

Test Report

Electromagnetic Compatibility

Product	ComTac headset		
Name and address of the applicant	3M Svenska AB Box 2341 Värnamo 331 02 Sweden		
Name and address of the manufacturer	3M Svenska AB Box 2341 Värnamo 331 02 Sweden		
Model	MT14H419A (ComTac IX)		
Rating	915 MHz SRD Tranceiver		
Trademark	3M Peltor		
Additional information	/		
Tested according to	FCC CFR 47 Subpart 15B ISED Canada ICES-003, Issue 7		
Project number	PRJ0074312		
Tested in period	2025-07-01 – 2025-08-31		
Issue date	2026-01-19		
Name and address of the testing laboratory	Nemko Scandinavia AS ☐ Location 1: Philip Pedersens vei 11, 1366 Lysaker, Norway ☒ Location 2: Instituttveien 6, 2007 Kjeller, Norway  		
An accredited technical test executed under the Norwegian accreditation scheme			
 Jan G Eriksen C=NO, CN=Jan G Eriksen, OU=Senior Engineer, O=Nemko Scandinavia AS, E=jangunnar.eriksen@nemko.com 2026.01.19 06:59:05 +01'00' Prepared by [Jan G Eriksen]  Digitally signed by Frode Sveinsen DN: cn=Frode Sveinsen, c=NO, o=Nemko Scandinavia AS, ou=ETM, email=frode.sveinsen@nemko.com Location: Kjeller Date: 2026.02.24 14:30:47 +01'00' Approved by [Frode Sveinsen]			

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REPORT REVISIONS

Report Edition	Date	Project	Description
A	2025-11-21	PRJ0074312	First issued
B	2026-01-19	PRJ0074312	Editorials (photos)



THIS REPORT APPLIES ONLY TO THE ITEM(S) AND CONFIGURATION(S) TESTED.

It is the manufacturer's responsibility to assure the additional production units of this product are manufactured with identical electrical and mechanical components. The manufacturer is responsible to the authorities for any modifications made to the product, which result in non-compliance to the relevant regulations.

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Opinions expressed within this report regarding general assessments and qualifications for PASS or FAIL to the standards limits and requirements, are not part of the current accreditation. Neither is opinions expressed regarding model variants covered by the testing performed in this report.

Deviations from, additions to, or exclusions from the test specifications are described in "Test Report Summary".

This report was originally distributed electronically with digital signatures. For more information contact Nemko.

DESCRIPTION OF TESTED ITEM(S)

Product description	The tested item is a head worn communication radio
Model/type	MT14H419A (ComTac IX)
FCC ID.....	FCC-ID: Y9ZMT14H419
IC.....	IC: 4406A-MT14H419
Serial number	Conducted: 1000000000011 Radiated: 1000000000026
Operating voltage.....	3.0 V DC (internal batteries)
Maximum power/current.....	+3 dBm conducted
Insulation class	II
Highest clock frequency	CPU clock 12.288 MHz
Hardware version	K501-st-application-1.0.0 For tests K501-st-application-0.0.0.148 software with test modes was used.
Software version	K501A

Mounting position.....	☐ Tabletop equipment ☐ Wall/ceiling mounted equipment ☐ Floor standing equipment ☐ Handheld equipment ☐ Rack mounted equipment ☐ Console equipment ☒ Other: Head
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INPUT/OUTPUT PORTS

Port name and description	Cable		
	Longer than 3m	Attached during test	Shielded
Cord with jack 0.5 m for connection to external radio	☐	☐	☐

This equipment has been tested with certain cable types and cable configurations. Any changes to these parameters when installed may influence the EMC properties of this equipment.

OPERATING MODES

OP no.	Description	References	Applied for testing	
			Emissions	Immunity
OP1	Stdby		☒	☐

POWER SUPPLY CONDITIONS

The following nominal power supply conditions have been tested:

PC no.	Voltage	Frequency	Type	Ground terminal
PC1	3 V (battery)	☐ AC 50Hz / ☐ AC 60Hz / ☒ DC	☐ 3AC / ☐ 3ACN / ☐ PoE	☐ PE / ☐ GND / ☐ None

Power supplied to the sample(s) during test verified with a calibrated instrument as listed below:

N/A

☐ Additional chassis grounding was applied.

