Guidant Inc.

Zoom Latitude Programming System Model 3120

February 18, 2005

Report No. GDMN0037.1 Revision 01

Report Prepared By



www.nwemc.com 1-888-EMI-CERT

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22975 NW Evergreen Parkway Suite 400 Hillsboro, Oregon 97124

Certificate of Test

Issue Date: January 20, 2005
Guidant Inc.
Zoom Latitude Programming System
Model 3120

	Emissions		
Specification	Test Method	Pass	Fail
FCC 15.249(a):2004 Field Strength of Fundamental	ANSI C63.4:2003		
FCC 15.249(a):2004 Field Strength of Harmonics	ANSI C63.4:2003		
FCC 15.207:2004 Conducted AC Powerline Emissions	ANSI C63.4:2003		

Modifications made to the product
See the Modifications section of this report

Approved By:	
Clean	Myon
Dean Ghizzone,	President

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested, the specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision History

Revision 05/05/03

Revision Number	Description	Date	Page Number
01	Changed L1 Line Measurement to N (Neutral) in Conducted Emissions Test	2/18/05	26

FCC: Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities, have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.





NVLAP: Northwest EMC, Inc. is recognized under the United States Department of Commerce, National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 89/336/EEC, ANSI C63.4, MIL-STD 461E, DO-160D and SAE J1113. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



200629-0 200630-0 200676-0

Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



CAB: Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement



TÜV Product Service: Included in TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV's CARAT Program requirements. Certificate No. USA0401C



TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.



NEMKO: Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



Technology International: Assessed in accordance with ISO Guide 25 defining the general international requirements for the competence of calibration and testing laboratories and with ITI assessment criteria LACO196. Based upon that assessment Interference Technology International, Ltd., has granted approval for specifications implementing the EU Directive on EMC (89/336/EEC and amendments). The scope of the approval was provided on a Schedule of Assessment supplied with the certificate and is available upon request.



Australia/New Zealand: The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body. (NVLAP)



VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (Registration Nos. - Hillsboro: C-1071 and R-1025, Irvine: C-2094 and R-1943, Newberg: C-1877 and R-1760, Sultan: R-871, C-1784 and R-1761)



BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.



GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



SCOPE

For details on the Scopes of our Accreditations, please visit: http://www.nwemc.com/scope.asp

What is measurement uncertainty?

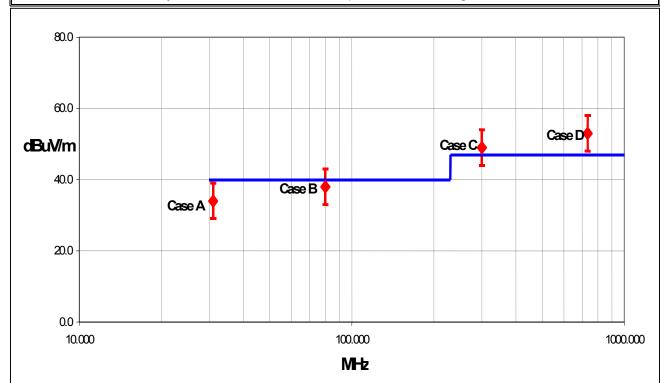
When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. The following statement of measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" value. In the case of transient tests (ESD, EFT, Surge, Voltage Dips and Interruptions), the test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements.

The following documents were the basis for determining the uncertainty levels of our measurements:

- "ISO Guide to the Expression of Uncertainty in Measurements", October 1993
- "NIS81: The Treatment of Uncertainty in EMC Measurements", May 1994
- "IEC CISPR 16-3 A1 f1 Ed.1: Radio-interference measurements and statistical techniques", December 2000

How might measurement uncertainty be applied to test results?

If the diamond marks the measured value for the test and the vertical bars bracket the range of + and – measurement uncertainty, then test results can be interpreted from the diagram below.



Test Result Scenarios:

Case A: Product complies.

Case B: Product conditionally complies. It is not possible to say with 95% confidence that the product complies.

Case C: Product conditionally does not comply. It is not possible to say with 95% confidence that the product does not comply.

Case D: Product does not comply.



Radiated Emissions ≤ 1 GHz		Value (dB)				
	Probability	Bico	nical	Log Pe	eriodic	D	ipole
	Distribution	Ante	enna	Ante	enna	An	tenna
Test Distance		3m	10m	3m	10m	3m	10m
Combined standard	normal	+ 1.86	+ 1.82	+ 2.23	+ 1.29	+ 1.31	+ 1.25
uncertainty u _c (y)		- 1.88	- 1.87	- 1.41	- 1.26	- 1.27	- 1.25
Expanded uncertainty <i>U</i>	normal (k=2)	+ 3.72	+ 3.64	+ 4.46	+ 2.59	+ 2.61	+ 2.49
(level of confidence ≈ 95%)		- 3.77	- 3.73	-2.81	- 2.52	- 2.55	- 2.49

Radiated Emissions > 1 GHz	Value (dB)		
	Probability Distribution	Without High Pass Filter	With High Pass Filter
Combined standard uncertainty $u_c(y)$	normal	+ 1.29 - 1.25	+ 1.38 - 1.35
Expanded uncertainty <i>U</i> (level of confidence ≈ 95%)	normal (k=2)	+ 2.57 - 2.51	+ 2.76 2.70

Conducted Emissions		
	Probability	Value
	Distribution	(+/- dB)
Combined standard uncertainty <i>uc(y)</i>	normal	1.48
Expanded uncertainty U (level of confidence ≈ 95 %)	normal (k = 2)	2.97

Radiated Immunity		
	Probability	Value
	Distribution	(+/- dB)
Combined standard uncertainty uc(y)	normal	1.05
Expanded uncertainty <i>U</i> (level of confidence ≈ 95 %)	normal (k = 2)	2.11

Conducted Immunity		
	Probability	Value
	Distribution	(+/- dB)
Combined standard uncertainty <i>uc(y)</i>	normal	1.05
Expanded uncertainty <i>U</i>	normal (k = 2)	2.10
(level of confidence ≈ 95 %)	Hormai (K – 2)	2.10

Legend

 $u_c(y)$ = square root of the sum of squares of the individual standard uncertainties

 $\it U$ = combined standard uncertainty multiplied by the coverage factor: $\it k$. This defines an interval about the measured result that will encompass the true value with a confidence level of approximately 95%. If a higher level of confidence is required, then $\it k$ =3 (CL of 99.7%) can be used. Please note that with a coverage factor of one, uc(y) yields a confidence level of only 68%.

