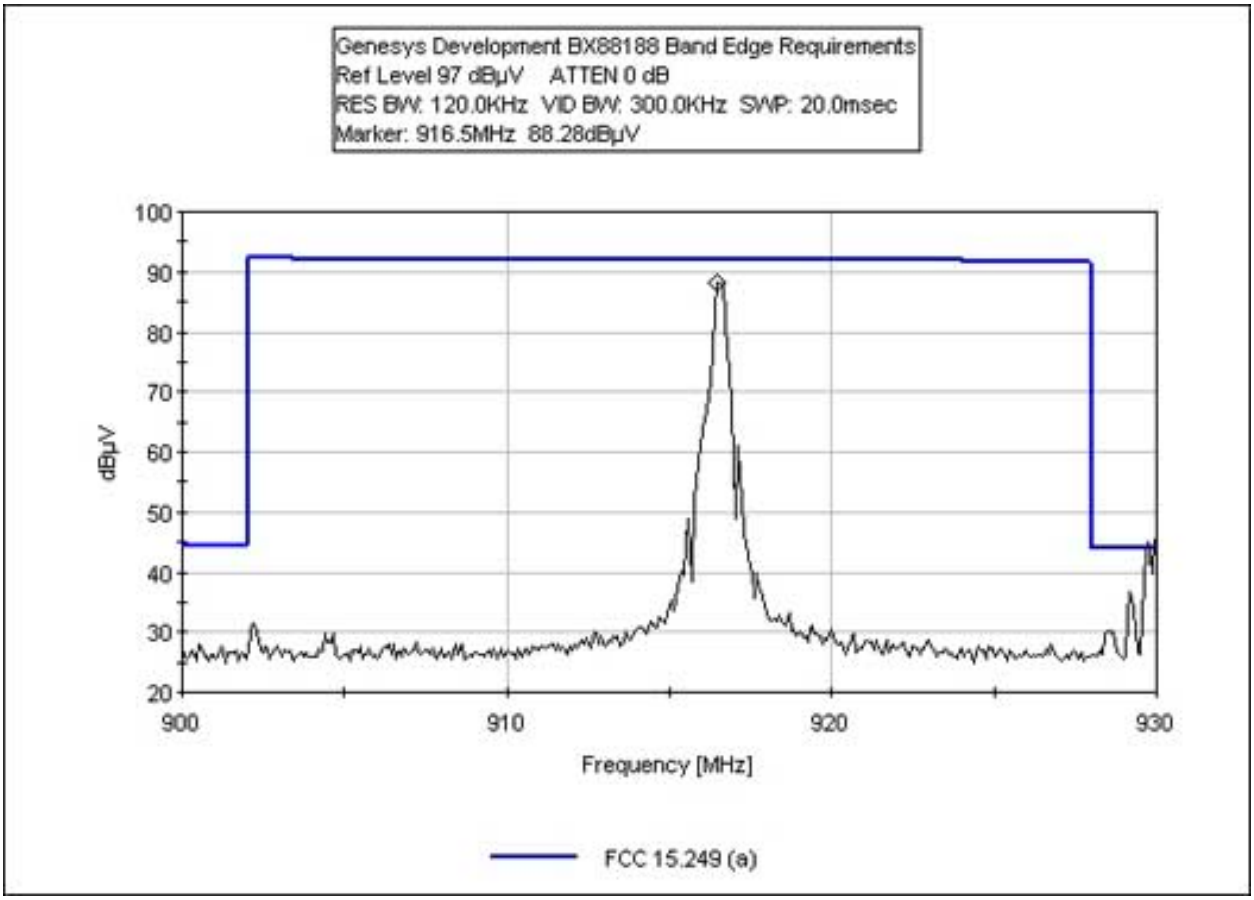
FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB	dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
902.125	38.3	22.8	-27.3	6.2		40.0	46.0	-6.0	H
1832.800	46.5	26.3	-35.3	8.8		46.3	54.0	-7.7	H
1833.480	46.6	26.3	-35.3	8.8		46.4	54.0	-7.6	V
2749.440	42.7	29.4	-35.0	11.2		48.3	54.0	-5.7	V
2749.740	44.4	29.4	-35.0	11.2		50.0	54.0	-4.0	H
3665.740	38.7	33.3	-35.0	13.4		50.4	54.0	-3.6	V

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.249 (d)/15.209
Test Distance: 3 Meters

