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APPLICANT: HANDAN BroadInfoCom Co., Ltd.

FCC ID: NU2HST-2000SC

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APPLICANT: HANDAN BroadInfoCom Co., Ltd.  
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TEST EQUIPMENT LIST

- 1.\_X\_Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/  
preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter  
HP 85650A, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02,  
S/N 3008A00372 Cal. 8/31/01 Due 8/31/02
- 2.\_X\_Biconnical Antenna: Eaton Model 94455-1, S/N 1057,  
Cal. 10/1/01 Due 10/1/02
- 3.\_\_\_ Biconnical Antenna: Electro-Metrics Model BIA-25, S/N 1171  
Cal. 4/26/01 Due 4/26/03
- 4.\_\_\_ Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632  
Char. 10/15/01 Due 10/15/02
- 5.\_\_\_ Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409  
Char. 10/16/01 Due 10/16/02
- 6.\_X Log-Periodic Antenna: Electro-Metrics Model LPA-25, S/N 1122  
Char. 2/10/01 Due 3/10/02
- 7.\_\_\_ Double-Ridged Horn Antenna: Electro-Metrics Model RGA-180,  
1-18 GHz, S/N 2319 Cal. 12/19/01 Due 12/19/02
- 8.\_\_\_ 18-26.3GHz Systron Donner Standard Gain Horn #DBE-520-20  
No Cal Required
- 9.\_\_\_ Horn 40-60GHz: ATM Part #19-443-6R No Cal Required
- 10.\_\_\_ Line Impedance Stabilization Network: Electro-Metrics Model  
EM-7820, w/NEMA Adapter S/N 2682 Cal. 3/16/01 Due 3/16/02
- 11.\_\_\_ Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7  
Char. 1/22/02 Due 1/22/03
- 12.\_\_\_ Frequency Counter: HP Model 5385A, S/N 3242A07460  
Char. 12/11/01 Due 12/11/02
- 13.\_\_\_ Peak Power Meter: HP Model 8900C, S/N 2131A00545  
Char. 1/26/01 Due 1/26/02
- 14.\_X\_Open Area Test Site #1-3meters Cal. 12/22/99
- 15.\_\_\_ Signal Generator: HP 8640B, S/N 2308A21464  
Cal. 11/15/01 Due 11/15/02
- 16.\_\_\_ Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N  
9706-1211 Char. 7/10/01 Due 7/10/02
- 17.\_\_\_ Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 152  
Cal. 3/21/01 Due 3/21/02
- 18.\_\_\_ AC Voltmeter: HP Model 400FL, S/N 2213A14499  
Cal. 10/9/01 Due 10/09/02
- 19.\_X\_Digital Multimeter: Fluke Model 77, S/N 35053830  
Char. 1/8/02 Due 1/8/03
- 20.\_\_\_ Oscilloscope: Tektronix Model 2230, S/N 300572  
Char. 2/1/01 Due 2/1/02

## TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100kHz and the video bandwidth was 300kHz. The ambient temperature of the UUT was 80°F with a humidity of 70%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz)	METER READING + ACF = FS
33	20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-1992 10.1.7 MEASUREMENT PROCEDURES: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSIC63.4-1992 with the EUT 40 cm from the vertical ground wall.

APPLICANT: HANDAN BroadInfoCom Co., Ltd.  
 FCC ID: NU2HST-2000SC  
 NAME OF TEST: RADIATION INTERFERENCE  
 RULES PART NUMBER: 15.109  
 REQUIREMENTS: 30 to 80 MHz: 40.0 dBuV/M @ 3 METERS  
 88 to 216 MHz: 43.5 dBuV/M  
 216 to 960 MHz: 46.0 dBuV/M  
 ABOVE 960 MHz: 54.0 dBuV/M  
 TEST RESULTS: A search was made of the spectrum from 30 to 1000 MHz and the measurements indicate that the unit DOES meet the FCC requirements.

