

**Class B Certification Application**

Under Part 15, Subpart B

**EUT : USBIDE**

**MODEL : PHATDOCK**

**FCC ID : MEUPHATDOCK**

**SRT REPORT # T1B036**

**PREPARED FOR :**

**YIELD TECHNOLOGY CO., LTD.**

38-1, JUNG MING ROAD,  
CHUNG LI, TAOYUAN,  
TAIWAN, R.O.C.

**YIELD TECHNOLOGY CO., LTD.**

No. 38-1 Jung Ming Road, Chung Li Taoyuan Taiwan R.O.C.  
TEL : 886-03-4533655 FAX : 886-03-4531522

Federal Communications Commission  
Authorization and Evaluation Division  
7435 Oakland Mills Road  
Columbia, MD 21046

To whom it may concern :

This is to serve as proper written authorization that Spectrum Research and Testing Laboratory, Inc., 15200, Shady Grove Rd., Rockville, MD. 20850, will act as our representative in all matters relating to FCC applications for equipment approval. This includes the signing of all related documents, the transmitting of required fees, and receiving correspondence and notifications from the FCC. All acts performed by Spectrum Research and Testing Laboratory, Inc., especially modifications to our equipment under testing will be carried out on our behalf.

Meantime, the applicant certifies that in the case of an individual applicant (e.g., corporation), no party to the applicant is subject to a denial of federal benefits, that includes FCC denial of federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 862. For a definition of a "party" for these purposes see 47 C.F.R. 1.2002 (b).

If you have any questions regarding our applications for equipment approval, please contact Spectrum Research and Testing Laboratory, Inc. by calling (301) 670-2818.

Respectfully,

Edison Lee

(Name, Surname)

President

(Position/Title)

DATE : 7/20/2000

Effective Dates :

From 7/20/2000 to 7/20/2001

## EMI TESTING REPORT

EUT : USBIDE

MODEL : PHATDOCK

FCC ID : MEUPHATDOCK

### PREPARED FOR :

YIELD TECHNOLOGY CO., LTD.

38-1, JUNG MING ROAD,

CHUNG LI, TAOYUAN,

TAIWAN, R.O.C.

### PREPARED BY :

SPECTRUM RESEARCH & TESTING LABORATORY INC.

NO. 101-10, LING 8 , SHAN-TONG LI CHUNG – LI CITY ,  
TAOYUAN, TAIWAN , R. O. C.

TEL : (03) 4987684

FAX : (03) 4986528

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**1. TEST REPORT CERTIFICATION**

**APPLICANT** : YIELD TECHNOLOGY CO., LTD.  
**ADDRESS** : 38-1, JUNG MING ROAD,  
CHUNG LI, TAOYUAN,  
TAIWAN, R.O.C.  
**EUT DESCRIPTION** : USBIDE  
(A) POWER SUPPLY : FROM ADAPTER  
(B) MODEL : PHATDOCK  
(C) FCC ID : MEUPHATDOCK  
**FINAL TEST DATE** : 03/02/2001

**MEASUREMENT PROCEDURE USED :**

- \* PART 15 SUBPART B OF FCC RULES AND REGULATIONS ( 47 CFR PART 15)
- \* ANSI C63.4 - 1992
- \* TEST PROCEDURE AND DATA ARE TRACEABLE TO NATIONAL OR INTERNATIONAL STANDARDS.

**We hereby certify that :**

*The measurements contained in this report were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable.*

TESTING ENGINEER : Alen Chou DATE 03/02/2001

Alen Chou

SUPERVISOR : Jesse Ho DATE 03/02/2001

Jesse Ho

APPROVED BY : Johnson Ho DATE 03/02/2001

Johnson Ho

## 2. TEST STATEMENT

### 2 . 1 TEST STATEMENT

1. This letter is to explain the test condition of this project.  
The EUT be tested as the following status.
2. The data was shown in this report reflects the worst – case data for the condition as listed above.  
Please disregard any other processor (s) speed shown in this user manual.
3. EUT Conditions.
  1. **Transfer data to and from computer to removeable hardisk.**
  2. **Data storage system.**
4. NVLAP logo is to be approved by management (it is according to NVLAP requirement if it need) before use.