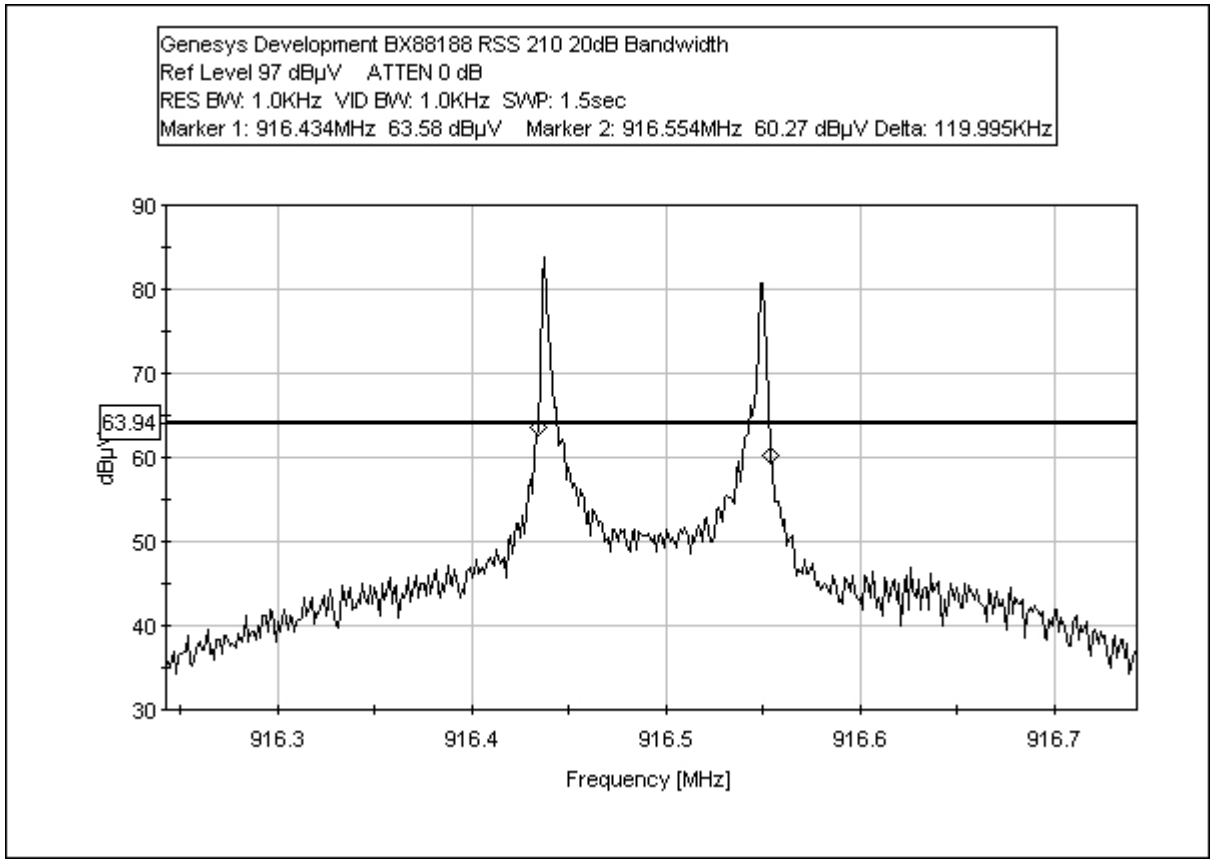
NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Testing performed with the brake light signal on, this represents the worst case for emissions. Frequency Range Investigated: 9kHz to 10GHz. **No EUT emissions detected within 20 dB of the limit below 30MHz.**

FCC 15.249 Band Edge Plot



RSS 210 20dB Band Width



MEASUREMENT UNCERTAINTY

TEST	HIGHEST UNCERTAINTY
Radiated Emissions	+/- 2.94 dB

Note: Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Statements of compliance are based on the nominal values only.

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 emissions data of the EUT 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)

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 radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For frequencies 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.

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.

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

Antenna Conducted Emissions

For measuring the signal strength on the RF output port of the EUT, the spectrum analyzer was connected directly to the EUT. The sweep time of the analyzer was adjusted so that the spectrum analyzer readings were always in a calibrated range. All readings within 20 dB of the limit were recorded.