Facilities



California

Orange County Facility Labs OC01 – OC13

41 Tesla Ave. Irvine, CA 92618 (888) 364-2378 FAX (503) 844-3826



Oregon

Evergreen Facility

Labs EV01 - EV10

22975 NW Evergreen Pkwy., Suite 400 Hillsboro, OR 97124 (503) 844-4066 FAX (503) 844-3826

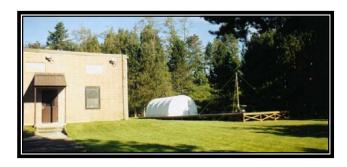


Oregon

Trails End Facility

Labs TE01 - TE03

30475 NE Trails End Lane Newberg, OR 97132 (503) 844-4066 FAX (503) 537-0735



Washington

Sultan Facility

Labs SU01 - SU07

14128 339th Ave. SE Sultan, WA 98294 (888) 364-2378 FAX (360) 793-2536

Product Description

Revision 10/3/03

I mParty Requesting the Te	st
Company Name:	Guidant Inc.
Address:	4100 Hamline Avenue North
City, State, Zip:	Saint Paul, MN 55112-5798
Test Requested By:	Holli Pheil
Model:	Zoom Latitude Programming System Model 3120
First Date of Test:	December 20, 2004
Last Date of Test:	February 11, 2005
Receipt Date of Samples:	December 16, 2004
Equipment Design Stage:	Production
Equipment Condition:	No visual damage.

Information Provided by the Party Requesting the Test

Clocks/Oscillators:	40MHz, 33.3MHz, 100MHz, 66.6MHz, 4.1MHz, 41.667MHz, 6MHz, 32.768kHz, 14.318MHz, 16.67MHz, 24MHz, 25MHz, 48MHz, 16MHz, 10MHz, 210.38MHz, 833.52MHz, 13MHz
I/O Ports:	Parallel, USB, VGA, PCMCIA, ECG, Analog Output, Patient Simulator, Telemetry Wand

Functional Description of the EUT (Equipment Under Test):

The ZOOM® LATITUDE™ Programming System, which includes the Model 3120 Programmer/Recorder/Monitor (PRM), is a portable cardiac rhythm management system designed to be used with certain models of Guidant implantable pulse generators. It is a composite system operating under 15.209 using the telemetry wand and 15.249 with the single provided antenna. The Model 3120 PRM is designed to be used only with the Model 6577 Sterilizable Telemetry Wand. The Model 3120 is provided with only one available antenna, it is a RP-SMA to meet the unique antenna requirements of 47 CFR 15.203.

Client Justification for EUT Selection:

The product is a representative production sample.

Client Justification for Test Selection:

Testing required for FCC approval.

Revision 4/28/03

	Equipment modifications						
Item	Test	Date	Modification	Note	Disposition of EUT		
1	Conducted AC Powerline Emissions	12/20/2004	No EMI suppression devices were added or modified during this test.	Same configuration as delivered.	Unit returned to Guidant upon completion of Conducted AC Powerline Emissions Testing for modification by client. Unit was then returned to Northwest EMC for completion of remaining tests.		
2	Field Strength of Fundamental	02/09/2005	No EMI suppression devices were added or modified during this test.	Same configuration as delivered.	EUT remained at Northwest EMC.		
3	Spurious Radiated Emissions	02/11/2005	No EMI suppression devices were added or modified during this test.	Same configuration as delivered.	EUT remained at Northwest EMC.		

Field Strength of Fundamental

Revision 10/1/03

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. 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:	Operating Modes Investigated:
Transmitting External Antenna	ransmitting External Antenna
Transmitting Internal Antenna	Fransmitting Internal Antenna

Da	ta	Rates	Investi	gated:
	-			

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120VAC/60Hz

Frequency Range Inv	vestigated:		
Start Frequency	902 MHz	Stop Frequency	928 MHz

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

EUT and Peripherals in Test Setup Bo	EUT and Peripherals in Test Setup Boundary												
Description	Manufacturer	Model/Part Number	Serial Number										
Telemetry Wand	Guidant	6577	N/A										
USB Keyboard	Logitech	N/A	N/A										
USB Flash Hard Drive	N/A	Pen Drive 2.0	N/A										
Zoom Latitude Programming System	Guidant	Model 3120	050596										
PCMCIA Card	D-Link	10/100 Lan	B203146002099										

Field Strength of Fundamental

Revision 10/1/03

Cables									
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2				
AC Power	Yes	1.8	No	Zoom Latitude Programming System	AC Mains				
Parallel	Yes	1.6	No	Zoom Latitude Programming System	Unterminated				
Video	No	8.0	Yes	Zoom Latitude Programming System	Unterminated				
USB	No	1.8	No	Zoom Latitude Programming System	keyboard				
ECG	Yes	4.0	No	Zoom Latitude Programming System	Unterminated				
Slave Stimulator	Yes	3.0	No	Zoom Latitude Programming System	Unterminated				
Telemetry	Yes	3.0	No	Zoom Latitude Programming System	Telemetry Wand				
Analog Output	No	2.0	No	Zoom Latitude Programming System	Unterminated				
Telecom	No	1.8	No	PCMCIA Card Unterminate					
PA = Cab	le is perman	ently attach	ed to the de	vice. Shielding and/or presence of ferrite may	oe unknown.				

Measurement Equipment												
Description	Manufacturer	Model	Identifier	Last Cal	Interval							
Antenna, Biconilog	EMCO	3142	AXJ	09/08/2003	24 mo							
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/07/2004	13 mo							
Receiver	Schaffner	SCR 3101	ARC	04/28/2003	24 mo							

Test Description

Requirement: the field strength of fundamental emission from intentional radiators operated within these frequency bands shall comply with the limits specified in 15.249(a). The Quasi-peak level must comply with the limits specified in 47 CFR 15.249.

<u>Configuration</u>: The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2001). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Bandwidths Used for Me	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 n	nade using the bandwidths	and detectors specified. No	video filter was used.											



