

EMI TESTING REPORT

EUT : CORDLESS TELEPHONE

MODEL: 966LCD

FCCID: N98966LCD

PREPARED FOR:

CHINCOWELL INDUSTRIES CO., LTD.

NO. 123, NIU PU SOUTH RD.,

HSIN-CHU CITY,

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 : CHINCOWELL INDUSTRIES CO., LTD.ADDRESS : NO. 123, NIU PU SOUTH RD.,  
HSIN-CHU CITY,  
TAIWAN, R.O.C.EUT DESCRIPTION : CORDLESS TELEPHONE(A) POWER SUPPLY : 110V AC 9V DC(B) MODEL : 966LCD(C) FCCID : N98966LCDFINAL TEST DATE : 08/26/1998

## MEASUREMENT PROCEDURE USED :

PART 15 SUB PART B OF FCC RULES AND  
REGULATIONS ( 47 CFR PART 15 )  
FCC / ANSI C63.4 - 1992

## WE HEREBY SHOW THAT:

THE MEASUREMENTS SHOWN IN THE ATTACHMENT 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 : Carrie Pang DATE 08/26/1998  
Carrie PangSUPERVISOR : Jesse Ho DATE 8/26/98  
Jesse HoAPPROVED BY : Johnson Ho DATE 8/26/98  
Johnson Ho

## 2. TEST STATEMENT

## 2.1 TEST STATEMENT

TO whom it may concern,

This letter is to explain the test condition of this project.  
The EUT be tested as the following status.

OSCILLATOR FREQUENCY : HANDSET - 10.24MHz, 4MHz  
BASE - 10.24MHz, 800KHz

**OPERATING FREQUENCY :**   HANDSET - 49.670MHz ~ 49.970MHz  
                               BASE - 46.610MHz ~ 46.970MHz

The data was shown in this report reflects the worst-case data for the condition as listed above.

This telephone provide 2-way 16-bit security code more than 65536 sets of security ID codes for operating between handset and base, This security code will be setted by automatically select a different code at each time.

## 2. TEST STATEMENT

## 2.2 DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS

DID HAVE

ANY DEPARTURE FROM DOCUMENT POLICIES  
& PROCEDURES OR FROM SPECIFICATIONS.YES \_\_\_\_\_ , NO N/A .

IF YES, THE DESCRIPTION AS BELOW.

## 2.3 TEST STATEMENT

1. THE CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY.
2. THE REPORT MUST NOT BE USED BY THE CLIENT TO CLAIM PRODUCT ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE U.S. GOVERNMENT.

3. EUT MODIFICATIONS

THE FOLLOWING ACCESSORIES WERE ADDED TO THE EUT DURING TESTING:

\* HANDSET

- 1). L6 CHANGED INDUCTOR (imp: 4.7uH).
- 2). C42 CHANGED FROM 100pF TO 36pF.
- 3). R41 CHANGED FROM 10Kohm TO 33Kohm.

\* BASE

- 1). L1 CHANGED INDUCTOR (imp: 2.2uH).
- 2). C60 CHANGED FROM 100pF TO 56pF.
- 3). R46 CHANGED FROM 10Kohm TO 33Kohm.

4. MODIFICATION LETTER

THIS SECTION CONTAINS THE FOLLOWING DOCUMENTS:

A. LETTER OF MODIFICATIONS

勤格實業股份有限公司  
**CHINCOWELL INDUSTRIES CO., LTD.**

NO. 123, NIU-PU SOUTH ROAD, SHIN-CHU CITY  
TAIWAN, R.O.C

TEL : 886-5-5307385(REP.)  
FAX : 886-3-5307370

Federal Communications Commission  
Authorization and Evaluation Division  
7436 Oakland Mills Road  
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 : N98966LCD  
as listed in section 3.0 of the test report submitted by Spectrum  
Research And Testing Laboratory, Inc.

Respectfully,

Effective Dates :

Yun-Ming Tu  
(Name, Surname)

From 1998.10.30 to 1999.10.30

R&D Dep. II.  
Manager  
(Position / Title)

Date : 1998.10.30

## 5. CONDUCTED POWER LINE TEST

## 5.1 TEST EQUIPMENT

THE FOLLOWING TEST EQUIPMENT WAS USED DURING THE  
CONDUCTED POWER LINE TEST :

| EQUIPMENT/<br>FACILITIES | SPECIFICAT<br>-IONS            | MANUFACTURER         | MODEL#/<br>SERIAL#             | DATE OF CAL.<br>& CAL.CENTER | DUE<br>DATE |
|--------------------------|--------------------------------|----------------------|--------------------------------|------------------------------|-------------|
| SPECTRUM<br>ANALZER      | 9 KHz TO<br>1 GHz              | HP                   | 8590L/<br>3624A1317            | AUGUST, 1998<br>ETC          | 1Y          |
| EMI TEST<br>RECEIVER     | 9 KHz TO<br>30 MHz             | ROHDE &<br>SCHWARZ   | ESHS30/<br>826003/008          | AUGUST, 1998<br>ETC          | 1Y          |
| LISN                     | 50 uH, 50<br>ohm               | SOLAR<br>ELECTRONICS | 9252-50-<br>R24-BNC/<br>951315 | AUGUST, 1998<br>ETC          | 1Y          |
| LISN                     | 50 uH, 50<br>ohm               | SOLAR<br>ELECTRONICS | 9252-50-<br>R24-BNC/<br>951318 | AUGUST, 1998<br>ETC          | 1Y          |
| SIGNAL<br>GENERATOR      | 9 KHz TO<br>1080 MHz           | ROHDE &<br>SCHWARZ   | SMY01/<br>841104/019           | APRIL, 1998<br>ITRI          | 1Y          |
| POWER<br>CONVERTER       | 0 TO 300<br>VAC 47 -<br>500 Hz | AFC                  | AFC-1KW/<br>850510             | APRIL, 1998<br>SRT           | 1Y          |

