



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3) Date : 18 Apr 2013

Application No. : LR007511(3)

Client : Kid Galaxy Inc
150 Dow Street,
Unit 425B Manchester, nh03101

Sample Description : One(1) item of submitted sample stated to be :

Sample Description	Model number
GOGO Auto--F150	10472
GOGO Auto series	10481 / 10482 / 10483 / 10484 / 10421 / 10422 / 10420 / 10478 / 10415 / 10438 / 10471 / 10423 / 10433 / 10569 / 10570 / 40215 / 10436 / 10437 / 10460 / 10414 / 10709 / 10710 / 10711 / 10712 / 10435 / 10410 / 10705 / 10706

Sample registration no. : RR008824-002
Radio Frequency : 49.860MHz Receiver
Rating : 3 x 1.5V AA size batteries
No. of submitted sample : Two (2) piece (s)

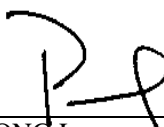
Date Received : 21 Mar 2013

Test Period : 25 Mar 2013 to 11 Apr 2013

Test Requested : FCC Part 15 Certification.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____


Mr. WONG Lap-pong, Andrew
Assistant Manager
Electrical Division

Page 1 of 21

FCC ID: QEA-E003-49R



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3) Date : 18 Apr 2013

Test Method : 47 CFR Part 15 (10-1-10 Edition)
ANSI C63.4 – 2009

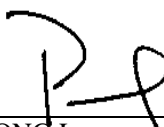
Test Result : See attached sheet(s) from page 2 to 21.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15
Subpart B.

Remark : All twenty-nine models are the same in circuitry and components; and therefore
model 10472 was chosen to be the representative of the test sample. The difference
between the tested model and the declared model(s) is/are the model number, color
and sample description.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____


Mr. WONG Lap-pong, Andrew
Assistant Manager
Electrical Division

Page 2 of 21

FCC ID: QEA-E003-49R



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

Table of Contents

1	General Information.....	4
1.1	General Description.....	4
1.2	Location of the test site.....	5
1.3	List of measuring equipment.....	6
1.4	Measurement Uncertainty.....	6
2	Description of the radiated emission test.....	7
2.1	Test Procedure.....	7
2.2	Test Result.....	7
2.3	Radiated Emission Measurement Data.....	8
3	Description of the Line-conducted Test.....	9
3.1	Test Procedure.....	9
3.2	Test Result.....	9
3.3	Graph and Table of Conducted Emission Measurement Data.....	9
4	Photograph.....	10
4.1	Photographs of the Test Setup for Radiated Emission and Conducted Emission.....	10
4.2	Photographs of the External and Internal Configurations of the EUT.....	10
5	Supplementary document.....	11
5.1	Bandwidth.....	11
5.2	Duty cycle.....	11
5.3	Transmission time.....	11
6	Appendices.....	12



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

1 General Information

1.1 General Description

The equipment under test (EUT) is a receiver for F 150 FCC car. It operates at 49.860MHz and the oscillation of radio control is generated by a LRC circuit. The EUT is powered by 3 x 1.5V AA size batteries. When it switched on and received radio control signal, it will take corresponding action.

The brief circuit description is listed as follows:

- SW1, R12, R3, C11, C12, C6 and its associated circuit act as power circuit.
- L1, C1, C2, C3, Q1, T1, L2, R6, C4, R4, C5, R2, R5, C7, C8 and its associated circuit act as super regeneration band pass filter and amplifier circuit
- C9, R7, C10, U1 and its associated circuit act as pre-amplifier circuit
- U1, R1 and its associated circuit act as decoder circuit
- R8, R9, U2, C12, C14 and its associated circuit act as motor front / back circuit



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

1.2 Location of the test site

FCC Registered Test Site Number: 552221

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2009. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
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CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date
EMI Test Receiver	R&S	ESCI	100152	28 May 2013
Broadband Antenna	Schaffner	CBL6112B	2718	16 Jan 2014
Loop Antenna	EMCO	6502	00056620	15 Sep 2013
Coaxial Cable	Schaffner	RG 213/U	N/A	28 May 2013
Coaxial Cable	Schaffner	RG 214/U	N/A	28 May 2013

1.4 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%.

