



# The Hong Kong Standards and Testing Centre Ltd.

Date: 1998-09-05

## TEST REPORT

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No.: KM0040/504

**APPLICANT:** (CODE : 000944)

New Bright Ind. Co. Ltd.

11 Sheung Yuet Rd., 9/F New Bright Bldg., Kowloon Bay, Kowloon, Hong Kong.

**DATE OF SAMPLES RECEIVED:** 1998.08.07

**DATE OF TESTING:** 1998.08.13.

### **DESCRIPTION OF SAMPLE(S):**

A sample of product said to be:

Product: Low Power Communication Device - Receiver

Manufacturer: New Bright Ind. Co. Ltd.

Model Number: 3044A

Brand Name: N/A

Rating: 6Vd.c. 1A 6W (Rechargeable 6.0V NiCd Battery Pack) or ("AA" size battery x 4)

Origin: China

### **INVESTIGATIONS REQUESTED:**

Measurement to the relevant clauses of F.C.C. Rules and Regulations Part 15 Subpart B - Unintentional Radiator.

**RESULT/ REMARK:** Please see attached sheet(s).

### **CONCLUSION:**

From the measurement data obtained, the tested sample was considered to have COMPLIED with the clause 15.109(a) of Federal Communications Commission Rules and Regulations Part 15.

**TEST EQUIPMENT AUDIT:** Please see Appendix A

Testing Engineer

Verify by

Patrick Wong  
for Managing Director

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### TEST SUMMARY

\*\*\*UNINTENTIONAL RADIATOR\*\*\*

- (A) Measurement of Radiated Emissions ..... Satisfactory
- (B) Line Conducted Voltage Test ..... Not applicable

### TEST DATA

Please refer to the attached result sheets.



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\*\*\*UNINTENTIONAL RADIATOR\*\*\*

\*\* RECEIVER SECTION \*\*

### (A) Measurement of Radiated Interference

TEST REFERENCE: FCC Rules Part 15 Subpart B section 15.109(a)

TEST CONDITION : Normal

TEST DATE : 1998.08.13

| Freq. to which<br>tuned | Freq of the<br>emission | Polarization<br>H-V | Meter<br>reading (at 3m) |        | Antenna<br>factor | Field Strength<br>(at 3m) | FCC limit<br>@ |
|-------------------------|-------------------------|---------------------|--------------------------|--------|-------------------|---------------------------|----------------|
| MHz                     | MHz                     |                     | dB( $\mu$ V)             | dB     | dB( $\mu$ V/m)    | $\mu$ V/m                 | $\mu$ V/m      |
| 49.860                  | 49.9                    | V                   | 20.1                     | + 15.0 | 35.1              | 56.9                      | 100            |
|                         | 99.7                    |                     | < 1.0                    | + 12.2 | < 13.2            | < 4.6                     | 150            |
|                         | 149.6                   | H                   | 21.7                     | + 9.8  | 31.5              | 37.6                      | 150            |
|                         | 199.4                   | H                   | 22.4                     | + 11.5 | 33.9              | 49.5                      | 150            |
|                         | 249.3                   | H                   | 25.5                     | + 15.9 | 41.4              | 117.5                     | 200            |
|                         | 299.1                   |                     | < 1.0                    | + 17.0 | < 18.0            | < 7.9                     | 200            |
|                         | 349.0                   |                     | < 1.0                    | + 17.2 | < 18.2            | < 8.1                     | 200            |
|                         | 398.8                   |                     | < 1.0                    | + 18.8 | < 19.8            | < 9.8                     | 200            |
|                         | 448.7                   |                     | < 1.0                    | + 19.7 | < 20.7            | < 10.8                    | 200            |
|                         | 498.6                   |                     | < 1.0                    | + 20.6 | < 21.6            | < 12.0                    | 200            |
|                         | 548.4                   |                     | < 1.0                    | + 22.2 | < 23.2            | < 14.5                    | 200            |
|                         | 598.3                   |                     | < 1.0                    | + 23.4 | < 24.4            | < 16.6                    | 200            |
|                         | 648.1                   |                     | < 1.0                    | + 23.5 | < 24.5            | < 16.8                    | 200            |
|                         | 698.0                   |                     | < 1.0                    | + 25.0 | < 26.0            | < 20.0                    | 200            |
|                         | 747.8                   |                     | < 1.0                    | + 26.2 | < 27.2            | < 22.9                    | 200            |
|                         | 797.7                   |                     | < 1.0                    | + 27.2 | < 28.2            | < 25.7                    | 200            |
|                         | 847.5                   |                     | < 1.0                    | + 27.2 | < 28.2            | < 25.7                    | 200            |
|                         | 897.5                   |                     | < 1.0                    | + 27.2 | < 28.2            | < 25.7                    | 200            |
|                         | 947.2                   |                     | < 1.0                    | + 27.8 | < 28.8            | < 27.5                    | 200            |
|                         | 997.1                   |                     | < 1.0                    | + 28.5 | < 29.5            | < 29.9                    | 500            |