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	902.50 902.50		58.9 49.9		31.4 31.4	166.0 253.0		3.0 3.0	0.0 0.0	H-Bilog V-Bilog	QP QP	0.0 0.0	90.3 81.3		-3 -12

	RTHWEST		F	RADI	ATE	D EM	IISSI	ONS	DA	ΓA S	HEE			ACQ 2005.1.3 EMI 2005.1.3
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	914 914		60.6 53.2	31.5 31.5	152.0 186.0	1.0 1.0	3.0 3.0		H-Bilog V-Bilog	QP QP	0.0 0.0	92.1 84.7	94.0 94.0	-1.9 -9.3

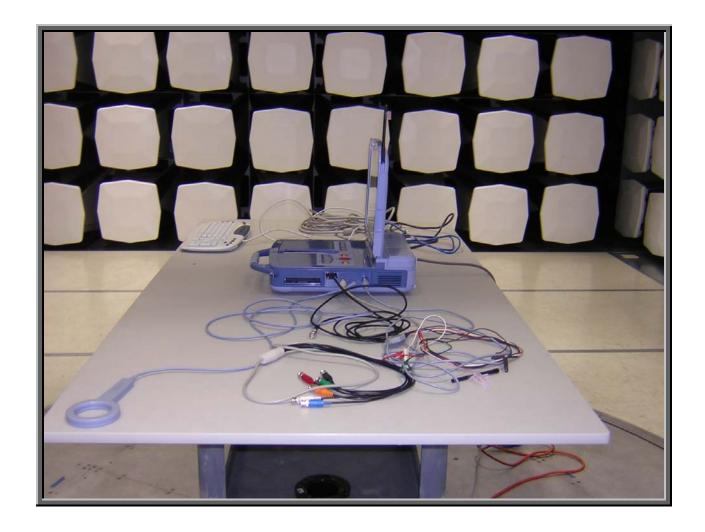
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			Jaemi Suh					Power:	120VAC/6	0Hz		Job Site:		
	PECIFIC									,				
S SAMPL			FCC 15.24	9:2004					Method:	ANSI C63	.4:2003			
Radia	ated Emiss	ions: F	ield Strength					nplifier Gain + [ation Factor + E			+ External Atter	nuation		
COMME None	ENTS													
EUT OP	PERATIN	IG M	ODES											
927.5 MH		- W	ODLO											
		ROM	TEST STA	NDARD										
No deviat													Run#	
Pass														5
Other										19	2	5		
											Teste	d Bv		-
											10010	u Dy.		
	100.0 -													_
	90.0 -												•	_
	80.0 -												•	
	70.0 -													
E	60.0 -													
dBuV/m	50.0 -													
쁑	40.0 -													
	30.0 -													
	20.0 -													
	10.0 -													
	0.0 -													
	900	ິດດດ		905.000		910.000		915.000		920.000	(925.000	(930.000
	300	.000		300.000		310.000		MHz		320.000	`	320.000	•	700.000
	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)
	927. 927.		60.7 52.6	31.5 31.5	145.0 186.0	1.0 1.0	3.0 3.0	0.0	H-Bilog V-Bilog	QP QP	0.0	92.2 84.1	94.0 94.0	

	RTHWEST		F	RADI	ATE	D EM	IISSI	ONS	DA	ΓA S	HEE	Γ		ACQ 2005.1.3 EMI 2005.1.3
				ude Progr	amming Sy	/stem					٧		GDMN005	5
Se	rial Num										_		02/09/05	
	Attend		Guidant In	С.							Te	mperature: Humidity:		
Cı	ust. Ref.										Barometr	ic Pressure		
			Jaemi Suh					Power:	120VAC/6	0Hz		Job Site:		
	PECIFIC									,				
	pecificat		FCC 15.24	9:2004					Method:	ANSI C63	.4:2003			
Radia	ated Emiss	ions: F	ield Strength					nplifier Gain + [ation Factor + E			+ External Atter	nuation		
COMME None	ENTS													
	PERATIN		ODES											
927.5 MH	Iz Externa	I												
DEVIAT No deviat		ROM	TEST STA	NDARD										
RESULT Pass	TS												Run #	16
Other														
Other										1	-	5		
											Teste	d By:		=
	100.0 -													
	90.0 -												•	
	80.0 -													
	70.0 -													
ε	60.0 -													
dBuV/m	50.0													
ס	40.0 -													
	30.0 -													
	20.0 -													
	10.0 -													
	900	.000		905.000		910.000		915.000 MHz		920.000	<u> </u>	925.000	(930.000
	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)
	927. 927.		60.4 55.8	31.5 31.5	130.0 169.0	1.0 1.0	3.0 3.0		V-Bilog H-Bilog	QP QP	0.0 0.0	91.9 87.3	94.0 94.0	







Conducted Emissions

Revision 1/4/2005

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. All of the EUT parameters listed below were investigated. This includes, but may not be limited to, CPU speeds, video resolution settings, operational modes, and input voltages.

Operating Modes Investigated:	
High Band	
Mid Band	
Low Band	

Power Input Settings Investigated:

120 VAC, 60 Hz

Software\Firmware A	Applied During Test		
Operating system	QNX/Red Hat LINUX	Version	Unknown
Exercise software	Standard Production Software	Version	Unknown
Description			
The system was tester	d using standard operating production software	to exercise the	e functions of the

The system was tested using standard operating production software to exercise the functions of the device during the testing.

EUT and Peripherals in Test Setup Bou	ındary		
Description	Manufacturer	Model/Part Number	Serial Number
Telemetry Wand	Guidant	6577	N/A
USB Keyboard	Logitech	N/A	N/A
USB Flash Hard Drive	N/A	Pen Drive 2.0	N/A
PCMCIA Card	D-Link	10/100 Lan	B203146002099
Zoom Latitude Programming System	Guidant	Model 3120	050574

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	Yes	1.8	No	Zoom Latitude Programming System	AC Mains
Parallel	Yes	1.6	No	Zoom Latitude Programming System	Unterminated
Video	No	8.0	Yes	Zoom Latitude Programming System	Unterminated
USB	No	1.8	No	Zoom Latitude Programming System	keyboard
ECG	Yes	4.0	No	Zoom Latitude Programming System	Unterminated
Slave Stimulator	Yes	3.0	No	Zoom Latitude Programming System	Unterminated
Telemetry	Yes	3.0	No	Zoom Latitude Programming System	Telemetry Wand
Analog Output	No	2.0	No	Zoom Latitude Programming System	Unterminated
Telecom	No	1.8	No	PCMCIA Card	Unterminated
PA = Cab	le is perman	ently attached	to the devi	ce. Shielding and/or presence of ferrite may be	unknown.

