# *EXHIBIT B*

# *Test Report*

| | |
|---|---|
| Report No. | IA115039 |
| FCC ID | ODZ-IMT-87CTA |
| Specifications | FCC Part 15, Class B |
| Test Method | ANSI C63.4 1992 |
| Applicant Address | 10F, No. 333, Wen Shin Rd. Kaohsiung Taiwan |
| Applicant | Immortal-Tek Enterprise CO., Ltd. |
| Items tested | Wireless Hands-Free Car Kits(Transmitter) |
| Model No. | IMT-87CTA(Sample # IA1039) |
| Results | **Compliance** (As detailed within this report) |
| Date | 09/29/2000 (month / day / year)(Sample received)<br>10/30/2000 (month / day / year)(Tested) |
| Prepared by | Project Engineer |
| Authorized by | V.General Manager<br>(Jacob Lin) |
| Issue date | Oct. 31, 2000 (month / day / year) |
| **Modifications** | **None** |
| Tested by | Training Research Co., Ltd. |
| Office at | 2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan |
| Open site at | No. 15, Lane 530, Pa-Lian RD., Sec. 1, Hsichih City, Taipei Hsien, Taiwan, R.O.C. |

***Conditions of issue :***

(1) ***This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.***

(2) ***This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.***

(3) ***This test report, measurements made by TRC are traceable to the NIST only Conducted and Radiated Method.***

★ ***NVLAP LAB CODE: 200174-0***

# Contents

# *Chapter 1 Introduction*

## *Description of EUT:*

This EUT is designed to connect cellular phone and the cellular phone set which is in car. If the cellular phone gets the call when driving, the driver could talking via the receiver receiving voice via the EUT that plug into the auto-outlet propagates signals through R/F. The transmitting frequency is 84.49MHz. The relative receiver was approved by DOC.

## *Connections of EUT:*

Auto-outlet edge --- via two 1m length conductive wires to DC Supply.

Cord edge --- via a 35cm cord cable to the cellular phone.

## *Test method:*

Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

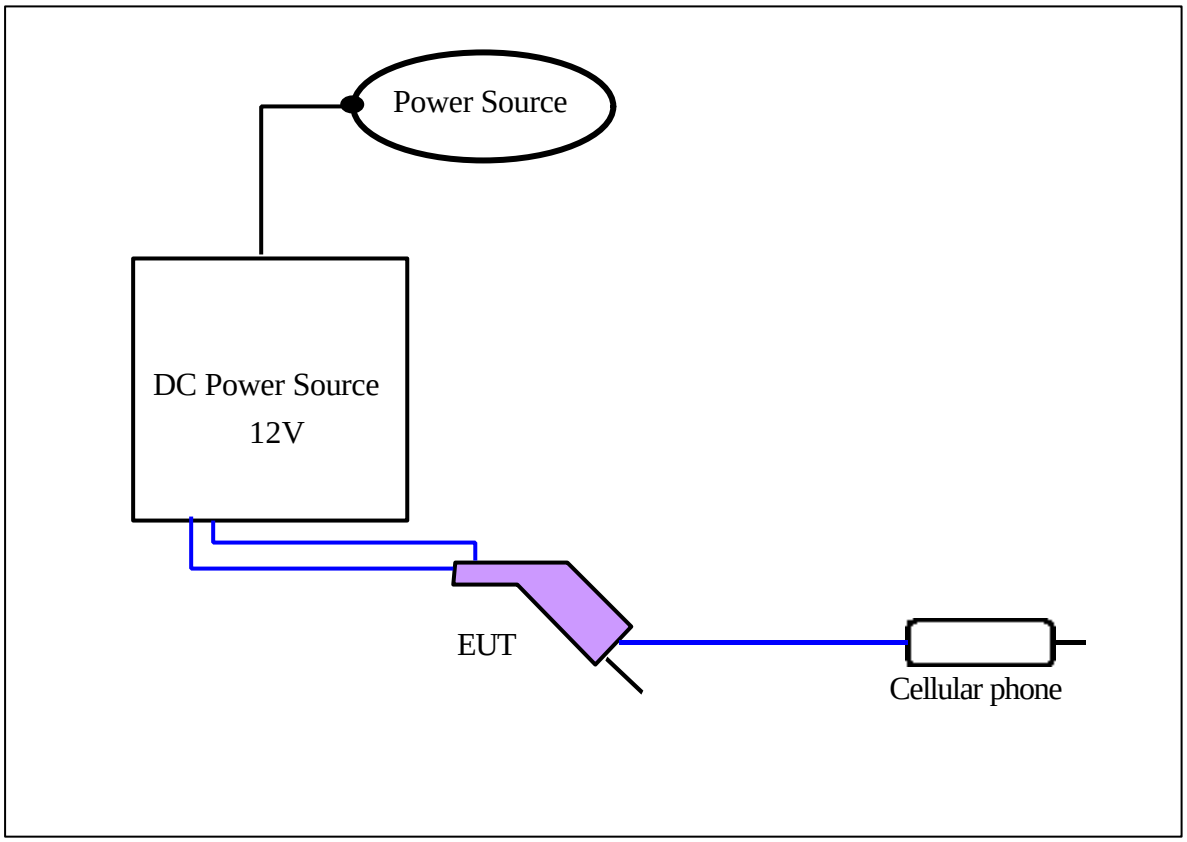
During testing, the EUT was propagated signals trough R/F with incoming phone calls.\