### SUMMARY

All data is within limits

Broad-band Antennas were used and both polarizations of emissions were measured

Polarizations at highest reading indicated as:

H -- Horizontal      V -- Vertical



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### NOTES FOR THE RADIATION MEASUREMENT

(1) Test site facility:

Open field test site located at Taipo (Hong Kong) with a metal ground plane on filed with the FCC pursuant to section 2.948 of the FCC Rules.

(2) Distance between the ET and measuring antenna:

3 meters.

(3) Measuring instrumentation's:

CISPR Quasi-peak type field strength meter (25 MHz - 1000 MHz.). 6 dB bandwidth set at 120 KHz. Also, peak level of the fundamental emissions was measured in order to determine compliance with the 20dB peak to average limit specified in Section 15.35(b) of the FCC new Rules.

(4) Measuring antenna:

Broad band antenna for the frequency range 25-1000 MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable included in the Antenna Factor for measurement data. The antenna are capable of measuring both horizontal and vertical polarizations.

(5) Frequency range scanned:

The frequency range from 25 MHz to 1000 MHz had been searched. Readings of the highest emissions relating to the limit were reported as above.

(6) Arrangement of EUT:

During the test, the sample was operated at rated supply voltage and arranged for maximum emissions.

(7) Measuring Procedure:

In accordance with the relevant clauses of the FCC Rules Part 15 section 15.109(a) and ANSI C63.4:1992 section 12.1.1.1-2.

(8) Measuring Uncertainty:

The calculated uncertainty for measurement performed at 3M test distance are:-  
30MHz to 200MHz =  $\pm 3.7\text{dB}$ , 200MHz to 1000MHz =  $+ 3.0\text{dB}/-2.7\text{dB}$ .

Remark: Purpose of this test is to provide the Applicant with the necessary test data of their device for the submission to FCC with application for Equipment Authorization under FCC's Equipment Authorization Program. This test itself is not an Approval Test.

\*\*\*\*\*End of Document\*\*\*\*\*



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### APPENDIX A

#### TEST EQUIPMENT AUDIT

##### Radiated Emission

| EQP NO. | DESCRIPTION                                                                  | MANUFACTURER   | MODEL NO.                      | SERIAL NO.                             | LAST CAL |
|---------|------------------------------------------------------------------------------|----------------|--------------------------------|----------------------------------------|----------|
| EM007   | SPECTRUM ANALYZER                                                            | HP             | HP85660B                       | 3144A21192                             | 29/05/98 |
| EM008   | SPECTRUM ANALYZER DISPLAY                                                    | HP             | HP85662A                       | 3144A20514                             | 29/05/98 |
| EM009   | QUASI PEAK ADAPTOR                                                           | HP             | HP85650A                       | 3303A01702                             | 29/05/98 |
| EM010   | RF PRESELECTOR                                                               | HP             | HP85685A                       | 3221A01410                             | 29/05/98 |
| EM011   | ATTENUATOR/SWITCH                                                            | HP             | HP11713A                       | 2508A10595                             | 29/05/98 |
| EM012   | PRE-AMPLIFIER                                                                | HP             | HP8449B                        | 3008A00262                             | 29/05/98 |
| EM013   | CONTROLLER (COMPUTER),<br>COLOR MONITOR, KEYBOARD &<br>MOUSE<br>FLOPPY DRIVE | HP<br>HP<br>HP | HP9000<br>HP A1097C<br>HP9133L | 6226A60314<br>3151J39517<br>2623A02468 | CM       |
| EM016   | ANTENNA                                                                      | ARA INC.       | LPB-2513/A                     | 1047                                   | 05/08/98 |
| EM072   | SIGNAL GENERATOR                                                             | HP             | 8640B                          | 1948A11892                             | 30/03/98 |
| EM083   | HKSTC OPEN AREA TEST SITE                                                    | HKSTC          | N/A                            | N/A                                    | 16/02/98 |

#### ABBREVIATIONS:

CM = Corrective Maintenance

N/A = Not Applicable