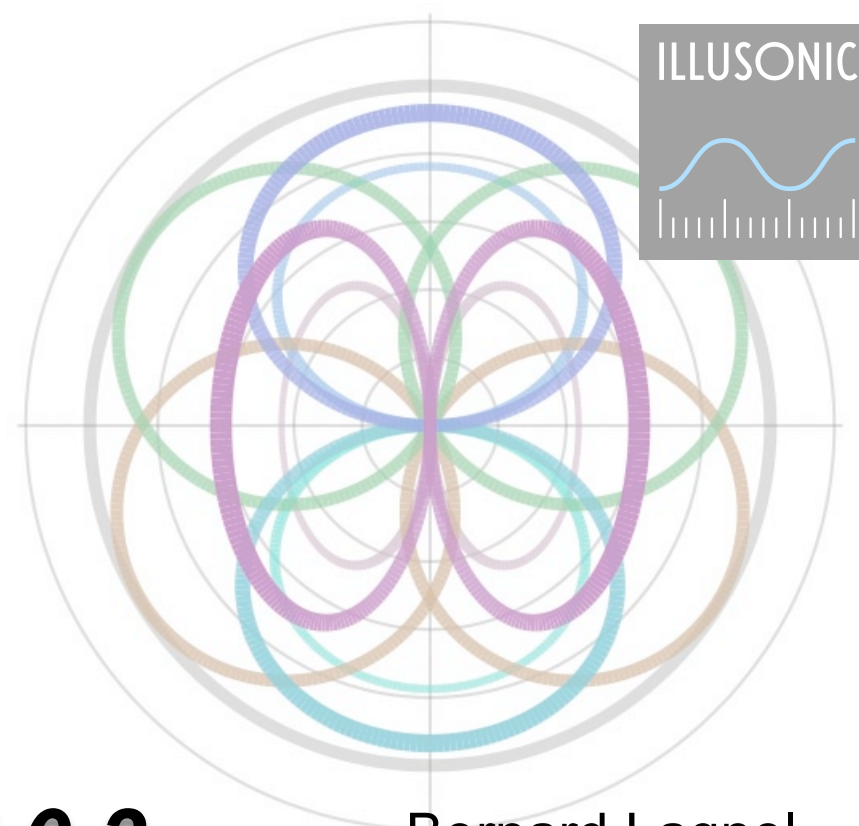
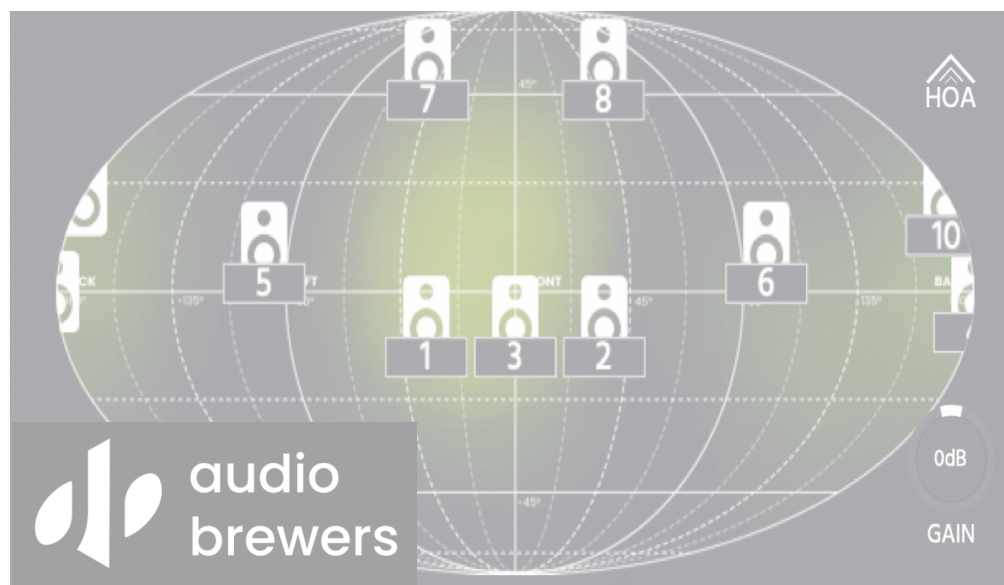


# ***HOA*** **Audio Brewers** contre **ILLUSONIC** ***Paramétrique***



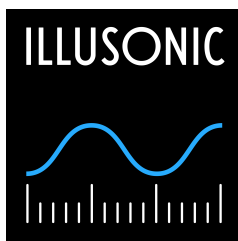
**Configuration 5.0.3**

Bernard Lagnel  
Septembre 2025

# Ma configuration de Haut-Parleurs en (5.0.3)







# AES Dublin 2019 Paper Session P14

## A/B- Format Decoder d'ILLUSONIC

**P14-2 Décodage au format B basé sur la formation de faisceaux adaptatifs** - *Alexis Favrot*, Illusonic GmbH - Uster, Suisse; *Christof Faller*, Illusonic GmbH - Uster, Zurich, Suisse; EPFL - Lausanne, Suisse

Les signaux au format B peuvent être décodés en signaux avec une directivité de premier ordre. Pour le décodage stéréo et multicanal, il serait souhaitable d'avoir plus de séparation des canaux que ce qui est réalisable au premier ordre. DirAC (codage audio directionnel) et HARPEX (expansion des ondes planes à haute résolution) permettent une séparation des canaux plus élevée en utilisant un modèle paramétrique au format B pour estimer les ondes planes et le son diffus, et les rendre de manière adaptative. Une limitation est que les modèles à ondes planes et diffuses sont trop simples pour représenter des signaux complexes au format B. Nous proposons un décodeur au format B, où chaque canal est généré par un formateur de faisceau adaptatif indépendant au format B. Chaque faisceau est généré indépendamment des autres faisceaux, contournant la limitation lors de l'utilisation d'un modèle de signal au format B unique.

