



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

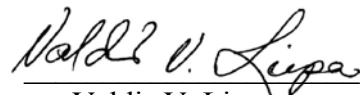
3228 EECS BUILDING
1301 BEAL AVENUE
ANN ARBOR, MICHIGAN 48109-2122
734 764-0500 FAX 734 647-2106
<http://www.eecs.umich.edu/RADLAB/>

August 1, 2003

Re: Class II Permissive Change/Re-assessment
for JCI 700N Transmitter
Model: 700N
FCC ID: CB2120NHL3
IC: 2791021862

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).


Valdis V. Liepa
Research Scientist



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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, JCI requests that a part of the subject application be held confidential. This comprises Exhibits

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

JCI 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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GENERAL PRODUCT INFORMATION

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

Johnson Controls Interiors L.L.C.
One Prince Center
Holland, MI 49423

Jeremy Bos
Tel: (616) 394-6076
Fax: (616) 394-6100

It will be manufactured by:

Johnson Controls Interiors L.L.C.
One Prince Center
Holland, MI 49423

Jeremy Bos
Tel: (616) 394-6076
Fax: (616) 394-6100

Canadian Contact:

Johnson Controls
Lakeshore Plant
477 Jutras Dr. South
Tecumseh, ON N8N 5C4
Jim Komar
Jim.komar@jci.com
(519) 727-2341
(519) 727-4750

Changes Made

1 Application of FCC ID for Toyota 700N program

2 Brief explanation

Toyota 700N is similar product to current Toyota 120N / 500N program.

(120N and 500N hardware is quiet same. Difference is software and the software change only the trip computer coefficient which do not effect anything for HomeLink.)

This documents is for application of FCC ID for Toyota 700N program.

3 The difference details 120N / 500N vs 700N

3-1 Circuit diagram

120N / 500N main circuit diagram see Page 3 / 10

120N / 500N HomeLink circuit diagram see Page 4 / 10

700N main circuit diagram see Page 5 / 10

700N HomeLink circuit diagram see Page 6 / 10

3-2 PCB pattern

120N / 500N PCB pattern 1 see Page 7 / 10

120N / 500N PCB pattern 2 see Page 7 / 10

700N PCB pattern 1 see Page 8 / 10

700N PCB pattern 2 see Page 8 / 10

3-3 PCB pattern

120N / 500N assembly drawing see Page 9 / 10

700N assembly drawing see Page 10 / 10

3-4 software

| | 120N / 500N | 700N |
|----------|-------------|---------|
| HomeLink | Rev 6.4 | Rev 6.4 |
| Main | Rev 4.0 | Rev FO |

3-5 Summary how changed (see Page 3, 5, 6, 8 / 10)

1 Remove the UART communication port for the Trip computer.

2 Add the thermistor circuit for Trip computer.

3 Change the VFD filament voltage driver.

4 Change the micro from MC68HC05C9A to MC68HC08AB32 so PCB layout changed.

5 Change the one of compass sensor to small compass sensor.

6 Change illumination circuit to communicate with tester.

7 Speed circuit for the feed back changed.

8 Antenna tuning supply voltage for HomeLink changed.

4 Current 120N / 500N FCC ID

CB2120NHL3