IEEE C95.1 2005
KDB 447498 D01 V06
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Stream

Model:
7610 Dual pH/ORP/ION, 7620 Dual EC, 7630 Dual DO, 7650 Dual pH/ORP/ION/EC/DO, 6610 pH/ORP/ION/EC, 6620 pH/ORP/ION/DO, 6630 EC/DO, 5610 pH/ORP, 5620 EC 5630 DO

Trade Name: JENCO

Issued to

Jenco Electronics, Ltd
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Issued by

Compliance Certification Services Inc.
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Issued Date: January 23, 2017

Testing Laboratory
1309

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		January 23, 2017		Initial Issue	ALL	Becca Chen

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1. TEST RESULT CERTIFICATION

We hereby certify that:

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Approved by:

Sam Chuang
Manager
Compliance Certification Services Inc.

Prepared by:

Becca Chen
Report coordinator
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

<table>
<tr><td>Product</td><td>Stream</td></tr>
<tr><td>Model Number</td><td>7610 Dual pH/ORP/ION, 7620 Dual EC, 7630 Dual DO,
7650 Dual pH/ORP/ION/EC/DO, 6610 pH/ORP/ION/EC,
6620 pH/ORP/ION/DO, 6630 EC/DO, 5610 pH/ORP, 5620 EC 5630 DO</td></tr>
<tr><td>Model Discrepancy</td><td>Difference of the model numbers (list on this report) are just for marketing purpose only and please see as below:
<table>
<tr><th>Model number</th><th>pH/ORP</th><th>EC</th><th>DO</th><th>pH/ORP/ION</th></tr>
<tr><td>7610 Dual pH/ORP/ION</td><td>N/A</td><td>N/A</td><td>N/A</td><td>2</td></tr>
<tr><td>7650 Dual pH/ORP/EC/DO/ION</td><td>N/A</td><td>2</td><td>2</td><td>2</td></tr>
<tr><td>7630 Dual DO</td><td>N/A</td><td>N/A</td><td>2</td><td>N/A</td></tr>
<tr><td>7620 Dual EC</td><td>N/A</td><td>2</td><td>N/A</td><td>N/A</td></tr>
<tr><td>6630 EC/DO</td><td>N/A</td><td>1</td><td>1</td><td>N/A</td></tr>
<tr><td>6620 pH/ORP/ION/DO</td><td>N/A</td><td>N/A</td><td>1</td><td>1</td></tr>
<tr><td>6610 pH/ORP/ION/EC</td><td>N/A</td><td>1</td><td>N/A</td><td>1</td></tr>
<tr><td>5630 DO</td><td>N/A</td><td>N/A</td><td>1</td><td>N/A</td></tr>
<tr><td>5620 EC</td><td>N/A</td><td>1</td><td>N/A</td><td>N/A</td></tr>
<tr><td>5610 pH/ORP</td><td>1</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
</table></td></tr>
<tr><td>Trade Name</td><td>JENCO</td></tr>
<tr><td>Frequency band (Operating)</td><td>☒ 802.11b/g/n HT 20: 2412MHz ~ 2462MHz
☐ Others</td></tr>
<tr><td>Device category</td><td>☐ Portable (<20cm separation)
☒ Mobile (>20cm separation)
☐ Others</td></tr>
<tr><td>Exposure classification</td><td>☐ Occupational/Controlled exposure (S = 5mW/cm^2)
☒ General Population/Uncontrolled exposure (S=1mW/cm^2)</td></tr>
<tr><td>Antenna Specification</td><td>PIFA Antenna
2.4GHz: Antenna Gain : 4.00 dBi (Numeric gain: 2.51)</td></tr>
<tr><td>Maximum Average output power</td><td>IEEE 802.11b Mode: 18.14 dBm (65.163 mW)
IEEE 802.11g Mode: 17.00 dBm (50.119 mW)
IEEE 802.11n HT 20 Mode: 16.64 dBm (46.132 mW)</td></tr>
<tr><td>Maximum Tune up Power</td><td>IEEE 802.11b Mode: 19.00 dBm (79.433 mW)
IEEE 802.11g Mode: 18.00 dBm (63.096 mW)
IEEE 802.11n HT 20 Mode: 17.50 dBm (56.234 mW)</td></tr>
<tr><td>Evaluation applied</td><td>☒ MPE Evaluation*
☐ SAR Evaluation
☐ N/A</td></tr>
</table>

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm^2

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
11	2462	79.433	2.51	20	0.0397	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
1	2412	63.096	2.51	20	0.0315	1

IEEE 802.11n HT 20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
6	2437	56.234	2.51	20	0.0281	1