TEST DATA:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
<b>DIGITAL EMISSIONS</b>						
49.20	22.4	V	0.79	11.99	35.18	4.82
49.20	22.7	H	0.79	11.9	35.48	4.52
53.20	22.8	V	0.83	10.71	34.34	5.66
53.20	18.4	H	0.83	10.71	29.94	10.06
57.30	17.4	V	0.87	9.18	27.45	12.55
57.30	13.6	H	0.87	9.18	23.65	16.35
73.70	27.9	V	1.02	6.66	35.58	4.42
73.70	29.0	H	1.02	6.66	36.68	3.32
122.80	14.5	V	1.29	11.50	27.29	16.21
122.80	15.1	H	1.29	11.50	27.89	15.61
147.40	12.7	V	1.39	16.24	30.33	13.17
147.40	16.6	H	1.39	16.24	34.23	9.27
159.70	5.5	V	1.48	16.90	23.88	19.62
159.70	10.5	H	1.48	16.90	28.88	14.62
172.00	15.6	V	1.58	15.58	32.76	10.74
172.00	22.0	H	1.58	15.58	39.16	4.34
228.00	12.5	V	1.91	11.46	25.87	20.13
228.0	18.4	H	1.91	11.46	31.77	14.23
245.70	11.6	V	1.98	11.89	25.47	20.53
245.70	26.1	H	1.98	11.89	39.97	6.03
258.00	12.7	H	2.03	12.66	27.39	18.61

APPLICANT: HANDAN BroadInfoCom Co., Ltd.

FCC ID: NU2HST-2000SC

NAME OF TEST: RADIATION INTERFERENCE

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
270.30	13.4	H	2.08	13.63	29.11	16.89
270.30	8.3	V	2.08	13.63	24.01	21.99
294.90	19.5	V	2.18	14.52	36.20	9.80
294.90	20.0	H	2.18	14.52	36.70	9.30
307.20	6.4	V	2.24	14.08	22.72	23.28
307.20	11.2	H	2.24	14.08	27.52	18.48
319.50	11.8	V	2.32	14.30	28.42	17.58
319.50	14.6	V	2.32	14.30	31.22	14.78
342.00	18.2	H	2.45	14.56	32.21	10.79
342.00	16.2	V	2.45	14.56	33.21	12.79
381.80	26.2	V	2.69	15.27	44.16	1.84
381.80	25.5	H	2.69	15.27	43.46	2.54
393.20	23.2	V	2.76	15.63	41.59	4.41
393.20	18.4	H	2.76	15.63	36.79	9.21
442.30	16.5	H	2.93	16.93	36.36	9.64
442.30	13.4	V	2.93	16.93	33.26	12.74
456.00	25.6	H	2.97	17.06	45.63	.37
456.00	23.0	V	2.97	17.06	43.03	2.97
478.10	14.0	V	3.03	17.74	34.77	11.23
478.10	15.3	H	3.03	17.74	36.07	9.93
570.00	22.8	V	3.31	19.20	45.31	.69
570.00	23.0	H	3.31	19.20	45.51	.49
668.70	16.1	H	3.61	20.47	40.18	5.82
668.70	12.9	V	3.61	20.47	36.98	9.02
684.00	12.4	V	3.65	21.10	37.15	8.85
684.00	18.40	H	3.65	21.10	43.15	2.85
798.00	12.0	V	3.99	21.28	37.27	8.73
798.00	16.0	H	3.99	21.28	41.27	4.73

RECEIVER EMISSIONS:

NO EMISSIONS NOTED.

SAMPLE CALCULATION: FS dBuV/m = MR(dBuV) + ACF dB.

APPLICANT: HANDAN BroadInfoCom Co., Ltd.

FCC ID: NU2HST-2000SC

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.109

TEST PROCEDURE: ANSI STANDARD C63.4-1992 using a Hewlett Packard Model 8566B spectrum analyzer, a Hewlett Packard Model 85685A Preselector, a Hewlett Packard Model 85650A Quasi-Peak adapter, an Electro-Metric log periodic and an Eaton Model 94455-1 Biconnical Antenna. The bandwidth of spectrum analyzer was 100 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. This device was tested at the test site of TIMCO ENGINEERING, INC. 849 N.W. SR 45 Newberry, FL 32669.

