

# **Motion C&G SP X**

## **Technical Data**

Made for **≰** iPhone | iPad | iPod 7X 5X 3X 2X 1X DX



#### **Earhook**

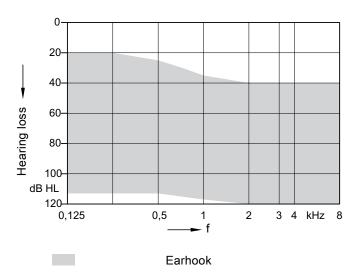
- 82 dB / 140 dB SPL (2 ccm coupler)
- 86 dB / 144 dB SPL (ear simulator)

# Motion C&G SP X | Technical Data

Туре	Earh	Earhook		
	2 ccm coupler	Ear simulator		
Output sound pressure level				
OSPL 90 at 1.6 kHz	– 135 dB SPL			
OSPL 90 (Peak)	140 dB SPL	144 dB SPL		
HFA-OSPL 90	133 dB SPL	_		
Gain				
FOG at 1.6 kHz	-	77 dB		
FOG (peak)	82 dB	86 dB		
HFA-FOG	74 dB	-		
Reference test gain	56 dB	60 dB		
Frequency, noise and directivity				
Frequency range 7X 5X / 3X / 2X / 1X	100 - 5400 Hz 100 - 5400 Hz	100 - 5400 Hz 100 - 5400 Hz		
Equivalent input noise	18 dB SPL	18 dB SPL		
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	5/1/1/1%	5/2/2/-%		
Tinnitus Function broadband	94 dB SPL	_		
AI-DI	3.8 dB			
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz		108 dB SPL		
HFA MASL (1 mA/m)	104 dB SPL	-		
HFA SPLITS (left/right)	116 / 116 dB SPL	-		
RSETS (left/right)	0 / 0 dB	_		
HFA SPLIV	116 dB SPL	-		
Battery				
Battery runtime (without streaming)	up to 61 h			
Battery runtime (incl. 5 h streaming)	up to 57 h			
IRIL IEC 60118-13:2016 Ed. 4.0				
700-960 MHz (rating)	us	user		
1400-2000 MHz (rating)	us	user		
2000-2700 MHz (rating)	user			
ANSI C63.19-2011				
800-950 MHz (rating)	M4/T4			
1600-2500 MHz (rating)	M4/T4			

Please find additional information to the values on page "Further Information".

# Motion C&G SP X | Fitting Range



## Earhook | Basic Data

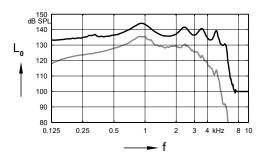
## 2 ccm coupler

#### 150 dB SPL 130 120 110 100 90 80 0.125 2 3 4 kHz

Max. Output sound pressure  $(L_1 = 90 dB)$ 

Full on gain  $(L_1 = 50 \text{ dB})$ 

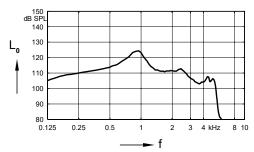
### Ear simulator



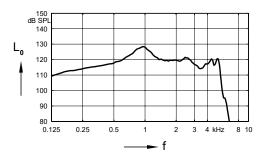
Max. Output sound pressure

 $(L_1 = 90 \text{ dB})$ 

Full on gain  $(L_1 = 50 \text{ dB})$ 

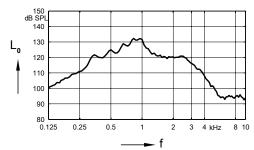


Frequency response  $(L_1 = 60 \text{ dB})$ 

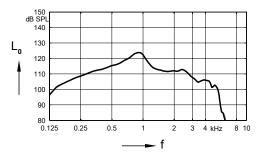


**Basic acoustic** response  $(L_i = 60 dB)$ 

## Inductive response

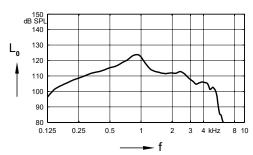


Inductive response (H = 10 mA/m)



SPLITS curve left (H = 31.6 mA/m)

