

FCC Test Report

E4064047301DW

Type / Model Name: CC-601, CC-604

Product Description: Remote Transmitter

Applicant: Controlled Entry Distributors, Inc.

FCC ID: SU7CC601

FCC -- TEST REPORT

Test Report No. : E4064047301DW	November 4, 2008 Date of issue
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Type / Model Name : CC-601 and CC-604

Product Description : Remore Transmitter

Applicant : Controlled Entry Distributors, Inc.

Address : 2500 south 3850 West

Suite A, SlT Lake City

Utah 84120, USA

Test Result according to the standards listed in clause 1 test standards:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15, July 10, 2008

Federal Communications Commission, Part 15 – Radio
Frequency Device

ANSI C63.4:2003

Method of Measurement of Radio-Noise Emissions from Low-
Voltage Electrical and Electronic Equipment in the Range of
9 kHz to 40 GHz

2 SUMMARY

GENERAL REMARKS:

The model: CC-601 is same as model: CC-604 in circuit design and PCB layout. The difference is only on the no. of switch, CC-601 is two switches and CC-604 is one switch. Therefore, CC-601 is selected as the represented model for testing.

FINAL ASSESSMENT:

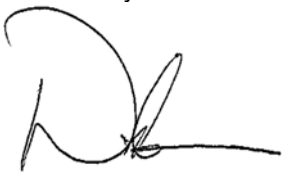
The equipment under test fulfils the technical requirement cited in section 15.231 of FCC Part 15

Date of receipt of test sample : September 24, 2008

Testing commenced on : September 24, 2008

Testing concluded on : November 4, 2008

Reviewed by:



Wilson Loke
Senior Manager

Prepared by:



Davis Wei
Engineer

3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EuT



Front View (CC-601)



Back View (CC-601)



Front View (CC-604)



Back View (CC-601)

3.2 Power supply system utilised

Power supply voltage: 12VDC

3.3 Short description of the Equipment under Test (EuT)

The Equipment under test (EUT) is a 434MHz transmitter. The main function of the EUT is acted as a remote control to control the on/off of the garage door. When the button is pressed, the transmitter will transmit the signal by Pulsed Code Modulation to the receiver installed in the garage door to control the garage door close or open. The EUT is powered by one 12V alkaline battery

Number of tested samples:	One		
Serial number:	Not Labelled		
Dimensions:	L: 5.0cm	W: 3.5cm	H: 1.2cm

EuT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- Operation mode 1: Transmissing mode

- Operation mode 2: N/A

- Operation mode 3: N/A

EuT configuration:

(The CDF filled by the applicant can be viewed at the test laboratory.)

The following peripheral devices and interface cables were connected during the measurements:

- None Model : _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**emitel (Shenzhen) Limited
Building 2, 171 Meihua Road,
Futian District,
Shenzhen, 518049
China**

FCC Registration No.: 746887

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 /11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to ISO 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

5 TEST CONDITIONS AND RESULTS

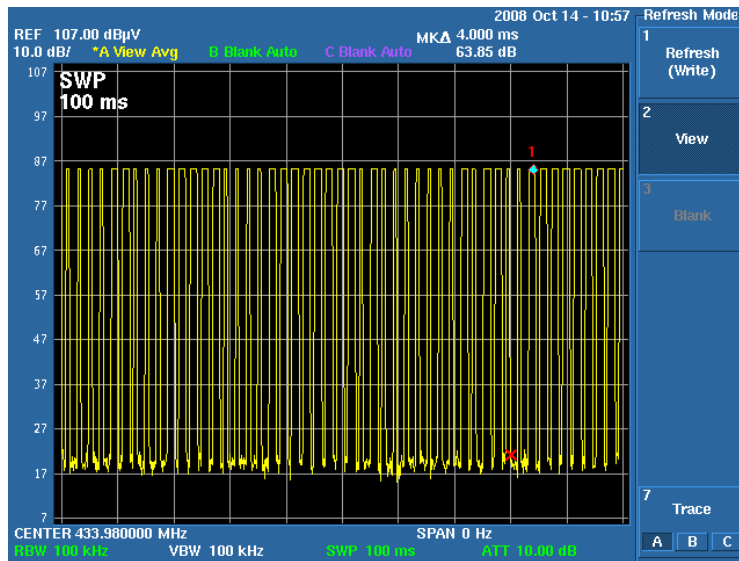
5.1 Average Factor

For test instruments and accessories used see section 6.