PERFORMED BY: JOSEPH SCOGLIO

DATE: February 1, 2002

APPLICANT: HANDAN BroadInfoCom Co., Ltd.  
FCC ID: NU2HST-2000SC  
NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE  
RULES PART NUMBER: 15.107(a)  
REQUIREMENTS: .45 - 30 MHz 48 dBuV or 250 uV  
TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum  
was scanned from 0.45 to 30 MHz.  
TEST DATA:

THE HIGHEST EMISSION READ FOR LINE 1 WAS 62.4 uV @ 17.88 MHz.

THE HIGHEST EMISSION READ FOR LINE 2 WAS 83.2 uV @ 20.54 MHz.

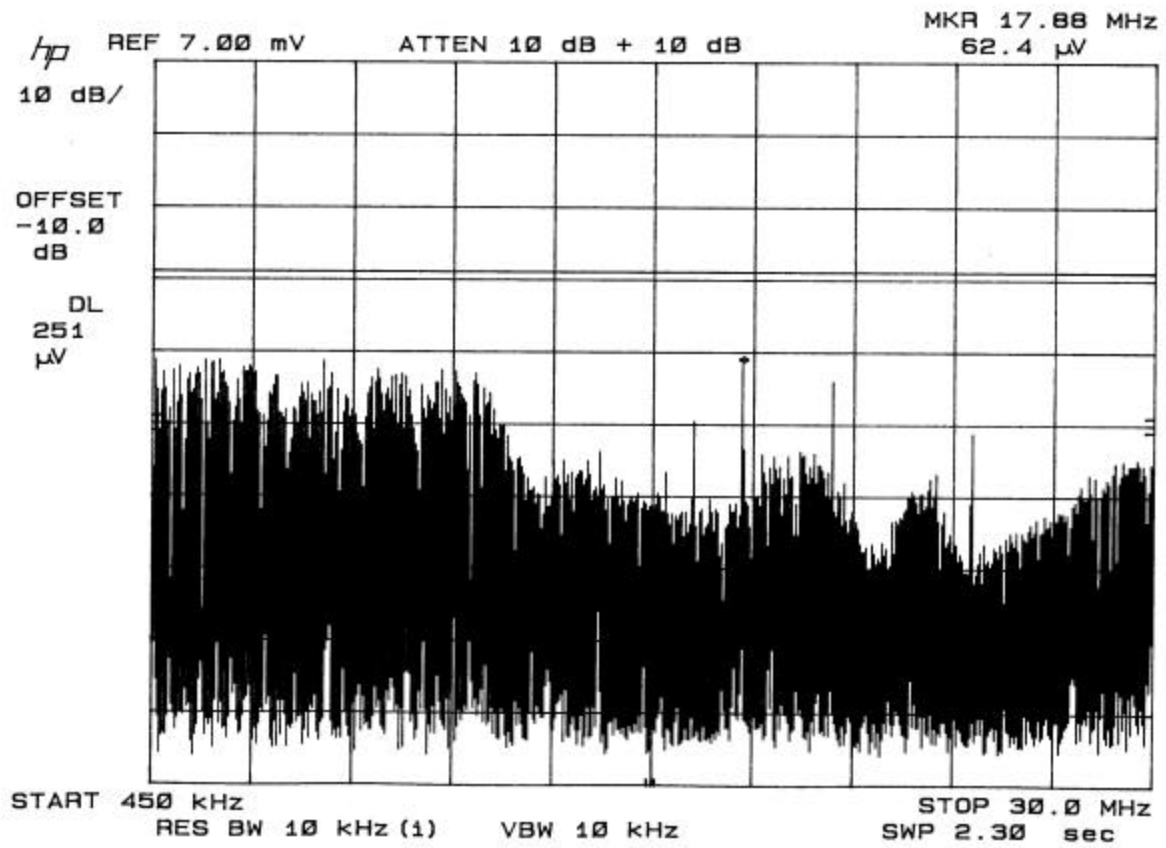
THE FOLLOWING GRAPHS REPRESENT THE EMISSIONS TAKEN FOR THIS  
DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate  
that the unit DOES appear to meet the FCC requirements for this class  
of equipment.