**SPLITS** curve right (H = 31.6 mA/m)



**SPLIV** curve (H = 31.6 mA/m)

# Motion C&G SP X | Features and Accessories

	7X	5X	3X	2X	1X
Dynamic Soundscape Processing					
OVP (Own Voice Processing) 1)				_	_
Sound Clarity					
Signal processing (channels) / Gain&MPO (handles)	34 / 16	32 / 16	24 / 12	16 / 8	16 / 8
Hearing programs	6	6	6	4	4
Extended dynamic range	✓	✓	✓	✓	✓
Extended bandwidth	_	_	_	_	_
EchoShield	<b>√</b>	_	_	_	_
HD Music (presets)	3	3	1	1	_
eWindScreen <sup>2)</sup>	Binaural	Binaural	Monaural	Monaural	_
Speech and noise management	<b>√</b>	<b>√</b>	✓	✓	✓
SoundSmoothing	✓	✓	✓	✓	_
Feedback cancellation	✓	<b>√</b>	<b>√</b>	✓	✓
Speech Quality					
Directionality (Automatic / Adaptive)	Binaural	Binaural	Binaural	✓	✓
Spatial SpeechFocus 1) 3)	✓	✓	_	_	_
TwinPhone <sup>1)</sup>	✓	✓	✓	_	_
Frequency compression	✓	<b>√</b>	<b>√</b>	✓	✓
Wearer Interaction					
Signia App (iOS and Android)	✓	✓	✓	✓	✓
Spatial Configurator	✓	✓	_	_	_
Adaptive Streaming Volume 4)	✓	✓	✓	✓	✓
Direct Streaming	✓	<b>√</b>	<b>√</b>	✓	✓
Made for iPhone	✓	✓	✓	✓	✓
Tinnitus	✓	✓	✓	✓	_
Notched Amplification Therapy		_	_	_	_
Tinnitus noise therapy signal	✓	✓	✓	✓	_
Fitting	✓	✓	✓	<b>√</b>	✓
Smart Optimizer and Data Logging	✓	✓	✓	✓	✓
Acclimatization manager	✓	✓	✓	✓	✓
InSituGram	✓	✓	✓	✓	✓
AutoFit	✓	✓	✓	✓	✓
TeleCare	✓	✓	✓	✓	✓
Remote Services	✓	✓	✓	✓	✓
Signia App	✓	✓	✓	✓	✓
1) reg hilateral fitting	highest feature performance				

<sup>1)</sup> req. bilateral fitting

highest feature performance

√ available — not available O optional

<sup>&</sup>lt;sup>2)</sup> Binaural used in dedicated programs for 5X

 $<sup>^{3)}</sup>$  for 5X, right / left directionality available only in Stroll Program and via the Spatial Configurator