### 2 . 2 DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS , THE STATEMNT

- A . Did have  
Any departure from document policies & procedures or from specifications.  
Yes \_\_\_\_\_, No \_\_\_\_\_ .  
If yes , the description as below.
- B . The certificate and report shall not be reproduced except in full ,  
without the written approval of SRT laboratory.
- C . The report must not be used by the client to claim product  
endorsement by NVLAP or any agency the government.
- D. This product is a prototype product.
- E. The effect that the results relate only to the items tested.

### 3. EUT MODIFICATIONS

The following accessories were added to the EUT during testing :

- 1). Replaced L2 by 0.8uH inductor.
- 2). Replaced R5 by bead(MLB-201209-0080P-N2)
- 3). To series bead(MLB-201209-2200A-N4 and MLB-160808-0600B-N3) at Pin2, Pin3 of JP3.
- 4). Added a bypass capacitor 51pF at Pin 2, Pin 3 of JP3
- 5). To cut off Pin 1 of JP3.
- 6). Added a core (KCF-65-B) at USB cable.
- 7). Added a core(KCF-50) at power line of adapter.
- 8). To series a wide band choke at Pin1 of J1.

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Authorization and Evaluation Division  
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Columbia, MD 21046

To whom it may concern :

This is to serve as proper notice that our company agrees to make all modifications to FCC ID : MEUPHATDOCK as listed in section 3.0 of modification to submitted by Spectrum Research and Testing Laboratory, Inc.

Respectfully,

Edison Lee

(Name, Surname)

President

(Position/Title)

Effective Dates :

From 2/20/2000 to 2/20/2001

DATE : 2/20/2000



## 4. CONDUCTED POWER LINE TEST

### 4 . 1 TEST EQUIPMENT

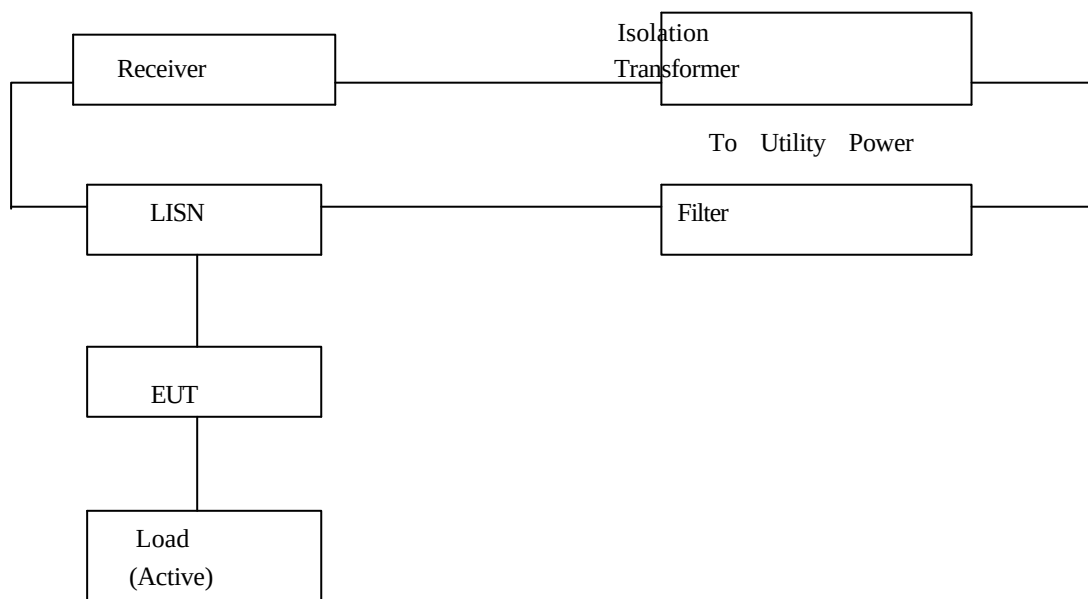
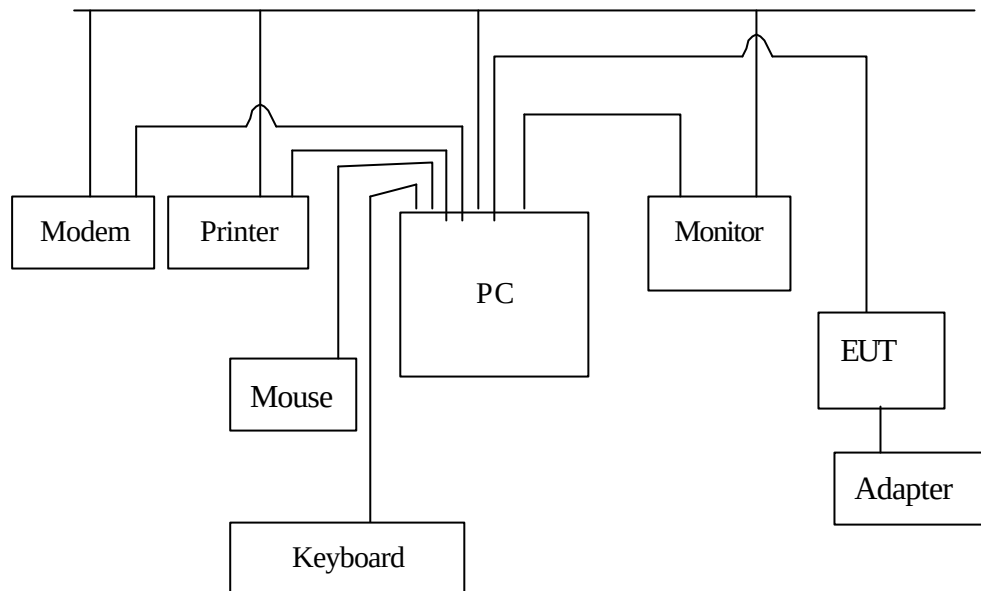
The following test equipment were used during the conducted power line test :