[https://www.lesonbinaural.fr/EDIT/DOCS/favrot\\_faller.PDF](https://www.lesonbinaural.fr/EDIT/DOCS/favrot_faller.PDF)



### Audio Engineering Society Convention Paper

Presented at the 146<sup>th</sup> Convention  
2019 March 20 – 23, Dublin, Ireland

This convention paper was selected based on a submitted abstract and 750-word precis that have been peer reviewed by at least two qualified anonymous reviewers. The complete manuscript was not peer reviewed. This convention paper has been reproduced from the author's advance manuscript without editing, corrections, or consideration by the Review Board. The AES takes no responsibility for the contents. This paper is available in the AES E-Library (<http://www.aes.org/e-lib>), all rights reserved. Reproduction of this paper, or any portion thereof, is not permitted without direct permission from the Journal of the Audio Engineering Society.

#### B-Format Decoding Based on Adaptive Beamforming

Alexis Favrot<sup>1</sup> and Christof Faller<sup>1</sup>

<sup>1</sup>Illusonic GmbH, Bahnstrasse 23, 8610 Uster, Switzerland

Correspondence should be addressed to Alexis Favrot ([alexis.favrot@illusonic.com](mailto:alexis.favrot@illusonic.com))

#### ABSTRACT

B-Format signals can be decoded into signals with first order directivity. For stereo and multi-channel decoding, it would be desirable to have more channel separation than what is achievable by first order. DirAC (directional audio coding) and HARPEX (high resolution plane wave expansion) achieve higher channel separation by means of using a parametric B-Format model to estimate plane waves and diffuse sound, and adaptively rendering those. A limitation is that plane wave and diffuse models are too simple to represent complex B-Format signals. We propose a B-Format decoder, where each channel is generated by an adaptive B-Format beamformer. Each beam is generated independently of the other beams, circumventing the limitation when using a single B-Format signal model.



### Audio Engineering Society Convention Paper

Presented at the 144<sup>th</sup> Convention  
2018 May 23 – 26, Milan, Italy

This convention paper was selected based on a submitted abstract and 750-word precis that have been peer reviewed by at least two qualified anonymous reviewers. The complete manuscript was not peer reviewed. This convention paper has been reproduced from the author's advance manuscript without editing, corrections, or consideration by the Review Board. The AES takes no responsibility for the contents. This paper is available in the AES E-Library (<http://www.aes.org/e-lib>), all rights reserved. Reproduction of this paper, or any portion thereof, is not permitted without direct permission from the Journal of the Audio Engineering Society.

#### Adaptive Non-Coincidence Correction for A to B-Format Conversion

Alexis Favrot<sup>1</sup> and Christof Faller<sup>1</sup>

<sup>1</sup>Illusonic GmbH, Bahnstrasse 23, 8610 Uster, Switzerland

Correspondence should be addressed to Alexis Favrot ([alexis.favrot@illusonic.com](mailto:alexis.favrot@illusonic.com))

#### ABSTRACT

B-Format is usually obtained from A-format signals, i.e. from four directive microphone capsules pointing in different directions. Ideally, these capsules should be coincident, but due to design constraints, small distances always remain between them. The resulting phase mismatches between the microphone capsule signals lead to inaccuracies and interferences, impairing B-format directional responses, especially at high frequencies. An adaptive non-coincidence correction is proposed based on adaptive phase matching of the four microphone A-format signals before conversion to B-format, improving the directional responses at high frequencies, enabling higher focus, better spatial image and timbre in B-format decoded signals.

GRATUIT

## A/B- Format Decoder d'ILLUSONIC

Voir aussi : [https://www.lesonbinaural.fr/EDIT/PDF/plugin\\_illusonic\\_AB\\_decoder.PDF](https://www.lesonbinaural.fr/EDIT/PDF/plugin_illusonic_AB_decoder.PDF)

**A/B-Format Decoder**

**Decoding**

Rotation: 0° Elevation: 0°

**FOCUS**

Center: 100 % Front: 50 % Wide: 50 % Surround: 30 %

Rear: 49 % Front Height: 70 % Surround Height: 100 % Rear Height: 50 %

**ANGLE**

Azimuth: ± 50° Front: ± 60° Wide: ± 100° Surround: ± 150°

Rear: ± 90° Front Height: ± 55° Surround Height: ± 180° Rear Height: ± 150°

Diffuse gain: -4 dB De-correlation: Room size: 50

**W Signal Bass**

Cross-over: Gain: 0 dB Frequency: 50 Hz

Order: Butterworth 3rd

Invert bass

**Outputs**

**GAIN**

Center: 0 dB Front: 0 dB Wide: 0 dB Surround: 0 dB

Rear: -1.2 dB Front Height: 0 dB Surround Height: 0 dB Rear Height: 0 dB

Delay / Shelving: Surround Delay: off Frequency: 2 kHz Gain: -20 dB

**Formats**

Input format: A-Format

Microphone distance: 24 mm (NT-SF1) Microphone position: normal

Output format: 5.1 + 4H (ITU/SMPTE)

Binaural output

**Channel ordering**

Input: LF RF LB RB Output channel test

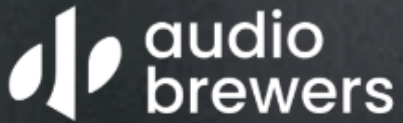
Output: L R C LFE Ls Rs Lts Rts Ltr Rtr

**ILLUSONIC**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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# ab Advanced Decoder

**HOA 7<sup>e</sup> ORDRE**

119,00 € ~~139,00 €~~

**Également disponible en bundle avec notre « ab Decoder Suite » et « ab Decoder HOA ».**

Décodeur ambisonique avancé d'ordre supérieur.

Algorithme de formation de faisceaux haute performance.

L'Upscaler interne traite tous les signaux dans 7OA.

« Mode haut-parleur » pour des dispositions personnalisées jusqu'à 64 haut-parleurs.

« Mode Spot » avec jusqu'à 64 faisceaux (avec taille personnalisée).

« Mode Auto » pour la mise au point acoustique automatique.

« Porte » personnalisable pour une isolation supplémentaire.

Filtres passe-haut et passe-bas par canal.

Prise en charge jusqu'à 62 canaux LFE.

Mode « Moniteur » pour un traitement sans latence.