## 5.2 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.

-EUT

| DEVICE                | MANUFACTURER                          | MODEL # | FCCID     |
|-----------------------|---------------------------------------|---------|-----------|
| CORDLESS<br>TELEPHONE | CHINCOWELL<br>INDUSTRIES CO.,<br>LTD. | 966LCD  | N98966LCD |

-REMARK-INTERNAL DEVICES

| <u>DEVICE</u>   | <u>MANUFACTURER</u> | <u>MODEL #</u>    | <u>DoC/FCCID</u> |
|-----------------|---------------------|-------------------|------------------|
| CONTROL BOARD   | CHINCOWELL          | 966 HAND          | N/A              |
| CONTROL BOARD   | CHINCOWELL          | MT-850BT1         | N/A              |
| RF BOARD        | CHINCOWELL          | RF UNIT V2        | N/A              |
| RF BOARD        | CHINCOWELL          | 966BASE CPU2.0    | N/A              |
| TELEPHONE BOARD | CHINCOWELL          | MC13109 DISNEY V5 | N/A              |

-PERIPHERALS

| DEVICE          | MANUFACTURER | MODEL# /<br>SERIAL# | FCCID | CABLE     |
|-----------------|--------------|---------------------|-------|-----------|
| ADAPTOR         | HON KWANG    | HKD-97804           | N/A   | POWER-UNS |
| BATTERY<br>PACK | NI-CD        | 3KR3202/3AAH4P      | N/A   | POWER-UNS |
|                 |              |                     |       |           |
|                 |              |                     |       |           |
|                 |              |                     |       |           |

-REMARK

(1). CABLE - UNS : UNSHIELDED CABLE  
S : SHIELDED CABLE

(2). CABLES - ALL 1m OR GREATER IN LENGTH-  
BUNDLED ACCORDING TO ANSI C63.4 - 1992.

### 5.3 EUT OPERATING CONDITION

OPERATING CONDITION IS ACCORDING TO ANSI C63.4 - 1992.

1. EUT POWER ON.

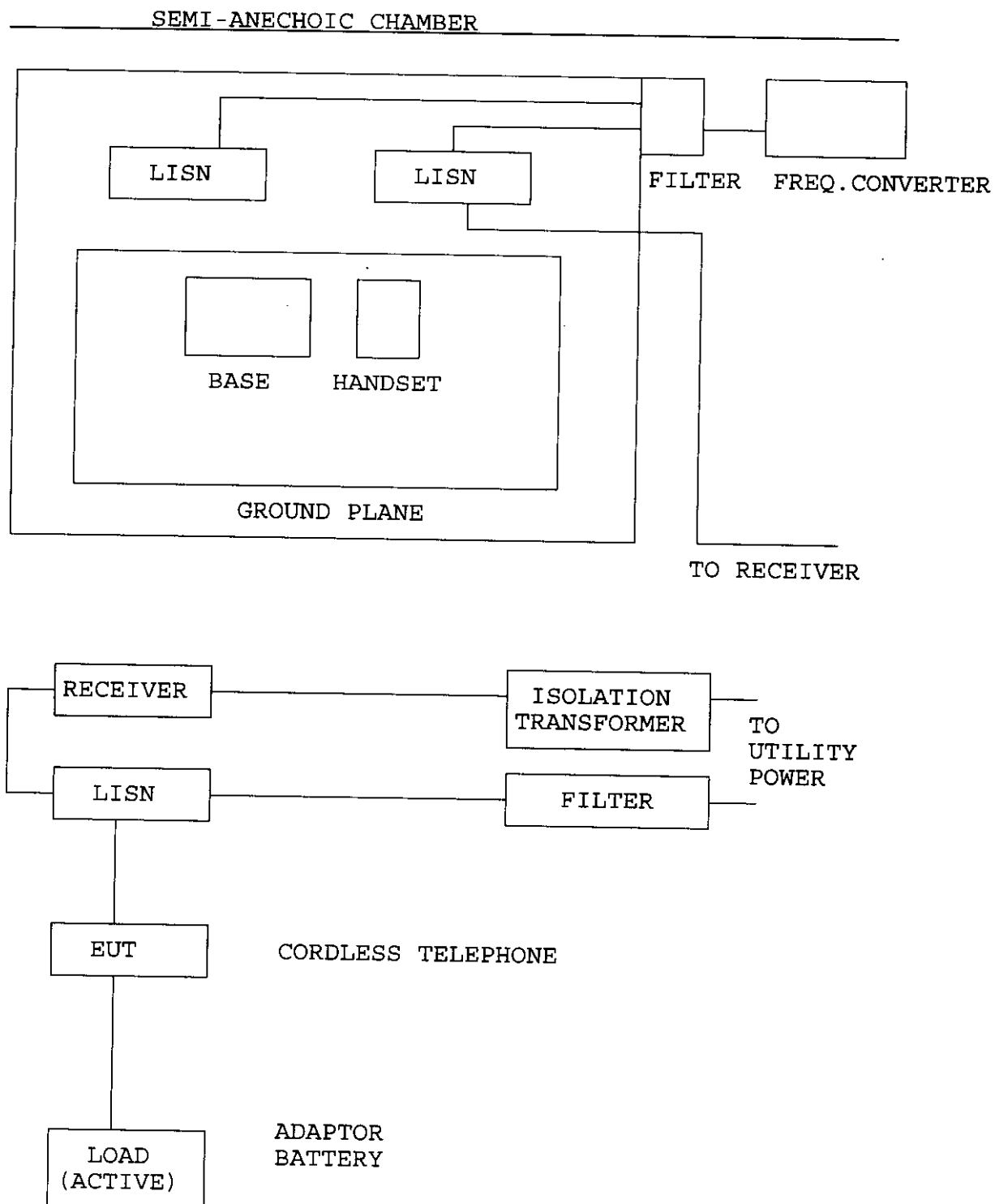
2. OSCILLATOR FREQUENCY : HANDSET - 10.24MHz, 4MHz  
BASE - 10.24MHz, 800KHz