| EQUIPMENT/<br>FACILITIES | SPECIFICATIONS                            | MANUFACTURER         | MODEL#/<br>SERIAL#             | DATE OF CAL. &<br>CAL. CENTER | DUE<br>DATE | FINAL<br>TEST |
|--------------------------|-------------------------------------------|----------------------|--------------------------------|-------------------------------|-------------|---------------|
| EMI TEST<br>RECEIVER     | 9 KHz TO 30<br>MHz                        | ROHDE &<br>SCHWARZ   | ESHS30/<br>826003/008          | JULY 2000<br>ETC              | 1Y          |               |
| EMI TEST<br>RECEIVER     | 9 KHz TO 2750<br>MHz                      | ROHDE &<br>SCHWARZ   | ESCS30/<br>830245/012          | JULY 2000<br>ETC              | 1Y          | √             |
| LISN                     | 50 uH, 50 ohm                             | SOLAR<br>ELECTRONICS | 9252-50-<br>R24-BNC/<br>951315 | JULY 2000<br>ETC              | 1Y          | √             |
| LISN                     | 50uH, 50 ohm                              | SOLAR<br>ELECTRONICS | 9252-50-<br>R24-BNC/<br>951318 | JULY 2000<br>ETC              | 1Y          | √             |
| SIGNAL<br>GENERATOR      | 9 KHz TO 1080<br>MHz                      | ROHDE &<br>SCHWARZ   | SMY01/<br>841104/019           | MARCH 2000<br>ETC             | 1Y          | √             |
| POWER<br>CONVERTER       | 50 TO 300 VAC<br>47 to 63Hz/<br>50Hz/60Hz | AFC                  | AFC-2KBB<br>F100030030         | MARCH 2000<br>SRT             | 1Y          | √             |

### 4 . 2 TEST PROCEDURE

The EUT was tested according to ANSI C63.4 - 1992. The frequency spectrum from 0.45 MHz to 30 MHz was investigated. The LISN used was 50 ohm / 50 uHenry as specified by section 5.1 of ANSI C63.4 - 1992 . Cables and peripherals were moved to find the maximum emission levels for each frequency.

### 4.3 TEST SETUP



#### 4 . 4 CONFIGURATION OF THE EUT

The EUT was configured according to ANSI C63.4 - 1992. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

##### A. EUT

| DEVICE | MANUFACTURER                  | MODEL #  | FCCID       |
|--------|-------------------------------|----------|-------------|
| USBIDE | YIELD TECHNOLOGY<br>CO., LTD. | PHATDOCK | MEUPHATDOCK |

##### B. INTERNAL DEVICES

| DEVICE | MANUFACTURER | MODEL # | FCCID / DoC |
|--------|--------------|---------|-------------|
| HDD    | TOSHIBA      | FKN3HA  | N/A         |
|        |              |         |             |
|        |              |         |             |
|        |              |         |             |
|        |              |         |             |
|        |              |         |             |
|        |              |         |             |
|        |              |         |             |

**C. PERIPHERALS**

| DEVICE       | MANUFAC-TURER | MODEL #      | FCCID / DoC    | CABLE                                                       |
|--------------|---------------|--------------|----------------|-------------------------------------------------------------|
| MONITOR      | SAMSUNG       | 700IFT       | DoC            | 1.5m unshielded power cord<br>1.2m shielded data cable (S2) |
| PRINTER      | HP            | 2225C+       | DSI6XU2225     | 1.5m unshielded power cord<br>1.2m shielded data cable (S2) |
| MODEM        | SMARTEAM      | 103/212A     | EF56A5103/212A | 1.5m unshielded power cord<br>1.2m shielded data cable (S2) |
| MOUSE        | LOGITECH      | M-S34        | DZL210472      | 1.2m unshielded data cable                                  |
| KEYBOARD     | ACER          | 6311-TA      | N/A            | 1.2m unshielded data cable                                  |
| ADAPTER      | SIN CHO       | SCP48-120800 | N/A            | 1.5m unshielded power cord                                  |
| MAIN BOARD   | MSI           | MS-6351      | DoC            | N/A                                                         |
| POWER SUPPLY | ENHANCE       | SFX-1209F    | DoC            | N/A                                                         |
| HDD          | SEAHATE       | ST320413A    | N/A            | N/A                                                         |
| FDD          | SONY          | MPF920-E     | N/A            | N/A                                                         |
| CD-ROM       | ASUS          | CD-S400/A    | DoC            | N/A                                                         |

**- REMARK :**

- (1). Cable - S1 : Single point shielding  
S2 : 360° shielding  
S3 : Double shielding

- (2). Cables - All 1m or greater in length – bundled according to ANSI C63.4 – 1992.

#### 4 . 5 EUT OPERATING CONDITION

Operating condition is according to ANSI C63.4 - 1992.

1. EUT power on.
2. Under WIN ME run “EMI TEST” program.  
" H" pattern sent to the following peripherals :
  - Monitor or VGA
  - RS232 (modem)
  - Keyboard
  - Printer
  - FDD
  - HDD
3. Under WIN ME run “Media Player” program.  
EUT will being to work.

#### 4 . 6 CONDUCTED POWER LINE EMISSION LIMITS

| FREQUENCY RANGE (MHz) | CLASS B   |
|-----------------------|-----------|
| 0 . 45 - 1.705        | 48.0 dBuV |
| 1.705 - 30            | 48.0 dBuV |

**NOTE** : In the above table , the togther limit applies at the band edges.

#### 4 . 7 CONDUCTED POWER LINE TEST RESULTS

The frequency spectrum from 0.45 MHz to 30 MHz was investigated.  
All readings are quasi-peak values with a resolution bandwidth  
of 9 KHz.

Temperature : 23 °C

Humidity : 52 %RH

| FREQUENCY (MHz) | LINE 1 (dBuV) | LINE 2 (dBuV) | LIMIT (dBuV) |
|-----------------|---------------|---------------|--------------|
| 0.46            | *             | 30.0          | 48.0         |
| 0.48            | 34.5          | *             | 48.0         |
| 0.82            | *             | 19.1          | 48.0         |
| 0.85            | 26.9          | *             | 48.0         |
| 1.42            | 30.5          | 21.5          | 48.0         |
| 5.98            | *             | 21.1          | 48.0         |
|                 |               |               |              |
|                 |               |               |              |
|                 |               |               |              |
|                 |               |               |              |
|                 |               |               |              |
|                 |               |               |              |

**REMARKS** : (1). \* = Measurement does not apply for this frequency  
(2). Uncertainty in conducted emission measured is <+/-2dB  
(3). Any departure from specification : N/A