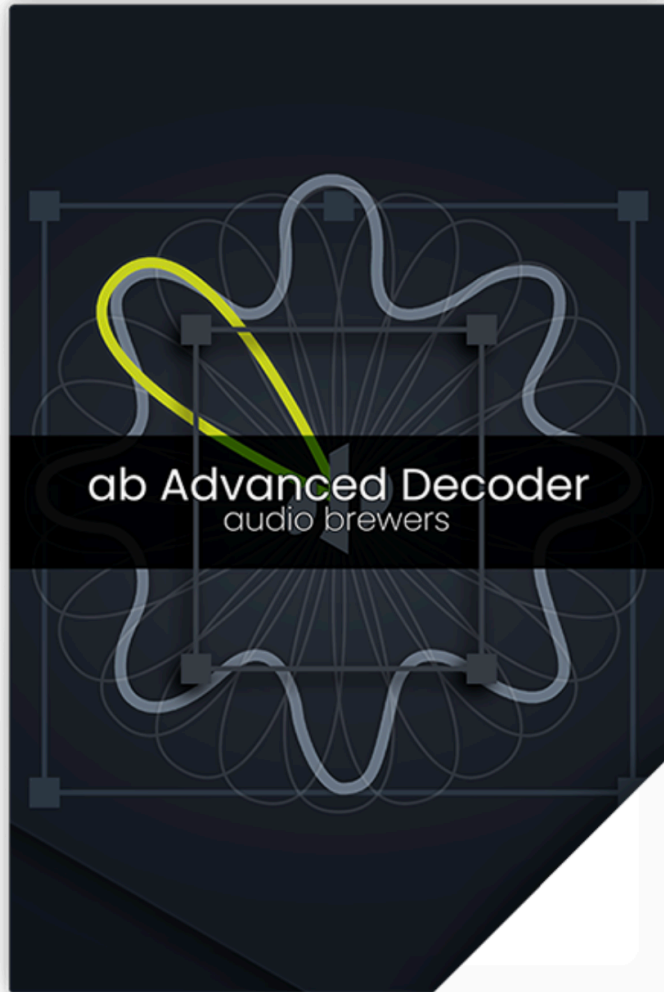
S'adapte automatiquement aux signaux ambisoniques du 1er au 7e ordre (1OA à 7OA)\*

Conçu avec une mentalité plug-and-play : ça marche tout simplement !