OPERATING FREQUENCY : HANDSET - 49.670MHz ~ 49.970MHz  
BASE - 46.610MHz ~ 46.970MHz

## 5.4 TEST PROCEDURE

THE EUT WAS TESTED ACCORDING TO ANSI C63.4 - 1992. THE CONDUCTED TEST WAS PERFORMED IN AN ANECHOIC CHAMBER. 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.

## 5.5 TEST SETUP



## 5.6 CONDUCTED POWER LINE EMISSION LIMIT

| FREQUENCY RANGE (MHz) | CLASS A | CLASS B |
|-----------------------|---------|---------|
| 0.045 - 1.705         | 1000 uV | 250 uV  |
| 1.705 - 30            | 3000 uV | 250 uV  |

NOTE : IN THE ABOVE TABLE, THE TIGHTER LIMIT  
APPLIES AT THE BAND EDGES.

## 5.7 CONDUCTED POWER LINE TEST RESULT

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 : 28 C

HUMIDITY : 78 %RH

| FREQUENCY (MHz) | LINE 1 (uv) | LINE 2 (uv) | LIMIT (uv) |
|-----------------|-------------|-------------|------------|
| 0.69            | *           | 4.365       | 250        |
| 0.85            | 4.074       | 5.248       | 250        |
| 1.42            | 4.571       | 4.571       | 250        |
| 14.1            | 1.862       | 4.365       | 250        |
| 17.9            | *           | 1.778       | 250        |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |

- REMARKS : (1) .\* = MEMENT DOES NOT APPLY FOR THIS FREQUENCY
- (2) .UNCERTAINTY IN CONDUCTED EMISSION MEASURED IS <+/-2dB
- (3) .BASE
- (4) .TEST CONFIGURATION PLEASE SEE 4.2
- (5) .TEST EQUIPMENT PLEASE SEE 4.1
- (6) .ANY DEPARTURE FROM SPECIFICATION: N/A

SIGNED BY TESTING ENGINEER :

Caris

## 5.7 CONDUCTED POWER LINE TEST RESULT

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 : 28 C

HUMIDITY : 78 %RH

| FREQUENCY (MHz) | LINE 1 (uv) | LINE 2 (uv) | LIMIT (uv) |
|-----------------|-------------|-------------|------------|
| 0.69            | 3.631       | 4.169       | 250        |
| 0.85            | 4.266       | 3.981       | 250        |
| 1.05            | 3.631       | 3.936       | 250        |
| 28.0            | 6.457       | 5.248       | 250        |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |
|                 |             |             |            |

- REMARKS : (1) . \* = MEMENT DOES NOT APPLY FOR THIS FREQUENCY
- (2) . UNCERTAINTY IN CONDUCTED EMISSION MEASURED IS <+/-2dB
- (3) . HANDSET
- (4) . TEST CONFIGURATION PLEASE SEE 4.2
- (5) . TEST EQUIPMENT PLEASE SEE 4.1
- (6) . ANY DEPARTURE FROM SPECIFICATION: N/A

SIGNED BY TESTING ENGINEER : Carie

## 6. RADIATED EMISSION TEST

## 6.1 TEST EQUIPMENT

THE FOLLOWING TEST EQUIPMENT WAS USED DURING THE  
RADIATED EMISSION TEST :