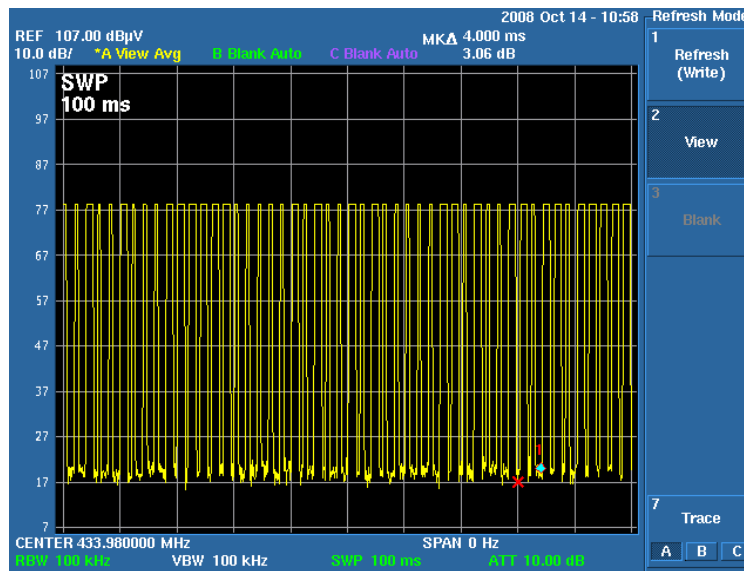
5.1.1 Description of the test location

Test location: Shield room

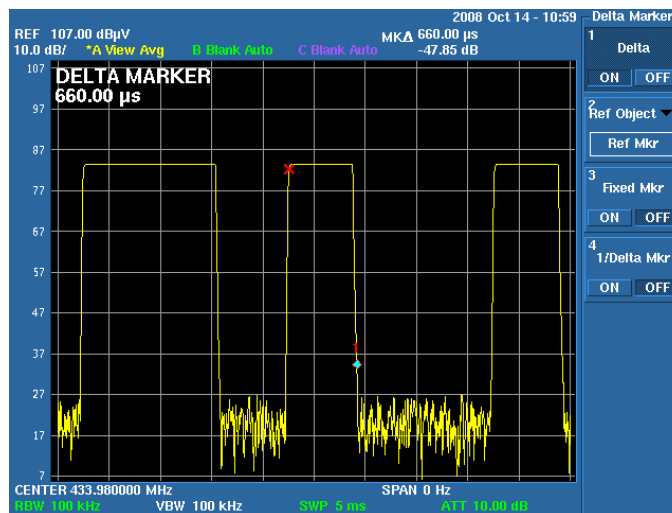
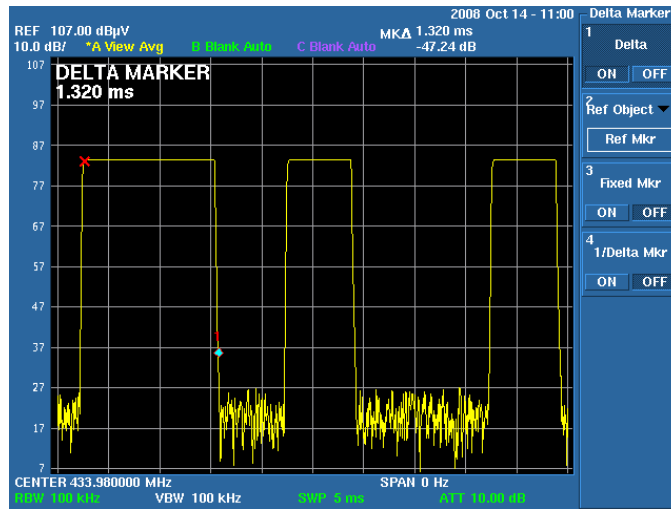
5.1.2 Photo documentation of test