**Compatible avec tous les principaux DAW\***

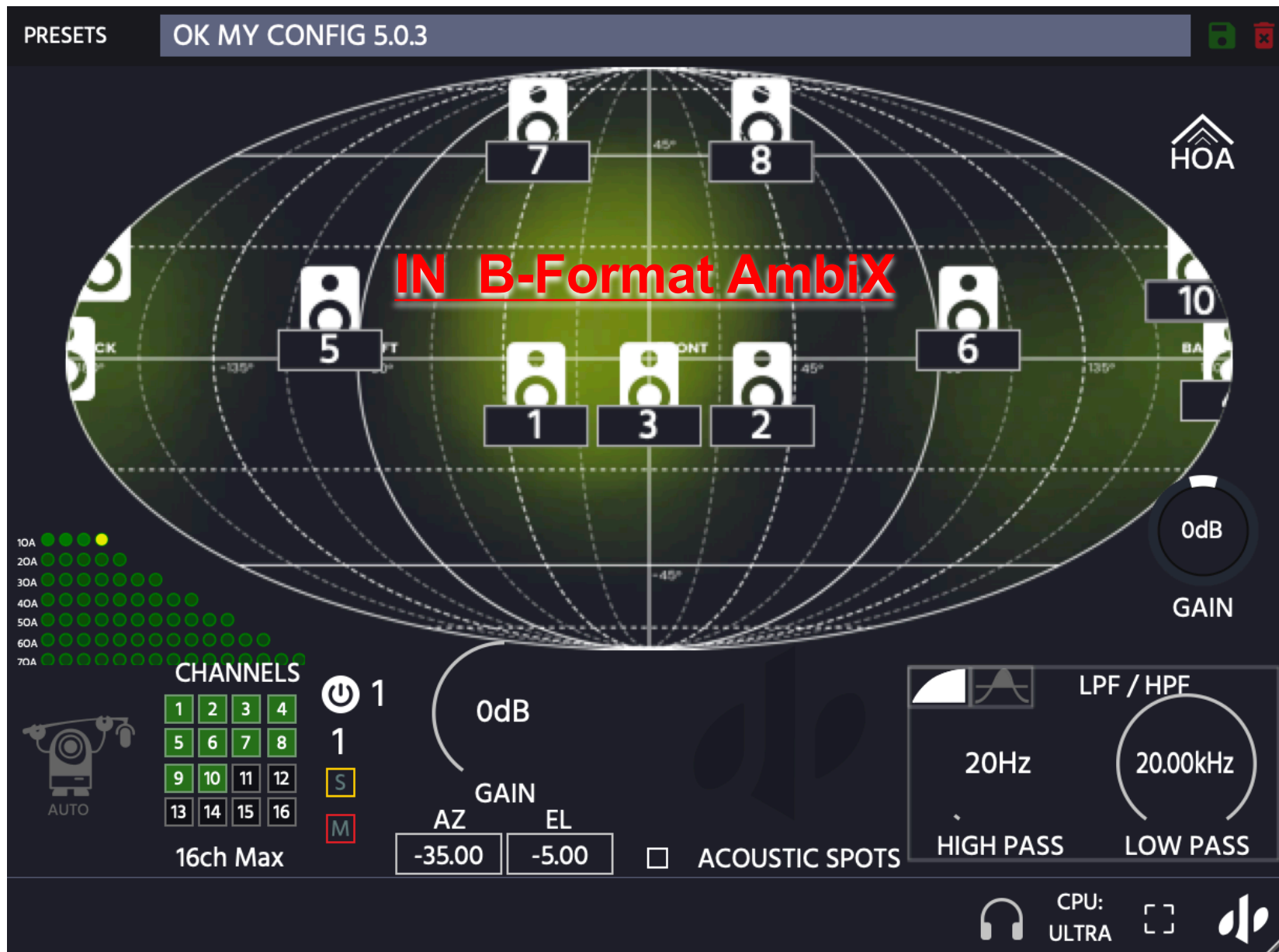
**Disponible en AAX | AU | VST3**

**Compatible avec macOS (Silicon et Intel) | Windows 10+**



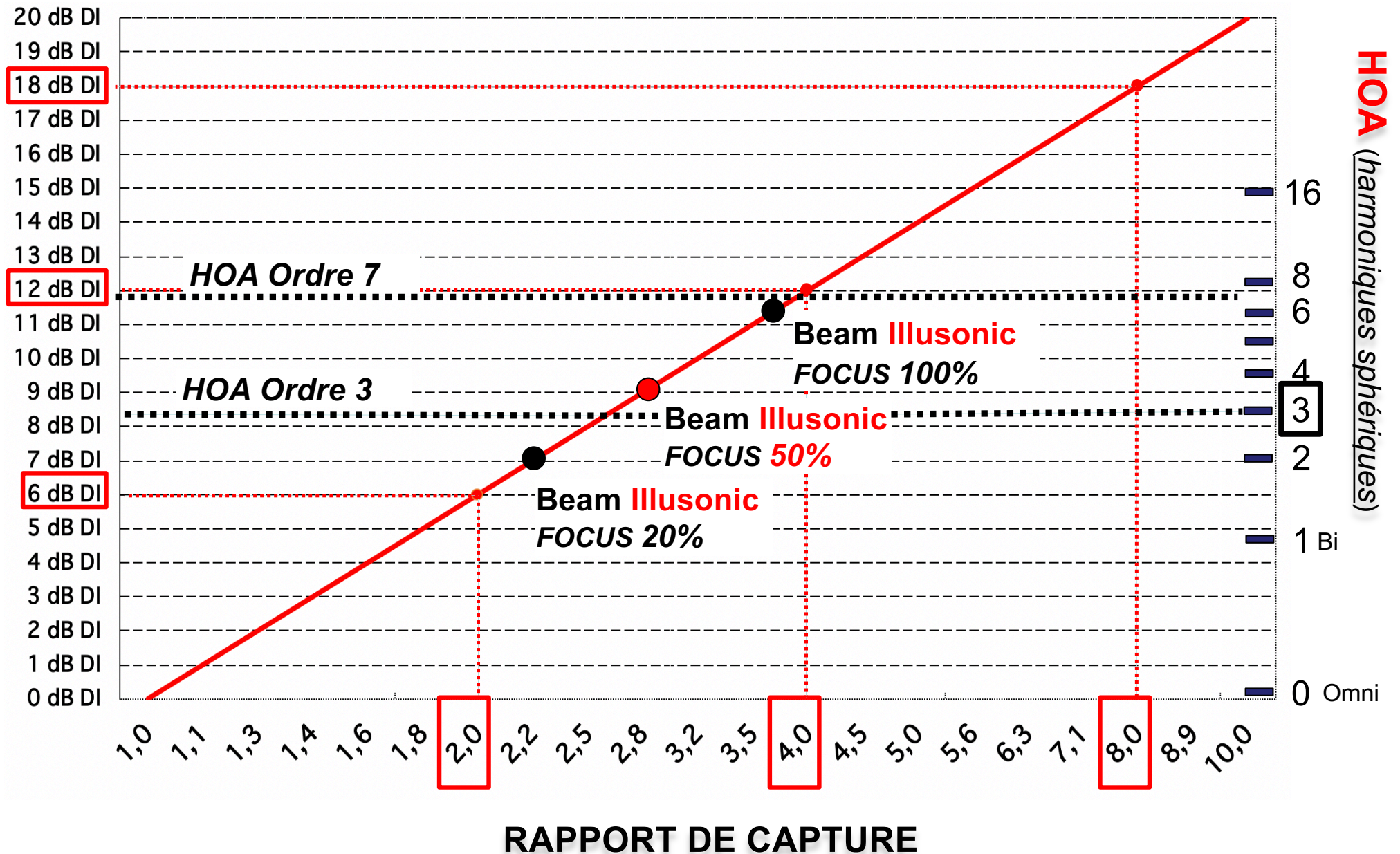
<https://www.audiobrewers.com/plugins/>

<https://www.audiobrewers.com/plugins/>





# **RAPPORT DE CAPTURE** en fonction de l'Indice de Directivité **DI**





# HOA Audio Brewers contre ILLUSONIC Paramétrique

02:12:12:00 / 2:12:12.000 [Vitesse: 1.0 4/4 BPM 120]

Start 2:10:08:00 End 2:13:54:00 Length 0:03:46:00

ILLUSONIC 0.00 Centre FX 1

BREWERS 0.00 Centre FX 2

hardware 0.00 Centre FX 3

0.00 Centre FX 4

ILLUSONIC [Entrée] Mic/Line/Inst In 1 / Mic/Line/Inst In 2

Mixeur

Main Out 1 / Main Out 2

ILabdecoder 3:hardware 3:hardware 3:hardware 3:hardware 3:hardware

ab Advanced 3:hardware 3:hardware 3:hardware 3:hardware

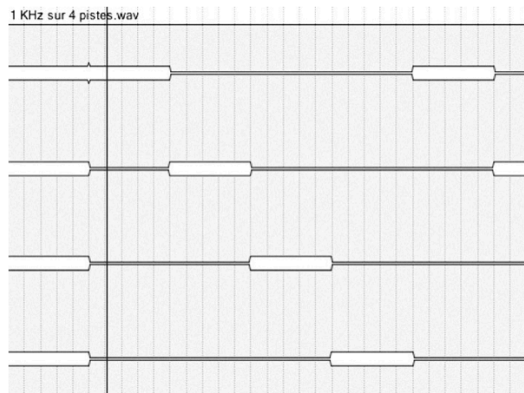
Main Out 1 Line Out 5 Line Out 7 Line Out 4 Line Out 3

