APPLICANT: HANDAN BROADINFOCOM CO., LTD.

MODEL #: NU2UVR-100N

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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 8565OA, 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._X_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.__ Log-Periodic Antenna: Electro-Metrics Model LPA-25, S/N 1122 Char. 2/10/01 Due 3/10/02
7._X_ 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. 1/27/01 Due 1/27/02
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. 1/11/01 Due 1/11/02
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 Paragraph 12.2 using a HEWLETT PACKARD spectrum analyzer with a preselector. The resolution bandwidth below 1GHz was 100 kHz & the video bandwidth was 300 kHz. Above 1 GHz the resolution bandwidth was 1 MHz and the video bandwidth was 3 MHz. The ambient temperature of the UUT was 73°F with a humidity of 47%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3 m 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

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-1992 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed. The ambient temperature of the UUT was 76°F with a humidity of 47%.

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 1 m to 4 m. 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: NU2UVR-100N

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
DIGITAL EMISSIONS						
85.00	**15.5**	**h**	**1.08**	**9.90**	**26.48**	**13.53**
85.00	**18.1**	**v**	**1.08**	**9.90**	**29.08**	**10.93**
270.00	**6.9**	**h**	**2.08**	**13.60**	**22.58**	**23.42**
270.00	**11.0**	**v**	**2.08**	**13.60**	**26.68**	**19.32**
297.00	**17.1**	**h**	**2.19**	**14.10**	**33.39**	**12.61**
297.00	**19.6**	**v**	**2.19**	**14.10**	**35.89**	**10.11**
324.00	**12.8**	**h**	**2.34**	**14.46**	**29.60**	**16.40**
324.00	**17.6**	**v**	**2.34**	**14.46**	**34.40**	**11.60**
351.00	**10.5**	**h**	**2.51**	**14.45**	**27.46**	**18.54**
351.00	**12.9**	**v**	**2.51**	**14.45**	**29.86**	**16.14**
405.00	**17.4**	**h**	**2.82**	**16.00**	**36.22**	**9.79**
405.00	**14.3**	**v**	**2.82**	**16.00**	**33.12**	**12.89**
459.00	**10.3**	**h**	**2.98**	**17.09**	**30.37**	**15.63**
459.00	**13.4**	**v**	**2.98**	**17.09**	**33.47**	**12.53**

RECEIVER EMISSIONS:

NO EMISSIONS NOTED.

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

APPLICANT: HANDAN BROADINFOCOM CO., LTD.

FCC ID: NU2UVR-100N

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: JANUARY 11, 2002

APPLICANT: HANDAN BROADINFOCOM CO., LTD.

FCC ID: NU2UVR-100N

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 110 uV @ 28.35 MHz.

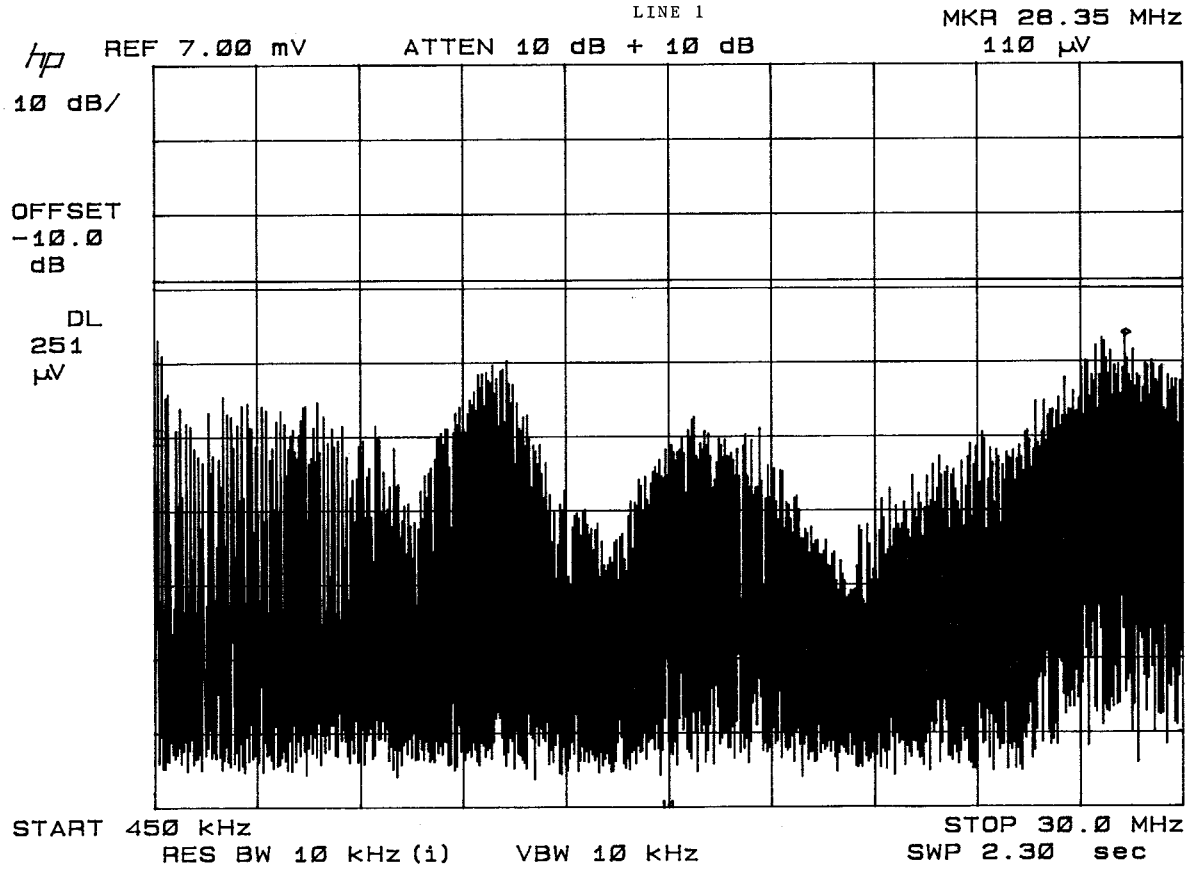
THE HIGHEST EMISSION READ FOR LINE 2 WAS 143 uV @ 690 kHz.