Key 1 (worst case)



Key 2



5.1.3 Test result

Average Factor (Press Switch) =	$(1.32*27 + 0.66*22)\text{ms}/100\text{ms}$
=	0.5
=	-6.0dB

Remarks:

5.2 Radiated Emission

For test instruments and accessories used see section 6.

5.2.1 Description of the test location

Test location: Semi-anecholic Chamber

Test distance: 3m

5.2.2 Photo documentation of test

Front view:



Back view



5.2.3 Test result

Frequency range: 30MHz to 4340MHz

Min. limit margin: 13.3dB

The requirements of section 15.231(b) are **FULFILLED**.

Remarks:

5.2.4 Test protocol

Worst Case Operation mode: Transmissing mode

Result: PASS

Remarks:

Date: September 25, 2008

Tested by: Davis Wei

Polari- zation	Frequency [MHz]	Measured PK Value [dB μ V]	Correction factor [dB/m]	Result PK value [dB μ V/m]	Limit PK [dB μ V/m]	Margin PK [dB]
H	434.000	50.7	18.3	69.0	100.8	-26.8
H	862.920	28.1	25.4	53.5	80.8	-25.1

Polari- zation	Frequency [MHz]	Measured PK Value [dB μ V]	Correction factor [dB/m]	Average Factor [dB]	Result AV value [dB μ V/m]	Limit AV [dB μ V/m]	Margin AV [dB]
H	390.120	50.7	18.3	-6.0	63.0	80.8	-17.8
H	780.240	28.1	25.4	-6.0	47.5	60.8	-13.3

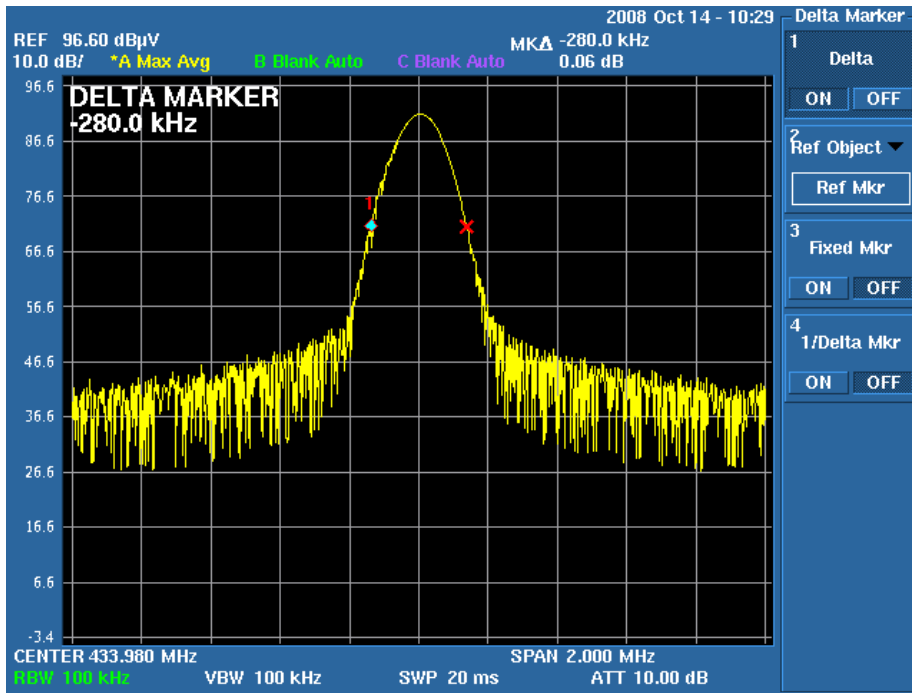
- Remark: 1) The emissions lower than 20dB below the limit are not measured.
 2) PK Detector are used for the measurement.
 3) Correction Factor is including the antenna factor and cable factor.
 4) Result = Measured data + Correction factor
 5) Wooden stuff and plastic tape is used to press the switch for continuous transmission.

