



Test Report: 4W07778

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

**Equipment Under Test:
(EUT)** RC-TRS-TX, Low Power Transmitter

FCC ID: RUE-RC-TRS-TX

In Accordance With: **FCC Part 90**

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



Authorized By: Kevin Carr, EMC Specialist.

Date: 6 February 2004

Total Number of Pages: 15

Table of Contents

Section 1. Summary of Test Results3

Section 2. General Equipment Specification.....5

Section 3. RF Power Output.....7

Section 4. Field Strength of Spurious Emissions8

Section 5. Frequency Stability11

Section 6. Test Equipment List14

Section 7. Block Diagrams15

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

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 90.217.



New Submission



Production Unit



Class II Permissive Change



Pre-Production Unit



Equipment Code

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: 6 February 2004

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This report applies only to the items tested.

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Summary Of Test Data

Name Of Test	Para. No.	Result
RF Power Output	2.1046	Complies
Occupied Bandwidth	2.1049	N/A (1)
Spurious Emissions at Antenna Terminals	2.1051	N/A (2)
Field Strength of Spurious Emissions	2.1053	Complies
Frequency Stability	2.1055	Complies

Notes:

- (1) This device falls under 90.217, Exemption from Technical Standards, Output power not exceeding 120mW.
- (2) The device has an integral antenna.

Footnotes For N/A's:

Indoor Temperature: 24°C
 Humidity: 2%

Outdoor Temperature: 10°C
 Humidity: 64%

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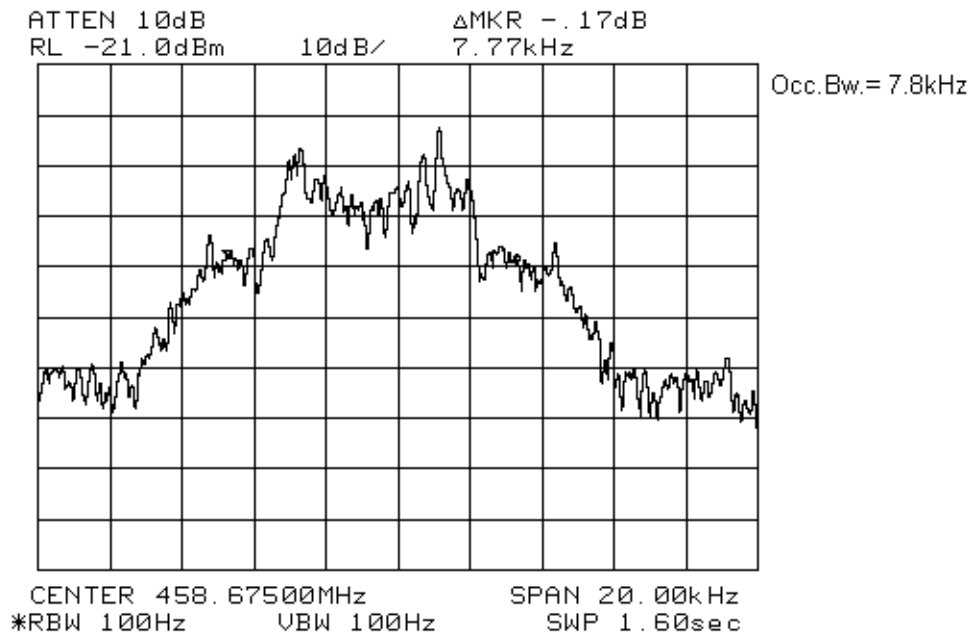
EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Section 2. General Equipment Specification

Manufacturer:	Technord
Model No.:	RC-TRS-TX, Low Power 458MHz Transmitter
Serial No.:	Sample#2
Date Received In Laboratory:	07 Jan. 2004
Nemko Identification No.:	#2
Supply Voltage Input:	5.5Vdc
Frequency Range of EUT:	458.525-458.775MHz
Frequency of EUT:	458.675MHz (fixed)
Channel Spacing:	25kHz
Emission Designator:	12K5F1D
Type(s) of Modulation:	FM (direct FSK)
RF Power Output (measured):	0.66mW

Note: This transmitter operates on a fixed frequency that is selectable via dip switches internal to the enclosure. The frequency selection table is contained in the operation guide.