SIGNED BY TESTING ENGINEER : Alan Chow

## 5. RADIATED EMISSION TEST

### 5.1 TEST EQUIPMENT

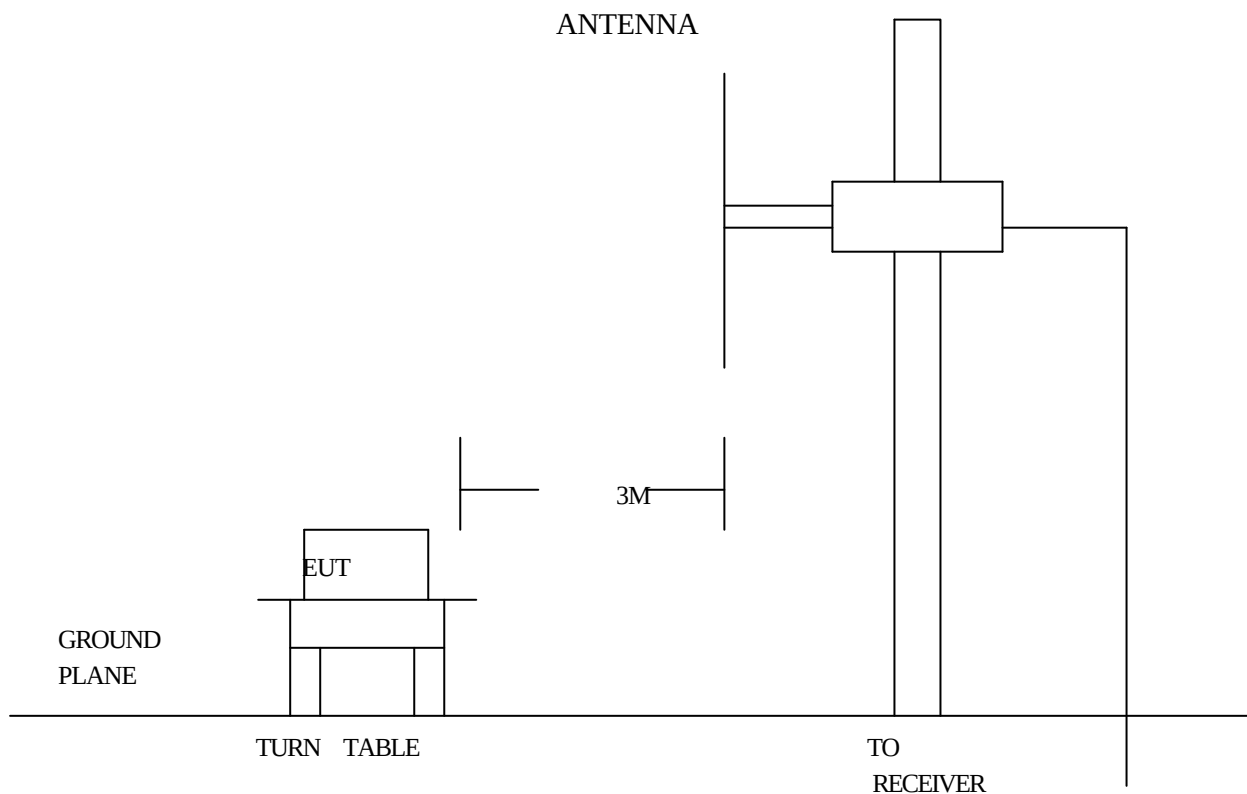
The following test equipment were used during the radiated emission test :

