



**Test Report:** 4W07778.1

**Applicant:** Tecnord S.r.l  
Via Decorati al Valor Militare, 3  
Baggiovara, MO, Italy 41040

**Equipment Under Test:  
(EUT)** RC-TRS-RX, 458MHz Receiver

**In Accordance With:** FCC Part 15, Subpart B, 15.109

**Tested By:** Nemko Canada Inc.  
303 River Road, R.R. 5  
Ottawa, Ontario K1V 1H2

A handwritten signature in blue ink, appearing to read 'Kevin Carr'.

**Authorized By:** Kevin Carr, EMC Specialist

**Date:** 3 February 2004

**Total Number of Pages:** 10

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*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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## **Section 1. Summary of Test Results**

### **General**

**All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart B. Measurement procedure ANSI C63.4-1992 was used for all tests. Radiated Emissions were measured on an open area test site. A description of the test facility is on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See " Summary of Test Data".



TESTED BY: \_\_\_\_\_  
Glen Westwell, Wireless Technologist

DATE: 3 February 2004

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This report applies only to the items tested.



Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada.  
The tests included in this report are within the scope of this accreditation.

*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

## Summary Of Test Data

| Name Of Test                  | Para. No. | Results  |
|-------------------------------|-----------|----------|
| Antenna Conducted Emissions   | 15.111    | N/A (1)  |
| Radiated Emissions            | 15.109    | Complies |
| Powerline Conducted Emissions | 15.107    | N/A (2)  |

Note:

(1) This device does not have access for conducted measurements.

(2) This device is DC powered 12-24Vdc.

## Test Conditions:

## Indoor

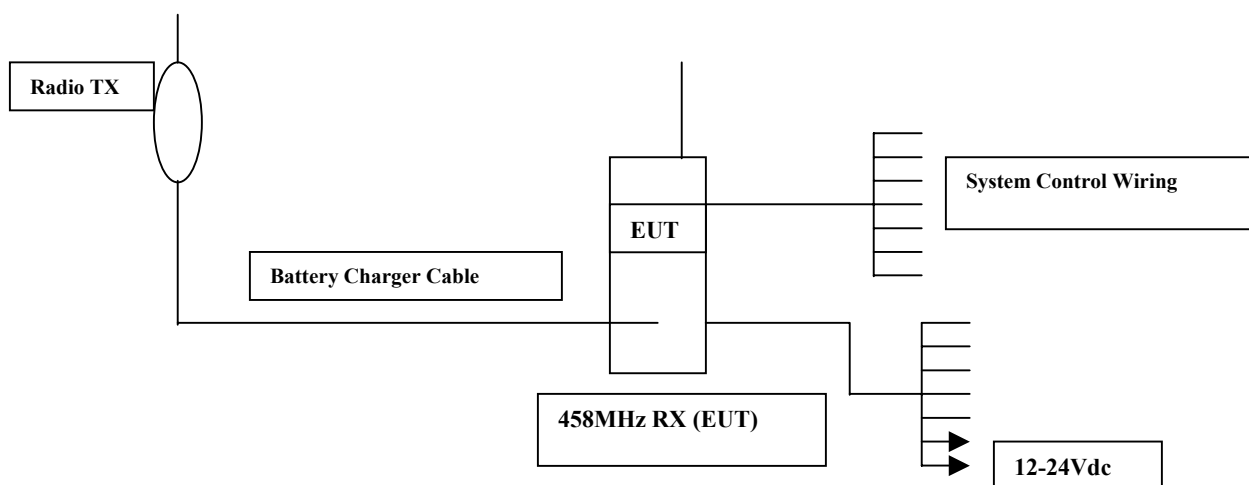
Temperature: 24°C

Humidity: 2%

## Outdoor

Temperature: 10°C

Humidity: 64%



*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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## **Section 2.           General Equipment Specification**

|                                     |                            |
|-------------------------------------|----------------------------|
| <b>Manufacturer:</b>                | Technord                   |
| <b>Model No.:</b>                   | RC-TRS-RX, 458MHz Receiver |
| <b>Serial No.:</b>                  | Sample#3                   |
| <b>Date Received In Laboratory:</b> | 07 Jan. 2004               |
| <b>Nemko Identification No.:</b>    | #3                         |
| <b>Receive Frequency Range:</b>     | 458.525-458.775MHz         |
| <b>Receive Frequency of EUT(s):</b> | 458.675MHz (fixed)         |
| <b>Supply Voltage:</b>              | 12-24Vdc.                  |

*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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**Section 3. Radiated Emissions****Para. No.: 15.109(a)****Test Performed By: Glen Westwell****Date of Test: 19 Jan. 2004****Minimum Standard:**

| <b>Frequency(MHz)</b> | <b>Field Strength<br/>(dBµV/m @ 3m)</b> |
|-----------------------|-----------------------------------------|
| 30 - 88               | 40.0                                    |
| 88 - 216              | 43.5                                    |
| 216 - 960             | 46.0                                    |
| Above 960             | 54.0                                    |

**Test Results:** Complies.**Measurement Data:** See attached table.

All emissions were searched from 30MHz to 5GHz.