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter



EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Section 3. RF Power Output**Para. No.: 2.1046**

Test Performed By: Glen Westwell	Date of Test: 19 Jan. 2004
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Minimum Standard: 120mW**Test Results:** Complies**Measurement Data:** 0.66mW

Frequency (MHz)	Pol.	Antenna	Receive Signal (dBuV)	Total Field Strength (dBuV)	Signal Substitution Power Level (dBm)
458.675	V	LP1	78.0	97.4	-1.8
458.675	H	LP1	75.7	95.1	-5.6

Receiver: HP8565E

Detector: Peak

RBW/VBW: 100kHz

Measurement Distance: Range A @ 3m.

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Section 4. Field Strength of Spurious Emissions

Para. No.: 2.1053

Test Performed By: Glen Westwell	Date of Test: 19 Jan. 2004
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Minimum Standard: -30dBc**Test Results:** Complies**Measurement Data:**

Frequency (MHz)	Pol.	Antenna	Receive Signal (dBuV)	Total Field Strength (dBuV)	Signal Substitution Power Level (dBm)	Limit (dBm)
88.4	V	BC1	33.0	42.0	-56.4	-31.8
88.4	H	BC1	32.2	42.4	-57.4	-31.8

Receiver: HP8565E

Detector: Peak

RBW/VBW: 100kHz

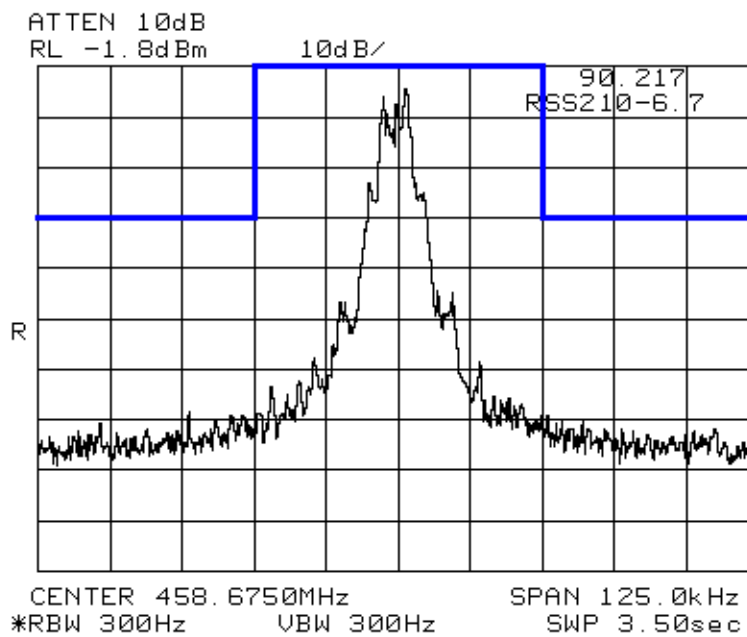
Measurement Distance: Range A @ 3m.

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.

