M. Flom Associates, Inc. - Global Compliance Center
3356 North San Marcos Place, Suite 107, Chandler, Arizona 85225-7176
www.mflom.com general@mflom.com (480) 926-3100, FAX: 926-3598

Date: February 28, 2001
Submitted: March 6, 2001

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Kenwood Communications Corporation
Equipment: TKR-850-3
FCC ID: ALH31113130
FCC Rules: Radiofrequency Radiation Exposure Limits
47 CFR 1.1310
MPE - Mobiles _____ Fixed Based Station __x__

Gentlemen:

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Morton Flom, P. Eng.

enclosure(s)
cc: Applicant
MF/cvr

MFA M. Flom Associates, Inc. - Global Compliance Center
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ENVIRONMENTAL ASSESSMENT

for

FIXED BASE STATION

for

FCC ID: FCC ID: ALH31113130
Model:TKR-850-3

to

FEDERAL COMMUNICATIONS COMMISSION

47 CFR 1.1310 (MPE)
Radiofrequency Radiation Exposure Limits

DATE OF REPORT: March 6, 2001

ON THE BEHALF OF THE APPLICANT:

Kenwood Communications Corporation

AT THE REQUEST OF: P.O. 40470

Kenwood Communications Corporation
P.O. Box 22745
Long Beach, CA 90801-5745

Attention of: Joel E. Berger, Research & Development
JBerger@kenwoodusa.com
(310) 761-4409; FAX: -8246

SUPERVISED BY: Morton Flom, P. Eng.

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Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) TEST REPORT (SUPPLEMENTAL)

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0120024

d) Client: Kenwood Communications Corporation
P.O. Box 22745
Long Beach, CA 90801-5745

e) Identification: TKR-850-3
FCC ID: ALH31113130
Description: UHF FM Repeater

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: March 6, 2001
EUT Received: February 13, 2001

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:

Morton Flom, P. Eng.

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

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IDENTIFICATION OF THE EQUIPMENT UNDER TEST (EUT)

NAME AND ADDRESS OF APPLICANT:

Kenwood Communications Corporation
2201 E. Dominguez St
P.O. Box 22745
Long Beach, CA 90801-5745

MANUFACTURER:

Kenwood Electronics Technologies PTE Ltd.
1 Ang Mo Kio Street 63
Singapore 569110

FCC ID:	ALH31113130
MODEL NO:	TKR-850-3
DESCRIPTION:	UHF FM Repeater
TYPE OF EMISSION:	16K0F3E, 11K0F3E
FREQUENCY RANGE, MHz:	400 to 430
POWER RATING, Watts:	5 to 40

___ Switchable _x_ Variable ___ N/A

MODULATION:

____ AMPS
____ TDMA
____ CDMA
_x_ OTHER

ANTENNA:

____ HELICAL
____ MONOPOLE
____ WHIP
_x_ OTHER

NOTE: For RF Safety test antenna gain taken at the upper range of expected gain (i.e. 0 dBd) and RF Power set to highest nominal power across all channels.

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M. Flom Associates, Inc. is accredited by the American Association for Laboratory Association (A2LA) as shown in the scope below.