The EUT was searched on 3 orthogonal axis, worst case data has been presented.

The DC supply was varied +/- 15% to verify worst case emissions.

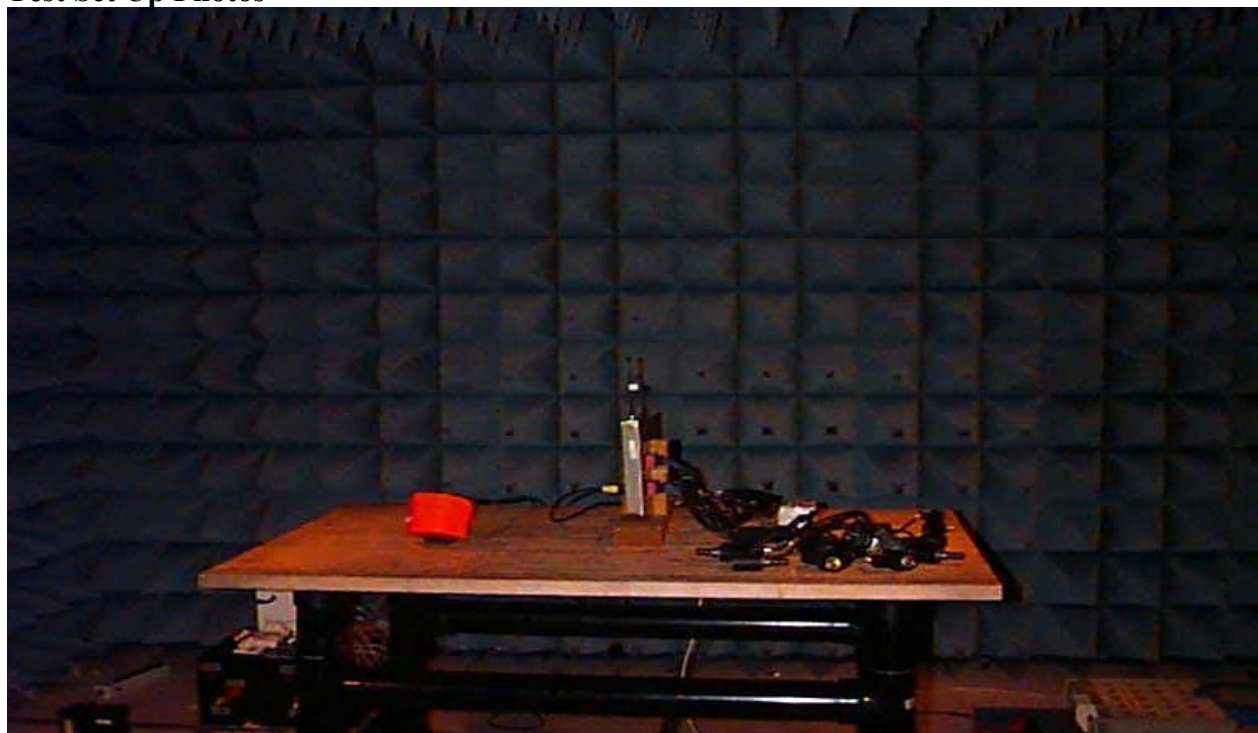
*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

| Test Date: 19 Jan. 2004                                                                              |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
|------------------------------------------------------------------------------------------------------|------|-------------|--------------------------|------------------------|----------------------|-----------------------|-------------------------------|-------------------|----------------|--------|------|
| Engineer's Name: G.W.                                                                                |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
| Tested as per: Table Top                                                                             |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
| Test Distance (meters): 3                                                                            |      |             |                          |                        |                      |                       | Range: A                      |                   |                |        |      |
| Emissions within 20 dB of the limit have been recorded.                                              |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
| Freq.<br>(MHz)                                                                                       | Ant. | Pol.<br>V/H | RCVD<br>Signal<br>(dBμV) | Ant.<br>Factor<br>(dB) | Amp.<br>Gain<br>(dB) | Cable<br>Loss<br>(dB) | Field<br>Strength<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Det.   | Amp  |
| 112.4000                                                                                             | BC1  | V           | 19.7                     | 11.4                   | N/A                  | 1.3                   | 32.4                          | 43.5              | 11.1           | Q-Peak | None |
| 112.4000                                                                                             | BC1  | H           | 17.3                     | 10.9                   | N/A                  | 1.3                   | 29.5                          | 43.5              | 14.0           | Q-Peak | None |
| 176.6300                                                                                             | BC1  | V           | 15.0                     | 13.1                   | N/A                  | 1.7                   | 29.8                          | 43.5              | 13.7           | Q-Peak | None |
| 176.6300                                                                                             | BC1  | H           | 12.0                     | 12.4                   | N/A                  | 1.7                   | 26.1                          | 43.5              | 17.4           | Q-Peak | None |
| 437.2770                                                                                             | LP1  | V           | 10.2                     | 16.1                   | N/A                  | 2.7                   | 29.0                          | 46.4              | 17.4           | Q-Peak | None |
| 437.2770                                                                                             | LP1  | H           | 12.1                     | 16.8                   | N/A                  | 2.7                   | 31.6                          | 46.4              | 14.8           | Q-Peak | None |
| Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
| Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW                                 |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
| Notes:                                                                                               |      |             |                          |                        |                      |                       |                               |                   |                |        |      |
|                                                                                                      |      |             |                          |                        |                      |                       |                               |                   |                |        |      |