| EQUIPMENT /<br>FACILITIES | SPECIFICAT<br>-IONS    | MANUFACTUR<br>-ER  | MODEL#/<br>SERIAL#     | DATE OF CAL.<br>& CAL. CENTER | DUE<br>DATE |
|---------------------------|------------------------|--------------------|------------------------|-------------------------------|-------------|
| RECEIVER                  | 20 MHz TO<br>1000 MHz  | R & S              | ESVS 30/<br>841977/003 | APRIL, 1998<br>ITRI           | 1Y          |
| SPECTRUM<br>ANALYZER      | 100 Hz TO<br>1500 MHz  | HP                 | 8568B/<br>3019A05294   | OCT, 1997<br>ETC              | 1Y          |
| SPECTRUM<br>ANALYZER      | 9 KHz TO<br>22 GHz     | HP                 | 8593E/<br>3322A00670   | APRIL, 1998<br>ITRI           | 1Y          |
| SPECTRUM<br>ANALYZER      | 100 Hz TO<br>1000 MHz  | IFR                | A-7550/<br>2684/1248   | JULY, 1998<br>ETC             | 1Y          |
| SIGNAL<br>GENERATOR       | 9 KHz TO<br>1080 MHz   | ROHDE &<br>SCHWARZ | SMY01/<br>841104/019   | APRIL, 1998<br>ITRI           | 1Y          |
| DIPOLE<br>ANTENNA         | 28 MHz TO<br>1000 MHz  | EMCO               | 3121C/<br>9003-535     | DEC, 1997<br>SRT              | 1Y          |
| DIPOLE<br>ANTENNA         | 28 MHz TO<br>1000 MHz  | EMCO               | 3121C/<br>9611-1239    | DEC, 1997<br>SRT              | 1Y          |
| BI-LOG<br>ANTENNA         | 26 MHz TO<br>2000 MHz  | EMCO               | 3142/<br>9509-1152     | DEC, 1997<br>SRT              | 1Y          |
| BI-LOG<br>ANTENNA         | 26 MHz TO<br>1100 MHz  | EMCO               | 3143/<br>9509-1152     | DEC, 1997<br>SRT              | 1Y          |
| PRE-AMPLIFIER             | 0.1 MHz TO<br>1300 MHz | HP                 | 8447D/<br>2944A08402   | APRIL, 1998<br>ITRI           | 1Y          |
| PRE-AMPLIFIER             | 0.1 MHz TO<br>1300 MHz | HP                 | 8447D/<br>2944A06412   | AUGUST, 1998<br>ETC           | 1Y          |
| HORN ANTENNA              | 1 GHz TO<br>18 GHz     | EMCO               | 3115/<br>9012-3619     | DEC, 1997<br>SRT              | 1Y          |

## 6.2 CONFIGURATION OF THE EUT

SAME AS SECTION 5.4 OF THIS REPORT.

## 6.3 EUT OPERATING CONDITION

SAME AS SECTION 5.3 OF THIS REPORT.

## 6.4 TEST PROCEDURE

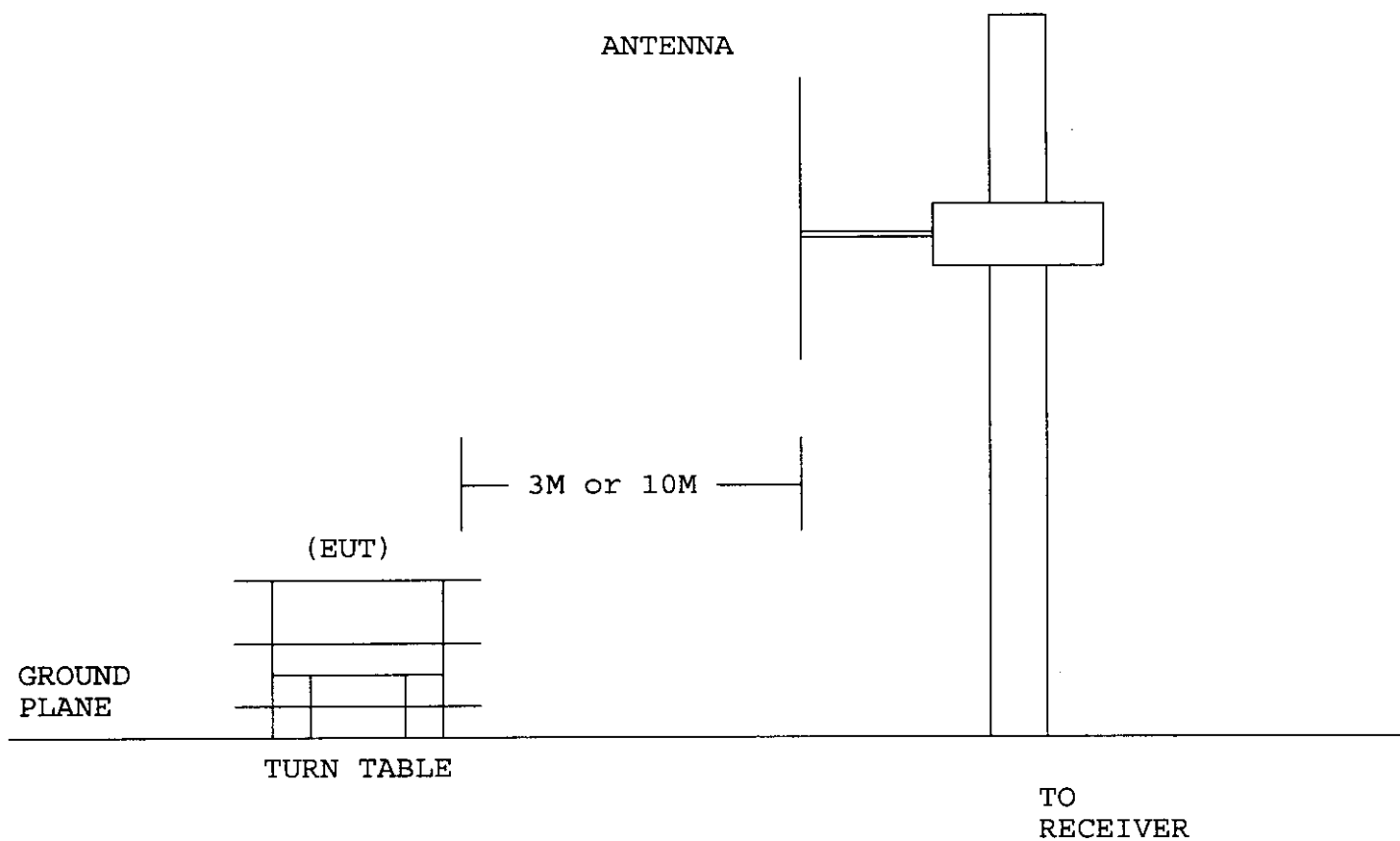
THE EUT WAS TESTED ACCORDING TO ANSI C63.4 - 1992. THE RADIATED TEST WAS PERFORMED AT SRT LAB'S OPEN SITE. THIS SITE IS ON FILE WITH THE FCC LABORATORY DIVISION, REFERENCE 31040/SIT.