PHOTOS AND DRAWINGS

Copy of marking label..... :	
Photo of the test item :	Please refer to the ANNEX for the photo
Drawing of test setup :	/

OTHER INFORMATION

Modifications :	None
Additional information :	None

TEST ENVIRONMENT

Test laboratory	☒ KJELLER (Instituttveien 6, N-2007 Kjeller, Norway) ☐ LYSAKER (Philip Pedersens vei 11, N-1366 Lysaker, Norway)
Laboratory accreditation	 Norsk Akkreditering – TEST 033 P06 – Electromagnetic Compatibility
Environmental conditions	The climatic conditions during the tests are within limits specified by the manufacturer for the operation of the product and the test equipment. The climatic conditions during tests are within the following limits: Ambient temperature: 15 – 35 °C Relative humidity: 25 – 75 %RH Atmospheric pressure: 86 – 106 kPa If explicitly required by the test standard, or the requirements are tighter than the above; the climatic conditions are recorded and documented separately in this test report.
Calibration	All instruments used in the tests of this test report are calibrated and traceable to national or international standards. Between calibrations test set-ups are controlled and verified on a regular basis by intermediate checks to ensure, with 95% confidence that the instruments remain within their calibrated levels. The instrumentation accuracy is within limits agreed by the IECCE/CTL and defined by Nemko.
Measurement uncertainties	Uncertainty in EMC emission measurements stated in this report are calculated from the standard measurement uncertainties multiplied by the coverage factor $k=2$. It was determined in accordance with CISPR 16-4-2. The true value is in the corresponding interval with a probability of 95%. If some emission measurements have a margin to the required limit which is less than the instrumentation measurement uncertainty provided by the laboratory, occurrences are marked with an asterisk (*) in the “Margin” columns. Uncertainties for continuous immunity tests are calculated based on the same principles as for EMC emission uncertainties. For Harmonics and Flicker measurements the measurement uncertainty is calculated based on the same principles as for EMC emission uncertainties. Uncertainties for transient immunity are kept within the requirements of the relevant basic standard. <i>Further information about measurement uncertainties is provided on request.</i>
Decision rules	As specified by CISPR 16-4-2; if our measurement uncertainty U_{LAB} is less than or equal to U_{CISPR}, compliance is deemed to occur if no measured disturbance level exceeds the limit hence “PASS” is indicated, and non-compliance is deemed to occur if any measured disturbance level exceeds the limits hence “FAIL” is indicated. For continuous immunity tests, uncertainties are not considered when applying the calibrated test levels. Tests are performed at the test levels specified by the test standard. PASS and FAIL decisions are based on behaviour observations of the specimen. For transient immunity tests, uncertainties are not considered if the test equipment is kept within the requirements of the relevant basic standard. Tests are performed at the test levels specified by the test standard. PASS and FAIL decisions are based on behaviour observations of the specimen. For Harmonics and Flicker measurements the measurement uncertainty is considered, and measurements are marked if necessary. In doing so, the associated uncertainty of measurement has been considered. <i>Further information about decision rules is provided on request.</i>

EVALUATION OF PERFORMANCE

PERFORMANCE TESTS

Performance checks	Check functionality of buttons audio microphone
Performance tests	Check that device is active
Monitoring during tests	Manual monitoring
Information: Performance check is a short functional test carried out during or after a technical test to confirm that the equipment operates. Performance test is a measurement, or a group of measurements carried out during and/or after a technical test to confirm that the equipment complies with selected parameters as defined in the equipment standard. Monitoring during tests describes which functions were monitored and how.	

☐ This test report contains functional evaluation data provided by the customer. Some pass/fail statements are based on such evaluations and data provided by customer auxiliary equipment. Data originating from the customer are not obtained under the accreditation conditions of the laboratory.

GENERAL PERFORMANCE CRITERIA

For the specimen to pass each test, it shall meet the following general criteria:

During test	After test
Performance criterion A: Operate as intended. No loss of function. No unintentional responses.	Performance criterion A: Operate as intended. No loss of function. No degradation of performance. No loss of stored data or user programmable functions.
Performance criterion B: May be loss of function (one or more). No unintentional responses.	Performance criterion B: Operate as intended. Lost function(s) shall be self-recoverable. No degradation of performance. No loss of stored data or user programmable functions.
Performance criterion C: May be loss of function (one or more).	Performance criterion C: Lost function(s) shall be recoverable by the operator. Operate as intended after recovering. No degradation of performance.
Information: In the subsequent test sections of this report, the required and actual specimen performance during immunity testing is indicated by the nomenclatures as given by the table above (A, B or C).	