| EQUIPMENT / FACILITIES | SPECIFICATIONS      | MANUFACTURER    | MODEL # / SERIAL # | DATE OF CAL. & CAL. CENTER | DUE DATE | FINAL TEST |
|------------------------|---------------------|-----------------|--------------------|----------------------------|----------|------------|
| TEST RECEIVER          | 9 KHz TO 2.75 MHz   | R & S           | ESCS30/830245/012  | JULY 2000 ETC              | 1Y       |            |
| TEST RECEIVER          | 20 MHz TO 1000 MHz  | R & S           | ESVS30/841977/003  | MARCH 2000 ETC             | 1Y       | √          |
| SPECTRUM ANALYZER      | 100 Hz TO 1500 MHz  | HP              | 8568B/3001A04931   | AUG. 2000 ETC              | 1Y       |            |
| SPECTRUM ANALYZER      | 9 KHz TO 22 GHz     | HP              | 8593E/3322A00670   | MARCH 2000 ETC             | 1Y       |            |
| SIGNAL GENERATOR       | 9 KHz TO 1080 MHz   | ROHDE & SCHWARZ | SMY01/841104/019   | MARCH 2000 ETC             | 1Y       | √          |
| DIPOLE ANTENNA         | 28 MHz TO 1000 MHz  | EMCO            | 3121C/9003-534     | MARCH 2000 SRT             | 1Y       |            |
| DIPOLE ANTENNA         | 28 MHz TO 1000 MHz  | EMCO            | 3121C/9611-1239    | AUG. 2000 SRT              | 1Y       |            |
| BI-LOG ANTENNA         | 26 MHz TO 2000 MHz  | EMCO            | 3142/9701-1124     | NOV. 2000 SRT              | 1Y       | √          |
| BI-LOG ANTENNA         | 26 MHz TO 2000 MHz  | EMCO            | 3142/9608-1073     | AUG. 2000 SRT              | 1Y       |            |
| BI-LOG ANTENNA         | 26 MHz TO 1100 MHz  | EMCO            | 3143/9509-1152     | AUG. 2000 SRT              | 1Y       |            |
| PRE-AMPLIFIER          | 0.1 MHz TO 1300 MHz | HP              | 8447D/2944A08402   | MARCH 2000 ETC             | 1Y       |            |
| PRE-AMPLIFIER          | 0.1 MHz TO 1300 MHz | HP              | 8447D/2944A06412   | JULY 2000 ETC              | 1Y       |            |
| HORN ANTENNA           | 1 GHz TO 18 GHz     | EMCO            | 3115/9012-3619     | JAN. 2001 ETC              | 1Y       |            |

## 5 . 2 TEST PROCEDURE

- (1).The EUT was tested according to ANSI C63.4 -1992. The radiated test was performed at SRT lab's open site. this site is on file with the FCC laboratory division, reference 31040/SIT.
- (2).The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-1992.
- (3).The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.
- (4). The antenna high were varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5). The antenna polarization : Vertical polarization and horizontal polarization.