Conducted Emissions

Revision 1/4/2005

Measurement Equipm	nent				
Description	Manufacturer	Model	Identifier	Last Cal	Interval
LISN	Solar	9252-50-24-BNC	LIA	12/16/2003	16 mo
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/07/2004	13 mo
Receiver	Schaffner	SCR 3101	ARC	04/28/2003	24 mo

Test Description

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

Measurement Bandwidt	hs		
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:

	EMC	C	ON	IDI	JC	TED	EM	ISSIC	DNS	DA	TA SI	HEET		12/14
		Zoom Latitud	le Progr	ammin	g Sys	tem						Work Order:		37
Se	erial Number:	050574 Guidant Inc.										Date: Temperature:	12/20/04	
	Attendees:											Humidity:		
С	ust. Ref. No.:										Barome	etric Pressure		
		Jonathan Per	ng					Power:	120VAC/	60Hz		Job Site:	OC10	
	SPECIFICATION:	IONS FCC 15.207 A	C Powe	rlina C	ondu.	cted Emis	eione:200	14	Method	I. VNSI	63.4:2003			
			C F OW	Jillie C	onuu	Clea Lillis	310113.200	,-	illotilot	ANOI C	703.4.2003			
	E CALCULA ated Emissions:	Field Strength = N	Measured I	Level + A	ntenna	Factor + Cab	le Factor - A	mplifier Gain +	Distance Adj	ustment Fa	ctor + External A	ttenuation		
	cted Emissions: ENTS	Adjusted Level =	Measured	Level + 1	Transdu	cer Factor +	Cable Attenu	uation Factor + I	External Atte	nuator				
OI	PERATING N		Frequenc	y Band 9	02.5 MI	Hz; External	US Antenna	1.						
ΙΑ	TIONS FROM	M TEST STANI	DARD											
	tions. .TS										Line		Run#	
;	.10										LIIIC	L1	rtuii #	1
r														
										9	13_			<u> </u>
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						1								
	0					1				10				10
	0.1													
								MHz						
		Amplitude		1		Transducer	Cable	MHz External Attenuation				Adjusted	Spec. Limi	Compa

NORTHWEST		COND	UCTE	D EN	IISSIC	DNS	DAT	A SH	IEET		12/14
	UT: Zoom Latitu	ide Programm	ing System					١	Work Order:		37
	ber: 050574 ner: Guidant Inc							т.	Date: emperature:	12/20/04	
	ees: None	<u> </u>						10	Humidity:		
Cust. Ref.								Baromet	ric Pressure		
	by: Jonathan Po	eng			Power:	120VAC/6	0Hz		Job Site:	OC10	
Specificat	ion: FCC 15.207	AC Powerline	Conducted F	missions:20	104	Method:	ANSI C63	4.2003			
		AG I GWGIIIIG	- Conductou L				74101 000	.4.2000			
PLE CALC adiated Emiss	ions: Field Strength =	: Measured Level +	Antenna Factor	+ Cable Factor -	Amplifier Gain + I	Distance Adju	stment Factor	+ External Atte	nuation		
nducted Emiss	ions: Adjusted Level	= Measured Level	+ Transducer Fac	tor + Cable Atter	nuation Factor + E	xternal Atten	uator				
OPERATING OPERATING IN		v Frequency Band	1 902.5 MHz; Ext	ernal US Antenr	na.						
	ROM TEST STAM	NDARD									
ULTS								Line		Run#	
3									N		2
er											
							41	3_			
								Teste	ed By:		
80											$\overline{}$
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10											+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$
0 —	1							-			
0.1			1				10				10
					MHz						
Freq	Amplitude		Transdu	ıcer Cable	External Attenuation		Detector		Adjusted	Spec. Limit	Compa

NORTHWEST EMC	CONDUCTED	EMISSIC	ONS DAT	A SHEET	12/14
	JT: Zoom Latitude Programming System				GDMN0037
Serial Numb	er: 050574 er: Guidant Inc.			Date: Temperature:	12/20/04
	es: None			Humidity:	
Cust. Ref. N				Barometric Pressure	
	by: Jonathan Peng	Power:	120VAC/60Hz	Job Site:	OC10
T SPECIFICA	ATIONS on: FCC 15.207 AC Powerline Conducted Emise	olono,2004	Mothod: ANSI C62	4,2002	
		sions:2004	Method: ANSI C63.	4:2003	
PLE CALCU adiated Emission	JLATIONS ons: Field Strength = Measured Level + Antenna Factor + Cabl	le Factor - Amplifier Gain +	Distance Adjustment Factor -	External Attenuation	
nducted Emissio	ns: Adjusted Level = Measured Level + Transducer Factor + 0	Cable Attenuation Factor + F	External Attenuator		
OPERATING AND OPERATING METERS OF THE PROPERTY		US Antenna.			
	OM TEST STANDARD				
viations.					
ULTS				Line L1	Run #
				LI	<u> </u>
			41	3	
				Tested By:	
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50					
40					
₹ 40					
5					
30					
30					
20					
10					
0 ├─					
0.1	1	MHz	10		10
		External		l l	Compa
Freq (MHz)	Amplitude Transducer (dBuV) (dB)	Cable Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit Spe dBuV (dB

	EMC	C	DND	JCT	ED E	ЕМІ	SSIC	ONS	DA	TA S	HEET		12/14
		Zoom Latitude F	Programmir	ng System							Work Order:		37
Se	erial Number:	050574 Guidant Inc.									Date: Temperature:	12/20/04	
	Attendees:										Humidity:		
С	ust. Ref. No.:									Barom	etric Pressure		
		Jonathan Peng					Power:	120VAC/	60Hz		Job Site:	OC10	
	PECIFICATI	ONS FCC 15.207 AC I	Dowerline (Conducted	Emissis	2004		Motho	I. ANGLA	C63.4:2003			
			rowerline	Jonaactea	LIIIISSIO	115.2004		Wetho	a. ANSI	503.4.2003			
	E CALCULA ated Emissions:	Field Strength = Meas	sured Level + A	Antenna Facto	r + Cable F	actor - Am	plifier Gain + [Distance Ad	ustment Fa	ctor + External A	ttenuation		
	cted Emissions: ENTS	Adjusted Level = Mea	sured Level +	Transducer Fa	actor + Cab	le Attenuat	ion Factor + E	xternal Atte	nuator				
OI	PERATING N		requency Ban	d 914 MHz; E	xternal US	Antenna.							
	TIONS FROM	I TEST STANDA	RD										
	TS									Line		Run#	
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r													
									4	73	sted By:		_
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	70												
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	0												ШЩ
	0.1			1					10				10
							MHz						
							1411 12						
	Freq	Amplitude		Trans	<u> </u>	Cable	External Attenuation		<u> </u>		Adjusted	Spec. Limi	Compa