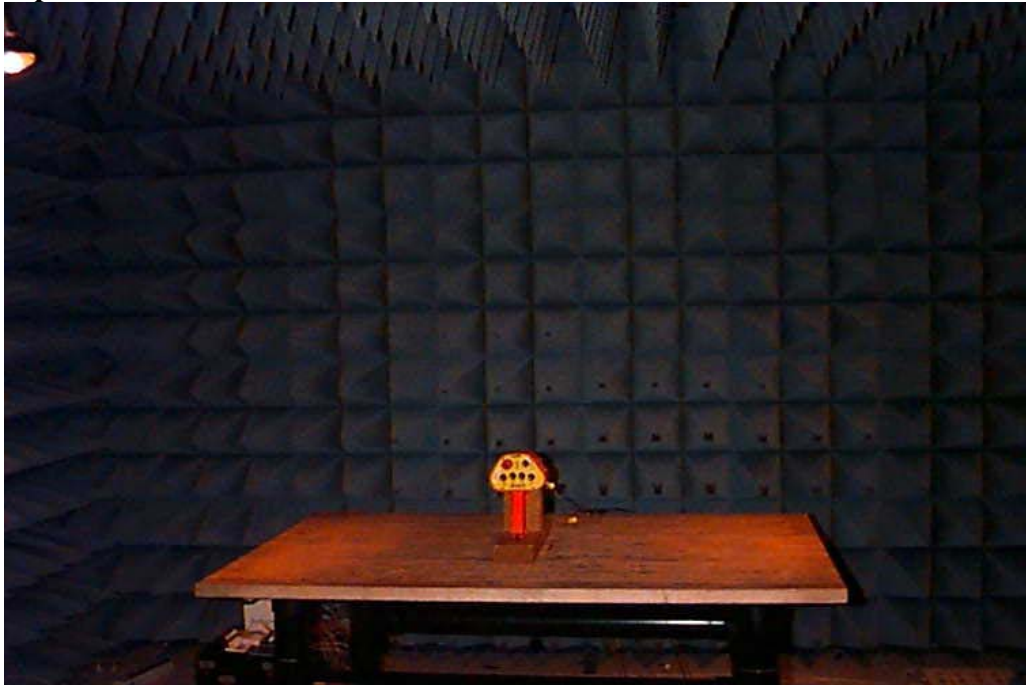
EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter



Exemption from Technical
Standards.
Transmitters not Exceeding
120mW.
Ambient

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Test Set Up Photos



EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Section 5. Frequency Stability

Para. No.: 2.1055

Test Performed By: Glen Westwell	Date of Test: 19 Jan. 2004
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Minimum Standard: 90.217, +/-25kHz, -30dBc

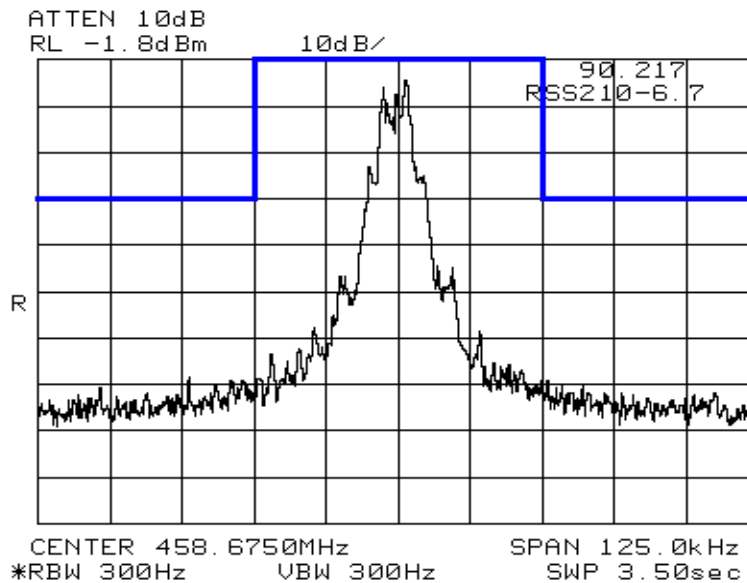
Test Results: Complies

Measurement Data: See attached plots.