The modulated plots showed on the Appendix A.

The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

***The testing configuration of test setup is showing in the next page.***

## *Configuration of test setup*




## ***Connections:***

### ***EUT :***

*Auto-outlet edge --- via two 1m length conductive wires to DC Supply.
*Cord edge --- via a 35cm cord cable to the cellular phone.

### ***DC Power supply:***

*AC power input port --- via a 1.5m length power cable to power source.
*DC power output jacks --- via a 1m length conductive wires to EUT.

## *List of support equipment*

## Conducted (Radiated) test:

| | | |
|---|---|---|
| **Power supply :** | | **GOOD WILL INSTRUMENT CO., LTD.** |
| Model No. | : | GPC-3030D |
| Serial No. | : | 8050552 |
| FCC ID | : | N/A (Doc Approved) |
| 檢磁 | : | 3872H013 |
| Power type | : | 100 ~ 120VAC / 50 ~ 60Hz, 6A, Switching |
| Power cord | : | Non-shielded, 2.33m long, Plastic, No ferrite core |

| | | |
|---|---|---|
| **Mobile Phone:** | | **NOKIA** |
| Model No. | : | 6150 SAT |
| Serial No. | : | 449208/30/551655/9 |
| FCC ID | : | CE Approved |
| 檢磁 | : | N/A |
| Power type | : | by batterie, 3.6V, 900mAh |
| Power cord | : | N/A |

# *Chapter 2 Conducted emission test*

## *Test condition and setup:*

All the equipment is placed and setup according to the ANSI C63.4 - 1992.
The EUT is assembled on a wooden table, which is 80 cm high, is placed 40 cm from the back-wall which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and spectrum.

The spectrum scans from 450KHz to 30 MHz. Conducted emission levels are detected at max. peak mode . But if the max. peak mode failed ,it will be measured by CISPR's quasi-peak detection mode .

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

## *List of test Instrument :*

| | | | | **Calibration Date** | |
|---|---|---|---|---|---|
| Instrument Name | Model No. | Brand | Serial No. | Last time | Next time |
| Spectrum analyzer | 8594EM | H P | 3710A00198 | 06/29/00 | 06/29/01 |
| LISN (EUT) | 3825/2 | EMCO | 9411-2284 | 06/10/00 | 06/10/01 |
| LISN (Support E.) | 3825/2 | EMCO | 9210-2007 | 05/31/00 | 05/31/01 |
| Preamplifier | EQ3-006 | TRC | --------- | 05/15/00 | 05/15/01 |
| Line switch box | EQ3-007 | TRC | --------- | 05/15/00 | 05/15/01 |

The level of confidence of 95% , the uncertainty of measurement of conducted emission is ± 2.4 dB .