Serial Numb	UT: Zoom L	atituda D											IEET		12/1
Custon Attende	050574	atitude F	rogram	nming S	ystem								Work Order:	GDMN00	
Attende	ber: 0505/4													12/20/04	
	ner: Guidan	t Inc.										T	emperature:		
	ees: None												Humidity:		
	by: Jonatha	an Dona					D	owor:	120VAC	/60Hz		Baromet	tric Pressure Job Site:		
SPECIFIC		an Feng					F	ower.	IZUVAC	бопа			Job Site.	0010	
	ion: FCC 15	.207 AC I	Powerli	ne Cond	lucted En	nissions:	2004		Metho	d: AN	SI C63.4	:2003			
	ULATIONS														
	ions: Field Stre										t Factor +	External Att	enuation		
ILLICTED EMISSION	ions: Adjusted I	_evel = Mea	isured Lev	/ei + Trans	ducer Facto	r + Cable At	tenuation Fa	ictor + E	xternai Atte	enuator					
OPERATIN Operating M	Mode	STANDAG													
riations.	ROM TEST S	STANDA	RD									Lina		Dun #	
ILTS												Line	L1	Run #	7
										/	11	3 _			
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Freq	Amplitud	.			Transduc	er Cabl		ernal uation			etector		Adjusted	Spec. Limit	Comp

NORTHWEST EMC	(COND	UC	TED	EM	ISSIC	NS	DA	TA SI	HEET		12/14
	UT: Zoom Latitud	de Programm	ing Sy	stem						Work Order:		37
Serial Numb	er: 050574 ner: Guidant Inc.								-	Date: Femperature:	12/20/04	
	es: None									Humidity:		
Cust. Ref. N									Barome	tric Pressure		
	by: Jonathan Pe	ng				Power:	120VAC/	60Hz		Job Site:	OC10	
T SPECIFIC	On: FCC 15.207	AC Bowerline	Condu	ucted Emis	sions:200	4	Method	· ANGLO	63.4:2003			
		AC FOWEITINE	Condi	icted Ellis	510115.200	•	Metriou	ANSIC	03.4.2003			
PLE CALCU adiated Emission	DILATIONS ons: Field Strength =	Measured Level +	Antenna	a Factor + Cab	le Factor - An	nplifier Gain + [Distance Adji	ustment Fac	ctor + External At	tenuation		
nducted Emission	ons: Adjusted Level =	Measured Level -	+ Transd	ucer Factor + 0	Cable Attenua	ation Factor + E	xternal Atter	nuator				
OPERATING OF THE PROPERTY OF T		Frequency Band	1 927.5 N	MHz; External	US Antenna							
IATIONS FR	OM TEST STAN	DARD										
ULTS									Line		Run#	
3										N		8
er												
								4	Tes	ted By:		_
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40				1								+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$
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55												
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10												
10												
0 —				1								
0.1				1		MHz		10				10
Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detect (blank equal)		Adjusted dBuV	Spec. Limit	Compa Spe (dl





Spurious Radiated Emissions

Revision 10/1/03

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. 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:	Operating Modes Investigated:
Transmitting External Antenna	ransmitting External Antenna
Transmitting Internal Antenna	Fransmitting Internal Antenna

Da	ıta	Rates	Investi	gated:

Maximum

Output Power Setting(s) Investigated:

Maximum

Power Input Settings Investigated:

120VAC/60Hz

Frequency Range Investigated:									
Start Frequency	30 MHz	Stop Frequency	10 GHz						

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

EUT and Peripherals in Test Setup Boundary										
Description	Manufacturer	Model/Part Number	Serial Number							
Telemetry Wand	Guidant	6577	N/A							
USB Keyboard	Logitech	N/A	N/A							
USB Flash Hard Drive	N/A	Pen Drive 2.0	N/A							
Zoom Latitude Programming System	Guidant	Model 3120	050596							
PCMCIA Card	D-Link	10/100 Lan	B203146002099							

Spurious Radiated Emissions

Revision 10/1/03

Cables										
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2					
AC Power	Yes	1.8	No	Zoom Latitude Programming System	AC Mains					
Parallel	Yes	1.6	No	Zoom Latitude Programming System	Unterminated					
Video	No	8.0	Yes	Zoom Latitude Programming System	Unterminated					
USB	No	1.8	No	Zoom Latitude Programming System	keyboard					
ECG	Yes	4.0	No	Zoom Latitude Programming System	Unterminated					
Slave Stimulator	Yes	3.0	No	Zoom Latitude Programming System	Unterminated					
Telemetry	Yes	3.0	No	Zoom Latitude Programming System	Telemetry Wand					
Analog Output	No	2.0	No	Zoom Latitude Programming System	Unterminated					
Telecom No 1.8 No PCMCIA Card Ur		Unterminated								
PA = Cab	PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.									

Measurement Equi	Measurement Equipment										
Description	Manufacturer	Model	Identifier	Last Cal	Interval						
Antenna, Biconilog	EMCO	3142	AXJ	09/08/2003	24 mo						
Antenna, Horn	EMCO	3115	AHB	08/27/2003	24 mo						
Spectrum Analyzer	Hewlett Packard	8593E	AAP	12/07/2004	13 mo						
Receiver	Schaffner	SCR 3101	ARC	04/28/2003	24 mo						
Pre-Amplifier 0.5-18 GHz	Miteq	AMF-4D-005180-24-10P	APP	05/07/2004	13 mo						
Pre-Amplifier	Miteq	AM-1616-1000	AOM	10/20/2004	13 mo						
Antenna, Horn	EMCO	3160-07	AHP	NCR	NA						
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	12/26/2004	13 mo						

Test Description

Requirement: the field strength of harmonic emissions from intentional radiators operated within these frequency bands shall comply with the limits specified in 15.249(a). The peak level must comply with the limits specified in 47 CFR 15.35(b). The average level (taken with a 10 Hz VBW) must comply with the limits specified in 15.209.

<u>Configuration</u>: The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.4:2001). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Bandwidths Used for Mea	surements								
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	Above 1000 1000.0		1000.0						
Measurements were ma	Above 1000 1000.0 N/A 1000.0 Measurements were made using the bandwidths and detectors specified. No video filter was used.								

