



## ADDENDUM TO CERTIFICATION TEST REPORT FC00-025A

FOR THE

**BLT TRANSCEIVER, 26-0612  
(TRANSMITTER PORTION ONLY)**

**FCC PART 15.247/15.209**

**COMPLIANCE**

**DATE OF ISSUE: AUGUST 26, 2000**

**PREPARED FOR:**

CellNet Data Systems  
125 Shoreway Road  
San Carlos, CA 94070

W.O. No: 75076

**Report No: FC00-025B**

**PREPARED BY:**

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

Date of test: August 23, 2000

**DOCUMENTATION CONTROL:**

Tracy Phillips  
Documentation Control Supervisor  
CKC Laboratories, Inc.

**APPROVED BY:**

Dennis Ward  
Director of Laboratories  
CKC Laboratories, Inc.

This report contains a total of 13 pages and may be reproduced in full only. Partial reproduction may only be done with the written consent of CKC Laboratories, Inc.

## TABLE OF CONTENTS

Administrative Information .....	3
Report Of Measurements.....	4
Table 1: Six Highest Radiated Emission Levels - 30-1000MHz.....	4
Table 2: Six Highest Radiated Emission Levels - > 1GHz .....	5
Table A: List Of Test Equipment .....	6
Photograph Showing Radiated Emissions.....	7
Photograph Showing Radiated Emissions .....	8
Appendix A: Measurement Data Sheets.....	9

**CKC Laboratories, Inc. has Certificates of Accreditation from the following agencies:**  
DATech (Germany); A2LA (USA); FCC (USA); VCCI (Japan); BSMI (TaiSIO); HOKLAS (Hong Kong).  
**CKC Laboratories, Inc. has Letters of Acceptance through an MRA for the following agencies:**  
ACA/NATA (Australia); SABS (South Africa); SWEDAC (Sweden); TUV Rheinland-Germany; TUV Rheinland-Korea; TUV Rheinland-Russia; Radio Communication Agency (RA); NEMKO (Norway).

## ADMINISTRATIVE INFORMATION

**DATE OF TEST:** August 23, 2000

**PURPOSE OF TEST:** To demonstrate the compliance of the BLT Transceiver, 26-0612, with the requirements for FCC Part 15.247 and 15.209 devices. Addendum has test results for an additional antenna not tested during the original testing.

**MANUFACTURER:** CellNet Data Systems  
125 Shoreway Road  
San Carlos, CA 94070

**REPRESENTATIVE:** Gordon Furze

**TEST LOCATION:** CKC Laboratories, Inc.  
1653 Los Viboras Road  
Hollister, CA 95023

**TEST PERSONNEL:** Hue Vang

**TEST METHOD:** ANSI C63.4 1992

**FREQUENCY RANGE TESTED:** 30-9200 MHz

**EQUIPMENT UNDER TEST:**

<b>BLT Transceiver</b>
Manuf: CellNet Data Systems
Model: 26-0612
Serial: B001
FCC ID: H6N26061200 (pending)

## REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the BLT Transceiver, 26-0612. All readings taken are peak readings unless otherwise noted by a "Q" or "A". The data sheets from which these tables were compiled are contained in Appendix B.

<b>Table 1: Six Highest Radiated Emission Levels - 30-1000MHz</b>									
FREQUENCY MHz	METER READING dB $\mu$ V	CORRECTION FACTORS				CORRECTED READING dB $\mu$ V/m	SPEC LIMIT dB $\mu$ V/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
901.800	38.2	22.0	-27.3	4.4		37.3	46.0	-8.7	H
911.560	114.9	22.3	-27.2	4.5		114.5	137.0	-22.5	V
911.640	110.6	22.3	-27.2	4.5		110.2	137.0	-26.8	H
917.560	108.8	22.7	-27.2	4.5		108.8	137.0	-28.2	H
917.760	114.4	22.7	-27.2	4.5		114.4	137.0	-22.6	V
928.065	39.2	22.4	-27.1	4.6		39.1	46.0	-6.9	HQ

Test Method:  
Spec Limit :  
Test Distance:

ANSI C63.4 1992  
FCC Part 15.209/15.247  
3 Meters

NOTES:      H = Horizontal Polarization  
                  V = Vertical Polarization  
                  N = No Polarization  
                  D = Dipole Reading  
                  Q = Quasi Peak Reading  
                  A = Average Reading

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797 (CKC Training Procedure LP042007). The EUT is a wireless half duplex LAN transceiver operating on 911.58, 914.58, or 917.58 MHz. It is powered by a 12 Volt battery. A vertical antenna with 5 dBi gain is attached to the EUT. An RJ45 WAN cable connects the EUT to the support PC. The WAN port normally connects to another transceiver operating in the 950 MHz range. "Receiver noise level" data is being transferred over the WAN port to the support PC. Note 1) Testing on the OATS for spurious emissions from 30-1000 MHz range while the unit is in the normal transceiver mode where it transmits for 20 mS, and receives for 80 mS. Also checked the restricted bands for signals from the transmitter. Transmitting at 917.58 MHz.