5.3 Bandwidth

5.3.1 Description of the test location

Test location: Shielded Room

5.3.2 Photo documentation of the test



5.3.3 Test result

Measured Occupied Bandwidth (kHz)	Limit (kHz)
280	1085

The requirements of section 15.231(c) is **FULFILLED**

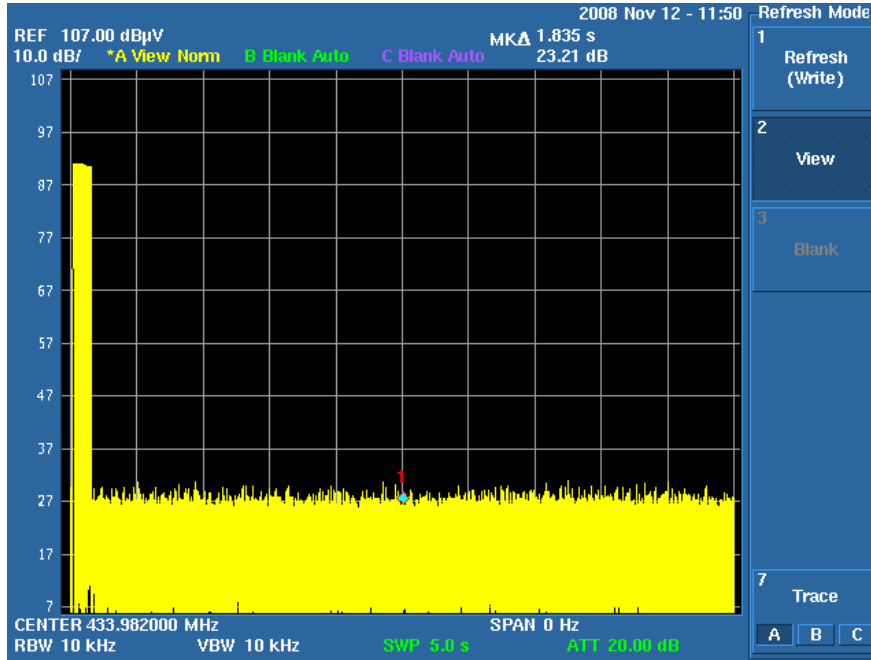
Remarks:

5.4 Provision of Momentary operation

5.4.1 Description of the test location

Test location: Shielded Room

5.4.2 Photo documentation of the test



5.4.3 Test result

The time of stopping transmission after switch releasing (s)	Limit (s)
<1	5

The requirement of section 15.231(a)(1) is **FULFILLED**

Remarks:

6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test Item	Model / Type	Kind of Equipment	Manufacturer	Equipment No.
Radiated Emission	ESPI3	EMI Test Receiver	Rohde & Schwarz	04-02/03-06-002
	U3772	Spectrum Analyzer	Advantest	04-02/11-08-001
	3142C	Biconilog Antenna	EMCO	04-02/24-06-001
	3117	Horn Antenna	ETS Lindgren	04-02/24-07-001
Bandwidth	U3772	Spectrum Analyzer	Advantest	04-02/11-08-001
Momentary operation	U3772	Spectrum Analyzer	Advantest	04-02/11-08-001
Average Factor	U3772	Spectrum Analyzer	Advantest	04-02/11-08-001