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.
During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 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, antenna height, and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

APPENDIX A

TEST SETUP PHOTOGRAPHS

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Back View

APPENDIX B

TEST EQUIPMENT LIST

15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
Cable, Site B		11/18/2002	11/18/2003	0
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
Cable H&S 25'	90148405	01/21/2003	01/21/2004	0
Cable, WL Gore 2'	149047	04/10/2003	04/10/2004	0
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010

15.31(e)

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
HP 6205C Dual Power Supply	2228A01775	06/05/2003	06/05/2005	672

15.249 (a)

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327

15.209/15.249(d)

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8593EM Spectrum Analyzer	3624A00159	05/12/2003	05/12/2005	2111
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2004	99
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2003	2010
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	1991
EMCO 3115 Horn Antenna	9006-3413	11/25/2002	11/25/2003	327
EMCO Loop Antenna	2078	08/23/2002	08/23/2003	432
Cable H&S 35'	90148402	01/21/2003	01/21/2004	0
Cable H&S 25'	90148405	01/21/2003	01/21/2004	0
Cable, WL Gore 2'	149047	04/10/2003	04/10/2004	0
Cable, Site B		11/18/2002	11/18/2003	0

APPENDIX C:

MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Genesys Development Systems**
Specification: **15.109 CLASS B**
Work Order #: **80891** Date: 07/23/2003
Test Type: **Maximized Emissions** Time: 11:27:04
Equipment: **Brakelight Signal Transmitter System** Sequence#: 4
Manufacturer: Genesys Development Tested By: Randal Clark
Model: BX88188
S/N: BX8818800000200001

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

Function	Manufacturer	Model #	S/N
Brakelight Signal Receiver	Genesys Development	BX88188	BX8818800000200001

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Testing performed with the receiver latched, this represents worst case emissions. In order to attain a latched configuration, input power is supplied to both transmitter and reciever, then the input power to the transmitter is disconnected. Both the transmitter and reciever are located on the table. Frequency Range Investigated: 30MHz to 5GHz. Data represent ambient signal levels. No EUT emissions detected within 20dB of the limit in this frequency range.

Transducer Legend:

T1=Amp - S/N 604 T2=Bilog Site B
T3=Cable - 10 Meter

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

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	916.450M	20.1	-27.3	+23.0	+6.2		+0.0	22.0	46.0	-24.0	Vert
2	905.000M	19.7	-27.3	+22.9	+6.2		+0.0	21.5	46.0	-24.5	Vert
3	916.450M	19.5	-27.3	+23.0	+6.2		+0.0	21.4	46.0	-24.6	Horiz
4	905.000M	18.7	-27.3	+22.9	+6.2		+0.0	20.5	46.0	-25.5	Horiz
5	825.000M	19.2	-27.7	+21.8	+5.6		+0.0	18.9	46.0	-27.1	Vert
6	825.000M	18.6	-27.7	+21.8	+5.6		+0.0	18.3	46.0	-27.7	Horiz
7	35.000M	22.4	-27.3	+15.3	+0.8		+0.0	11.2	40.0	-28.8	Vert
8	35.000M	16.9	-27.3	+15.3	+0.8		+0.0	5.7	40.0	-34.3	Horiz

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Genesys Development Systems**
Specification: **FCC 15.249 (a)/15.31(e)**
Work Order #: **80891** Date: 08/12/2003
Test Type: **Maximized Emissions** Time: 09:20:35
Equipment: **Brakelight Signal Transmitter System** Sequence#: 2
Manufacturer: Genesys Development Tested By: Randal Clark
Model: BX88188
S/N: BX8818800000100001

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

Function	Manufacturer	Model #	S/N
Brakelight Signal Transmitter*	Genesys Development	BX88188	BX8818800000100001

Support Devices:

Function	Manufacturer	Model #	S/N
Brakelight Signal Receiver	Genesys Development	BX88188	BX8818800000200001

Test Conditions / Notes:

EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Frequency Range Investigated: Carrier Frequency

Transducer Legend:

T1=Amp - S/N 604 T2=Bilog Site B
T3=Cable - 10 Meter

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

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	916.438M	90.5	-27.3	+23.0	+6.2		+0.0	92.4	93.9	-1.5	Vert
									12VDC (Nominal Voltage)		
2	916.438M	90.5	-27.3	+23.0	+6.2		+0.0	92.4	93.9	-1.5	Vert
									Brakelight ON		
3	916.438M	90.3	-27.3	+23.0	+6.2		+0.0	92.2	93.9	-1.7	Horiz
									Brakelight OFF		
4	916.438M	90.2	-27.3	+23.0	+6.2		+0.0	92.1	93.9	-1.8	Horiz
									Brakelight ON		
5	916.438M	89.6	-27.3	+23.0	+6.2		+0.0	91.5	93.9	-2.4	Vert
									10.2VDC (-15% Nominal Voltage)		
6	916.438M	89.1	-27.3	+23.0	+6.2		+0.0	91.0	93.9	-2.9	Vert
									13.8VDC (+15% Nominal Voltage)		
7	916.438M	88.6	-27.3	+23.0	+6.2		+0.0	90.5	93.9	-3.4	Vert
									Brakelight OFF		