Table 2: Six Highest Radiated Emission Levels - > 1GHz									
FREQUENCY MHz	METER READING dB $\mu$ V	CORRECTION FACTORS				CORRECTED READING dB $\mu$ V/m	SPEC LIMIT dB $\mu$ V/m	MARGIN DB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
3670.320	38.2	31.9	-38.5	14.8		46.4	54.0	-7.6	V
4557.800	31.1	31.3	-37.6	23.5		48.3	54.0	-5.7	V
7292.722	20.2	37.7	-35.8	30.2		52.3	54.0	-1.7	VA
677340.320	23.3	37.7	-36.3	21.4		46.1	54.0	-7.9	VA
8204.087	20.2	37.3	-37.1	32.6		53.0	54.0	-1.0	VA
9115.783	23.1	37.8	-36.0	25.6		50.5	54.0	-3.5	VA

Test Method: ANSI C63.4 1992  
 Spec Limit : FCC Part 15.209/15.247  
 Test Distance: 3 Meters

NOTES: H = Horizontal Polarization  
 V = Vertical Polarization  
 N = No Polarization  
 D = Dipole Reading  
 Q = Quasi Peak Reading  
 A = Average Reading

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797 (CKC Training Procedure LP042007). The EUT is a wireless half duplex LAN transceiver operating on 911.58, 914.58, or 917.58 MHz. It is powered by a 12 Volt battery. A vertical antenna with 5 dBi gain is attached to the EUT. An RJ45 WAN cable connects the EUT to the support PC. The WAN port normally connects to another transceiver operating in the 950 MHz range. "Receiver noise level" data is being transferred over the WAN port to the support PC. Note 1) Testing on the OATS for spurious emissions above 1 GHz range while the unit is in the normal transceiver mode where it transmits for 20 mS, and receives for 80 mS. Also checked the restricted bands for signals from the transmitter. Transmitting at 917.58 MHz.

## LIST OF TEST EQUIPMENT

**EMI Meters:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447F Preamp	2944A03850	03/22/2000	03/22/2001	501
Cable, 10m	Cbl10mha00	01/18/2000	01/18/2001	0
HP 85650A QP Adaptor	2430A00541	04/09/2000	04/09/2001	0
HP 85662A Display	2112A02174	04/09/2000	04/09/2001	0
HP 85680A S. A.	2049A01408	04/09/2000	04/09/2001	0
Bicon, AH Sys.	273	10/29/1999	10/29/2000	0
SAS200/540				
Log Periodic, A.H.	464	10/12/1999	10/12/2000	2
SAS200/510				
Horn Ant, ARA	1064	02/08/2000	02/08/2001	2061
DRG-118A				
HP 8596E S.A.	3346A00225	05/10/2000	05/10/2001	783
Cable, 100 ft	Cable #3	09/23/1999	09/23/2000	0
Andrews FSJ1P-50A-4A				
Cable, 25 ft Andrews	Cable #12	09/23/1999	09/23/2000	0
FSJ1P-50A-4A				
Cable, 25 ft Andrews	Cable #5	09/23/1999	09/23/2000	0
FSJ1P-50A-4A				
Preamp, HP83017A	3123A00464	05/11/2000	05/11/2001	1271

**PHOTOGRAPH SHOWING RADIATED EMISSIONS**



Radiated Emissions - Front View

## PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View

**APPENDIX A**  
**MEASUREMENT DATA SHEETS**

Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd., Site A • Hollister, Ca 95023 • (831) 637-0485

Customer: **CellNet Data Systems**  
 Specification: **FCC15.247 & 15.209**  
 Work Order #: **75076** Date: 08/23/2000  
 Test Type: **Radiated Scan** Time: 15:02:48  
 Equipment: **LAN Transceiver** Sequence#: 1  
 Manufacturer: CellNet Data Systems Tested By: Hue Ly Vang  
 Model: 26-0612  
 S/N: B001

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

Function	Manufacturer	Model #	S/N
LAN Transceiver*	CellNet Data Systems	26-0612	B001
Antenna	Antenna Specialists	ASPG918	none