0.00dB -inf -inf Centre FX I/O

ILLUSONIC BREWERS hardware

1 2 3 4

# Sons Techniques Ambisonics



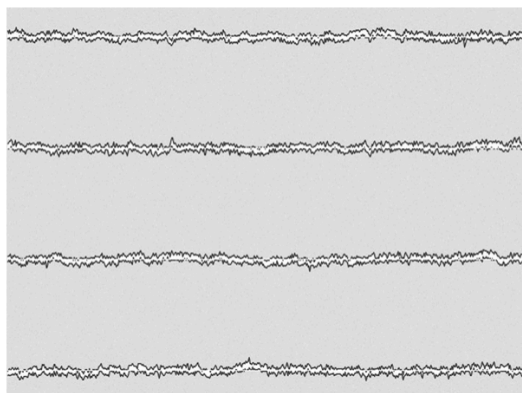
## 1 KHz sur 4 Pistes ©

1 KHz à -18 dBFS sur 4 pistes destiné au Multicanal en Quad et à l'Ambisonic (calibration, équilibre, diaphonie...) .  
Cinq cycles de 40 secondes (10 s de modulation par piste)

3 min 30 sec

Quad 4.0  
L R Ls Rs  
En .WAV  
24 Bit / 48 KHz

[Télécharger](#)



## Bruit Rose sur 4 Pistes ©

Bruit Rose sur 4 pistes destiné au Multicanal en Quad et à l'Ambisonique (courbe de réponse, équilibre, filtre...)

Dé-corrélation + 0,0 : de 0 s à 40 s  
Corrélation + 0,25 : de 1 mn à 1 mn 40 s  
Corrélation + 0,5 : de 2 mn à 2 mn 40 s  
Corrélation + 0,75 : de 3 mn à 3 mn 40 s  
Corrélation + 1,0 : de 4 mn à 4 mn 40 s

Attention au niveau -12 dBFS, coupe bas à 30 Hz.

4 min 40 sec

Quad 4.0  
L R Ls Rs  
En .WAV  
24 Bit / 48 KHz

[Télécharger](#)

Pour le **A-Format** prendre une Corrélation = +0,5

Pour le **B-Format** prendre uniquement une Dé-corrélation = +0,0



# AMBISONIC = Système Coïncident en ILD

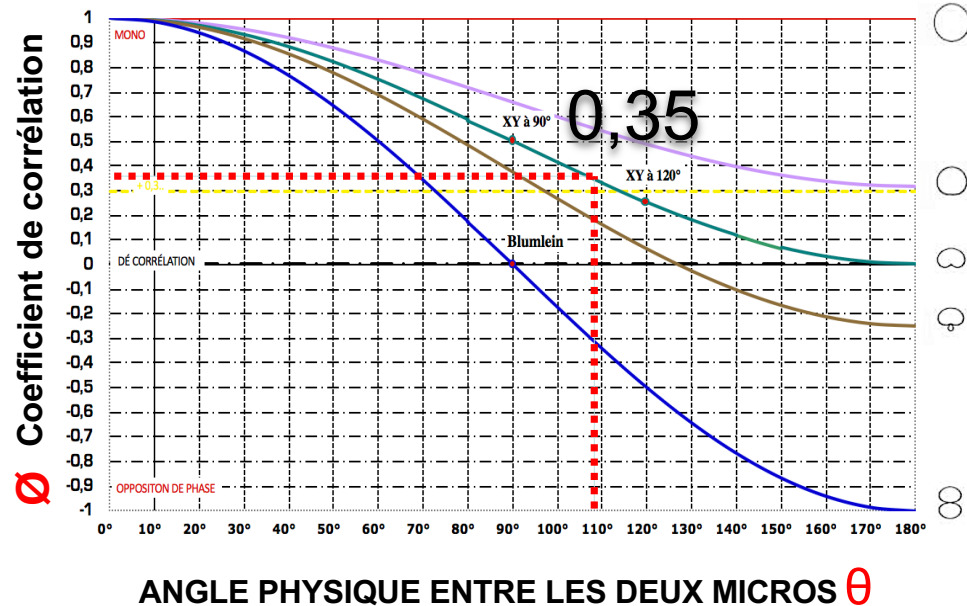
## A-Format : FLU FRD BLD BRU

### La Théorie :

Ø : coef de corrélation théorique en Champ Direct...

$$\varnothing = a + (1 - a) \cdot \cos \theta$$

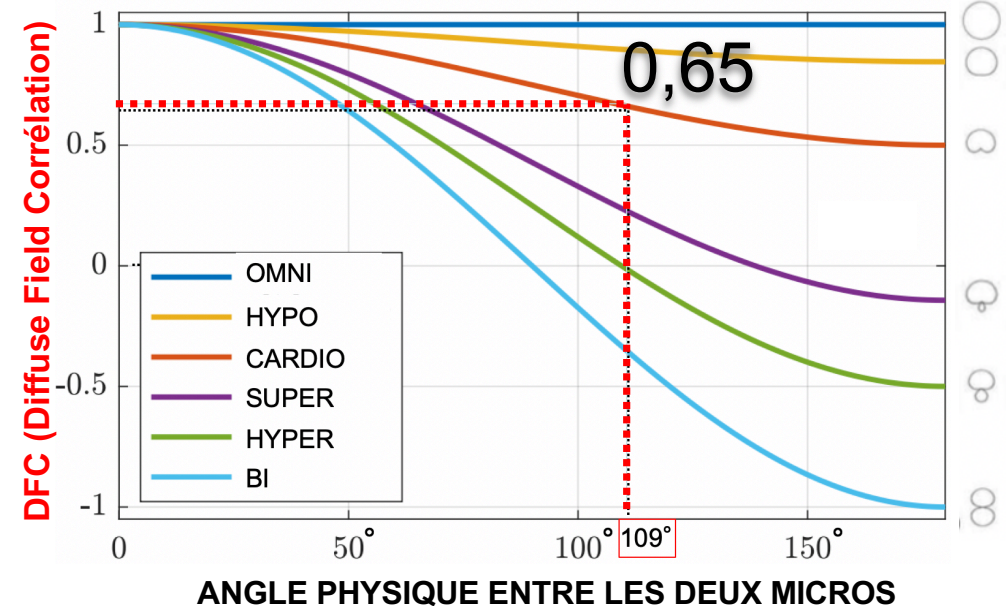
|        |         |
|--------|---------|
| Omni   | a = 1   |
| Cardio | a = 0,5 |
| Bi     | a = 0   |



### Dans le Champ diffus...

Fonctions de cohérence spatiale de paires de microphones coïncidents de même types :

Document AES ILLUSONIC



**En A-Format : FLU FRD BLD BRU sont corrélées à +0,5 (moyenne Direct / Diffus)...**



# A/B – Format Decoder v5.1.0

**A-Format (bruit rose corrélé à +0,5) vers Stereo**

**Corrélation en fonction de l'angle Stéréo  
pour des variations du « Diffuse gain »**

Decoding

Rotation  
0°

Elevation  
0°

Center  
100 %

**Front  
50 %**

Wide  
50 %

Surround  
30 %

Rear  
49 %

Front Height  
70 %

Surround Height  
100 %

Rear Height  
50 %

ANGLE

Azimuth ▾

**Front  
± 50°**

Wide  
± 60°

Surround  
± 100°

Rear  
± 90°

Front Height  
± 55°

Surround Height  
± 180°

Rear Height  
± 150°

**Diffuse gain  
-4 dB**

De-correlation

Room size  
50

A/B-Format Decoder

W Signal Bass

Cross-over

Gain  
0 dB

Frequency  
50 Hz

Order  
Butterworth 3rd ▾

Invert bass

ILLUSONIC

Outputs

GAIN

Center  
0 dB

Front  
0 dB

Wide  
0 dB

Surround  
0 dB

Rear  
-1.2 dB

Front Height  
0 dB

Surround Height  
0 dB

Rear Height  
0 dB

Delay / Shelving  
Surround ▾

Delay  
off

Frequency  
2 kHz

Gain  
-20 dB

Formats

Input format  
A-Format ▾

Microphone distance  
Coincident ▾

Microphone position  
normal ▾

Output format  
Stereo ▾

Binaural output

Channel ordering

Input  
LF RF LB RB

Output channel test

Output  
L R

1

2

3

4

5

6

7

8

9

10

11

12

13

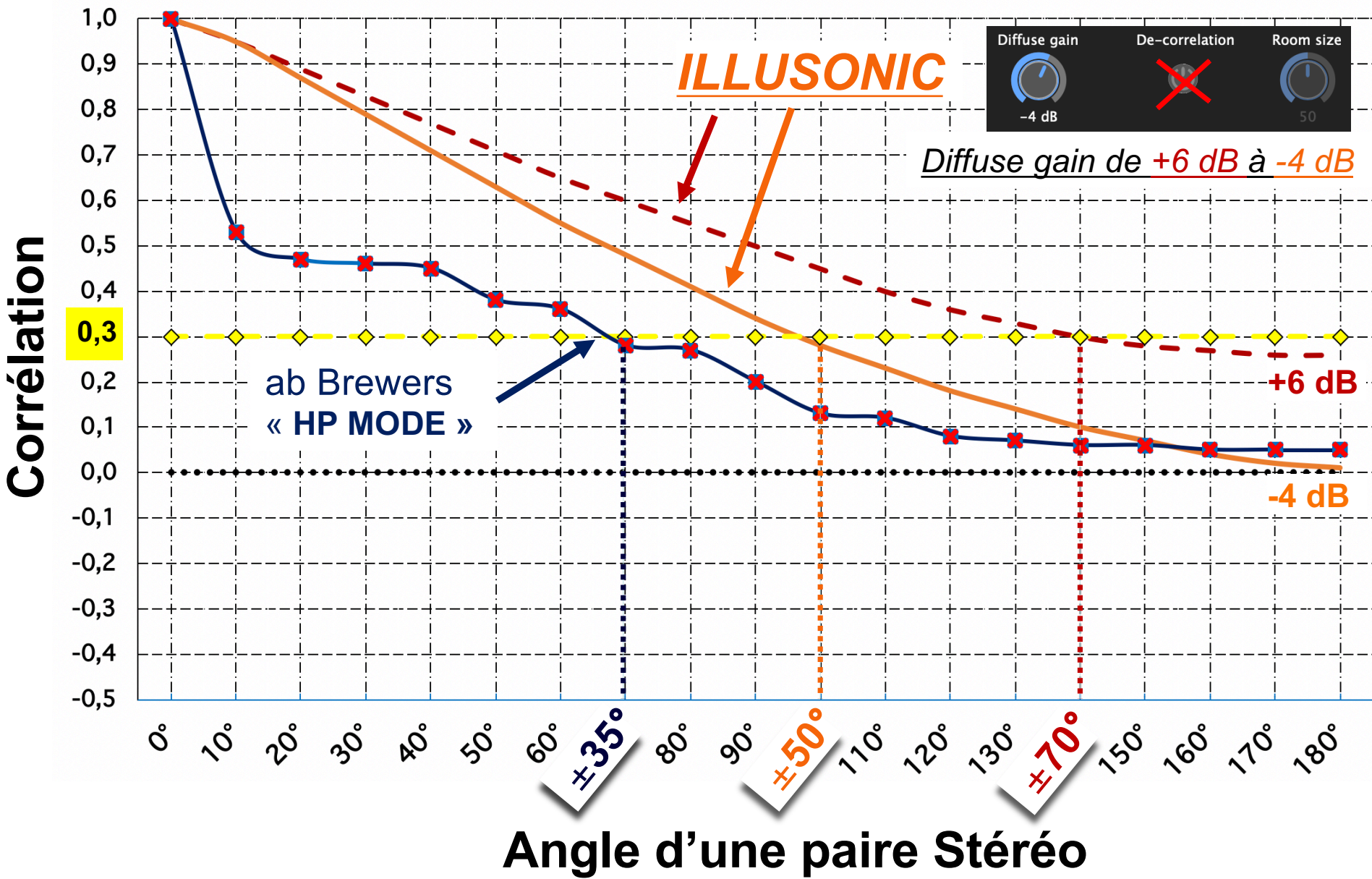
14

15

16

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## Comparaison de la Corrélation en fonction de l'angle d'une paire Stéréo





