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**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 282399

Report No.: **03.04.0365EF**  
Page: 1 of 10  
FCC ID: FJPDV-168G

## **FCC TEST REPORT**

**Application No.** : 03.04.0365EF

**Applicant** : Dee Van Enterprise Co., Ltd.

**Fundamental Frequency** : 433.640 MHz

**Equipment under Test (EUT):**

Name : Golf Car (Transmitter part)

Model : DV-168G

**Standards** : FCC PART 15, SUBPART C : 2002

**Date of Receipt** : 03 April 2003

**Date of Test** : 04 April 2003 to 18 April 2003

**Date of Issue** : 21 April 2003

<b>Test Result :</b>	<b>PASS *</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Kent Hsu  
Laboratory Manager  
SGS-CSTC Co.,Ltd.

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf. This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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### **3 General Information**

#### **3.1 Client Information**

Applicant: Dee Van Enterprise Co., Ltd.  
Address of Applicant: No. 5, Pao Kao Road, Hsin Tien City, Taipei, Taiwan.

#### **3.2 Details of E.U.T.**

Product Name: Golf Car(Transmitter Part)  
Model: DV-168G  
Power Supply: 9V DC (1 x '6F22' Battery)  
Power Cord: N/A  
Operation of the EUT: The EUT works when the operator pressing the control button. After the operation release, the EUT stop emitting immediately. This is in compliance with clause (a1) of FCC PART 15, SUBPART C section 15.231.

#### **3.3 Description of Support Units**

The EUT was tested as an independent unit: a radio transmitter.

#### **3.4 Test Location**

All tests were performed at:-

SGS-CSTC Standards Technical Services Ltd., Guangzhou Safety & EMC Laboratory, 1/F, Building No. 1, Agriculture Machinery Materials Company Warehouse Ltd., Wushan Road Shipai, Tianhe District, Guangzhou, China. P.C. 510630.

Tel: +86 20 3848 1001

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#### **3.5 Other Information Requested by the Customer**

None.

### **3.6 Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

**1. NVLAP – Lab Code: 200611-0**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 2000611-0. Effective through February 2, 2003.

**2. ACA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

**3. SGS UK -- Certificate No.: 32, SGS-TUV SAARLAND and SGS-FINKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

**4. CNAL – LAB Code: L0141**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratory (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratory.

**5. FCC – Registration No.: 282399**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002. With the above and NVLAP, SGS-CSTC is an authorized test laboratory for the DoC process.

### **3.7 Modificaiton**

Modification was performed before final test:

Shorten the antenna layout on PCB and add a by-pass capacitor (100pF) at the antenna and earth (V-). For details please refer to section 5 of this report.

## 4 Test Results

### 4.1 Test Instruments

Test Equipment	Manufacturer	Model	Asset No.	Cal. Due Date
Temperature, Humidity & Barometer	Oregon Scientific	BA-888	EMC0003	25-07-2003
3m Semi- Anechoic Chamber	Frankonia	N/A	EMC0501	04-11-2003
EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	EMC0506	17-11-2003
Bilog Type Antenna	Schaffner Chase	CBL6143	EMC0519	01-12-2003
Spectrum Analysor	ROHDE & SCHWARZ	FSP30	100324	21-05-2004
Horn Antenna	ROHDE & SCHWARZ	HF906	100096	01-04-2004
30dB Pre-amplifier	HP	8449B	3008A00863	01-06-2003
Coaxial cable	SGS	N/A	EMC0514	04-11-2003

### 4.2 E.U.T. Operation

Input voltage: 9V DC (1 x '6F22' Battery)

Operating Environment:

Temperature: 24.0 °C

Humidity: 68 % RH

Atmospheric Pressure: 1018 mbar

EUT Operation:

Test the EUT in transmitting mode.

### 4.3 Test Procedure & Measurement Data

#### 4.3.1 Radiated Emissions

Test Requirement: FCC Part 15, Subpart C

Test Method: Based on FCC Part15, Subpart C, Section 15.231

Test Date: 18 April 2003

Measurement Distance: 3m (Semi-Anechoic Chamber)

Requirements: Field strength of carrier frequency shall not exceed 72.8dBuV/m at 3m.

Field strength of the spurious emissions shall not exceed 52.8dBuV/m at 3m

Detector: Pre-test with Peak detector (120kHz resolution bandwidth for frequency not above 1GHz, 1MHz resolution bandwidth for frequency above 1GHz);

Final test with Average detector (120kHz resolution bandwidth for frequency not above 1GHz, 1MHz resolution bandwidth for frequency above 1GHz);

Test Procedure: The procedure used was ANSI Standard C63.4-2001. The receive spectrum analyser was scanned from 30MHz to the 5GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. The worst case emissions were reported.

The following measurements were performed on the EUT on 18 April 2003:  
Test the EUT in transmitting mode.