TEST REPORT SUMMARY

APPLIED STANDARDS

Standards	Titles
FCC CFR 47 Subpart 15B	<i>Digital devices - Unintentional radiators, Class B Digital Device</i>
ISED Canada ICES-003, Issue 7	<i>Spectrum Management and Telecommunications Policy. Interference-Causing Equipment Standard. Information Technology Equipment (Including Digital Apparatus - Limits and Methods of Measurement (Issue 7, June 2020)</i>

* : An asterisk (*) placed after the standard name indicates standards that are not within the laboratory scope of accreditation.

TEST SUMMARY

Requirements – Tests	Reference standards	Verdict
Conducted Emissions on Supply Ports (Method: FCC Part 15.107 per ANSI C63.4-2014)	FCC CFR 47 Subpart 15B ISED Canada ICES-003, Issue 7	N/A
Radiated Emissions (Below 1GHz) (Method: FCC Part 15.109 per ANSI C63.4-2014)	FCC CFR 47 Subpart 15B ISED Canada ICES-003, Issue 7	PASS
Radiated Emissions (Above 1GHz) (Method: FCC Part 15.109 per ANSI C63.4-2014)	FCC CFR 47 Subpart 15B ISED Canada ICES-003, Issue 7	N/A

PASS : Tested and complied with the requirements
 FAIL : Tested and failed the requirements
 N/A : Test not relevant to this specimen (evaluated by the test laboratory)
 – : Test not performed (instructed by the applicant)
 * : An asterisk (*) placed after the verdict in the Result column indicates a test item that are not within Nemko's scope of accreditation
 # : A grid (#) placed after the verdict in the Result column indicates a test item that are only partly covered by Nemko's scope of accreditation. Further information or details may be provided within the test chapter

ABOUT REFERENCE STANDARDS AND TEST LEVELS

Product standards with dated references to basic standards may have been performed according to the newest edition of the basic standard. This may impact on the compliance criteria or technical performance of the test, still this is adequate if the test is expected to confirm compliance with the intention of the product standard. The table above lists the actual editions of the basic standards which have been used during testing.

The choice of immunity test levels could be higher than those specified by the reference standards when we consider the nature of the specimen and its intended use or based on customer requests.

NOTES

None

Test Results

RADIATED EMISSIONS (BELOW 1GHZ)

TEST DESCRIPTION

Method

These measurements have been performed according to ANSI C63.4-2014.

Set-up

The measurements were performed in a semi-anechoic chamber (SAC). Nominal supply voltage was provided.

The specimen was energized and in normal operating mode during the measurement.

- ☐ The specimen and its cables were elevated 10 cm above the site ground plane and placed in the centre of the turntable.
- ☒ The specimen and its cables were placed on a table 80 cm above the site ground plane and placed in the centre of the turntable.

Antenna type = Hybrid bilog antenna

Antenna elevation = 100-400 cm above the ground reference plane with bore-sight movement.

Specimen rotation = 0-360°.

- ☐ Band-stop filter(s) was used to suppress the wanted RF transmission band to protect the measurement equipment.

Frequency range:

☒ 30-1000MHz

Measurement distance:

☒ 3m

Conditions

The measuring bandwidth is 120 kHz in the frequency range 30 MHz – 960 MHz. Frequency sweeps with RBW = 120 kHz and VBW = 1 MHz was applied with a sweep time of 20 ms (step size resolution < 60 kHz).

Measurement uncertainty: ± 5.2 dB (3m distance in SAC10); ± 5.1 dB (3m distance in SAC3)

Instruments used during measurement

Instrument list: EMI Receiver: R&S / ESU40 (LR-1639) (01/2026)
Preamplifier: Sonoma / 310N (LR-1686) (08/2026)
Antenna, Hybrid: Schwarzbeck / VULB 9163 (LR-1616) (05/2026)

Conformity

Verdict:

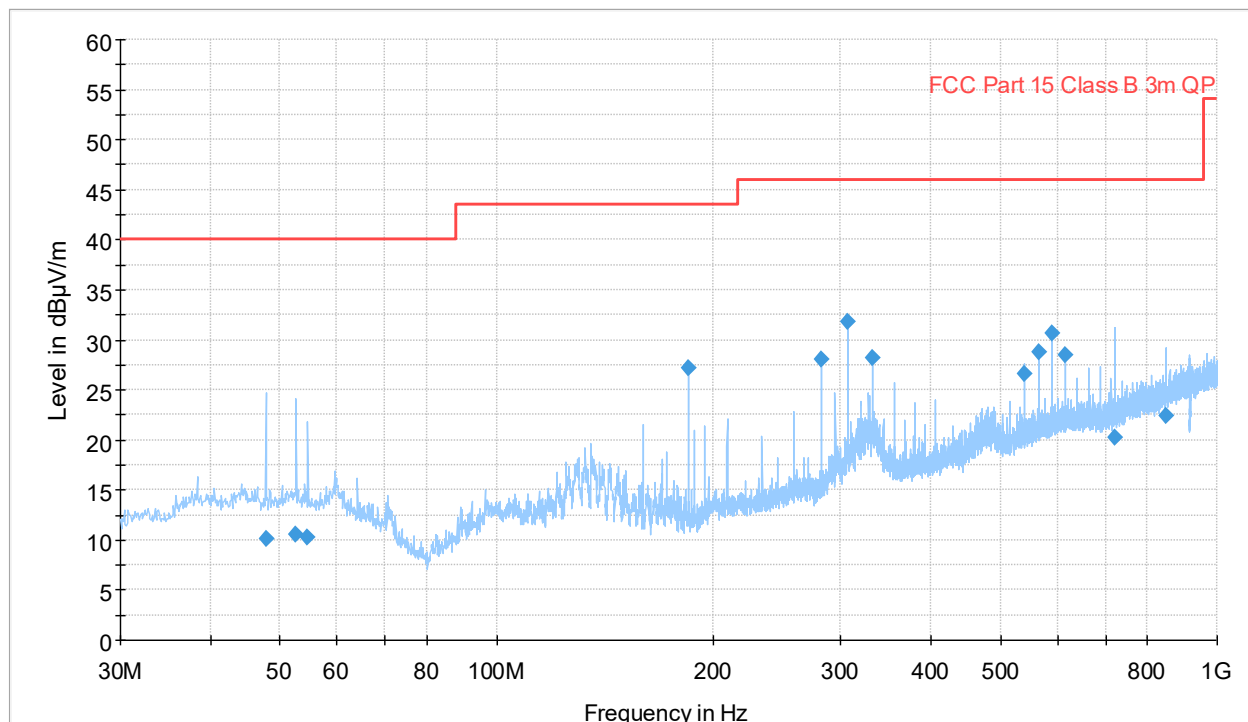
PASS

Test engineer:

Jan G Eriksen

EMISSION SPECTRUM

Full Spectrum



— Preview Result 1-PK+ — FCC Part 15 Class B 3m QP ◆ Final_Result QPK

MEASUREMENTS DATA

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.829084	10.11	40.00	29.89	15000.0	120.000	102.0	V	237.0	-12.8
52.561490	10.60	40.00	29.40	15000.0	120.000	150.0	V	244.0	-12.8
54.650402	10.24	40.00	29.76	15000.0	120.000	150.0	V	225.0	-12.8
184.323562	27.16	43.50	16.34	15000.0	120.000	223.0	H	179.0	-14.5
282.629544	28.02	46.00	17.98	15000.0	120.000	102.0	H	59.0	-10.9
307.206470	31.78	46.00	14.22	15000.0	120.000	100.0	H	63.0	-10.4
331.783002	28.16	46.00	17.84	15000.0	120.000	100.0	H	329.0	-9.4
540.683022	26.64	46.00	19.36	15000.0	120.000	102.0	V	173.0	-4.7
565.259914	28.71	46.00	17.29	15000.0	120.000	102.0	V	168.0	-4.1
589.835940	30.61	46.00	15.39	15000.0	120.000	102.0	V	196.0	-3.6
614.413714	28.47	46.00	17.53	15000.0	120.000	100.0	V	167.0	-3.2
719.696764	20.27	46.00	25.73	15000.0	120.000	410.0	V	321.0	-2.4
850.758416	22.37	46.00	23.63	15000.0	120.000	407.0	V	72.0	0.0