Completed by:

	DRTHWEST		R	ADI	ATFI) FM	IISSI	ONS	DA	TA S	HEE			ACQ 2005.1.3 EMI 2005.1.3
	EMC	IT.					нөөг			A / \ \ \			CDMNOCS	E
9	EU erial Numbe		Zoom Latitı 050596	ude Progra	imming Sy	stem					V		GDMN005 02/11/05	5
		_	Guidant Inc								Te	mperature:		
	Attended				· · · · · ·	· · · · · ·	· · · · · ·	· · · · · ·				Humidity:		
C	ust. Ref. No		N/A Jaemi Suh				1	Power	120VAC	/60Hz	Barometr	Job Site:		
	SPECIFICA	ATIO	ONS					. Jwei.	.20170			COD OILE.	20.0	
	Specification	on:	FCC 15.249	:2004					Metho	d: ANSI C63	.4:2003			
SAMPI	LE CALCU	IL A	TIONS											
Radi	iated Emissio	ns: I	Field Strength :							ljustment Factor	+ External Atter	nuation		
COMM		ns: /	Adjusted Level	= Measured I	_evel + Transd	ucer Factor +	Cable Attenua	tion Factor + E	external Atte	enuator				
None	ENIS													
EUT O	PERATING	3 M	ODES											
902.5 MI	ız Internal Tr	rans	mitting											
DEVIA No devia		ОМ	TEST STA	NDARD										
RESUL													Run #	
Pass														5
Other														
Juler											2	0		
											Tocto	d Dvr		
									<u> </u>		Teste	и Бу.		
	120.0 —								1					_ I
	100.0													_
	-													
	80.0													
														→ 1
Ξ														
dBuV/m	60.0													_
<u> </u>	11.0						•							
ਰ					•		•							
	40.0				*		*							_
					•									
					Ť									
	20.0													
	0.0													⊣
	1000.0	000											100	000.000
								MHz						
								WITZ						
		-	Т		Т	1	1	External			Distance			Compared to
	Freq		Amplitude	Factor	Azimuth	Height	Distance	Attenuation	Polarity	Detector	Adjustment	Adjusted	Spec. Limit	Spec.
	(MHz)	U3	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)	V-Horn	<u> </u>	(dB)	dBuV/m	dBuV/m	(dB)
	1804.66 2706.6		35.9 32.8	-1.9 0.6	99.0 100.0	1.0 1.9	3.0 3.0	10.0 10.0	V-Horn		0.0 0.0	44.0 43.4	54.0 54.0	-10.0 -10.6
	2742.0	00	30.3	0.8	302.0	2.1	3.0	10.0	H-Horr	n AV	0.0	41.1	54.0	-12.9
	1599.9		32.1	-3.2	153.0	1.0	3.0	10.0	V-Horn		0.0	38.9	54.0	-15.1
	2706.6° 1599.9°		44.5 27.5	0.8 -3.2	100.0 187.0	1.9 1.4	3.0 3.0	10.0 10.0	V-Horn H-Horn		0.0 0.0	55.3 34.3	74.0 54.0	-18.7 -19.7
	1828.0		25.0	-1.8	353.0	2.3	3.0	10.0	H-Horr		0.0	33.2	54.0	-20.8
	2706.8		39.8	0.8	302.0	2.1	3.0	10.0	H-Horr		0.0	50.6	74.0	-23.4
	1804.60 1600.00		37.1 34.0	-1.8 -3.2	99.0 153.0	1.0 1.0	3.0 3.0	10.0 10.0	V-Horn V-Horn		0.0 0.0	45.3 40.8	74.0 74.0	-28.7 -33.2
	1600.0		32.3	-3.2	187.0	1.4	3.0	10.0	H-Horr		0.0	39.1	74.0	-34.9
	1828.0		29.3	-1.8	353.0	2.3	3.0	10.0	H-Horr		0.0	37.5	74.0	-36.5

	EMC						IISSI	ONS	D/	λΤ	A S	HEE			ACQ 2005.1.3 EMI 2005.1.3
			Zoom Latit	ude Progra	mming Sy	stem						١	Work Order:		5
S	erial Num		050596 Guidant Inc									-	Date: emperature:	02/11/05	
	Attend			<i>.</i> .								10	Humidity:		
С	ust. Ref.											Baromet	ric Pressure		
	Tested	l by:	Jaemi Suh					Power:	120VA	C/60H:	Z		Job Site:		
	PECIFIC														
	Specification: FCC 15.249:2004 Method: ANSI C6:									NSI C63	.4:2003				
	E CALC ated Emiss		TIONS Field Strength	= Measured L	evel + Antenna	Factor + Cab	le Factor - Am	plifier Gain + I	Distance A	Adjustme	ent Factor	+ External Atte	nuation		
	cted Emiss		Adjusted Level							-					
None															
	PERATIN														
	Iz External														
No devia	tions.	ROM	I TEST STA	NDARD											
RESUL Pass	.TS													Run #	1
Other									ı						
											9	Z	5=		
										_		Teste	ed By:		
	120.0 -														٦
	100.0 -														
	.00.0														
	80.0 -														
															+
dBuV/m															
l Ba	60.0 -														
							•								
	40.0 -						•								
	20.0 -														
	0.0 - 1000).000)									l		100	000.000
								MHz							
	Freq (MHz)		Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarit	ty	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
2706.700 1804.600			34.1 34.5	0.8 -1.8	102.0 91.0	1.0 1.0	3.0 3.0	10.0 10.0			AV AV	0.0		54.0 54.0	-9.1 -11.3
1804.600 1804.600			32.5	-1.8	40.0	1.0	3.0	10.0			AV	0.0		54.0	-13.3
2706.700		27.3	0.8	112.0	2.4	3.0	10.0	H-Ho	rn	AV	0.0	38.1	54.0	-15.9	
	1600.000		30.0	-3.2	149.0	1.0	3.0	10.0			AV	0.0		54.0	-17.2
	2706.		42.7	0.8	102.0	1.0	3.0	10.0			PK	0.0		74.0	-20.5
	1600. 2706.		25.0 39.1	-3.2 0.8	192.0 112.0	1.0 2.4	3.0 3.0	10.0 10.0			AV PK	0.0 0.0		54.0 74.0	-22.2 -24.1
	1804.		36.9	-1.8	91.0	1.0	3.0	10.0			PK PK	0.0		74.0	-24.1 -28.9
	1804.		35.5	-1.8	40.0	1.0	3.0	10.0			PK	0.0		74.0	-30.3
	1600.	.000	32.9	-3.2	149.0	1.0	3.0	10.0	V-Ho	rn	PK	0.0	39.7	74.0	-34.3
	1600.	.000	30.3	-3.2	192.0	1.0	3.0	10.0	H-Ho	rn	PK	0.0	37.1	74.0	-36.9