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PPS	04949
AC Adaptor	Dell	73463	M5055818
Battery	Genesis	G12V12aH10EP	none

**Test Conditions / Notes:**

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797 (CKC Training Procedure LP042007). The EUT is a wireless half duplex LAN transceiver operating on 911.58, 914.58, or 917.58 MHz. It is powered by a 12 Volt battery. A vertical antenna with 5 dBi gain is attached to the EUT. An RJ45 WAN cable connects the EUT to the support PC. The WAN port normally connects to another transceiver operating in the 950 MHz range. "Receiver noise level" data is being transferred over the WAN port to the support PC. Note 1) Testing on the OATS for spurious emissions from 30-1000 MHz range while the unit is in the normal transceiver mode where it transmits for 20 mS, and receives for 80 mS. Also checked the restricted bands for signals from the transmitter. Transmitting at 917.58 MHz.

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

#	Freq MHz	Rdng dB $\mu$ V	Amp. Cable dB	Log dB	Bicon dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	928.065M QP	39.2 +4.6	-27.1	+22.4	+0.0	+0.0	39.1	46.0	-6.9	Horiz
2	901.800M	38.2	-27.3 +4.4	+22.0	+0.0	+0.0	37.3	46.0	-8.7	Horiz
3	911.560M	114.9	-27.2 +4.5	+22.3	+0.0	+0.0	114.5	137.0	-22.5	Vert
4	917.760M	114.4	-27.2 +4.5	+22.7	+0.0	+0.0	114.4	137.0	-22.6	Vert
5	911.640M	110.6	-27.2 +4.5	+22.3	+0.0	+0.0	110.2	137.0	-26.8	Horiz
6	917.560M	108.8	-27.2 +4.5	+22.7	+0.0	+0.0	108.8	137.0	-28.2	Horiz

Test Location: CKC Laboratories, Inc. • 1653 Los Viboras Rd., Site A • Hollister, Ca 95023 • (831) 637-0485

Customer: **CellNet Data Systems**  
 Specification: **FCC15.247 & 15.209**  
 Work Order #: **75076** Date: 8/23/2000  
 Test Type: **Radiated Scan** Time: 16:20:48  
 Equipment: **LAN Transceiver** Sequence#: 2  
 Manufacturer: CellNet Data Systems Tested By: Hue Ly Vang  
 Model: 26-0612  
 S/N: B001

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

Function	Manufacturer	Model #	S/N
Antenna	Antenna Specialists	ASPG918	none
LAN Transceiver*	CellNet Data Systems	26-0612	B001

**Support Devices:**

Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PPS	04949
Battery	Genesis	G12V12aH10EP	none
AC Adaptor	Dell	73463	M5055818

**Test Conditions / Notes:**

COMMENTS: The EUT and ancillary equipment was set up and tested in accordance with ANSI C63.4 and FCC DSSS test procedure Public Notice 54797 (CKC Training Procedure LP042007). The EUT is a wireless half duplex LAN transceiver operating on 911.58, 914.58, or 917.58 MHz. It is powered by a 12 Volt battery. A vertical antenna with 5 dBi gain is attached to the EUT. An RJ45 WAN cable connects the EUT to the support PC. The WAN port normally connects to another transceiver operating in the 950 MHz range. "Receiver noise level" data is being transferred over the WAN port to the support PC. Note 1) Testing on the OATS for spurious emissions above 1 GHz range while the unit is in the normal transceiver mode where it transmits for 20 mS, and receives for 80 mS. Also checked the restricted bands for signals from the transmitter. Transmitting at 917.58 MHz.

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

#	Freq MHz	Rdng dB $\mu$ V	Amp Cable	Cable dB	Cable dB	Horn dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	7292.480M	31.0	-35.8	+4.9	+16.4	+37.7	+0.0	63.1	54.0	+9.1	Vert
	See reading #17 for avg			+8.9					Noise floor readings.		
2	9115.593M	33.6	-36.0	+6.1	+19.5	+37.8	+0.0	61.0	54.0	+7.0	Vert
	See reading #9 for avg			+0.0					Noise floor readings.		
3	6380.920M	30.7	-35.7	+4.7	+15.8	+35.9	+0.0	60.0	54.0	+6.0	Vert
	See reading #12 for avg			+8.6					Noise floor readings.		
4	6423.060M	32.9	-35.5	+4.7	+15.9	+36.1	+0.0	54.1	54.0	+0.1	Vert
	See reading #22 for avg			+0.0					Noise floor readings.		
5	5469.360M	31.3	-37.3	+4.4	+14.4	+32.8	+0.0	53.3	54.0	-0.7	Vert
	See reading #25 for avg			+7.7					Noise floor readings.		
6	8204.087M	20.2	-37.1	+5.3	+17.8	+37.3	+0.0	53.0	54.0	-1.0	Vert
	Ave			+9.5					Noise floor		