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. MEASUREMENTS WERE MADE AT THREE METERS WITH AN ADJUSTABLE DIPOLE ANTENNA. PERIPHERALS, CABLES, EUT ORIENTATION, AND ANTENNA HEIGHT WERE VARIED TO FIND THE MAXIMUM EMISSION FOR EACH FREQUENCY.

THE FREQUENCY SPECTRUM FROM 30 MHz TO 2 GHz WAS INVESTIGATED. THE MEASUREMENTS UNDER 1 GHz WITH RESOLUTION BANDWIDTH OF 120 KHz ARE QUASI-PEAK READING MADE AT THREE METERS USING AN ADJUSTABLE DIPOLE ANTENNA. PERIPHERALS, CABLES, EUT ORIENTATION, AND ANTENNA HEIGHT WERE VARIED TO FIND THE MAXIMUM EMISSION FOR EACH FREQUENCY.

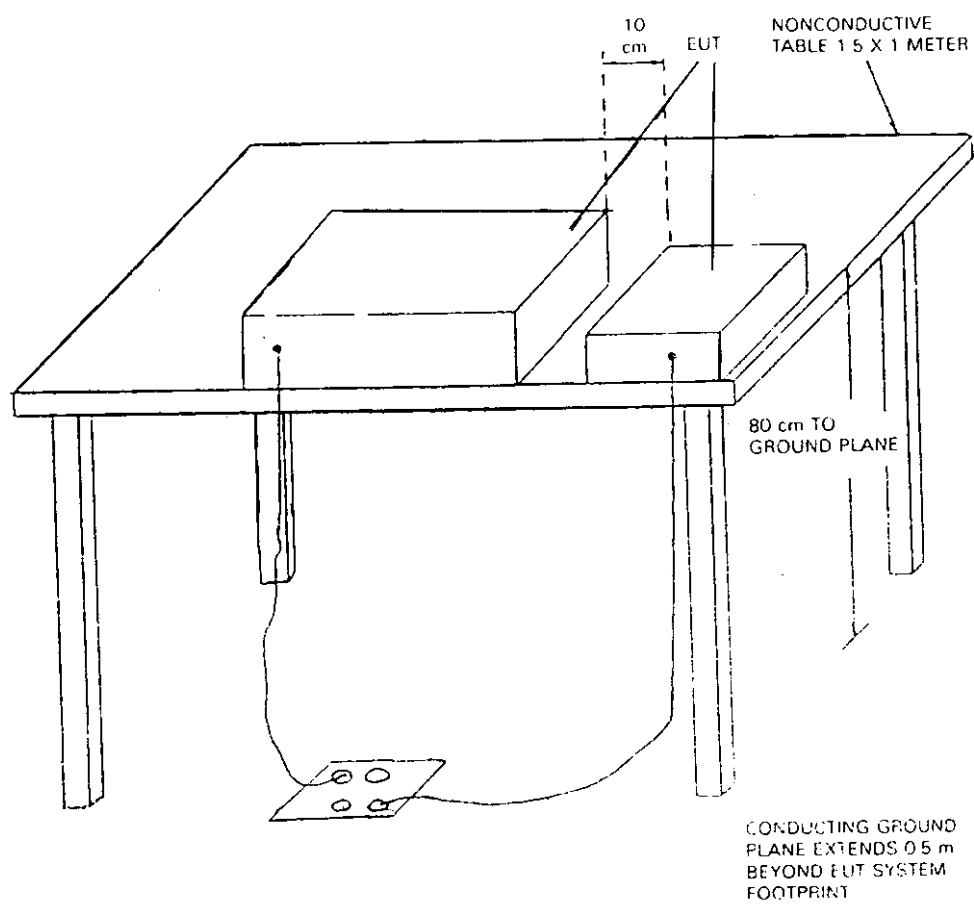
THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF THREE METERS WITH A HORN ANTENNA.