*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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**Test Set Up Photos**

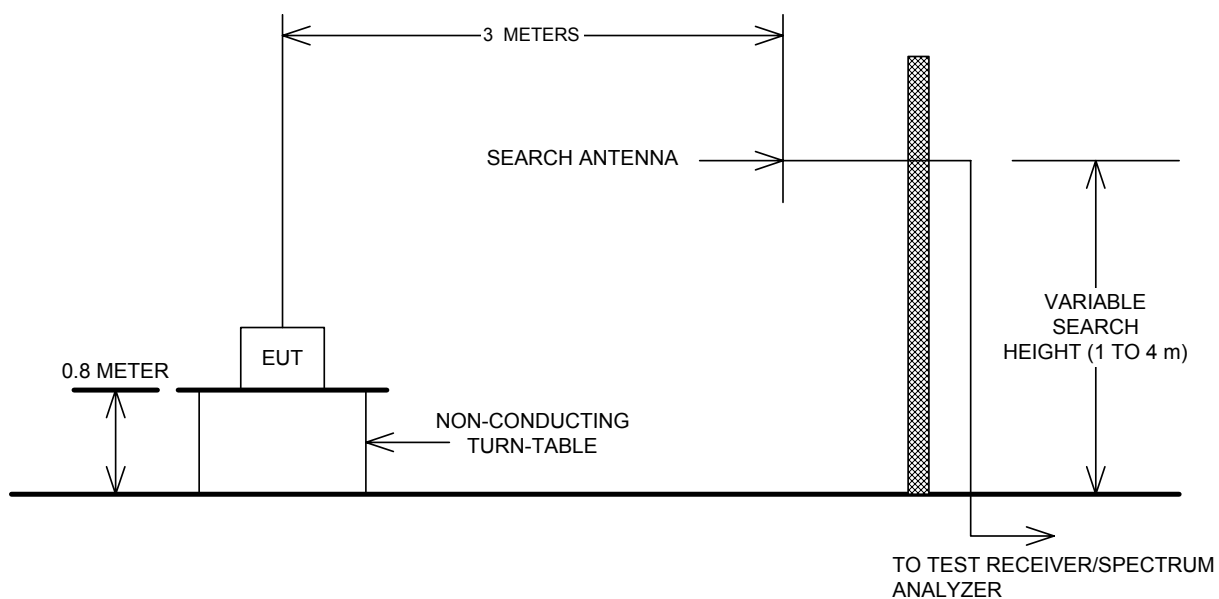


*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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## Section 4. Block Diagrams

### Outdoor Test Site For Radiated Emissions



*EQUIPMENT: RC-TRS-RX, 458MHz Receiver*

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**Section 5. Test Equipment List**

| CAL CYCLE | EQUIPMENT                 | MANUFACTURER    | MODEL    | SERIAL   | LAST CAL.    | NEXT CAL.    |
|-----------|---------------------------|-----------------|----------|----------|--------------|--------------|
| 1 Year    | Receiver                  | Rohde & Schwarz | ESVS-30  | FA001437 | July. 24/03  | July. 24/04  |
| 1 Year    | Spectrum Analyzer         | Hewlett Packard | 8565E    | FA000981 | 03 Jul 03    | 03 Jul 04    |
| 1 Year    | Horn Antenna              | EMCO #1         | 3115     | FA000649 | 18 Dec 03    | 18 Dec 04    |
| 1 Year    | Log Periodic Antenna #1   | EMCO            | LPA-25   | FA000477 | Sept. 02/03  | Sept. 02/04  |
| 1 Year    | Biconical (1) Antenna     | EMCO            | 3109     | FA000805 | April. 15/03 | April. 15/04 |
| 1 Year    | Spectrum Analyzer         | Hewlett-Packard | 8566B    | FA001309 | June. 05/03  | June. 05/04  |
| 1 Year    | Spectrum Analyzer Display | Hewlett-Packard | 85662A   | FA001309 | June. 05/03  | June. 05/04  |
| NCR       | Bilog                     | Schaffner       | CBL6112B | FA001504 | NCR          | NCR          |