readings.											
^	8204.040M	32.5	-37.1 +9.5	+5.3	+17.8	+37.3	+0.0	65.3	54.0	+11.3	Vert
									Noise floor		
									readings.		
8	7292.722M	20.2	-35.8 +8.9	+4.9	+16.4	+37.7	+0.0	52.3	54.0	-1.7	Vert
	Ave								Noise floor		
									readings.		
9	9115.783M	23.1	-36.0 +0.0	+6.1	+19.5	+37.8	+0.0	50.5	54.0	-3.5	Vert
	Ave								Noise floor		
									readings.		
10	9175.778M	23.2	-36.5 +0.0	+6.0	+19.5	+38.1	+0.0	50.3	54.0	-3.7	Vert
	Ave								Noise floor		
									readings.		
^	9175.800M	33.2	-36.5 +0.0	+6.0	+19.5	+38.1	+0.0	60.3	54.0	+6.3	Vert
									Noise floor		
									readings.		
12	6381.044M	19.5	-35.7 +8.6	+4.7	+15.8	+35.9	+0.0	48.8	54.0	-5.2	Vert
	Ave								Noise floor		
									readings.		
13	4557.800M	31.1	-37.6 +6.8	+3.8	+12.9	+31.3	+0.0	48.3	54.0	-5.7	Vert
									Noise floor		
									readings.		
14	8258.310M	23.7	-37.1 +0.0	+5.3	+17.9	+37.5	+0.0	47.3	54.0	-6.7	Vert
	Ave								Noise floor		
									readings.		
^	8258.220M	37.1	-37.1 +0.0	+5.3	+17.9	+37.5	+0.0	60.7	54.0	+6.7	Vert
									Noise floor		
									readings.		
16	3670.320M	38.2	-38.5 +0.0	+3.4	+11.4	+31.9	+0.0	46.4	54.0	-7.6	Vert
									Noise floor		
									readings.		
17	7340.620M	23.3	-36.3 +0.0	+4.9	+16.5	+37.7	+0.0	46.1	54.0	-7.9	Vert
	Ave								Noise floor		
									readings.		
^	7340.640M	33.9	-36.3 +0.0	+4.9	+16.5	+37.7	+0.0	56.7	54.0	+2.7	Vert
									Noise floor		
									readings.		
19	5505.480M	31.7	-37.4 +0.0	+4.4	+14.4	+32.7	+0.0	45.8	54.0	-8.2	Vert
									Noise floor		
									readings.		
20	3646.240M	31.6	-38.6 +6.1	+3.4	+11.4	+31.9	+0.0	45.8	54.0	-8.2	Vert
									Noise floor		
									readings.		
21	4587.900M	34.0	-37.4 +0.0	+3.9	+12.9	+31.5	+0.0	44.9	54.0	-9.1	Vert
									Noise floor		
									readings.		
22	6422.848M	22.3	-35.5 +0.0	+4.7	+15.9	+36.1	+0.0	43.5	54.0	-10.5	Vert
	Ave								Noise floor		
									readings.		
23	2752.740M	37.4	-38.5 +0.0	+2.9	+9.8	+31.1	+0.0	42.7	54.0	-11.3	Vert
									Noise floor		
									readings.		
24	2734.680M	32.7	-38.5 +5.0	+2.8	+9.7	+31.0	+0.0	42.7	54.0	-11.3	Vert

25	5468.998M	19.3	-37.3 +7.7	+4.4	+14.4	+32.8	+0.0	41.3	54.0	-12.7	Vert
Noise floor readings.											
26	1835.150M	43.8	-39.3 +0.0	+1.6	+7.6	+25.9	+0.0	39.6	54.0	-14.4	Vert
^	1835.160M	56.2	-39.3 +0.0	+1.6	+7.6	+25.9	+0.0	52.0	54.0	-2.0	Vert
28	1823.148M	39.3	-39.3 +3.3	+1.7	+7.5	+25.8	+0.0	38.3	54.0	-15.7	Vert
^	1823.119M	53.1	-39.3 +3.3	+1.7	+7.5	+25.8	+0.0	52.1	54.0	-1.9	Vert
30	4557.932M	19.6	-37.6 +6.8	+3.8	+12.9	+31.3	+0.0	36.8	54.0	-17.2	Vert
Noise floor readings.											