***Test Result: N/A***

# *Chapter 3 Radiated emission test*

## *Test condition and setup :*

***Pretest:*** Prior to the final test (OATS test), the EUT is placed in a shielded enclosure, and scan from 30MHz to 1GHz. This is done to ensure the radiation is exactly emitted from the EUT.

***Final test :*** Final radiation measurements is made on a ***3 – meter,*** open-field test site. The EUT is placed on a nonconductive table, which is 0.8m height, the top surface is 1.0 x 1.5 meter. The placement is according to ANSI C63.4 - 1992.

The spectrum is examined from 30 MHz to 1000 MHz measured by HP spectrum.

The M. E. whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum analyzer.

Measure more than six top marked frequencies generated form pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier that is made by TRC is used for improving sensitivity and precaution is taken to avoid overloading. The spectrum analyzer's 6dB bandwidth is set to 120 K Hz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambient, the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from shielded room will be taken as the final data.

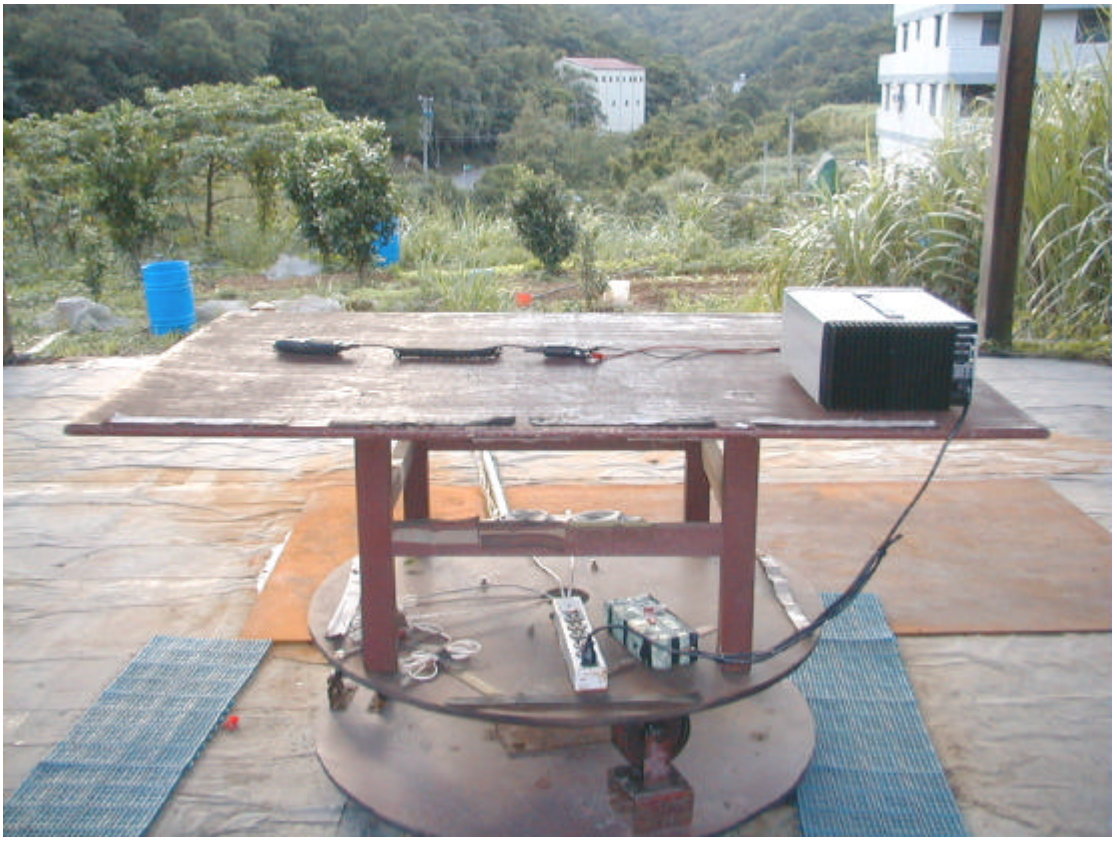
## *List of test Instrument :*

| | | | | **Calibration Date** | |
|---|---|---|---|---|---|