**Intentional emission**

<b>Test Frequency (MHz)</b>	<b>Average (dBuV/m)</b>		<b>Limits (dBuV/m)</b>	<b>Margin (dB)</b>	
	Vertical	Horizontal		Vertical	Horizontal
433.640	64.8	62.9	72.8	8.0	9.9

**Other emissions**

<b>Test Frequency (GHz)</b>	<b>Average (dBuV/m)</b>		<b>Limits (dBuV/m)</b>	<b>Margin (dB)</b>	
	Vertical	Horizontal		Vertical	Horizontal
0.867	51.6	52.3	52.8	1.2	0.5
1.301	40.4	43.5	52.8	12.4	9.3
1.735	29.6	32.6	52.8	23.2	20.2
2.168	29.6	33.2	52.8	23.2	19.6
2.602	17.3	23.6	52.8	35.5	29.2
3.305	25.8	27.4	52.8	27.0	25.4
3.469	39.0	32.9	52.8	13.8	19.9
3.903	36.1	36.8	52.8	16.7	16.0
4.336	25.4	29.9	52.8	27.4	22.9

**Test Results: The unit does meet the FCC Part 15, Subpart C requirements.**

#### 4.3.2 Occupied Bandwidth

Test Requirement: FCC Part 15, Subpart C

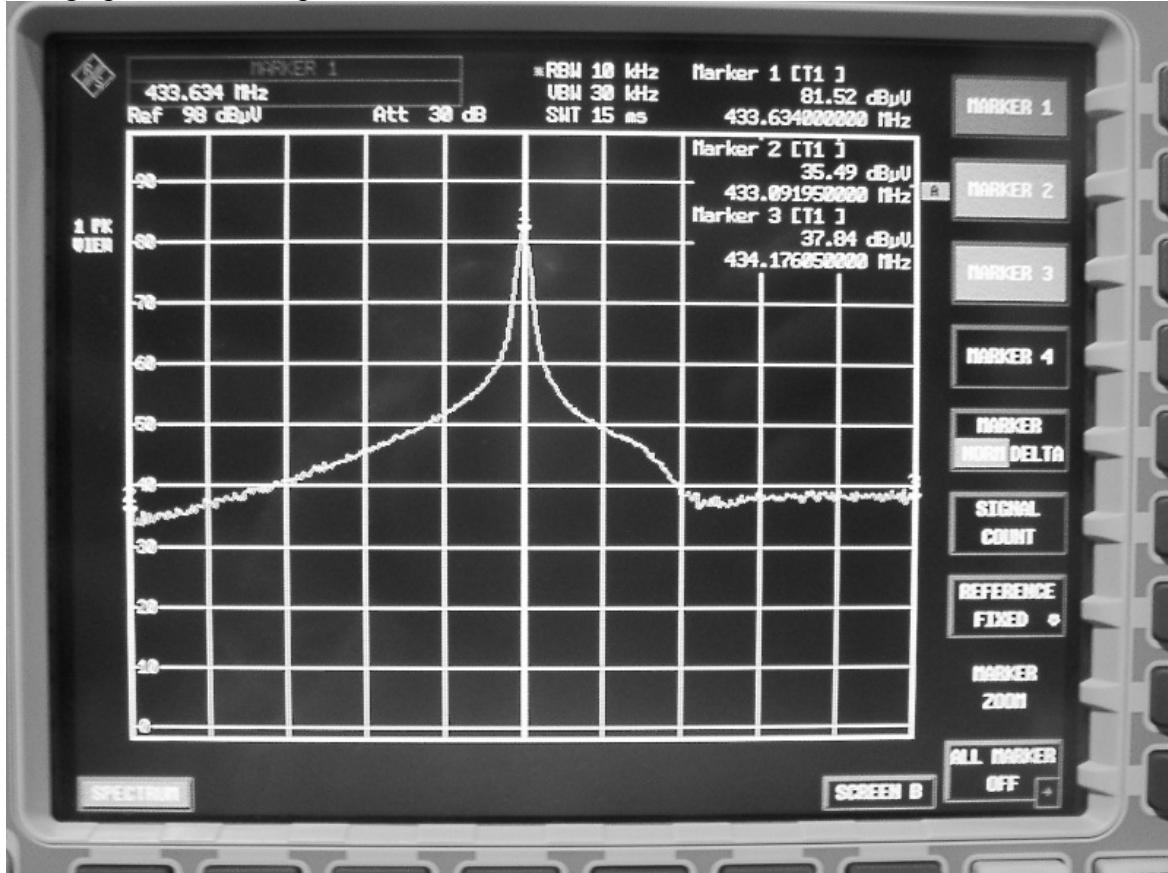
Test Method: Based on FCC Part 15, Subpart C, Section 15.231:  
Periodic Operation in the band 40.66-40.70MHz and above 70MHz.

Test Date: 17 April 2003

Requirements: The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 900

Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyer with peak detector.  
RBW=10KHz  
Span =  $433.634 \times 0.25\% = 1.084\text{MHz}$ .  
Vertical Scale = 10dB per division.

The graph as below, represents the emissions take for this device.



**The results: The unit does meet the FCC Part 15, Subpart C requirements.**

**4.3.3 Photographs - Radiated Emission Test Setup in Chamber**