



UNIVERSITY OF MICHIGAN
COLLEGE OF ENGINEERING
THE RADIATION LABORATORY
DEPARTMENT OF ELECTRICAL ENGINEERING
AND COMPUTER SCIENCE

3228 EECS BUILDING
1301 BEAL AVENUE
ANN ARBOR, MICHIGAN 48109-2122
734 764-0500 FAX 734 647-2106
<http://www.eecs.umich.edu/RADLAB/>

Re: Class II Permissive Change/Re-assessment
for Raven 20543-45T Transmitter
Model: 20543-45T
FCC ID: KSMBR20543-45T
IC: 2004 104 237

POWER OF ATTORNEY

A letter granting Valdis V. Liepa the Power of Attorney is on file and can be provided when so requested.



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REQUEST FOR CONFIDENTIALITY

Pursuant to 47 CFR 0.459, Raven requests that a part of the subject application be held confidential. This comprises Exhibits

- (5) Schematics
- (10) Parts List (Part of Exhibit only)

Raven has spent substantial effort in developing this product and it is one of the first of its kind in industry. Having the subject information easily available to "competition" would negate the advantage they have achieved by developing this product. Not protecting the details of the design will result in financial hardship.

If there are any questions regarding this request, please contact me at the above address or call 734-483-4211, fax 734-647-2106 or e-mail liepa@umich.edu.

Sincerely,

A handwritten signature in black ink that reads "Valdis V. Liepa".

Valdis V. Liepa
Research Scientist
University of Michigan



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CHANGES MADE

The current Transmitter was modified as listed below:

- Changed SR1 (310MHz SAW resonator) from through-hole (RF Monolithics RO2053-1) to surface mount (RF Monolithics RO2053A-1).
- Mirror antenna circuit (left to right) in PCB artwork.
- Changed U1 from MC68HC705J1A to MCHC908QY1CDWE
- Significant digital PCB changes to switchboard (due to new U1).
- Removed X1 (external 4MHz resonator)



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STATEMENT OF MODIFICATIONS

There were no modifications made to the DUT by this test laboratory. (Also see Section 3.1 of the attached Test Report).

A handwritten signature in black ink, reading "Valdis V. Liepa".

Valdis V. Liepa
Research Scientist



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GENERAL PRODUCT INFORMATION

The device, for which certification is pursued, has been designed by:

Raven Industries Inc
Electronic Systems Division, 4372 Green Ash Drive
Earth City, MO 63045

Tim Diehl
tim.diehl@ravenind.com
Tel: 314-291-2712 ext 3102
Fax: 314-291-0773

It will be manufactured by:

Raven Industries
4372 Green Ash Drive
Earth City, MO 63045

Darren Hacker
Tel: 314-291-2712
Fax: 314-291-0773

Canadian Contact:

Globe Spring Co.
25 Doney Crescent
Concord, Ontario L4K 1P6
Larry Marcus 416-669-9681

RAVEN INDUSTRIES

May 5, 2006

Raven Industries, Inc.
ESD Division
4372 Green Ash Drive
Earth City, Missouri, 63045

Acknowledgement of IC Listing Requirements

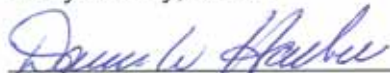
By signing this document, we acknowledge that any information specified on the ATCB **Application and Agreement Form for Industry Canada Certification Services** provided to Industry Canada. We Acknowledge that this information may be posted in the Radio Equipment List (REL) on the Department's website. Additionally, we understand that we must inform ATCB of any changes to the information submitted.

We further acknowledge that the Certified product shall not be distributed, leased, or offered for sale in Canada prior to its listing on the Industry Canada Radio Equipment List (REL). We are aware that we may verify the status of this listing at the following web address:

http://strategis.ic.gc.ca/cgi-bin/sc_mrksv/spectrum/reltelSearch/search.pl?lang=e&db=rel

Dated this fifth day of May, 2006.

By:


(Signature)

DARREN W. HACKER
(Print Name)

Title: Engineering Manager

Email: Darren.Hacker@ravenind.com

On behalf of: Raven Industries

Telephone: 314-291-2712

June 10, 2004

Attn: Director of Certification

Authority to Act as Agent

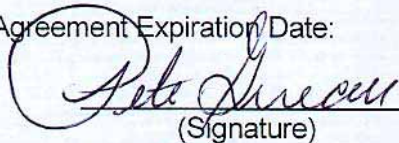
On behalf, I appoint AmericanTCB to act as our agent in the preparation of this application for equipment certification. I certify that submitted documents properly describe the device or system for which equipment certification is sought. I also certify that each unit manufactured, imported or marketed, as defined in Industry Canada's regulations will have affixed to it a label identical to that submitted for approval with this application.

For instances where our authorized agent signs the application for certification on our behalf, I acknowledge that all responsibility for complying with the terms and conditions for certification, as specified by Nemko Canada Inc, still resides with Raven Industries, 4372 Green Ash Dr., Earth City, MO 63045.

Dated this tenth day of June, 2004.

Agency Agreement Expiration Date: (Typically 8-12 months)

By:


(Signature)

Pete Gereau
(Print name)

Title:

SR. Program Manager

On behalf of: Raven Industries
(Company Name)

Telephone: 314-291-2712