| Instrument Name | Model No. | Brand | Serial No. | Last time | Next time |
| Spectrum analyzer | 8594EM | H P | 3710A00279 | 06/22/00 | 06/22/01 |
| Spectrum analyzer | 8568B | H P | 3710A00198 | 06/10/00 | 06/10/01 |
| Antenna (30M-1.5G Hz) | VULB 9160 | M.E. | 3063 | 06/26/00 | 06/23/01 |
| Antenna (30M-2G Hz) | 3141 | EMCO | 9711-1076 | 05/15/00 | 05/15/01 |
| RF Pre-selector | EQ3-003 | TRC | - - - - - - - - - | 05/15/00 | 05/15/01 |
| Open test side (Antenna, Amplify, cable calibrated together) | | | | 05/15/00 | 05/15/01 |

The level of confidence of 95% , the uncertainty of measurement of radiated emission is ± 4.96 dB .

***Test Result : Pass (Appendix A)***

***Radiated Test Placement: (Photographs)***



# *Appendix A*

## *Radiated Emission Test Result:(Horizontal)*

Test Conditions:

Testing room : Temperature : 31.34 ° C Humidity : 69 % RH

Testing site : Temperature : 31.97 ° C Humidity : 72 % RH

| Frequency | Reading Amplitude | Ant. Height | Table | Correction Factors | Corrected Amplitude | Class B Limit | Margin |
|---|---|---|---|---|---|---|---|
| MHz | dBμV | m | degree | dB/m | dBμV/m | dBμV/m | dB |
| 84.490 | 60.76 | 3.98 | 326 | -25.59 | 35.17 | 40.00 | -4.83 |
| *** | | | | | | | |
| | | | | | | | |

***The other emissions are under limit 20dB.**

Note:

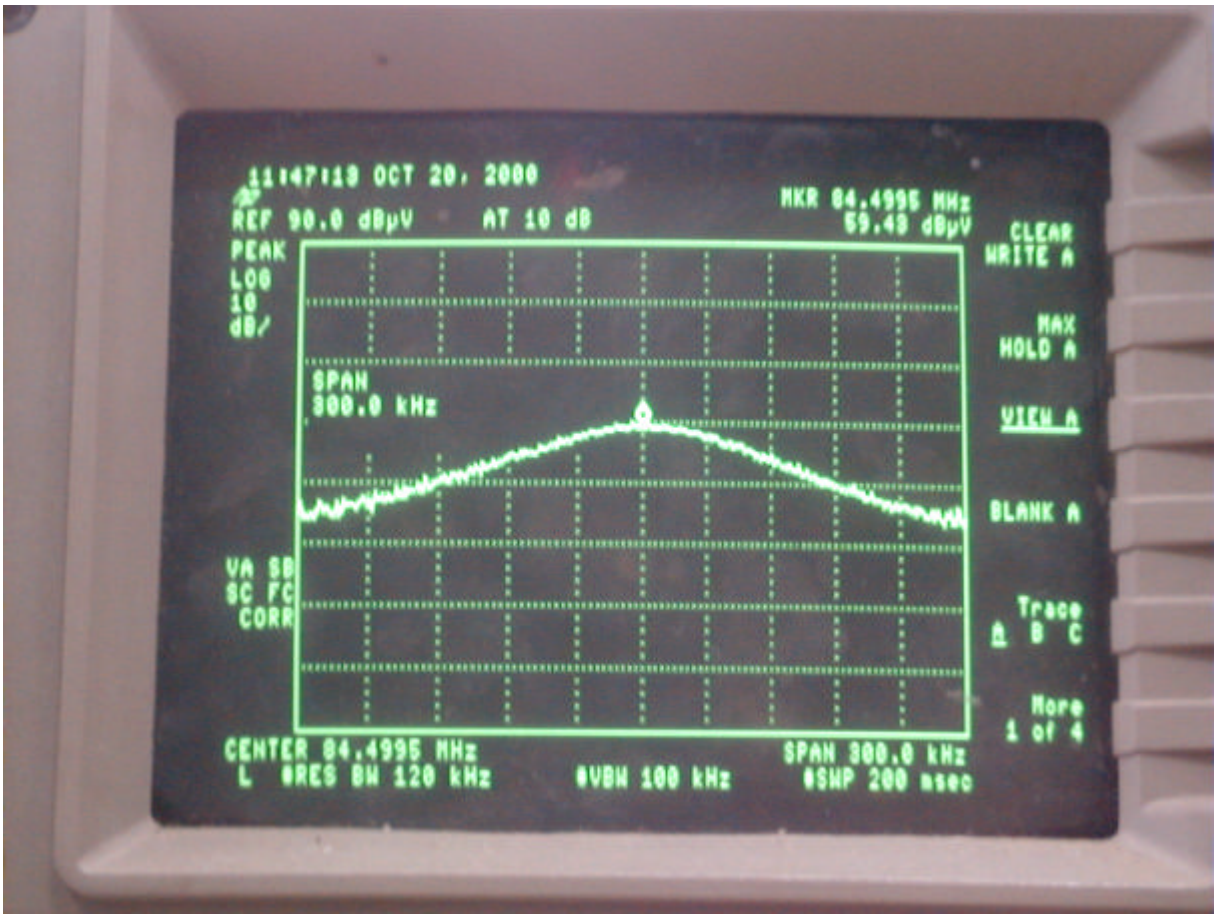
1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + ( Cable Loss - Amplitude gain )
   (For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

## *Radiated Emission Test Result: (Vertical)*

| Frequency | Reading Amplitude | Ant. Height | Table | Correction Factors | Corrected Amplitude | Class B Limit | Margin |
|---|---|---|---|---|---|---|---|
| MHz | dBμV | m | degree | dB/m | dBμV/m | dBμV/m | dB |
| 84.490 | 51.09 | 0.99 | 145 | -25.59 | 25.50 | 40.00 | -14.50 |
| *** | | | | | | | |
| | | | | | | | |

***The other emissions are under limit 20dB.**

***Final statement:***
***This test report, measurements made by TRC are traceable to the NIST.***


11:47:18 OCT 20, 2000
REF 90.0 dBµV
AT 10 dB
MKR 84.4995 MHz
69.49 dBµV
PEAK
LOG
10
dB/
SPAN
300.0 kHz
CLEAR
WRITE A
MAX
HOLD A
VIEW A
BLANK A
Trace
A B C
More
1 of 4
VA SB
SC FC
CORR
CENTER 84.4995 MHz
L #RES BW 120 kHz
#VBW 100 kHz
SPAN 300.0 kHz
#SWP 200 msec


18:15:44 OCT 20, 2000
REF 90.0 dBµV
AT 10 dB
MKR 84.4718 MHz
60.92 dBµV
PEAK
LOG
10
dB/
SPAN
300.0 kHz
MARKER
→ HIGH
MARKER
→ CF
NEXT
PEAK
NEXT PK
RIGHT
NEXT PK
LEFT
More
1 of 3
VA SB
SC FC
CORR
CENTER 84.4995 MHz
L #RES BW 120 kHz
#VBW 100 kHz
SPAN 300.0 kHz
#SWP 200 msec