# A/B- Format Decoder d'ILLUSONIC (Piste 2)

*Captation RODE NT-SF1* ( **IN** A-Format vers **OUT** B-Format AmbiX )

BASE 5.0.3 ok

## A/B-Format Decoder

**Decoding**

Rotation: 0° Elevation: 0°

**FOCUS**

Center: 100 % Front: 50 % Wide: 50 % Surround: 30 %

Rear: 49 % Front Height: 70 % Surround Height: 100 % Rear Height: 50 %

**ANGLE**

Elevation: 0° Front: 0° Wide: 0° Surround: 0°

Rear: 0° Front Height: 55° Surround Height: 35° Rear Height: 35°

Diffuse gain: -4 dB De-correlation: 0 Room size: 50

**W Signal Bass**

Cross-over: Gain: 0 dB Frequency: 50 Hz

Order: Butterworth 3rd

Invert bass

**Outputs**

**GAIN**

Center: 0 dB Front: 0 dB Wide: 0 dB Surround: 0 dB

Rear: -1.2 dB Front Height: 0 dB Surround Height: 0 dB Rear Height: 0 dB

Delay / Shelving: Surround Delay: off Frequency: 2 kHz Gain: -20 dB

**Formats**

Input format: A-Format

Microphone distance: 24 mm (NT-SF1) Microphone position: normal

Output format: B-Format AmbiX

Binaural output

**Channel ordering**

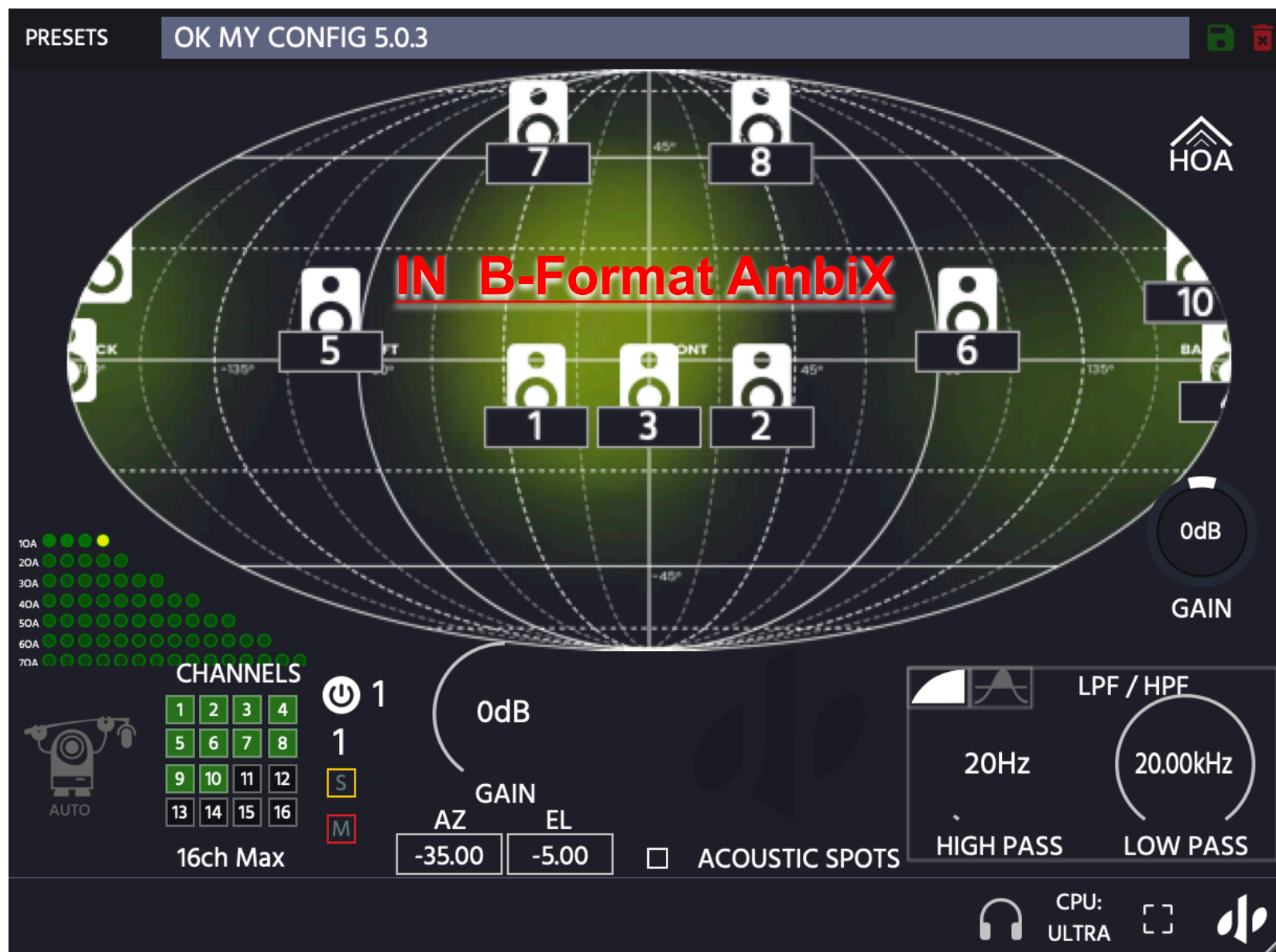
Input: LF RF LB RB Output channel test

Output: W Y Z X

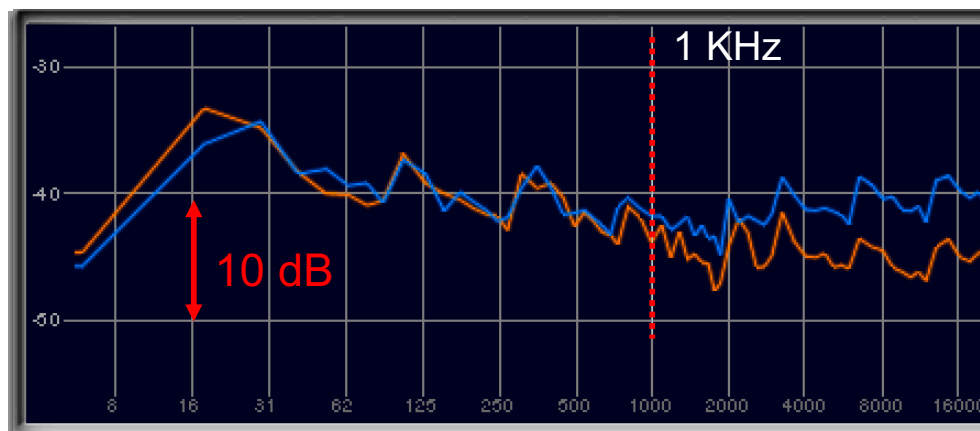