<sup>4)</sup> streaming only

# Motion C&G SP X | Features and Accessories

Style specific features IP68 IP68   Ingress Protection Rating IP68 IP68   Charging contacts ✓ ✓   Battery door on/off function — —   Nanocoated housing ✓ ✓   e2e wireless 3.0 ✓ ✓   User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations — —   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   Small earhook O O   ConnexxAir / ConnexxLink — —   Programming accessories O O   ConexxAir / ConnexxLink — — —		7X / 5X / 3X	2X / 1X
Charging contacts ✓ ✓   Battery Size — —   Battery door on/off function — —   Nanocoated housing ✓ ✓   e2e wireless 3.0 ✓ ✓   User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door — child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink —//— —//—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —	Style specific features		
Battery Size — —   Battery door on/off function — —   Nanoccated housing ✓ ✓   e2e wireless 3.0 ✓ ✓   User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Sattery door – child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink —//— —//—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory <td>Ingress Protection Rating</td> <td>IP68</td> <td>IP68</td>	Ingress Protection Rating	IP68	IP68
Battery door on/off function — —   Nanocoated housing ✓ ✓   e2e wireless 3.0 ✓ ✓   User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink — —   Mondatory O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O	Charging contacts	✓	✓
Nanocoated housing √ ✓   e2e wireless 3.0 √ ✓   User controls coupling via e2e √ ✓   Wireless programming √ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   ConnexxAir / ConnexxLink — —   Noahlink Wireless O O   ConnexxAir / ConnexxLink — — —   Noahlink Wireless O O   B&C Charger BTE SP / Char	Battery Size	_	_
e2e wireless 3.0 ✓ ✓   User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door − child lock — —   Battery door − child lock — —   Small earhook O O   Programming accessories O O   ConnexxAir / ConnexxLink —/ — —/ —   Noahlink Wireless O O   Programming adapter / cable — —   Accessories O O   B&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine Mic O <td>Battery door on/off function</td> <td>_</td> <td></td>	Battery door on/off function	_	
User controls coupling via e2e ✓ ✓   Wireless programming ✓ ✓   Instrument configurations   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink — —   Programming adapter / cable — —   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure Charge&Go X O	Nanocoated housing	✓	✓
Wireless programming ✓ ✓   Instrument configurations ✓ ✓   Flat cover — —   Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink —/— —/—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure Charge&Go X O —	e2e wireless 3.0	✓	✓
Instrument configurations	User controls coupling via e2e	✓	✓
Flat cover	Wireless programming	✓	✓
Rotary volume control — —   Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door – child lock — —   Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink — — —/—   Noahlink Wireless O O O   Programming adapter / cable — — —   Accessories — — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O O   StreamLine TV O O O   StreamLine Mic O — —   CROS Pure Charge&Go X O — —	Instrument configurations		
Push button — —   Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door − child lock — —   Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink — — —/—   Noahlink Wireless O O O   Programming adapter / cable — — —   Accessories — — —   B&C Charger BTE SP / Charger BTE SP Mandatory Mandatory Mandatory   miniPocket O O O   StreamLine TV O O O   StreamLine Mic O O —   CROS Pure Charge&Go X O — —	Flat cover	_	_
Rocker switch ✓ ✓   Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door − child lock — —   Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink —/ — —/ —   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Rotary volume control	_	<del>-</del>
Color conversion kit O O   Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door − child lock — —   Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink — —/—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Push button	_	<del>-</del>
Color conversion kit with T-Coil — —   T-Coil ✓ ✓   Battery door − child lock — —   Small earhook O O   Programming accessories — —   ConnexxAir / ConnexxLink — —/—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Rocker switch	✓	✓
T-Coil ✓ ✓   Battery door − child lock — —   Small earhook O O   Programming accessories ConnexxAir / ConnexxLink — — —   ConnexxAir / ConnexxLink — — — —   Noahlink Wireless O <td>Color conversion kit</td> <td>0</td> <td>0</td>	Color conversion kit	0	0
Battery door − child lock — —   Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink — / — — / —   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Color conversion kit with T-Coil	_	<del>-</del>
Small earhook O O   Programming accessories   ConnexxAir / ConnexxLink ─ / ─ ─ / ─   Noahlink Wireless O O   Programming adapter / cable ─ ─   Accessories ─ ─   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O ─   CROS Pure Charge&Go X O ─	T-Coil	✓	✓
Programming accessories   ConnexxAir / ConnexxLink ─ / ─ ─ / ─   Noahlink Wireless O O   Programming adapter / cable ─ ─   Accessories ─ ─   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O ─   CROS Pure Charge&Go X O ─	Battery door - child lock	_	_
ConnexxAir / ConnexxLink — /— — /—   Noahlink Wireless O O   Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Small earhook	0	0
Noahlink Wireless O O   Programming adapter / cable — —   Accessories StreamEine TV Mandatory Mandatory   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Programming accessories		
Programming adapter / cable — —   Accessories — —   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	ConnexxAir / ConnexxLink	<u> </u>	<u> </u>
Accessories   D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Noahlink Wireless	0	0
D&C Charger BTE SP / Charger BTE SP Mandatory Mandatory   miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Programming adapter / cable	_	_
miniPocket O O   StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	Accessories		
StreamLine TV O O   StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	D&C Charger BTE SP / Charger BTE SP	Mandatory	Mandatory
StreamLine Mic O O   CROS Pure 312 X O —   CROS Pure Charge&Go X O —	miniPocket	0	0
CROS Pure 312 X O —   CROS Pure Charge&Go X O —	StreamLine TV	0	0
CROS Pure Charge&Go X O —	StreamLine Mic	0	0
	CROS Pure 312 X	0	_
CROS Silk X — — —	CROS Pure Charge&Go X	0	_
	CROS Silk X		<del>_</del>

<sup>✓</sup> available — not available O optional

## Motion C&G SP X | Further information

#### **Abbreviations**

The following abbreviations are used in this datasheet:

OSPL Output Sound Pressure Level **HFA** High Frequency Average

FOG Full-On Gain

MASL Magneto Acoustical Sensitivity Level

**SPLITS** Coupler SPL for an Inductive Telephone Simulator

**RSETS** Relative Equivalent Telephone Sensitivity

SPLIV SPL In a Vertical magnetic field AI-DI Articulation Index - Directivity Index **IRIL** Input Related Interference Level RTF Reference Test Frequency

#### **Standards**

- ▶ All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- ▶ All measurements with an ear simulator were performed according to IEC 118-0/A1:1994 and to DIN 45605 (frequency range) if applicable.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- ▶ The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing instruments supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing)
- ▶ The battery runtime is based on first fit settings using 80 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage (Bluetooth streaming) two different conditions are considered.
- The following acoustic connections / ear pieces were used:
  - Earhook

#### Special note for instruments with built-in lithium-ion rechargeable battery

▶ The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

**≰**iPhone | iPad | iPod

"Made for iPod", "Made for iPhone", and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

Legal Manufacturer

WSAUD A/S Nymøllevej 6 3540 Lynge Denmark

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Subject to change without prior notice



## **⚠** WARNING

Choking hazard posed by small parts.

▶ This instrument is not intended for the fitting of infants, children under 3 years or persons of mental incapacity.



## **MARNING**

Instrument has an output sound pressure level of 132 dB SPL or more. Risk of impairing the residual hearing of the user.

▶ Take special care when fitting this instrument.