## 5 . 3 RADIATED TEST SET-UP

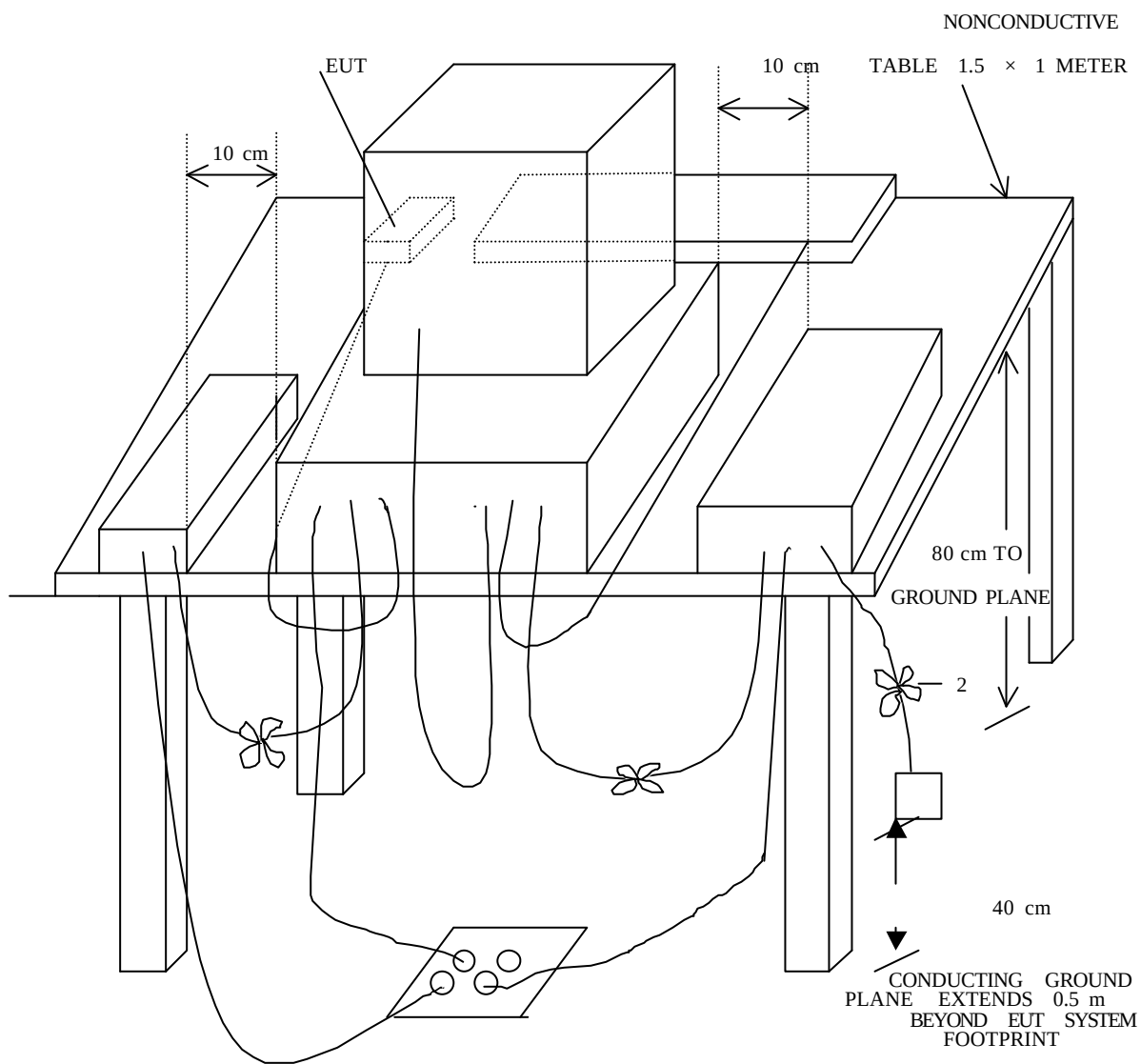




### 5 . 3 RADIATED TEST SET-UP

ANSI C63.4-1992

ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE IN THE RANGE OF 9 KHz TO 40 GHz



**5 . 4 CONFIGURATION OF THE THE EUT**

Same as section 4.4 of this report

**5 . 5 EUT OPERATING CONDITION**

Same as section 4.5 of this report.

**5 . 6 RADIATED EMISSION LIMITS**

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below :

**CLASS B**

| FREQUENCY (MHz) | DISTANCE (m) | FIELS STRENGTH (dBuV/m) |
|-----------------|--------------|-------------------------|
| 30 - 88         | 3            | 40.0                    |
| 88 - 216        | 3            | 43.5                    |
| 216 - 960       | 3            | 46.0                    |
| ABOVE 960       | 3            | 54.0                    |

- NOTE** : 1. In the emission tables above, the tighter limit applies at the band edges.
2. Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

## 5 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz . Measurements were made at 3 meters.

Temperature : 24 °C

Humidity : 51 %RH

| FREQ.<br>(MHz) | FACTOR<br>(dB) | ANT.<br>FACTOR<br>(dB/m) | READING<br>(dBuV) |      | EMISSION<br>(dBuV/m) |      | LIMITS<br>(dBuV/m) |
|----------------|----------------|--------------------------|-------------------|------|----------------------|------|--------------------|
|                |                |                          | HORIZ             | VERT | HORIZ                | VERT |                    |
| 46.22          | 0.9            | 11.8                     | *                 | 22.8 | *                    | 35.5 | 40.0               |
| 95.63          | 1.2            | 9.2                      | *                 | 24.9 | *                    | 35.3 | 43.5               |
| 135.02         | 1.4            | 8.4                      | 24.7              | *    | 34.6                 | *    | 43.5               |
| 142.49         | 1.4            | 8.8                      | *                 | 26.1 | *                    | 36.3 | 43.5               |
| 143.22         | 1.4            | 8.8                      | 26.7              | *    | 26.9                 | *    | 43.5               |
| 239.74         | 2.0            | 12.5                     | 27.7              | *    | 41.7                 | *    | 46.0               |
|                |                |                          |                   |      |                      |      |                    |
|                |                |                          |                   |      |                      |      |                    |
|                |                |                          |                   |      |                      |      |                    |
|                |                |                          |                   |      |                      |      |                    |

**REMARKS** : (1) . \*= Measurement does not apply for this frequency.  
 (2). Uncertainty in radiated emission measured is <+/-4dB  
 (3). Any departure from specification : N/A  
 (4). Factor will include cable loss and correction factor.  
 (5). Sample calculation  

$$20 \log(\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} + \text{reading(dBuV)}$$

*Alan Chua*

SIGNED BY TESTING ENGINEER : \_\_\_\_\_