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Genesys Development Systems**
Specification: **FCC 15.249(d) / 15.209**
Work Order #: **80891** Date: 07/23/2003
Test Type: **Maximized Emissions** Time: 09:17:12
Equipment: **Brakelight Signal Transmitter System** Sequence#: 3
Manufacturer: Genesys Development Tested By: Randal Clark
Model: BX88188
S/N: BX8818800000100001

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

Function	Manufacturer	Model #	S/N
Brakelight Signal Transmitter*	Genesys Development	BX88188	BX8818800000100001

Support Devices:

Function	Manufacturer	Model #	S/N
Brakelight Signal Receiver	Genesys Development	BX88188	BX8818800000200001

Test Conditions / Notes:

EUT functions as a brake light signal transmitting system for vehicular use. The system consists of a transmitter and separate receiver. EUT is powered by 12VDC via an AC/DC power supply. Data represents the highest emissions from three orthogonal orientations of the EUT. Testing performed with the brake light signal on, this represents the worst case for emissions. Frequency Range Investigated: 9kHz to 10GHz. No EUT emissions detected within 20 dB of the limit below 30MHz.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site B
T3=Cable - 10 Meter	T4=Amp - S/N 301
T5=Horn AN 00656 1-18 GHz (Mariposa)	T6=Cable HF P01527
T7=Cable 35' Blue SMA CKC P1352	T8=Cable 25' blue SMA ANP01353

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

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	3665.740M	38.7	+0.0	+0.0	+0.0	-35.0	+0.0	50.4	54.0	-3.6	Vert
			+33.3	+0.5	+6.7	+6.2					
2	2749.740M	44.4	+0.0	+0.0	+0.0	-35.0	+0.0	50.0	54.0	-4.0	Horiz
			+29.4	+0.4	+5.6	+5.2					
3	2749.440M	42.7	+0.0	+0.0	+0.0	-35.0	+0.0	48.3	54.0	-5.7	Vert
			+29.4	+0.4	+5.6	+5.2					
4	902.125M	38.3	-27.3	+22.8	+6.2	+0.0	+0.0	40.0	46.0	-6.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
5	1833.480M	46.6	+0.0	+0.0	+0.0	-35.3	+0.0	46.4	54.0	-7.6	Vert
			+26.3	+0.3	+4.4	+4.1					
6	1832.800M	46.5	+0.0	+0.0	+0.0	-35.3	+0.0	46.3	54.0	-7.7	Horiz
			+26.3	+0.3	+4.4	+4.1					
7	825.308M	37.2	-27.7	+21.8	+5.6	+0.0	+0.0	36.9	46.0	-9.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
8	5498.340M	27.3	+0.0	+0.0	+0.0	-34.7	+0.0	44.5	54.0	-9.5	Vert
			+34.8	+0.5	+8.6	+8.0					

9	902.130M	34.4	-27.3 +0.0	+22.8 +0.0	+6.2 +0.0	+0.0 +0.0	+0.0	36.1	46.0	-9.9	Vert
10	5498.280M	26.5	+0.0 +34.8	+0.0 +0.5	+0.0 +8.6	-34.7 +8.0	+0.0	43.7	54.0	-10.3	Horiz
11	4582.040M	29.0	+0.0 +32.7	+0.0 +0.6	+0.0 +7.6	-34.5 +7.1	+0.0	42.5	54.0	-11.5	Vert
12	4581.980M	29.0	+0.0 +32.7	+0.0 +0.6	+0.0 +7.6	-34.5 +7.1	+0.0	42.5	54.0	-11.5	Horiz
13	825.358M	34.5	-27.7 +0.0	+21.8 +0.0	+5.6 +0.0	+0.0 +0.0	+0.0	34.2	46.0	-11.8	Vert
14	3665.680M	27.9	+0.0 +33.3	+0.0 +0.5	+0.0 +6.7	-35.0 +6.2	+0.0	39.6	54.0	-14.4	Horiz