



METEOR COMMUNICATION CORPORATION TEST REPORT

FOR THE

MULTIBAND MOBILE TRANSCEIVER, 6120

FCC PART 90 RADIATED EMISSIONS ONLY

COMPLIANCE

DATE OF ISSUE: NOVEMBER 2, 2006

PREPARED FOR:

Meteor Communication Corporation
22614 66th Ave South
Kent, WA 98032

P.O. No.: 061858

W.O. No.: 85716

PREPARED BY:

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CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: October 23-25, 2006

Report No.: FC06-061

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ADMINISTRATIVE INFORMATION

DATE OF TEST: October 23-25, 2006

DATE OF RECEIPT: October 23, 2006

FREQUENCY RANGE TESTED: 9 kHz-1.6 GHz

MANUFACTURER: Meteor Communication Corporation
22614 66th Ave South
Kent, WA 98032

REPRESENTATIVE: Norm Shivley

TEST LOCATION: CKC Laboratories, Inc.
22116 23rd Drive S.E., Suite A
Bothell, WA 98021-4413

TEST METHOD: FCC Part 90 Radiated Emissions Only

PURPOSE OF TEST: To demonstrate the compliance of the Multiband Mobile Transceiver, 6120 with the requirements for FCC Part 90 Radiated Emissions Only devices.

FCC SITE NUMBER: Bothell, Washington Chamber 3: 318736



CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply. CKC Laboratories, Inc. was only contracted to perform FCC Part 90 Radiated Emissions testing. Compliance is not for the entire standard.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

A handwritten signature in black ink, appearing to read 'Joyce Walker', written over a horizontal line.

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:

A handwritten signature in black ink, appearing to read 'Eddie Wong', written over a horizontal line.

Eddie Wong, EMC Engineer



EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

Multiband Mobile Transceiver

Manuf: Meteor Communications Corporation
Model: 6120
Serial: 573

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

USB Thumb Drive

Manuf: Linear
Model: NA
Serial: NA

2.4 GHz Antenna

Manuf: Antenex
Model: TRA24003P
Serial: 38666

GPS Antenna

Manuf: Synergy System
Model: SMA-35
Serial: 10001339

Laptop

Manuf: HP
Model: Pavilion 4500
Serial: CNF3361RKW

Power Supply

Manuf: Astron
Model: VS-35M
Serial: 205050015

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

FCC 2.1033 (c)(5) FREQUENCY RANGE

44.5 MHz and 156 MHz.

FCC 2.1033(c)(14)/2.1053/90.210(b)(3) - FIELD STRENGTH OF SPURIOUS RADIATION

Test Location: CKC Laboratories • 22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: **Meteor Communication Corporation.**
 Specification: **FCC Part 90.210(b)(3) Radiated Spurious Emissions**
 Work Order #: **85716** Date: 10/25/2006
 Test Type: **Radiated Scan** Time: 10:29:20
 Equipment: **Multiband Mobile Transceiver** Sequence#: 1
 Manufacturer: Meteor Communications Corporation Tested By: Eddie Wong
 Model: 6120
 S/N: 573

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A	S/N: US44300437	05/27/2006	05/27/2008	AN02673
Bothell 5m Cable Set	S/N: P05444	11/28/2005	11/28/2007	ANP05444
HP 8447D PreAmp	S/N: 2944A08601	07/10/2006	07/10/2008	AN01517
Chase BILOG	S/N: 2458	02/02/2005	02/02/2007	AN01993

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Multiband Mobile Transceiver*	Meteor Communications Corporation	6120	573

Support Devices:

Function	Manufacturer	Model #	S/N
USB Thumb drive	Linear	NA	NA
2.4 GHz Antenna	Antenex	TRA24003P	38666
GPS Antenna	Synergy System	SMA-35	10001339
Laptop	HP	Pavilion 4500	CNF3361RKW
Power Supply	Astron	VS-35M	205050015

Test Conditions / Notes:

The vehicular mounted EUT is placed on the wooden table. Low band antenna port is connected to a 100 Watt load. High Band antenna port is connected to 50 Watt load. 802.11b antenna port is connected to 2.4 GHz antenna. GPS receiving antenna is connected to GPS antenna. I/O port is connected to a dongle with a Parallel port and three RS232s. One of the RS232 ports is connected to COM port of a remote support laptop. Parallel and two RS232s are left unpopulated. Ethernet and USB port: Terminated to a USB thumb drive, the other is left unpopulated. Two Ethernet ports are connected to support laptop via STP. DC Power is connected to a support DC power supply placed under the wooden table. The Laptop is running test software to exercise the EUT. Radio Under test: Low Band Frequency = 44.5 MHz (100W), 13.6VDC, 19°C, 38% relative humidity. Frequency range of measurement = 9 kHz - 445 MHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 445 MHz RBW=120 kHz, VBW=120 kHz.