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

M. FLOM ASSOCIATES, INC.
Chandler, AZ

for technical competence in the field of

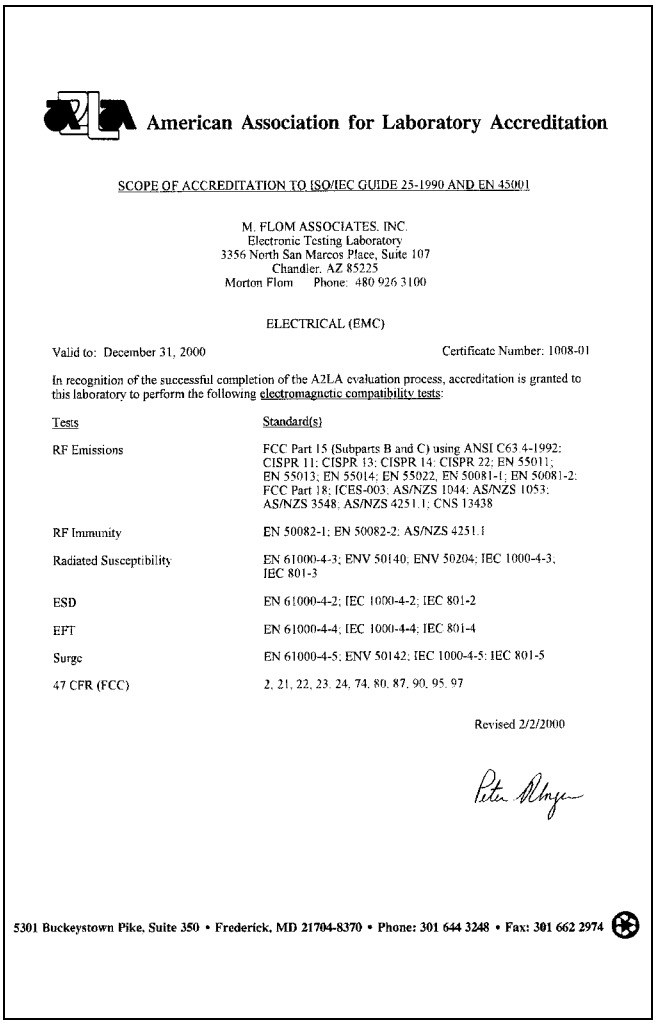
Electrical (EMC) Testing

The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC Guide 25-1990 "General Requirements for the Competence of Calibration and Testing Laboratories" (equivalent to relevant requirements of the ISO 9000 series of standards) and any additional program requirements in the identified field of testing.

Presented this 24th day of November, 1998.

President
For the Accreditation Council
Certificate Number 1008.01
Valid to December 31, 2000

For tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical (EMC) Scope of Accreditation



American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25-1990 AND EN 45001

M. FLOM ASSOCIATES, INC.
Electronic Testing Laboratory
3356 North San Marcos Place, Suite 107
Chandler, AZ 85225
Morton Flom Phone: 480 926 3100

ELECTRICAL (EMC)

Valid to: December 31, 2000 Certificate Number: 1008-01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility tests:

Tests	Standard(s)
RF Emissions	FCC Part 15 (Subparts B and C) using ANSI C63.4-1992; CISPR 11; CISPR 13; CISPR 14; CISPR 22; EN 55011; EN 55013; EN 55014; EN 55022, EN 50081-1; EN 50081-2; FCC Part 18; ICES-003; AS/NZS 1044; AS/NZS 1053; AS/NZS 3548; AS/NZS 4251.1; CNS 13438
RF Immunity	EN 50082-1; EN 50082-2; AS/NZS 4251.1
Radiated Susceptibility	EN 61000-4-3; ENV 50140; ENV 50204; IEC 1000-4-3; IEC 801-3
ESD	EN 61000-4-2; IEC 1000-4-2; IEC 801-2
EFT	EN 61000-4-4; IEC 1000-4-4; IEC 801-4
Surge	EN 61000-4-5; ENV 50142; IEC 1000-4-5; IEC 801-5
47 CFR (FCC)	2, 21, 22, 23, 24, 74, 80, 87, 90, 95, 97

Revised 2/2/2000

5301 Buckeystown Pike, Suite 350 • Frederick, MD 21704-8370 • Phone: 301 644 3248 • Fax: 301 662 2974

"This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this report have been determined in accordance with the laboratory's terms of accreditation unless stated otherwise in the report."

Should this report contain any data for tests for which we are not accredited, or which have been undertaken by a subcontractor that is not A2LA accredited, such data would not covered by this laboratory's A2LA accreditation.

STANDARD TEST CONDITIONS and ENGINEERING PRACTICES

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992/2000, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst case measurements.

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Name of test:	Environmental Assessment
Specification:	FCC: 47 CFR 1.1310
Measurement Guide:	ANSI/IEEE C95.1 1992
Test Equipment:	Maximum Permissible Exposure (MPE) measurement system, consisting of: Narda 8717-1174R, Radiation meter Narda 8761D, E-field probe (300 kHz – 3 GHz) (Calibrated Nov-98)
Measurement Procedure:	1. The following measurements were performed with a Narda probe using ANSI/IEEE C95.1 as a guide. 2. Prior to making any measurements, the measurements system was calibrated in accordance with the manufacturer's procedures. 3. The EUT's radiating element (antenna) was placed on a 1 m tall table for ease of testing. For equipment normally operated on a metal surface, a ground plane was used. 4. The remaining equipment necessary to operate the EUT was maintained at a distance from the measurement arrangement suitable to minimize interference with the measurements. 5. The minimum safe distance was calculated from the formula Power Density = EIRP / $4\pi R^2$ (Peak Watts/m^2). The calculation is shown with the measurement data. 6. With the EUT operating at maximum power, a search was initiated for worst case emissions with the probe raised and lowered over a range of 0.2 to 2 meters in height and over a horizontal plane of 0^o to 360^o. 7. Average values were calculated for the whole body (0.2-2.0m), lower body (0.2-0.8m) and upper body (1.0-2.0m).
Results:	Attached.