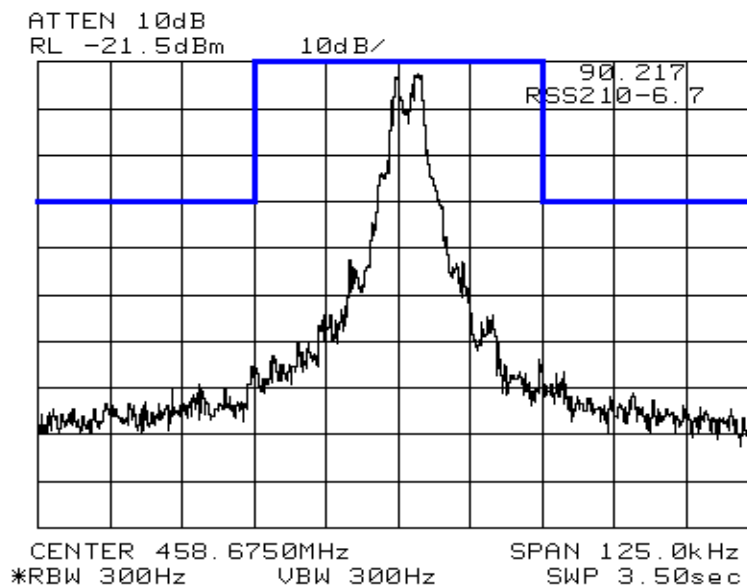
The EUT was measured over temperature extremes of -30°C to $+50^{\circ}\text{C}$.

The DC supply was varied +/-15% to verify worst case deviation across the bandwidth.

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter



Exemption from Technical
Standards.
Transmitters not Exceeding
120mW.
Ambient



Exemption from Technical
Standards.
Transmitters not Exceeding
120mW.
Low Temp. Extreme
-30degrees C

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter



Exemption from Technical
Standards.
Transmitters not Exceeding
120mW.
High Temp. Extreme
+50degrees C

EQUIPMENT: RC-TRS-TX, Low Power 458MHz Transmitter

Section 6. Test Equipment List

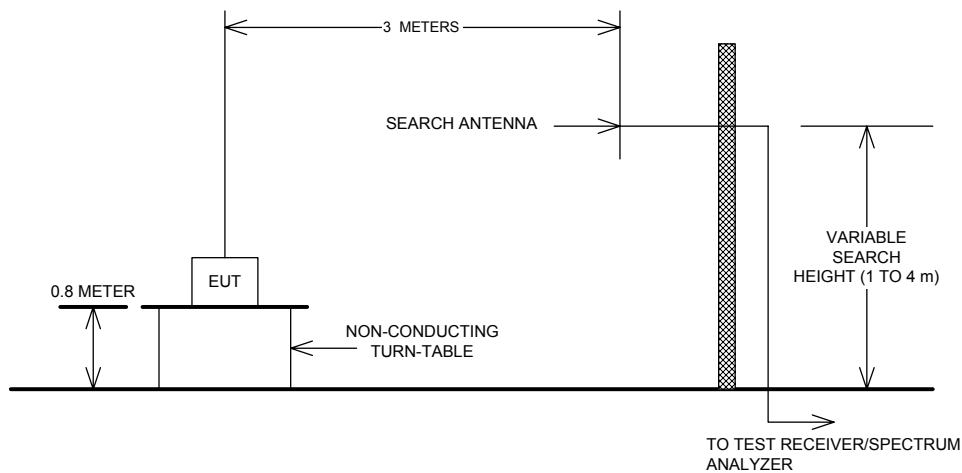
CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8565E	FA000981	03 Jul 03	03 Jul 04
1 Year	Horn Antenna	EMCO #1	3115	FA000649	18 Dec 03	18 Dec 04
1 Year	Climate Chamber	Thermotron	SM-16C	15649-S	COU	COU
1 Year	Log Periodic Antenna #1	EMCO	LPA-25	FA000477	Sept. 02/03	Sept. 02/04
1 Year	Biconical (1) Antenna	EMCO	3109	FA000805	April. 15/03	April. 15/04
1 Year	Receiver	Rohde & Schwarz	ESVS-30	FA001437	July. 24/03	July. 24/04
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

Section 7. Block Diagrams

Para. No. 2.1053 - Field Strength of Spurious Radiation

Para.No. 2.1046 RF Power.

TIA/EIA-603



Para. No. 2.1055 - Frequency Stability