## 6.5 RADIATED TEST SETUP



## 6.5 RADIATED TEST SETUP

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

ANSI  
C63.4-1992

## 6.6 RADIATED EMISSION LIMIT

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<br>(MHz) | DISTANCE<br>(m) | FIELD STRENGTH<br>(uV/m) |
|--------------------|-----------------|--------------------------|
| 30 - 88            | 3               | 100                      |
| 88 - 216           | 3               | 150                      |
| 216 - 960          | 3               | 200                      |
| ABOVE 960          | 3               | 500                      |

## CLASS B ( OPEN CASE )

| FREQUENCY<br>(MHz) | DISTANCE<br>(m) | FIELD STRENGTH<br>(uV/m) |
|--------------------|-----------------|--------------------------|
| 30 - 88            | 3               | 199.5                    |
| 88 - 216           | 3               | 298.5                    |
| 216 - 960          | 3               | 398.1                    |

## CLASS A

| FREQUENCY<br>(MHz) | DISTANCE<br>(m) | FIELD STRENGTH<br>(uV/m) |
|--------------------|-----------------|--------------------------|
| 30 - 88            | 3               | 316.3                    |
| 88 - 216           | 3               | 473.2                    |
| 216 - 960          | 3               | 613.0                    |
| ABOVE 960          | 3               | 1000.0                   |

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.

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 46.6100        | 0.8                   | 6.60                   | 61.47          | 66.52 | 2776.5        | 4965.9 | 10000        |
| 123.1          | 1.4                   | 7.20                   | 17.35          | *     | 19.84         | *      | 150          |
| 186.2          | 1.7                   | 9.10                   | 14.49          | 19.89 | 18.39         | 34.24  | 150          |
| 233.7          | 1.8                   | 10.7                   | *              | 17.38 | *             | 31.19  | 200          |
| 542.2          | 2.9                   | 18.6                   | 11.27          | *     | 43.50         | *      | 200          |
| 704.2          | 3.4                   | 20.2                   | 11.75          | 13.41 | 58.55         | 70.88  | 200          |
| 751.7          | 3.4                   | 21.1                   | *              | 12.71 | *             | 72.53  | 200          |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION

$20 \text{ LOG (EMISSION) uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$

(4). BASE

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $\pm 4\text{dB}$

(7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 0

(9). 46.6100MHz : CHANNEL 16

SIGNED BY TESTING ENGINEER : Carrie

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 46.7300        | 0.8                   | 6.60                   | 62.47          | 68.12 | 3115.3        | 5970.4 | 10000        |
|                |                       |                        |                |       |               |        |              |
| 185.2          | 1.7                   | 9.10                   | 17.73          | 20.77 | 26.70         | 37.89  | 100          |
| 476.1          | 3.0                   | 18.8                   | 11.29          | *     | 45.13         | *      | 200          |
| 644.0          | 3.1                   | 19.9                   | 12.29          | *     | 58.14         | *      | 200          |
| 699.3          | 3.4                   | 20.2                   | *              | 12.99 | *             | 67.53  | 200          |
| 745.9          | 3.4                   | 21.1                   | *              | 13.10 | *             | 75.86  | 200          |
|                |                       |                        |                |       |               |        |              |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION

$$20 \text{ LOG}(\text{EMISSION}) \text{ uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$$

(4). BASE

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $\pm 4\text{dB}$ (7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 1

(9). 46.7300MHz : CHANNEL 20

SIGNED BY TESTING ENGINEER : Carie

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 46.9695        | 0.8                   | 6.60                   | 62.37          | 67.82 | 3079.6        | 5767.7 | 10000        |
|                |                       |                        |                |       |               |        |              |
| 185.2          | 1.7                   | 9.10                   | 16.93          | 18.97 | 24.35         | 30.80  | 150          |
| 558.7          | 2.9                   | 18.6                   | 11.81          | *     | 46.29         | *      | 200          |
| 673.1          | 3.3                   | 20.1                   | 11.82          | *     | 57.68         | *      | 200          |
| 701.2          | 3.4                   | 20.2                   | *              | 12.05 | *             | 60.60  | 200          |
| 747.8          | 3.4                   | 21.1                   | *              | 12.82 | *             | 73.45  | 200          |
|                |                       |                        |                |       |               |        |              |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION  
 $20 \text{ LOG(EMISSION) uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$

(4). BASE

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $\pm 4\text{dB}$

(7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 5

(9). 46.9695MHz : CHANNEL 25

SIGNED BY TESTING ENGINEER : Carrie

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 49.6700        | 0.8                   | 6.60                   | 44.0           | 54.15 | 371.54        | 1195.4 | 10000        |
|                |                       |                        |                |       |               |        |              |
| 97.90          | 1.2                   | 7.40                   | 12.11          | 16.25 | 10.85         | 17.48  | 150          |
| 198.8          | 1.7                   | 9.90                   | 13.49          | 17.57 | 17.97         | 28.74  | 150          |
| 649.8          | 3.1                   | 19.9                   | *              | 14.94 | *             | 78.89  | 200          |
| 677.0          | 3.3                   | 20.1                   | 12.26          | *     | 60.67         | *      | 200          |
|                |                       |                        |                |       |               |        |              |
|                |                       |                        |                |       |               |        |              |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION

$$20 \text{ LOG (EMISSION) uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$$

(4). HANDSET

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $\pm 4\text{dB}$ (7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 0

(9). 49.6700MHz : CHANNEL 16

SIGNED BY TESTING ENGINEER : Carrie

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 49.8750        | 0.8                   | 6.60                   | 47.20          | 56.85 | 537.03        | 1631.2 | 10000        |
|                |                       |                        |                |       |               |        |              |
| 97.90          | 1.2                   | 7.40                   | 11.51          | 16.85 | 10.13         | 18.73  | 150          |
| 197.8          | 1.7                   | 9.90                   | *              | 17.81 | *             | 29.55  | 150          |
| 491.7          | 2.7                   | 17.2                   | 12.19          | *     | 40.23         | *      | 200          |
| 646.0          | 3.1                   | 19.9                   | *              | 13.63 | *             | 67.84  | 200          |
| 661.5          | 3.1                   | 19.9                   | 11.58          | *     | 53.58         | *      | 200          |
|                |                       |                        |                |       |               |        |              |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION  
 $20 \text{ LOG(EMISSION) uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$

(4). HANDSET

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $\pm 4\text{dB}$

(7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 1

(9). 49.8750MHz : CHANNEL 20

SIGNED BY TESTING ENGINEER : Carle

## 6.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS UNDER 1 GHz ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHz. MEASUREMENTS WERE MADE AT 3 METERS. THE MEASUREMENTS ABOVE 1 GHz WITH A RESOLUTION BANDWIDTH OF 1 MHz ARE PEAK READING AT A DISTANCE OF 3 METERS.

TEMPERATURE : 28 CHUMIDITY : 78 %RH

| FREQ.<br>(MHz) | CABLE<br>LOSS<br>(dB) | ANT.<br>FACTOR<br>(dB) | READING (dBuV) |       | EMISSION (uV) |        | LMTS<br>(uV) |
|----------------|-----------------------|------------------------|----------------|-------|---------------|--------|--------------|
|                |                       |                        | HORIZ          | VERT  | HORIZ         | VERT   |              |
| 49.9700        | 0.8                   | 6.60                   | 45.10          | 54.95 | 421.70        | 1310.7 | 10000        |
| 197.8          | 1.7                   | 9.90                   | *              | 17.71 | *             | 29.21  | 150          |
| 216.2          | 1.8                   | 10.7                   | *              | 22.96 | *             | 59.29  | 200          |
| 647.9          | 3.1                   | 19.9                   | *              | 14.28 | *             | 73.11  | 200          |
| 651.8          | 3.1                   | 19.9                   | 12.49          | *     | 59.50         | *      | 200          |
| 744.9          | 3.4                   | 21.1                   | 10.50          | *     | 56.23         | *      | 200          |
| 851.6          | 3.5                   | 21.5                   | 12.75          | *     | 77.18         | *      | 200          |

REMARKS : (1). MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY.

(2). THE MAXIMUM CONDITION WAS WITH THE MONITOR POWER CORD CONNECTED TO THE PERSONAL COMPUTER.

(3). SAMPLE CALCULATION  
 $20 \text{ LOG (EMISSION) uV/m} = \text{CABLE LOSS (dB)} + \text{FACTOR (dB)} + \text{READING (dBuV/m)}$

(4). HANDSET

(5). TEST EQUIPMENT PLEASE SEE 5.1

(6). UNCERTAINTY IN RADIATED EMISSION MEASURED IS  $<+/-4\text{dB}$

(7). ANY DEPARTURE FROM SPECIFICATION: N/A

(8). CHANNEL 5

(9). 49.9700MHz : CHANNEL 25

SIGNED BY TESTING ENGINEER : Caris

7. BANDWIDTH

A. TEST STATEMENT:

- a. OPERATING BETWEEN  $-20^{\circ}\text{C}$  ~  $+50^{\circ}\text{C}$
- b. OPERATING BETWEEN 85% POWER ~ 115% POWER

ALL MEET FCC REQUIREMENT: UNDER  $\pm 0.01\%$  TO LEARNANCE

B. TEST RESULT:

ALL MEET FCC REQUIREMENT, PLEASE SEE ATTACHED PLOTTERS.

\* BASE - CHANNEL 0

MKR  $\Delta$  16.8 KHZ  
--.85 dBREF 78.0 dB $\mu$ V ATTEN 10 dBPEAK  
LOG  
10  
dB/MARKER  $\Delta$   
16.8 KHZ  
--.85 dBVA SB  
SC FC  
ACORR

CENTER 46.9695 MHZ

#RES BW 3.0 KHZ

VBW 3 KHZ

SPAN 100.0 KHZ  
SWP 100 msec

\* BASE - CHANNEL 1

MKR  $\Delta$  15.8 KHZ  
--.86 dBREF 78.0 dB $\mu$ V ATTEN 10 dBPEAK  
LOG  
10  
dB/MARKER  $\Delta$   
15.8 KHZ  
--.86 dBVA SB  
SC FC  
ACORRCENTER 46.6100 MHZ  
#RES BW 3.0 KHZ

VBW 3 KHZ

SPAN 100.0 KHZ  
SWP 100 msec

\* BASE - CHANNEL 5

MKR  $\Delta$  16.8 KHZ  
--.86 dB

13:29:51 AUG 22, 1998

REF 78.0 dB $\mu$ V ATTN 10 dBPEAK  
LOG  
10  
dB/MARKER  $\Delta$   
16.8 KHZ  
--.86 dBVA SB  
SC FC  
ACORRCENTER 46.7300 MHZ  
#RES BW 3.0 KHZ