Radiated emissions

Frequency	Uncertainty (U_{lab})
30MHz ~ 200MHz (Horizontal)	4.83dB
30MHz ~ 200MHz (Vertical)	4.84dB
200MHz ~1000MHz (Horizontal)	4.66dB
200MHz ~1000MHz (Vertical)	4.65dB

Conducted emissions

Frequency	Uncertainty (U_{lab})
150kHz~30MHz	3.02dB



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

A signal generator was used to radiate an unmodulated continuous wave (CW) signal to the EUT (super-regenerative receiver) at its operating frequency in order to “cohere” the characteristic broadband emissions from the receiver.

2.2 Test Result

The frequencies from 30MHz to 1000MHz were investigated, and emissions more 20dB below limit were not reported. Thus, those highest emissions were presented in next page (section 2.3).

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.



CMA Testing and Certification Laboratories

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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	25	° C
Relative humidity:	70	%

Detector: Quasi-peak

RBW: 120kHz

VBW: 300kHz

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
50.497	V	16.7	10.2	26.9	40.0	- 13.1
54.499	V	10.6	10.2	20.8	40.0	- 19.2
109.285	V	10.4	12.4	22.8	43.5	- 20.7
135.983	V	9.2	14.7	23.9	43.5	- 19.6
157.944	H	6.8	14.5	21.3	43.5	- 22.2
208.596	H	9.6	11.9	21.5	43.5	- 22.0
248.391	H	12.2	11.9	24.1	46.0	- 21.9
270.825	H	9.3	15.0	24.3	46.0	- 21.7
294.713	H	9.6	15.0	24.6	46.0	- 21.4
315.686	H	9.3	15.9	25.2	46.0	- 20.8



CMA Testing and Certification Laboratories

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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2009. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

No measurement is required as the EUT is a battery-operated product.

3.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup2.jpg.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg.



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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

Not Applicable

5.2 Duty cycle

Not Applicable

5.3 Transmission time

Not Applicable



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

6 Appendices

A1.	Photos of the set-up of Radiated Emissions	1	page
A2.	Photos of External Configurations	1	page
A3.	Photos of Internal Configurations	1	page
A4.	ID Label/Location	1	page
A5.	Block Diagram	1	page
A6.	Schematics Diagram	1	page
A7.	User Manual	2	pages
A8.	Operation Description	1	page



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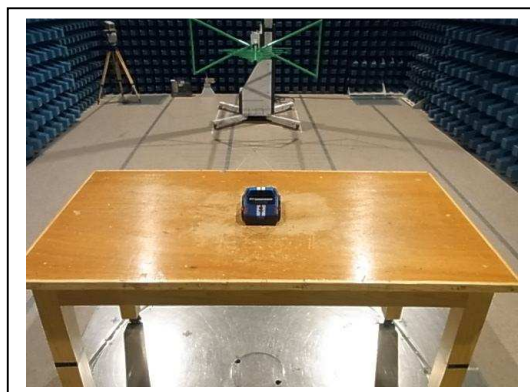
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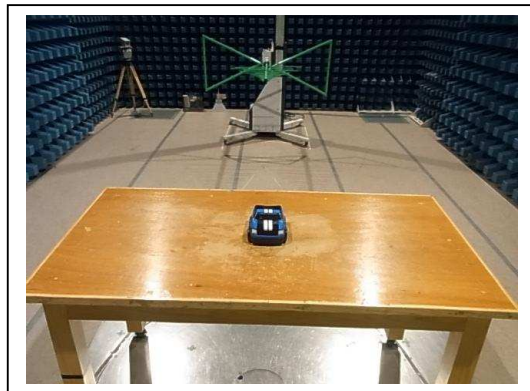
Report No. : AR0018475(3)

Date : 18 Apr 2013

A1. Photos of the set-up of Radiated Emissions



(Front view)



(Back view)

Tested by: 
Mr. LEUNG Shu-kan, Ken

Reviewed by: 
Mr. WONG Lap-pong, Andrew

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Page 13 of 21



CMA Testing and Certification Laboratories

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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A2. Photos of External Configurations



External Configuration 1



External Configuration 2

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Reviewed by:

Mr. WONG Lap-pong, Andrew

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Page 14 of 21



CMA Testing and Certification Laboratories

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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A3. Photos of Internal Configurations



Internal Configuration 1



Internal Configuration 2

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Reviewed by: 
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Page 15 of 21



CMA Testing and Certification Laboratories

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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A4. ID Label / Location