PAGE NO. 6 of 6.

Name of test: R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091
Description, EUT: See page 2 of Test Report

Test Frequency, MHz = 415.000
Antenna Gain = 0 dBd
Antenna Model Mobile Gain Antenna

Rated Probe: Narda 8761D Probe = 10 μW/cm^2 to 20 mW/cm^2

LIMITS: Controlled Exposure 47 CFR 1.1310 Table 1, (A)	0.3-3.0 MHz:	Limit [mW/cm^2] = 100
	3.0-30 MHz:	Limit [mW/cm^2] = (900/f^2)
	30-300 MHz:	Limit [mW/cm^2] = 1.0
	300-1500 MHz	Limit [mW/cm^2] = f/300
	1500-100,000 MHz:	Limit [mW/cm^2] = 5.0

Power, Conducted, W = 40 watts – 46 dBm
Power + Ant. Gain, W = 40 watts + 0 = 40 watts – 46 dBm
Limit: Controlled Exposure f/300 = 400/300 = 1.33 mW/cm^2
Tested Distance: 60 cm Controlled Exposure

Results: at tested distance

Probe Height, m	Power Density, mW/cm^2
2.0	0.12
1.8	0.14
1.6	0.23
1.4	0.42
1.2	0.61
1.0	0.74
0.8	0.32
0.6	0.11
0.4	0.07
0.2	0.09

Power Density Calculations: The measured power density readings were summed and the results divided by the number of readings to calculate the average.
For whole body: Average of 0.2 to 2.0 m, mW/cm^2 = 0.285
For lower body: Average of 0.2 to 0.8 m, mW/cm^2 = 0.148
For upper body: Average of 1.0 to 2.0 m, mW/cm^2 = 0.377
NOTE: Rule 1.1310 Table 1, A; OET Bulletin 65 Supplement C
For 400 MHz, Limit = 400/300 = 1.333 mW/cm^2, whole body average
Test Result = 0.285 mW/cm^2, whole body average
Separation Distance = 60 cm

SUPERVISED BY: Morton Flom, P. Eng.

(The following will be placed in the Instruction Manual)
(FRONT SECTION)

MANDATORY SAFETY INSTRUCTIONS TO INSTALLERS & USERS

Use only manufacturer or dealer supplied antenna.

Antenna Minimum Safe Distance is 60 cm.

Antenna Gain: zero dBd referenced to a dipole.

The Federal Communications Commission has adopted a safety standard for human exposure to RF (Radio Frequency) energy, which is below the OSHA (Occupational Safety and Health Act) limits.

Antenna Mounting: The antenna supplied by the manufacturer or radio dealer must be mounted at a location such as a radio tower or an access controlled roof-top, such that during radio transmission, no person or persons can come closer than the indicated minimum safe distance to the antenna, i.e. 60 cm. To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding this minimum safe distance, and in accordance with the requirements of the antenna manufacturer or supplier.

Base or Repeater Station Installation: The antenna should be fixed – mounted on an outdoor permanent structure. RF Exposure compliance must be addressed at the time of installation, including antenna co-location requirements of 47 CFR Part 1.1307(b)(3).

Antenna Substitution: Do not substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person or persons to excess radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

WARNING: Duty cycle is 100%. Maintain a separation distance from the antenna to person(s) of at least 60 cm.

TESTIMONIAL AND STATEMENT OF CERTIFICATION

THIS IS TO CERTIFY THAT:

1. THAT the application was prepared either by, or under the direct supervision of, the undersigned.

2. THAT the technical data supplied with the application was taken under my direction and supervision.

3. THAT the data was obtained on representative units, randomly selected.

4. THAT, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

CERTIFYING ENGINEER: Morton Flom, P. Eng.