



RF Exposure Evaluation Declaration

Report No.: S20250723677202

Issue Date: 2025-12-24

Applicant: Alps Alpine North America, Inc.
Address: 1500 Atlantic Blvd, Auburn Hills Michigan, United States 48326
FCC ID: 2ACH3UTEM701
Product: Marine Radio with Bluetooth
Model No.: UTE-M701
Trade Mark: Alpine
FCC Rule Part(s): CFR 47, FCC Part 2.1091 Radio frequency radiation exposure evaluation: mobile devices.
Item Receipt date: Aug. 14, 2025
Test Date: Aug. 15, ~ Aug. 25, 2025



Compiled By

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The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

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The test report must not be used by the client to claim product certifications, approval, or endorsement by NVLAP, NIST or any agency of U.S. Government.

Revision History

Report No.	Version	Description	Issue Date
S20250723677202	Rev. 01	/	2025-12-24

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§2.1033 General Information

Applicant:	Alps Alpine North America, Inc.
Applicant Address:	1500 Atlantic Blvd, Auburn Hills Michigan, United States 48326
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FCC Rule Part(s):	FCC Part 2.1091
FCC ID:	2ACH3UTEM701
Test Device Serial No.:	S/N.: S202507236772-1-1 ☐ Production ☒ Pre-Production ☐ Engineering

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Marine Radio with Bluetooth
Model Name:	UTE-M701
Trade Mark:	Alpine
Input Voltage Range:	DC 12V
Software Version:	HMS210A_MPEG V1.15
Hardware Version:	V03
Bluetooth Version:	5.2
Note:	This information is provided by the Customer and its authenticity is the responsibility of the Customer.

1.2. Product Specification Subjective to this Report

Operating Frequency:	2402~2480MHz
Channel Number:	79
Channel Spacing	1 MHz
Type of modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Data Rate:	1Mbps (GFSK), 2Mbps ($\pi/4$ DQPSK), 3Mbps (8DPSK)
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

For simultaneous transmission exposure cases, calculation formula is:

$$\sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

2.2. Test Result of RF Exposure Evaluation

Product	Marine Radio with Bluetooth
Test Item	RF Exposure Evaluation

Mode	Frequency (MHz)	Maximum Conducted OutputPower (dBm)	Antenna Gain (dBi)	PG		MPE (mW/cm ²)	MPE Limits (mW/cm ²)
				(dBm)	(mW)		
BT	2402~2480	10.41	0	10.41	10.99	0.0022	1.00

Remark: 1. MPE use distance is 20cm from manufacturer declaration of user manual.

Remark: 2. Use the maximum gain of all bands when evaluating.

CONCLUSION:

The Max Power Density at R (20 cm) = $0.0022\text{mW/cm}^2 < 1.00\text{mW/cm}^2$.

So the EUT complies with the requirement.

Statement

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7. Information about laboratory sites involved in our company:

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