ID Label 1



ID Label 2

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Reviewed by:

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Page 16 of 21



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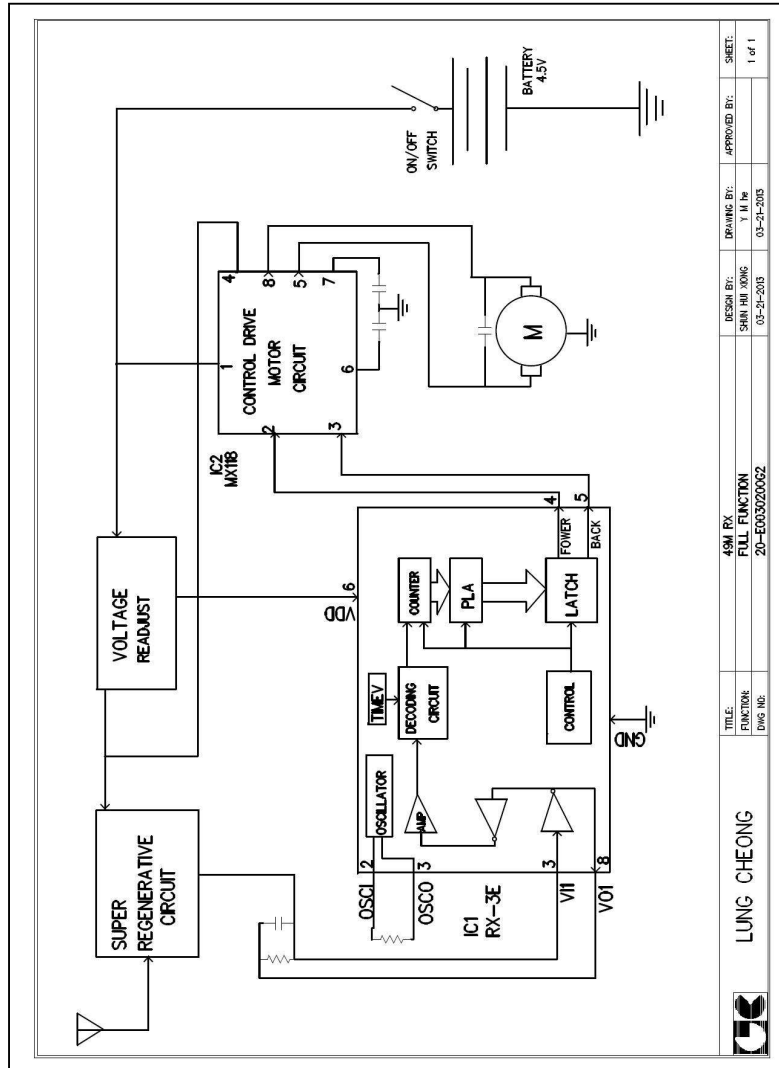
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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A5. Block Diagram



