



# CMA Testing and Certification Laboratories

廠商會檢定中心

## TEST REPORT

Report No. : AN0049561(3) Date : 07 Sep 2011

Application No. : LN023069(9)

Applicant : Ten Forward Limited  
Rm. 606, 6/F., Sunwise Industrial Bldg.,  
16-26 Wang Wo Tsai Street, Tsuen Wan,  
N.T., Hong Kong

Sample Description : One(1) item of submitted sample stated to be Pocket Weather Receiver  
of Model No. TF-6W  
Rating : 2 x 1.5V AAA size batteries  
DC 6V  
No. of submitted sample : Two (2) piece (s)

Date Received : 18 Jul 2011.

Test Period : 22 Jul 2011 to 22 Aug 2011.

Test Requested : FCC Part 15 Certification.

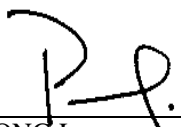
Test Method : 47 CFR Part 15 (10-1-09 Edition)  
ANSI C63.4 – 2009

Test Result : See attached sheet(s) from page 2 to 14.

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

For and on behalf of  
CMA Industrial Development Foundation Limited

Authorized Signature : \_\_\_\_\_

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

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FCC ID: V2N06W



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### 1 General Information

#### 1.1 General Description

The equipment under test (EUT) is a weather radio receiver for Pocket Weather Receiver. The EUT is powered by 2 x 1.5V AAA size batteries or AC/DC 6V adaptor.

The brief circuit description is saved with filename: OpDes.pdf



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### 1.2 Location of the test site

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,  
New Territories,  
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## 1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date
EMI Test Receiver	R&S	ESCI	100152	16 Mar 2012
Broadband Antenna	Schaffner	CBL6112B	2718	31 Oct 2012
Artificial Mains Network	R&S	ENV216	101232	01 Dec 2011
Coaxial Cable	Schaffner	RG 213/U	R/A	03 Aug 2012
Coaxial Cable	Suhner	RG 214/U	R/A	03 Aug 2012
Coaxial Cable	Tyco Electronics	RG58C/U	R/A	05 Jan 2012

Support equipment: (supplied by CMA)

1. AC/DC adaptor  
Model: NA-12

## 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)	4.63dB
30MHz ~ 200MHz (Vertical)	4.64dB
200MHz ~ 1000MHz (Horizontal)	4.65dB
200MHz ~ 1000MHz (Vertical)	4.64dB

### Conducted emissions

Frequency	Uncertainty ( $U_{lab}$ )
150kHz ~ 30MHz	3.04dB



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## 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 radio signal to the EUT during weather radio measurement.

### 2.2 Test Result

The frequencies from 30MHz to 2000MHz were investigated, and emissions more 20dB below limit were not reported. Thus, those the 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.



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## 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:	24	° C
Relative humidity:	52	%

Mode: Weather Radio

Channel: CH1

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)
151.697	H	19.7	12.9	32.6	43.5	- 10.9
303.394	V	17.6	15.9	33.5	46.0	- 12.5
455.093	V	12.3	18.8	31.1	46.0	- 14.9

Channel: CH4

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)
151.775	H	19.5	12.9	32.4	43.5	- 11.1
303.550	V	17.9	15.9	33.8	46.0	- 12.2
455.323	V	13.9	18.8	32.7	46.0	- 13.3



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Channel: CH7

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)
151.852	H	19.6	12.9	32.5	43.5	- 11.0
303.694	V	16.8	15.9	32.7	46.0	- 13.3
455.546	V	9.7	18.8	28.5	46.0	- 17.5
607.393	V	7.9	22.0	29.9	46.0	- 16.1





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Date : 07 Sep 2011

## Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	24	° C
Relative humidity:	52	%

Mode: Weather Alert

Channel: CH1

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)
151.697	H	19.8	12.9	32.7	43.5	- 10.8
303.395	V	17.6	15.9	33.5	46.0	- 12.5
455.093	V	12.2	18.8	31.0	46.0	- 15.0

Channel: CH4

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)
151.775	H	19.4	12.9	32.3	43.5	- 11.2
303.550	V	17.8	15.9	33.7	46.0	- 12.3
455.324	V	14.1	18.8	32.9	46.0	- 13.1



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Channel: CH7

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)
151.852	H	19.9	12.9	32.8	43.5	- 10.7
303.696	V	17.0	15.9	32.9	46.0	- 13.1
455.545	V	9.8	18.8	28.6	46.0	- 17.4
607.393	V	7.7	22.0	29.7	46.0	- 16.3



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### 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

The weather radio and, weather alert modes have been tested under the EUT is powered by AC/DC 6V adaptor.

It was found that the EUT meet the FCC requirement.

#### 3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filling, the document is saved with filename TestRpt2.pdf.



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#### **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 TSup5.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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## 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



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## 6 Appendices

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A2	Photos of the set-up of Conducted Emissions	2	pages
A3	Photos of External Configurations	1	page
A4	Photos of Internal Configurations	1	page
A5	ID Label/Location	1	page
A6	Conducted Emission Measurement Data	4	pages
A7	Block Diagram	1	page
A8	Schematics	1	page
A9	User Manual	1	page
A10	Operation Description	1	page

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