(b)(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.

44.5 MHz

Test frequency: 44.5MHz

Limit = $43 + 10\log(P) = -13\text{dBm}$

Freq.(MHz)	Reference level(dBm)	Antenna Polarity (H/V)	Limit (dBm)	Margin
89.00	-60.1	Vert	-13	-47.1
133.49	-44.3	Horiz	-13	-31.3
133.50	-40.3	Vert	-13	-27.3
178.00	-41.3	Horiz	-13	-28.3
178.00	-53.0	Vert	-13	-40.0
215.40	-62.5	Horiz	-13	-49.5
222.50	-46.7	Horiz	-13	-33.7
222.50	-50.4	Vert	-13	-37.4
267.00	-58.8	Vert	-13	-45.8
311.46	-46.0	Horiz	-13	-33.0
311.50	-48.0	Vert	-13	-35.0
356.00	-67.8	Vert	-13	-54.8
400.50	-64.3	Vert	-13	-51.3
445.00	-59.7	Horiz	-13	-46.7
445.00	-60.3	Vert	-13	-47.3



Test Location: CKC Laboratories • 22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: **Meteor Communication Corporation.**
 Specification: **FCC Part 90.210(d)(3) Radiated Spurious Emissions**
 Work Order #: **85716** Date: 10/23/2006
 Test Type: **Radiated Scan** Time: 11:19:11
 Equipment: **Multiband Mobile Transceiver** Sequence#: 2
 Manufacturer: Meteor Communications Corporation Tested By: Eddie Wong
 Model: 6120
 S/N: 573

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A	S/N: US44300437	05/27/2006	05/27/2008	AN02673
Bothell 5m Cable Set	S/N: P05444	11/28/2005	11/28/2007	ANP05444
HP 8447D PreAmp	S/N: 2944A08601	07/10/2006	07/10/2008	AN01517
Chase BILOG	S/N: 2458	02/02/2005	02/02/2007	AN01993

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Multiband Mobile Transceiver*	Meteor Communications Corporation	6120	573

Support Devices:

Function	Manufacturer	Model #	S/N
USB Thumb drive	Linear	NA	NA
2.4 GHz Antenna	Antenex	TRA24003P	38666
GPS Antenna	Synergy System	SMA-35	10001339
Laptop	HP	Pavilion 4500	CNF3361RKW
Power Supply	Astron	VS-35M	205050015

Test Conditions / Notes:

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(d)(3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 12.5 kHz: At least 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation

156 MHz

Test Frequency: 156.0MHz

Limit = $50 + 10\log(P) = -20\text{dBm}$

Freq.(MHz)	Reference level(dBm)	Antenna Polarity (H/V)	Limit (dBm)	Margin
311.99	-27.8	Vert	-20	-7.8
311.98	-29.2	Horiz	-20	-9.2
936.02	-32.2	Horiz	-20	-12.2
936.01	-32.5	Vert	-20	-12.5
1560.01	-33.8	Vert	-20	-13.8
624.00	-36.1	Horiz	-20	-16.1
623.98	-36.5	Vert	-20	-16.5
468.00	-37.7	Horiz	-20	-17.7
1560.01	-40.6	Horiz	-20	-20.6
467.98	-43.6	Vert	-20	-23.6
779.98	-43.8	Vert	-20	-23.8
779.99	-46.8	Horiz	-20	-26.8
1248.18	-47.9	Vert	-20	-27.9
1404.09	-49.3	Vert	-20	-29.3
1404.01	-49.3	Horiz	-20	-29.3
1248.13	-53.0	Horiz	-20	-33.0
1092.05	-57.1	Vert	-20	-37.1
1092.00	-58.6	Horiz	-20	-38.6

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Back View