Tested by: *Ken*
Mr. LEUNG Shu-kan, Ken

Reviewed by: *Andrew*
Mr. WONG Lap-pong, Andrew



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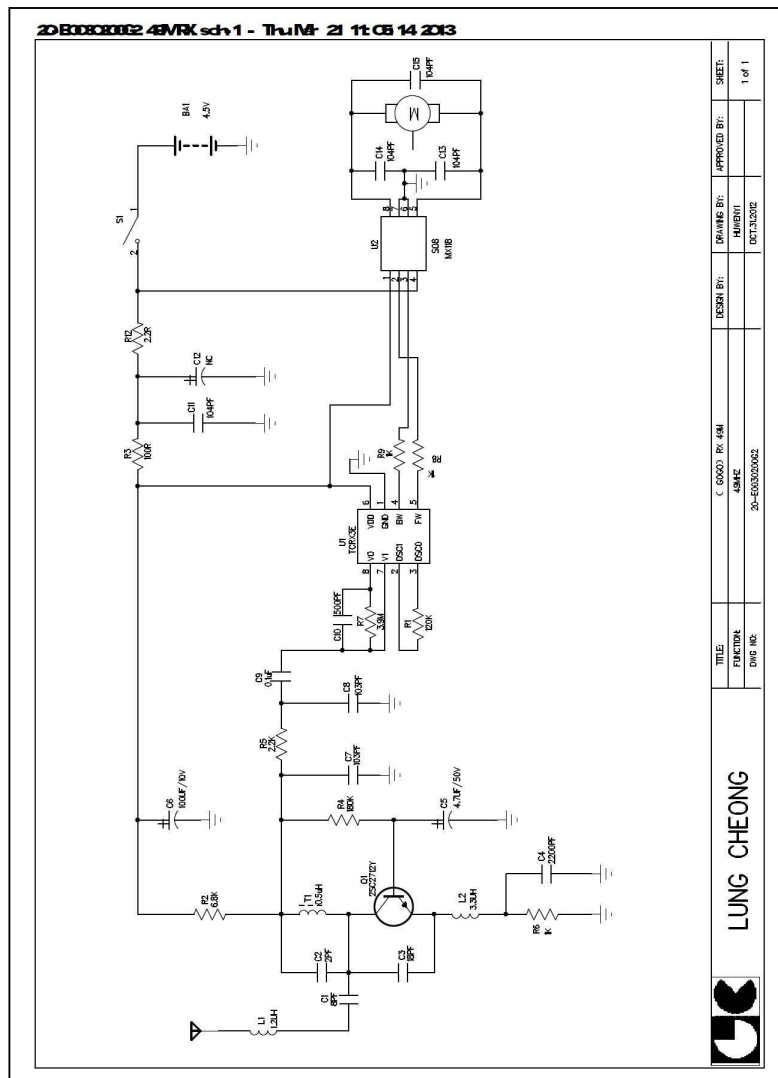
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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A6. Schematic Diagram



LUNG CHEONG

Tested by: *Ken*
Mr. LEUNG Shu-kan, Ken

Reviewed by: *Andrew*
Mr. WONG Lap-pong, Andrew



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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013


A7. User Manual

GO GO AUTO

OPERATING INSTRUCTIONS

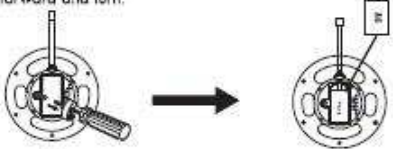
Vehicle

- Unscrew battery box door with a phillips screwdriver.
- Remove battery box door from chassis.
- Install 3-AA batteries with correct polarities show inside battery compartment.
- Reattach battery box door.
- Turn switch ON to start the vehicle. ON/OFF switch is located on the bottom of the vehicle.




Remote Controller

- Unscrew battery door with a phillips screwdriver to open battery door.
- Install 1-9V battery with polarity as shown inside battery compartment.
- Check to see that vehicle is turned on.
- Press button for forward and turn.



Function



The radio circuitry in your car and remote controller is sensitive. Radio interference can affect the control of your car. You may have to choose another location to operate your car.

To Free Kid Galaxy Hot Line: 800-816-1135

Kid Galaxy
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Tested by: 
Mr. LEUNG Shu-kan, Ken

Reviewed by: 
Mr. WONG Lap-pong, Andrew



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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A7. User Manual

USER MANUAL

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the requirements of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment, off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna,
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc), or rechargeable (Nickel-cadmium) batteries.

Go Go Auto Series

Tested by: 
Mr. LEUNG Shu-kan, Ken

Reviewed by: 
Mr. WONG Lap-pong, Andrew



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TEST REPORT

Report No. : AR0018475(3)

Date : 18 Apr 2013

A8. Operation Description

Kid Galaxy RC-TOY GOGO CAR RX OPERATION PRINCIPLE

The Kid Galaxy RC-TOY go go car operates at frequency 27.145MHz, or 49.860MHz, encode signals were received from antenna then passed into the super regeneration band pass filter circuit for wave-check; After Pre-amplification then passed into the decoder of the IC, the controlling signals corresponding to TX will be demodulated out to control the car's functions of forward; backward.

Circuits' composition:

Power circuit, super regeneration band pass filter and amplifier circuit, pre-amplified circuit, decoder circuit, motor front/back circuit.

1. Power circuit:

SW1, R12, R3 · C11, C12, C6

2. super regeneration band pass filter and amplifier circuit:

L1, C1, C2, C3, Q1, T1 · L2, R6, C4, R4 · C5, R2, R5, C7, C8

3. pre-amplified circuit:

C9, R7, C10, U1

4. decoder circuit:

U1, R1

5. motor front/back circuit:

R8, R9, U2, C13, C14

***** End of Report *****

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

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Page 21 of 21

FCC ID: QEA-E003-49R