	ORTHWEST		RADIATED EMISSIONS DATA								HEE		ACQ 2005.1.3 EMI 2005.1.3	
E	MC	=					ТООІ	ONO	אט	TA U				
9,	Erial Num			ude Progra	amming Sys	stem					V	Vork Order:	GDMN005 02/11/05	•
- 0		_	Guidant Inc	3.							Te	mperature:		
	Attend										_	Humidity:		
С	ust. Ref. I		N/A Jaemi Suh					Power:	120VAC/	60Hz	Barometr	Job Site:		
	PECIFIC	ATIO	ONS											
8	Specificat	ion:	FCC 15.249	9:2004					Method	ANSI C63.	4:2003			
SAMPL	E CALC	ULA [*]	TIONS											
			_					plifier Gain + E tion Factor + E	-	ustment Factor	+ External Atter	nuation		
COMM		10115. 7	Adjusted Level	- Measureu L	_ever+ mansu	ucer Factor + 0	Sable Alleriua	tion Factor + E	xterrial Atter	luatoi				
None														
	PERATIN													
914 MHz	Internal Tr	ansm	itting											
DEVIA	TIONS F	ROM	TEST STA	NDARD										
No devia														
RESUL Pass	.TS												Run #	1
1 400														•
Other											7			
										9)		
										/				
											Teste	d By:		
	120.0 ¬													_
	100.0													
	80.0													
														+
dBuV/m														
/n	60.0 -						•							
dВ	+						•							+
_							*							
	40.0 -													-
				•	•									
	20.0 -													
	0.0	000										1	100	→ 200 000
	1000	.000											100	000.000
								MHz						
	Freq		Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detector	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.
	(MHz)		(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)	-		(dB)	dBuV/m	dBuV/m	(dB)
	2742. 1828.		38.0 37.9	0.8 -1.8	104.0 90.0	1.0 1.0	3.0 3.0	10.0 10.0	V-Horn V-Horn	AV AV	0.0 0.0	48.8 46.1	54.0 54.0	-5.2 -7.9
	2742.		35.0	0.8	109.0	2.0	3.0	10.0	H-Horn	AV	0.0	45.8	54.0	-8.2
	1828.		35.4	-1.8	39.0	1.0	3.0	10.0	H-Horn	AV	0.0	43.6	54.0	-10.4
	2742. 1600.		47.0 30.0	0.8 -3.2	104.0 144.0	1.0 1.0	3.0 3.0	10.0 10.0	V-Horn V-Horn	PK AV	0.0 0.0	57.8 36.8	74.0 54.0	-16.2 -17.2
	2742.	265	42.8	0.8	109.0	2.0	3.0	10.0	H-Horn	PK	0.0	53.6	74.0	-20.4
	1599.		26.4	-3.2	134.0	1.0	3.0	10.0	H-Horn	AV	0.0	33.2	54.0	-20.8
	1828. 1828.		39.2 37.4	-1.8 -1.8	90.0 39.0	1.0 1.0	3.0 3.0	10.0 10.0	V-Horn H-Horn	PK PK	0.0 0.0	47.4 45.6	74.0 74.0	-26.6 -28.4
	1600.	000	33.3	-3.2	144.0	1.0	3.0	10.0	V-Horn	PK	0.0	40.1	74.0	-33.9
	1599.	983	29.8	-3.2	134.0	1.0	3.0	10.0	H-Horn	PK	0.0	36.6	74.0	-37.4

	RTHWEST						IISSI	IONS	DA	TA S	HEE			ACQ 2005.1.3 EMI 2005.1.3
				tude Progr	amming Sy	/stem					V	Vork Order:		5
Se	rial Numb		050596 Guidant In	10							To	Date:	02/11/05	
	Attende			ic.							16	Humidity:		
С	ust. Ref. N										Barometr	ic Pressure		
			Jaemi Suł	1				Power:	120VAC/6	0Hz		Job Site:		
	PECIFICA	_												
			FCC 15.24	9:2004					Method	ANSI C63	.4:2003			
	E CALCU ated Emissio			n = Measured L	_evel + Antenn	na Factor + Cab	le Factor - An	nplifier Gain +	Distance Adju	stment Factor	+ External Atte	nuation		
Conduction COMMI		ns: A	Adjusted Leve	el = Measured	Level + Transo	ducer Factor +	Cable Attenua	ation Factor + E	External Atten	uator				
None														
	PERATING External Tra													
No devia	tions.	ОМ	TEST STA	ANDARD										
RESUL Pass	TS												Run#	1
Other									l					
										1	Zen :	5=		
											Teste	d By:		
	120.0 —													_
	100.0													
	100.0													
	80.0													
	+													-
Ξ														
dBuV/m	60.0													
3u	60.0												*	
a p	T													
				1									•	
	40.0			<u> </u>									•	
	1													
	T													
	20.0													
	20.0													
	0.0 +													_
	1600.0	000		1800.000)	2000.000		2200.000		2400.000	2	000.000	28	300.000
								MHz						
		1			l	I I		External	l		Distance			Compared to
	Freq		Amplitude	Factor	Azimuth	Height	Distance	Attenuation	Polarity	Detector	Adjustment	Adjusted	Spec. Limit	Spec.
(MHz) 2742.0	00	(dBuV)	(dB)	(degrees) 104.0	(meters)	(meters)	(dB)	\/ Horn	AV	(dB)	dBuV/m	dBuV/m 54.0	(dB)
	1828.0		35.8 37.9		90.0		3.0 3.0			AV	0.0	46.6 46.1	54.0 54.0	-7.4 -7.9
	1828.0		35.3		41.0		3.0			AV	0.0	43.5	54.0	-10.5
	2742.0		30.8		110.0	2.1	3.0			AV	0.0	41.6	54.0	-12.4
	2742.0		46.6		104.0		3.0			PK	0.0	57.4	74.0	-16.6
	1600.0		28.7				3.0			AV	0.0	35.5	54.0	-18.5
	2742.0		43.7				3.0			PK	0.0	54.5	74.0	-19.5
	1600.0		25.2				3.0			AV	0.0	32.0	54.0	-22.0
	1828.0		40.0		90.0		3.0			PK	0.0	48.2	74.0	-25.8
	1828.0		37.4 35.1				3.0			PK	0.0	45.6	74.0	-28.4
	1600.0 1600.0		35.1 32.5	-3.2 -3.2			3.0 3.0			PK PK	0.0 0.0	41.9 39.3	74.0 74.0	-32.1 -34.7
	. 500.0		02.0	0.2	101.0	1.7	0.0	10.0			0.0	00.0	,	0 1.7

	RTHWEST MC		RADI	ATE	D EN	IISSI	ONS	DA	TA S	HEE.	Γ		ACQ 2005.1.3 EMI 2005.1.3
			titude Progr	amming Sy	ystem					V		GDMN005	5
Se	rial Numbe		Ina							_		02/11/05	
	Attendee	r: Guidant	IIIC.							Te	mperature: Humidity:		
Cı	ust. Ref. No									Barometr	ic Pressure		
		/: Jaemi Sı	ıh				Power:	120VAC/6	0Hz	24.0	Job Site:		
	PECIFICA	TIONS											
		FCC 15.2	249:2004					Method	: ANSI C63.	4:2003			
	E CALCUL		gth = Measured L	evel + Antenn	a Factor + Cah	le Eactor - An	onlifier Gain +	Dietance Adii	stment Factor	+ Evternal Atte	nuation		
			evel = Measured							· External / tite	iluution		
COMME	ENTS												
None													
	PERATING z Internal Tra												
727.5 WILL	z internar me	iiisiiiittiiig											
		M TEST S	TANDARD										
No deviat												Run#	
Pass													2
241								_					
Other										-	5=		
										Teste	d By:		-
								<u> </u>		16316	и Бу.		
	120.0												\neg
	100.0												
	100.0												
	80.0												
	+												_
Ξ													
≥	60.0												
dBuV/m	00.0												
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	T												•
	40.0												
	20.0												
	20.0												
	0.0 +	00	1000 000		2000 000		0000 000		0400 000	0.	200 000	0.0	
	1600.0	00	1800.000	1	2000.000		2200.000		2400.000	21	600.000	28	300.000
							MHz						
	F	A		A	11-2.1.	Dist	External	D-: "		Distance	Aut.	0 !: "	Compared to
	Freq	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	Attenuation (dB)	Polarity	Detector	Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Spec. (dB)
(MHz) 1866.63			107.0		3.0	10.0	H-Horn	AV	0.0	48.6		
	1600.00					3.0			AV	0.0	48.4		
	2782.91					3.0	10.0		AV	0.0	47.3		
	2782.91					3.0	10.0		PK	0.0	53.5		-20.5
	1600.00					3.0			PK	0.0	50.7		-23.3
	1866.63	7 41.	9 -1.6	107.0	1.0	3.0	10.0	H-Horn	PK	0.0	50.3	74.0	-23.7

	RTHWEST MC						IISSI	ONS	DA	TA S	SHEE			ACQ 2005.1.3 EMI 2005.1.3
				ude Progra	amming Sy	stem					1	Work Order:		5
Se	rial Num		050596 Guidant Ind	•								Date: emperature:	02/11/05	
	Attend			٠.							'	Humidity:		
С	ust. Ref.										Baromet	ric Pressure		
			Jaemi Suh					Power:	120VAC	/60Hz		Job Site:	OC10	
	PECIFIC	_							Mothe	di ANCI C	C2 4-2002			
			FCC 15.249	9:2004					Weth	od: ANSI C	63.4:2003			
	E CALC ated Emiss			= Measured L	evel + Antenna	Factor + Cab	le Factor - Am	plifier Gain + [Distance A	djustment Fac	tor + External Atte	enuation		
COMM		ions:	Adjusted Level	l = Measured l	_evel + Transd	ucer Factor + (Cable Attenua	tion Factor + E	external Att	enuator				
None														
FUT OF	PERATIN	IG M	ODES											
	z External													
DEVIAT		ROM	TEST STA	NDARD										
RESUL													Run#	
Pass													:	3
Other														
										5	han	5=		
										/	Teste	ed By:		
	100.0											,		
	120.0 -													
	100.0													
	00.0													
	80.0 -													1
m/														
dBuV/m	60.0 -						•							
Вb	-				•		*							
	40.0						•							
	40.0 -			•										
	20.0 -													
	0.0												100	⊣
	1000	0.000	1										100	000.000
								MHz						
	Freq		Amplitude	Factor	Azimuth	Height	Distance	External Attenuation	Polarity	Detecto	Distance Adjustment	Adjusted	Spec. Limit	Compared to Spec.
	MHz)	020	(dBuV)	(dB)	(degrees)	(meters)	(meters)	(dB)	V-Hori	A)/	(dB)	dBuV/m	dBuV/m	(dB)
2782.930 2782.952			38.0 37.1	1.0 1.0	227.0 232.0	1.5 2.1	3.0 3.0	10.0 10.0	V-Hori		0.0 0.0		54.0 54.0	-5.0 -5.9
	1855.		37.1	-1.6	47.0	1.0	3.0	10.0	H-Hori		0.0		54.0	-8.5
	2782.		33.6	1.0	205.0	3.1	3.0	10.0	H-Hori		0.0		54.0	-9.4
	1600.		34.8	-3.2	158.0	1.0	3.0	10.0	V-Hori		0.0		54.0	-12.4
	1600. 2782.		33.0 46.9	-3.2 1.0	197.0 227.0	1.0 1.5	3.0 3.0	10.0 10.0	H-Hori V-Hori		0.0 0.0		54.0 74.0	-14.2 -16.1
	2782. 2782.		40.9	1.0	205.0	3.1	3.0	10.0	H-Hori		0.0		74.0	-10.1
	1855.		41.3	-1.6	67.0	1.0	3.0	10.0			0.0		74.0	-24.3
	1600.		42.4	-3.2	197.0	1.0	3.0	10.0			0.0			-24.8
	1600. 1855.		41.1 39.0	-3.2 -1.8	158.0 47.0	1.0 1.0	3.0 3.0	10.0 10.0	V-Hori H-Hori		0.0 0.0		74.0 74.0	-26.1 -26.8
	1000.		0.0	1.0	ال. ا∓	1.0	5.0	10.0	11-11011	. 11	0.0	71.2	7-0	20.0