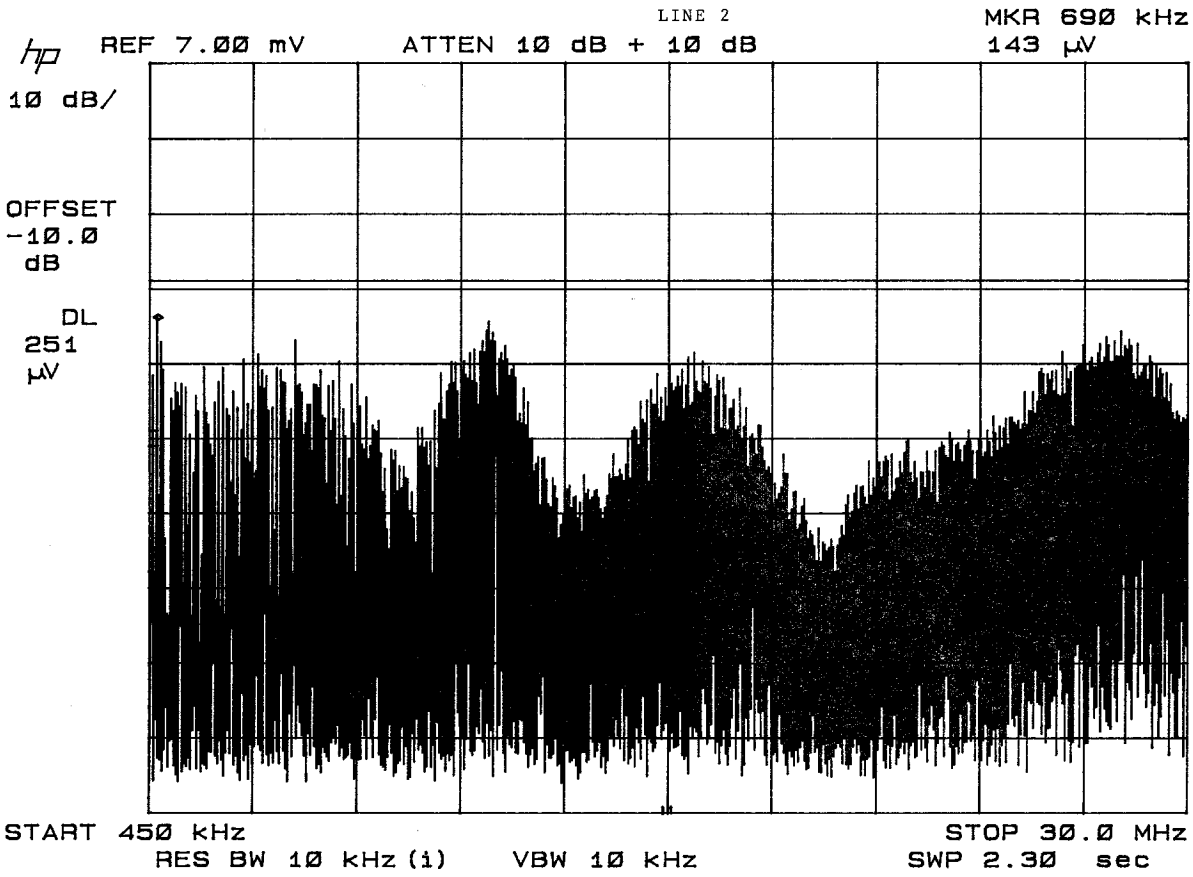
THE FOLLOWING GRAPHS REPRESENT THE EMISSIONS TAKEN FOR THIS DEVICE.

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

APPLICANT: HANDAN BROADINFOCOM CO., LTD.
FCC ID: NU2UVR-100N




LINE 2
MKR 690 kHz
143 µV
REF 7.00 mV
ATTEN 10 dB + 10 dB
10 dB/
OFFSET
-10.0
dB
DL
251
µV
START 450 kHz
STOP 30.0 MHz
RES BW 10 kHz (i)
VBW 10 kHz
SWP 2.30 sec

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)

REQUIREMENTS: Maximum video output signal that appears at the output terminals is 346.4*√R and 77.5*√R for the sound signal. For a 75 ohm system the maximum video is 2999.82 uVolts (A) and 671.15 uVolts (B) for the sound. Emissions removed by 4.6 MHz or more below or 7.6 MHz or more above the video carrier shall not exceed 10.95*√R where R is the terminating resistance. This would be 94.83 uVolts (30dB) for 75 ohm system. A 75 to 50 ohm matching pad with a 6 dB loss was used for the measurements.

TEST RESULTS:

CHANNEL NUMBER	EMISSION FREQUENCY MHz	ANTENNA LEVEL uV	FCC LIMIT uV
3 (AUDIO)	56.7	252.00	671.15
3 (VIDEO)	61.2	1448.00	2999.82
3 (VIDEO)	122.4	6.70	2999.82
3 (VIDEO)	183.6	5.44	2999.82
3 (AUDIO)	65.7	224.00	671.15
4 (AUDIO)	62.7	228.00	671.15
4 (VIDEO)	67.2	1384.00	2999.82
4 (VIDEO)	201.6	4.58	2999.82
4 (AUDIO)	71.7	220.00	671.15

TEST RESULTS: THIS UNIT DOES MEET THE REQUIREMENTS.

TEST PROCEDURE: This unit was tested in accordance with ANSI C63.4 1992 paragraph 12.2.5 The receiver was connected to a LNBF/SATELLITE ANTENNA. The unit was tested on several satellite frequencies and the highest output was recorded. The output was measured at the end of a one(1) meter long cable, that would normally be connected to the television receiver.

PERFORMED BY: JOSEPH SCOGLIO JANUARY 11, 2001

APPLICANT: HANDAN BROADINFOCOM CO., LTD.

FCC ID: NU2UVR-100N

NAME OF TEST: TRANSFER SWITCH ISOLATION
RULES PART: 15.115(C)

REQUIREMENT: For a 75 ohm system it is 2.996 uV(0.346(R)). Measurements were made with the switch in both positions. A 75 to 50 ohm matching pad was used to match the receiver to the analyzer. The pad has a 6 dB loss.

TEST DATA:

SWITCH POSITION	CHANNEL NUMBER	FREQUENCY MHz	LEVEL (in uV) AT ANTENNA TERMINAL
Ant	3	61.30	<1.00
SAT RECEIVER	3	61.30	1.30
Ant	4	67.34	1.00
SAT RECEIVER	4	67.34	1.25

NOTES: The noise level on the spectrum analyzer was 0.5 uV. In each switch position the spectrum was scanned from 9kHz to 1GHz.

TEST RESULTS: The results indicate that this unit does meet the requirement.

TEST PROCEDURE: This unit was tested in accordance with ANSI C63.4 1992 paragraph 12.2.5 The receiver was connected to a LNBF/SATELLITE ANTENNA. The unit was tested on several satellite frequencies and the highest output was recorded. The output was measured at the end of a one(1) meter long cable, that would normally be connected to the television receiver.

PERFORMED BY: JOSEPH SCOGLIO DATE: JANUARY 11, 2002