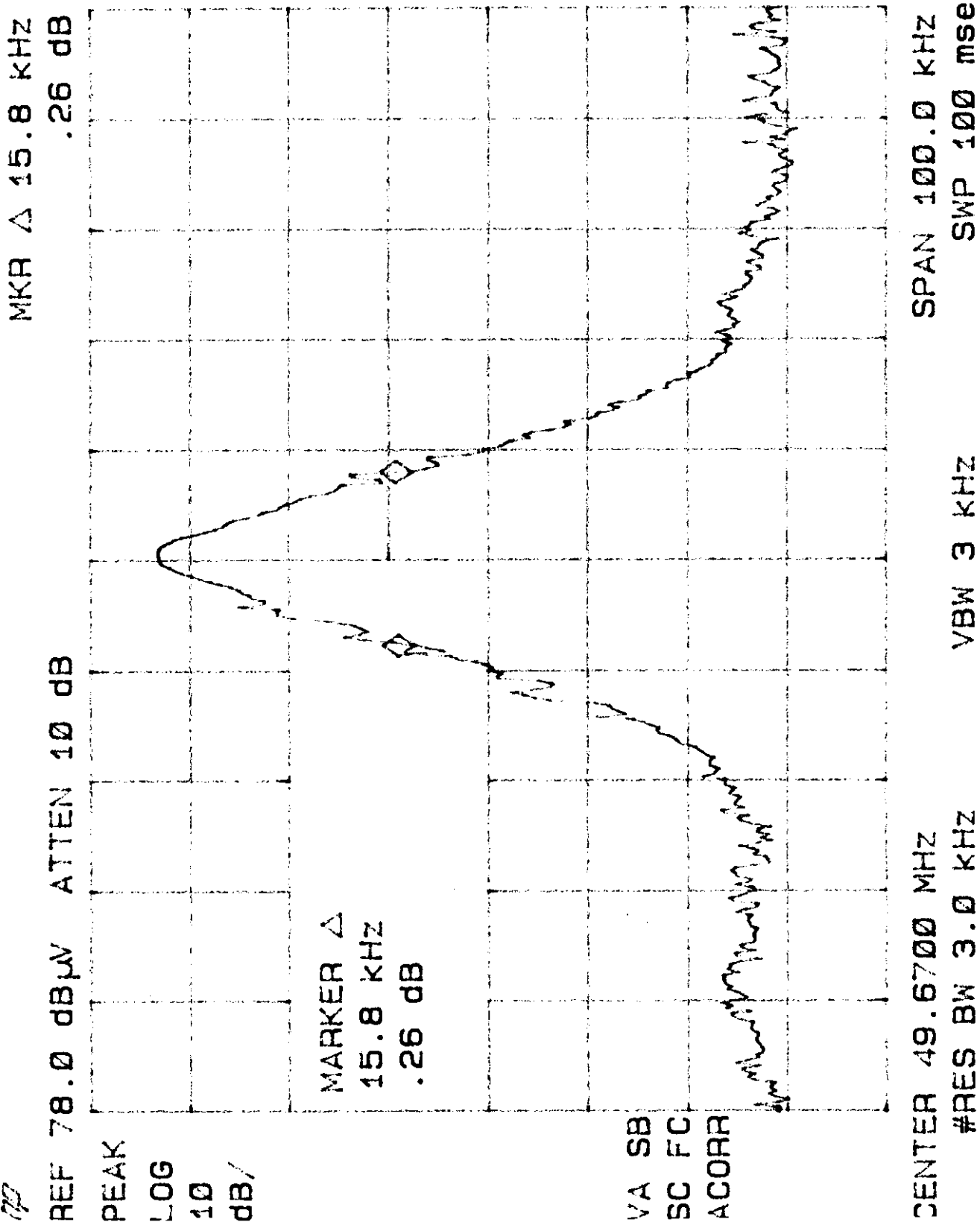
VBW 3 KHZ

SPAN 100.0 KHZ  
SWP 100 msec

\* HANDSET - CHANNEL 0

MKR  $\Delta$  16.0 KHZ  
- .08 dBREF 78.0 dB $\mu$ V ATTEN 10 dBPEAK  
LOG  
10  
dB/MARKER  $\Delta$   
16.0 KHZ  
- .08 dBVA SB  
SC FC  
ACORRCENTER 49.9700 MHz  
#RES BW 3.0 KHZ  
SPAN 100.0 KHZ  
VBW 3 KHZ  
SWP 100 msec

\* HANDSET - CHANNEL 1



\* HANDSET - CHANNEL 5

MKR  $\Delta$  16.3 KHZ  
.84 dB

13:18:30 AUG 22, 1998

REF 78.0 dB $\mu$ V ATTEN 10 dBPEAK  
LOG  
10  
dB/MARKER  $\Delta$   
16.3 KHZ  
.84 dBVA SB  
SC FC  
ACORRCENTER 49.8750 MHZ  
#RES BW 3.0 KHZ

VBW 3 KHZ

SPAN 100.0 KHZ  
SWP 100 msec