



ComplianceTesting.com

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Date: April 14, 2009

Applicant: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

Attention of: Brett James
+44(0) 1395 232020; Fax: +44(0) 1395 233190
E-mail: brett@mantracourt.co.uk

Equipment: RAD24i, RAD24e
FCC ID: VHARAD24
FCC Rules: Radio Frequency Radiation Exposure Limits
47 CFR 1.1310
MPE - Mobiles X Fixed Based Station

Gentlemen:

Enclosed please find your copy of the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

Please allow from 8-12 weeks to hear from the Commission, who may request additional data or information, and even a sample for pre-grant audit testing.

Should you need any clarification, just fax or phone. Thank you again for this order - it has been a pleasure to be of service.

Sincerely yours,



ComplianceTesting.com
Previously Flom Test Lab
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268
fax: (480) 926-3598
<http://www.ComplianceTesting.com>
info@ComplianceTesting.com

Date: April 14, 2009

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: MantraCourt.
Equipment: RAD24i, RAD24e
FCC ID: VHARAD24
FCC Rules: Radio Frequency Radiation Exposure Limits
47 CFR 1.1310
MPE - Mobiles X Fixed Based Station

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,



ComplianceTesting.com

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Environmental Assessment

for

Mobiles

for

FCC ID: VHARAD24

Model: RAD24i, RAD24e

to

Federal Communications Commission

47 CFR 1.1310

Radio Frequency Radiation Exposure Limits

Date Of Report: April 14, 2009

On the Behalf of the Applicant: MantraCourt

At the Request of: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

Attention of: Brett James
+44(0) 1395 232020; Fax: +44(0) 1395 233190
E-mail: brett@mantracourt.co.uk

Supervised By:

Table of Contents

Rule	Description	Page
	Test Report	1
	Identification of the Equipment Under Test	2
	Standard Test Conditions and Engineering Practices	4
1.1310	Environmental Assessment	5

Required information per ISO 17025-2005, paragraph 5.10:

a) **Test Report (Supplemental)**

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

c) Report Number: d0940009

d) Client: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

e) Identification: RAD24i, RAD24e

Description: Digital Transmission System

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

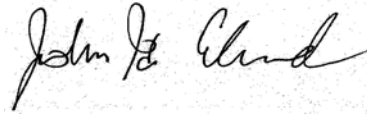
g) Report Date: April 14, 2009

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

i) Sampling method: No sampling procedure used.

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

m) Supervised by:



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.

**Identification of the Equipment Under Test (EUT)**

Name and Address of Applicant: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

Manufacturer: MantraCourt
The Drive, Farringdon
Exeter, Devon EX5 2JB
United Kingdom

FCC ID: VHARAD24

Model Number: RAD24i, RAD24e

Description: Digital Transmission System

Type of Emission: DTS

Frequency Range, MHz: 2405 – 2480

Power Rating, Watts: 0.0000126 W
☐ Switchable ☐ Variable ☐ N/A

Modulation:
☐ AMPS
☐ TDMA
☐ CDMA
☒ OTHER

Antenna:
☐ Helical
☐ Monopole
☐ Whip
☒ 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.

A2LA

"A2LA has accredited Compliance Testing in Chandler, AZ for technical competence in the field of Electrical 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 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to www.a2la.org for current scope of accreditation.

Certificate number: 2152.01



Standard Test Conditions and Engineering Practices

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

In accordance with ANSI C63.4-2003 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.

Name of Test: Environmental Assessment

Specification: FCC: 47 CFR 1.1310

Measurement Guide: ANSI/IEEE C95.1 1992

Name of Test: R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091

Limits: Uncontrolled Exposure	0.3-1.234 MHz:	Limit [mW/cm ²] = 100
47 CFR 1.1310	1.34-30 MHz:	Limit [mW/cm ²] = (180/f ²)
Table 1, (B)	30-300 MHz:	Limit [mW/cm ²] = 0.2
	300-1500 MHz	Limit [mW/cm ²] = f/1500
	1500-100,000 MHz:	Limit [mW/cm ²] = 1.0

Test Frequencies, MHz	2440
Power, Conducted, W (P)	0.0000126 W
Antenna Gain Isotropic	0 dBi
Antenna Gain Numeric (G)	1
Antenna Type	patch
Distance (R)	20 cm

Power Density Calculations	Formula =	$S = PG / 4\pi R^2$
	Power Density (S) =	0.00024
	Limit =	1.0

FCC ID: R68MPBGPRO (co-located transmitter)

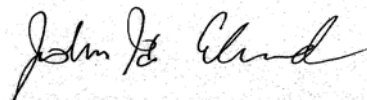
Test Frequencies, MHz	2462
Power, Conducted, W (P)	0.109 W
Antenna Gain Isotropic	0 dBi
Antenna Gain Numeric (G)	1
Antenna Type	Patch
Distance (R)	20 cm

Power Density Calculations	Formula =	$S = PG / 4\pi R^2$
	Power Density (S) =	0.0216
	Limit =	1.0

Summed Power Density

VHARAD24	R68MPBGPRO	Co-located Power Density	Limit	Result
0.00024	0.0216	0.02184	1.0	Pass

Supervised By:



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:

