



November 28, 2007

Cybiotronics Ltd.
Room 1906, 19 Floor, Eastern Centre,
1065 King's Road, Quarry Bay,
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Dear Ms. Angel Lam:

Enclosed you will find your file copy of a Part 15 Class II Permissive Change Application (FCC ID: CAC386001).

For your reference, TCB will normally take another 15 to 20 days for reviewing the report. Approval will then be granted when no query is sorted.

Please contact me if you have any questions regarding the enclosed material.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben Ho", with a stylized flourish at the end.

Ho Wai Kin, Ben
Supervisor

Enclosure



Cybiotronics Ltd.

Application
For
Permissive Change Class II

2.4GHz Frequency Hopping Spread Spectrum Cordless Phone with Caller
ID and Speakerphone

(FCC ID: CAC386001)

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BH/ ac
November 28, 2007

- The evaluation data of the report will be kept for 3 years from the date of issuance.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Intertek Testing Services Hong Kong Ltd.

2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

LIST OF EXHIBITS

INTRODUCTION

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INTERTEK TESTING SERVICES

MEASUREMENT/TECHNICAL REPORT

Cybiotronics Ltd.

MODEL: CY-386A(XXX), CY-381A(XXX), CYBIOLINK386A(XXX),
CYBIOLINK381A(XXX), SBC386A(XXX), SBC381A(XXX)

FCC ID: CAC386001

This report concerns (check one) Original Grant _____ Class II Change X

Equipment Type: DSS-Part 15 Spread Spectrum Transmitter

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No X

If yes, defer until : _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be
issued on that date.

Transition Rules Request per 15.37? Yes _____ No X

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR
[05-04-07 Edition] provision.

Report prepared by:

Ho Wai Kin, Ben
Intertek Testing Services
2/F., Garment Centre,
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Kowloon, Hong Kong.
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INTERTEK TESTING SERVICES

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INTERTEK TESTING SERVICES

List of attached file

Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Operational Description	Technical Description	descri.pdf
Cover Letter	Purpose of Application	product change.pdf
Test Report	Out Band Antenna Conducted Emission Plot	obantcon.pdf
Test Report	Duty Cycle Calculation and Measurement	dcc.pdf
Test Setup Photos	Radiated & Conducted Emission	config photos.pdf
Test Report	Conducted Emission Test Result	conduct.pdf
External Photos	External Photo	external photos.pdf
Internal Photos	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label/Location Info	Label Artwork and Location	label.pdf
Cover Letter	Label Location Justification	justification.pdf
Users Manual	User Manual	manual.pdf
Cover Letter	Letter of Agency	letter of agency.pdf

EXHIBIT 1
SUMMARY OF TEST RESULTS

INTERTEK TESTING SERVICES

1.0 Summary of Test

Cybiotronics Ltd.

**MODEL: CY-386A(XXX), CY-381A(XXX), CYBIOLINK386A(XXX),
CYBIOLINK381A(XXX), SBC386A(XXX), SBC381A(XXX)**

FCC ID: CAC386001

TEST	REFERENCE	RESULTS
Out of Band Antenna Conducted Emission	15.247(d)	Pass
Radiated Emission in Restricted Bands	15.247(d)	Pass
AC Conducted Emission	15.207	Pass
Radiated Emission from Transmitter Section of Transceiver	15.209	Pass
Antenna Requirement	15.203	Pass (See Notes)

Notes: The EUT uses a permanently attached antenna which, in accordance to Section 15.203, is considered sufficient to comply with the provisions of this section.

EXHIBIT 2
GENERAL DESCRIPTION

INTERTEK TESTING SERVICES

2.0 **General Description**

2.1 Product Description

The CY-386A-VT is a 2.4GHz Frequency Hopping Spread Spectrum Cordless Phone with Caller ID and Speakerphone. It operates at frequency range of 2401.808MHz to 2479.399MHz with 88 physical hopping frequencies and 75 logical hopping frequencies. The unit is capable of either tone or pulse dialing. The internal power supply's isolation is accomplished through a power transformer having an adequate dielectric rating. The circuit wiring is consistent under the requirement of part 68.

The antennas used in base unit and handset are integral, and the test sample is a prototype.

The Model: CY-386A-VT is one of the Model: CY-386A(XXX), and the Models: CY-381A(XXX), CYBIOLINK386A(XX), CYBIOLINK381A(XXX), SBC386A(XXX) and SBC381A(XXX) are the same as the Model: CY-386A(XXX) in hardware aspect except cosmetic difference. The suffix, (XXX), followed by the model number stands for color difference and number of handsets in a package. The models are identical in electrical, mechanical, and physical design. The difference in model number serves as marketing strategy.

The circuit description is saved with filename: descri.pdf

Connection between the device and the telephone network is accomplished through the use of USOC RJ11C in the 2-wire loop calling central office line.

INTERTEK TESTING SERVICES

2.2 Purpose of Application

The purpose of application is saved with filename: product change.pdf

The RF module and FHSS algorithm/mechanism of the Base Unit and Handset are the same as the previous granted Model: CY-386.

This is an application for Certification of a DSS-Part 15 Spread Spectrum Cordless Telephone System. Two transmitters are included in this application. The device is also subject to Part 68 Registration.

2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. Antenna port conducted measurements were performed according to FCC Public Notice DA 00-705. All other measurements were made in accordance with the procedures in 47 CFR Part 2.

2.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 3
SYSTEM TEST CONFIGURATION

3.0 **System Test Configuration**

3.1 Justification

For emissions testing, the equipment under test (EUT) was setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The handset was powered by a fully charged battery.

For the measurements, the EUT is attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attaches to peripherals, they are connected and operational (as typical as possible). The handset (if any) is remotely located as far from the antenna and the base as possible to ensure full power transmission from the base. Else, the base is wired to transmit full power without modulation.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Detector function is in peak mode. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

Measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF*. The effective period (τ_{eff}) was as shown in the timing plots in this report. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3 dB, the pulse desensitization factor was 0 dB.

As the base unit has 2 antennas, both have been checked. While conducting the test on one of antennas, another one was being disable its transmission. The data in this report represented the worst-case.

3.2 EUT Exercising Software

The EUT exercise program (if any) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Details of EUT and Description of Peripherals

Details of EUT:

An AC adaptor and a battery (provided with the unit) were used to power the device. Their description are listed below.

- (1) Base Unit: An AC adaptor (120VAC to 7.5VDC 500mA, Model: AD-0750) (Supplied by Client)
- (2) Extra Charger: An AC adaptor - permanently affixed (120VAC to 9VDC 200mA, Model: SA35-39A) (Supplied by Client)
- (3) Handset: A "Ni-MH" type rechargeable battery pack (3.6V 750mAh) (Supplied by Client)

Description of Peripherals:

- (1) A headset for telephone use with 1.2m unshielded cable permanently affixed. (Supplied by Intertek)
- (2) 2 x Telecommunication cable with RJ11C connectors (1m, unshielded), terminated (Supplied by Intertek)

INTERTEK TESTING SERVICES

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

3.5 Equipment Modification

Any modifications installed previous to testing by Cybiotronics Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Commercial & Electrical Division, Intertek Testing Services Hong Kong Ltd.

All the items listed under section 3.0 of this report are confirmed by:

Confirmed by:

*Ho Wai Kin, Ben
Supervisor
Intertek Testing Services Hong Kong Ltd.
Agent for Cybiotronics Ltd.*



Signature

November 28, 2007 Date

EXHIBIT 4
MEASUREMENT RESULTS

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.0 **Measurement Results**

4.1 Out of Band Conducted Emissions, FCC Rule 15.247(d):

In any 100 kHz bandwidth outside the EUT passband, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, or else shall meet the general limits for radiated emissions at frequencies outside the passband, whichever results in lower attenuation.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the following plots for out of band conducted emissions data:

Plot B6A1 -B6A2: Low Channel Emissions
Plot B6B1 -B6B2: Middle Channel Emissions
Plot B6C1 -B6C3: High Channel Emissions
Plot B6D1 -B6D2: Modulation Products Emissions*
Plot H6A1 - H6A2: Low Channel Emissions
Plot H6B1 - H6B2: Middle Channel Emissions
Plot H6C1 - H6C2: High Channel Emissions
Plot H6D1 - H6D2: Modulation Products Emissions*

The plots showed the 2nd harmonic and modulation products at the band edges of 2400MHz and 2483MHz. In addition, all spurious emission and up to the tenth harmonic was measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

Furthermore, delta measurement technique for measuring bandedge emissions was incorporated in the test of the edge at 2483.5MHz.

*These 2 plots are shown the worst-case which has been already considered between enable and disable the hopping function of the EUT.

For electronic filing, the above plots are saved with filenames: obantcon.pdf

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.2 Out of Band Radiated Emissions (for emissions in 4.3 above that are less than 20 dB below carrier), FCC Rule 15.247(d):

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3m separation distance to determine whether these emissions complied with the general radiated emission requirement.

- ☒ Not required, all emissions more than 20 dB below fundamental
- ☐ See attached data sheet

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.3 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b), (c):

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.4 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

where FS = Field Strength in dB μ V/m

RA = Receiver Amplitude (including preamplifier) in dB μ V

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

PD = Pulse Desensitization in dB

AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

Example

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$RA = 62.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$PD = 0 \text{ dB}$$

$$AV = -10 \text{ dB}$$

$$FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.5 Radiated Emission Configuration Photograph - Base Unit

Worst Case Radiated Emission
at

7438.197 MHz and 12009.040 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: config photos.pdf

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.6 Radiated Emission Data - Base Unit

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 6.6 dB compare with the peak limit

TEST PERSONNEL:



Tester Signature

Melvin Nip, Lead Engineer
Typed/Printed Name

November 28, 2007
Date

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode : TX-Channel 1

Date of Test: November 2-23, 2007

Table 1, Base Unit

Radiated Emissions

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	*4803.616	57.5	33	34.9	59.4	28.4	31.0	54.0	-23.0
H	*12009.040	59.9	33	40.5	67.4	28.4	39.0	54.0	-15.0
H	*19214.464	41.1	33	37.7	45.8	28.4	17.4	54.0	-36.6

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	*4803.616	57.5	33	34.9	59.4	74.0	-14.6
H	*12009.040	59.9	33	40.5	67.4	74.0	-6.6
H	*19214.464	41.1	33	37.7	45.8	74.0	-28.2

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode : TX-Channel 44

Date of Test: November 2-23, 2007

Table 2, Base Unit

Radiated Emissions

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	*4880.314	56.5	33	34.9	58.4	28.4	30.0	54.0	-24.0
H	*7320.471	62.3	33	37.9	67.2	28.4	38.8	54.0	-15.2
H	*12200.785	59.7	33	40.5	67.2	28.4	38.8	54.0	-15.2
H	*19521.256	40.4	33	37.8	45.2	28.4	16.8	54.0	-37.2

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	*4880.314	56.5	33	34.9	58.4	74.0	-15.6
H	*7320.471	62.3	33	37.9	67.2	74.0	-6.8
H	*12200.785	59.7	33	40.5	67.2	74.0	-6.8
H	*19521.256	40.4	33	37.8	45.2	74.0	-28.8

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
 Model: CY-386A-VT
 Mode : TX-Channel 88

Date of Test: November 2-23, 2007

Table 3, Base Unit

Radiated Emissions

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	**2479.399	116.1	33	29.4	112.5	28.4	84.1	--	--
H	*4958.798	57.4	33	34.9	59.3	28.4	30.9	54.0	-23.1
H	*7438.197	62.5	33	37.9	67.4	28.4	39.0	54.0	-15.0
H	*12396.995	59.8	33	40.5	67.3	28.4	38.9	54.0	-15.1
H	*19835.192	40.3	33	37.8	45.1	28.4	16.7	54.0	-37.3

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	**2479.399	116.1	33	29.4	112.5	--	--
H	*4958.798	57.4	33	34.9	59.3	74.0	-14.7
H	*7438.197	62.5	33	37.9	67.4	74.0	-6.6
H	*12396.995	59.8	33	40.5	67.3	74.0	-6.7
H	*19835.192	40.3	33	37.8	45.1	74.0	-28.9

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.7 Radiated Emission Configuration Photograph - Handset

Worst Case Radiated Emission
at

7320.471 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: config photos.pdf

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.8 Radiated Emission Data - Handset

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Passed by 5.6 dB compare with the peak limit

TEST PERSONNEL:



Tester Signature

Melvin Nip, Lead Engineer
Typed/Printed Name

November 28, 2007
Date

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode : TX-Channel 1

Date of Test: November 2-23, 2007

Table 4, Handset

Radiated Emissions

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	*4803.616	58.5	33	34.9	60.4	34.7	25.7	54.0	-28.3
H	*12009.040	50.7	33	40.5	58.2	34.7	23.5	54.0	-30.5
H	*19214.464	40.3	33	37.7	45.0	34.7	10.3	54.0	-43.7

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	*4803.616	58.5	33	34.9	60.4	74.0	-13.6
H	*12009.040	50.7	33	40.5	58.2	74.0	-15.8
H	*19214.464	40.3	33	37.7	45.0	74.0	-29.0

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode : TX-Channel 44

Date of Test: November 2-23, 2007

Table 5, Handset

Radiated Emissions

Polarization	Frequency	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB μ V/m)	Average Factor (dB)	Calculated at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
H	*4880.314	58.3	33	34.9	60.2	34.7	25.5	54.0	-28.5
H	*7320.471	63.5	33	37.9	68.4	34.7	33.7	54.0	-20.3
H	*12200.785	50.9	33	40.5	58.4	34.7	23.7	54.0	-30.3
H	*19521.256	38.8	33	37.8	43.6	34.7	8.9	54.0	-45.1

Polarization	Frequency	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
H	*4880.314	58.3	33	34.9	60.2	74.0	-13.8
H	*7320.471	63.5	33	37.9	68.4	74.0	-5.6
H	*12200.785	50.9	33	40.5	58.4	74.0	-15.6
H	*19521.256	38.8	33	37.8	43.6	74.0	-30.4

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode : TX-Channel 88

Date of Test: November 2-23, 2007

Table 6, Handset

Radiated Emissions

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Average Factor (dB)	Calculated at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
V	**2479.399	117.1	33	29.4	113.5	34.7	78.8	--	--
H	*4958.798	58.4	33	34.9	60.3	34.7	25.6	54.0	-28.4
H	*7438.197	63.3	33	37.9	68.2	34.7	33.5	54.0	-20.5
H	*12396.995	50.4	33	40.5	57.9	34.7	23.2	54.0	-30.8
H	*19835.192	38.7	33	37.8	43.5	34.7	8.8	54.0	-45.2

Polarization	Frequency	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
V	**2479.399	117.1	33	29.4	113.5	--	--
H	*4958.798	58.4	33	34.9	60.3	74.0	-13.7
H	*7438.197	63.3	33	37.9	68.2	74.0	-5.8
H	*12396.995	50.4	33	40.5	57.9	74.0	-16.1
H	*19835.192	38.7	33	37.8	43.5	74.0	-30.5

- NOTES: 1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of part 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.9 AC Line Conducted Emission, FCC Rule 15.207:

☐ Not required; battery operation only

☒ Test data attached

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.10 AC Line Conducted Configuration Photograph - Base Unit

Worst Case Line-Conducted Configuration

For electronic filing, the worst case line conducted configuration photographs are saved with filename: config photos.pdf

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.11 AC Line Conducted Emission Data - Base Unit

The data on the following pages list the significant emission frequencies, the limit, and the margin of compliance.

Judgement -

Passed by more than 20 dB margin

For electronic filing, the worst case line conducted emission data are saved with filename: conduct.pdf

TEST PERSONNEL:



Tester Signature

Melvin Nip, Lead Engineer
Typed/Printed Name

November 28, 2007
Date

INTERTEK TESTING SERVICES

Company: Cybiotronics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.12 Radiated Emissions from Transmitter Section of Transceiver (Transmitter), FCC
Ref: 15.209

☐ Not required - No digital part

☒ Test results are attached

☐ Included in the separated DOC report.

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode: Talking

Date of Test: November 2-23, 2007

Table 7, Base Unit

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
V	36.854	38.6	16	10.0	32.6	40.0	-7.4
V	73.728	40.8	16	6.0	30.8	40.0	-9.2
H	110.592	32.2	16	14.0	30.2	43.5	-13.3
H	147.456	31.6	16	14.0	29.6	43.5	-13.9
H	184.320	25.2	16	20.0	29.2	43.5	-14.3
H	221.184	27.6	16	17.0	28.6	46.0	-17.4

- NOTES:
1. Quasi-peak detector is used for the emission below or equal to 1000 MHz.
 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 3. Negative value in the margin column shows emission below limit.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT
Mode: Talking

Date of Test: November 2-23, 2007

Table 8, Handset

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
V	36.864	39.9	16	10.0	33.9	40.0	-6.1
V	73.728	42.6	16	6.0	32.6	40.0	-7.4
H	110.892	35.4	16	14.0	33.4	43.5	-10.1
H	147.456	34.4	16	14.0	32.4	43.5	-11.1
H	184.320	27.6	16	20.0	31.6	43.5	-11.9
H	221.184	30.2	16	17.0	31.2	46.0	-14.8
H	294.912	23.6	16	22.0	29.6	46.0	-16.4
H	331.776	21.2	16	24.0	29.2	46.0	-16.8

- NOTES: 1. Quasi-peak detector is used for the emission below or equal to 1000 MHz.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.

Test Engineer: Melvin Nip

INTERTEK TESTING SERVICES

Company: Cybionics Ltd.
Model: CY-386A-VT

Date of Test: November 2-23, 2007

4.13 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEEP function on the analyzer was set to ZERO SPAN. The transmitter ON time was determined from the resultant time-amplitude display:

Base Unit:

Duty cycle (DC) = Maximum ON time in 100ms/100ms
= (0.940 x 4)ms/100ms for 4 handsets operation

Duty cycle correction, dB = $20 \times \log(\text{DC})$
= $20 \times \log(0.0376)$
= -28.4dB

Handset:

Duty cycle (DC) = Maximum ON time in 100ms/100ms
= (0.920 x 2)ms/100ms for double-slots operation

Duty cycle correction, dB = $20 \times \log(\text{DC})$
= $20 \times \log(0.0184)$
= -34.7 dB

X	See attached spectrum analyzer chart (s) for transmitter timing Base Unit: Plot B7, Handset: Plot H7
	See transmitter timing diagram provided by manufacturer
	Not applicable, duty cycle was not used.

For electronic filing, the above plots are saved with filenames: dcc.pdf

EXHIBIT 5
EQUIPMENT PHOTOGRAPHS

5.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename: external photos.pdf, and internal photos.pdf.

EXHIBIT 6
PRODUCT LABELLING

6.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and location is saved with filename:
label.pdf

For electronic filing, the label location justification letter is save as filename:
justification.pdf

EXHIBIT 7
TECHNICAL SPECIFICATIONS

7.0 **Technical Specifications**

For electronic filing, the block diagram and circuit diagram are saved with filename: block.pdf and circuit.pdf

EXHIBIT 8
INSTRUCTION MANUAL

8.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf

Please note that the required FCC Information to the User is on P.57-58 of Instruction Manual.

This manual will be provided to the end-user with each unit sold/leased in the United States.

EXHIBIT 9
LETTER OF AGENCY

9.0 **Letter of Agency**

A copy of the Letter of Agency is saved as filename: letter of agency.pdf