Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V03
Report Template Revision Date: Mar.1st, 2017

RF Exposure Evaluation Report

Report No. :	CQASZ20190400237E-02
Applicant:	NINGBO LIANDA WINCH CO.,LTD
Address of Applicant:	Yushantou Village,Dongqiao Town,Haishu Dist,Ningbo,China
Manufacturer:	NINGBO LIANDA WINCH CO.,LTD
Address of Manufacturer:	Yushantou Village,Dongqiao Town,Haishu Dist,Ningbo,China
Equipment Under Test (EUT):	
Product:	Mini Wireless Remote
Model No.:	LD-WR02
Brand Name:	N/A
FCC ID:	2ASYP-LDWR02
Standards:	47 CFR Part 1.1307
	47 CFR Part 2.1093
	KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2019-04-11 to 2019-05-07
Date of Issue:	2019-05-07
Test Result :	**PASS***

Tested By： (Daisy Qin)

Reviewed By: (Aaron Ma)

Approved By: (Jack Ai)

* In the configuration tested, the EUT complied with the standards specified above.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190400237E-02	Rev.01	Initial report	2019-05-07

2 Contents

3 General Information

3.1 Client Information

Applicant:	NINGBO LIANDA WINCH CO.,LTD
Address of Applicant:	Yushantou Village,Dongqiao Town,Haishu Dist,Ningbo,China
Manufacturer:	NINGBO LIANDA WINCH CO.,LTD
Address of Manufacturer:	Yushantou Village,Dongqiao Town,Haishu Dist,Ningbo,China

3.2 General Description of EUT

Product Name:	Mini Wireless Remote
Model No.:	LD-WR02
Trade Mark:	N/A
Hardware Version:	V1.0
Software Version:	V1.0
Sample Type:	Portable production
Operation Frequency:	315MHz
Channel Numbers:	1
Modulation Type:	00K
Antenna Type:	Printed antenna
Antenna Gain:	0dBi
Power Supply:	Button battery: DC6.0V

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

eirp = pt x gt = $(E \times d)^2/30$

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, ---$10^{((dB\mu V/m)/20)}/10^6$,

d = measurement distance in meters (m)---3m,

So pt = $(E \times d)^2/30$ / gt

The worst case (refer to report CQASZ20190400237E-01) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
315	70.83	Peak
315	63.27	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
315	62.49	Peak
315	54.93	Average

For 315MHz wireless:

Field strength = 70.83dBμV/m @3m

Ant. gain 0dBi; so Ant numeric gain=1.0

So pt={[$10^{(70.83/20)}/10^6$x3]^2/30 /1.0}x1000mW =0.004mW

So (0.001mW/5mm)x √0.315GHz = 0.0004,

0.0004<3.0 for 1-g SAR

So the SAR report is not required.