PERFORMED BY: JOSEPH SCOGLIO

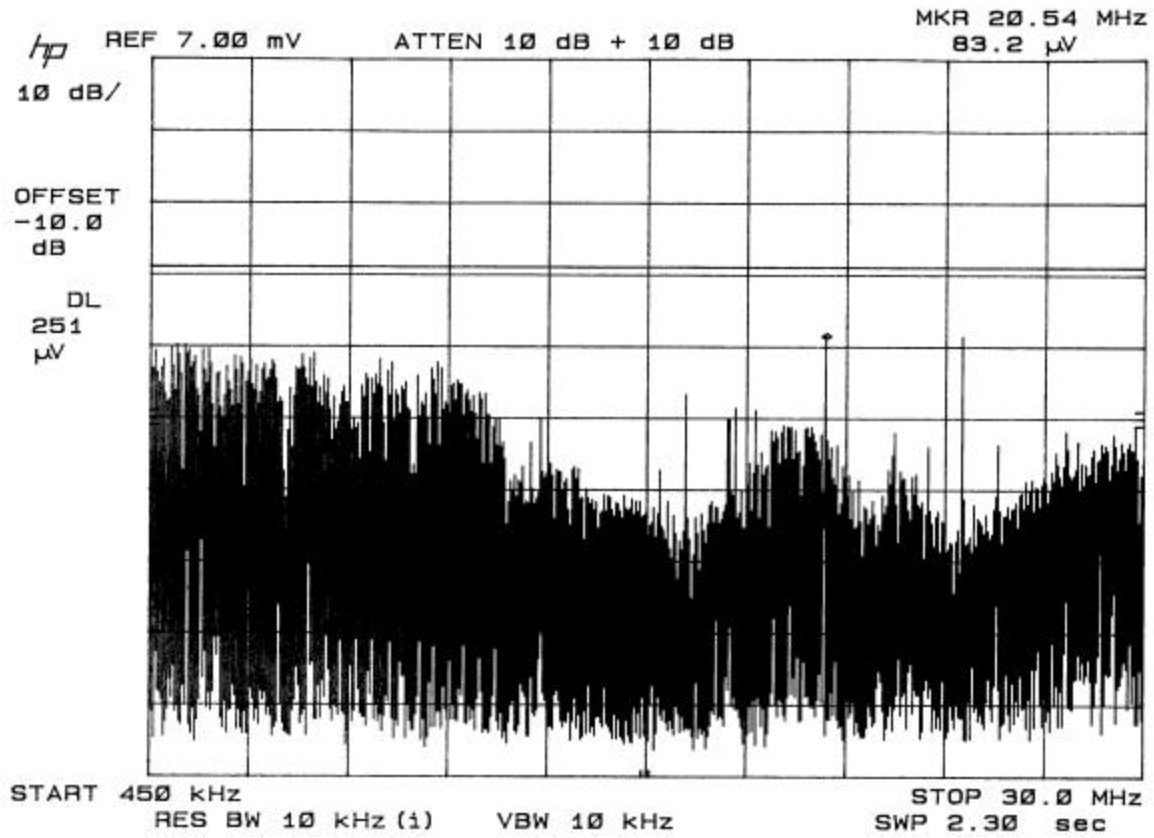
DATE: JANUARY 11, 2002

Line 1





Line 2



APPLICANT: HANDAN BROADINFOCOM CO., LTD.

FCC ID: NU2UVR-100N

NAME OF TEST: OUTPUT TERMINAL CONDUCTED SIGNAL LEVEL &  
INTERFERENCE LEVEL.

RULES PART: 15.115(b)(i)(ii) & 15.115(b)(2)(ii)

This device does not directly connect to a Television Receiver but is a  
converter device QPSK to QAM.