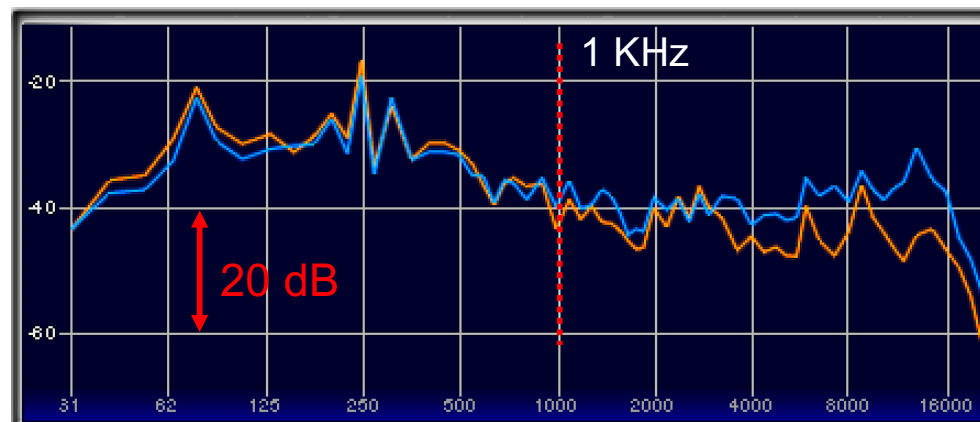
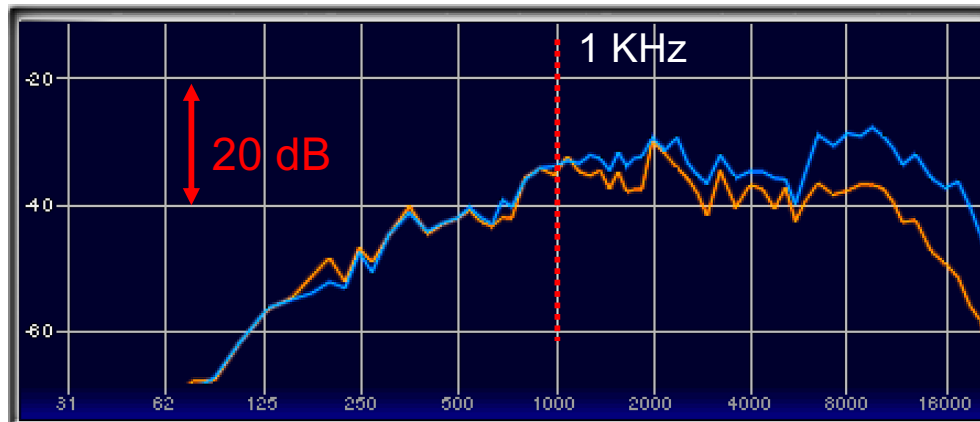
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## HOA Ordre 7 (Piste 2)

ab Advanced Decoder ( **IN** en B-Format AmbiX vers **OUT** 5.0.3 )

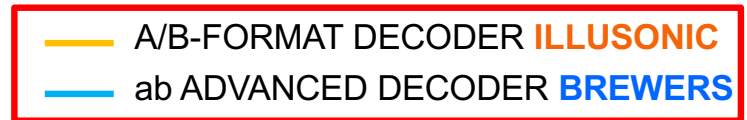


# INTERROGATION ??



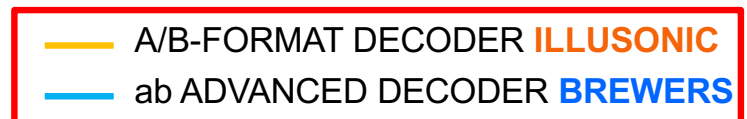
## Visualisation du canal *L*

### IN APPLAUDISSEMENTS A-FORMAT



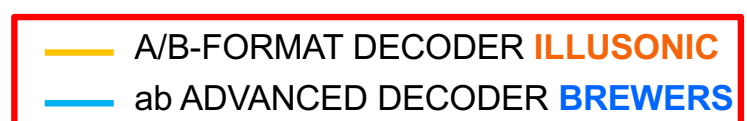
- 4 dB DIFFUSE GAIN ILLUSONIC

### IN CANTINE LOIN A-FORMAT



- 4 dB DIFFUSE GAIN ILLUSONIC

### IN COULOIR PORTES A-FORMAT



- 4 dB DIFFUSE GAIN ILLUSONIC



## A/B- Format Decoder d'ILLUSONIC (Piste 1)

*Captation micro RODE NT-SF1* ( **IN** A-Format vers **OUT** 5.0.3 )

- 4 dB par défaut à + 6 dB Max

### A/B-Format Decoder

ILLUSONIC

Decoding

Rotation 0° Elevation 0°

FOCUS

Center 100 % Front 50 % Wide 50 % Surround 30 %

Rear 49 % Front Height 70 % Surround Height 100 % Rear Height 50 %

ANGLE

Azimuth ✓ Front ± 50° Wide ± 60° Surround ± 100°

Rear ± 90° Front Height ± 55° Surround Height ± 180° Rear Height ± 150°

Diffuse gain -4 dB

De-correlation

Room size 50

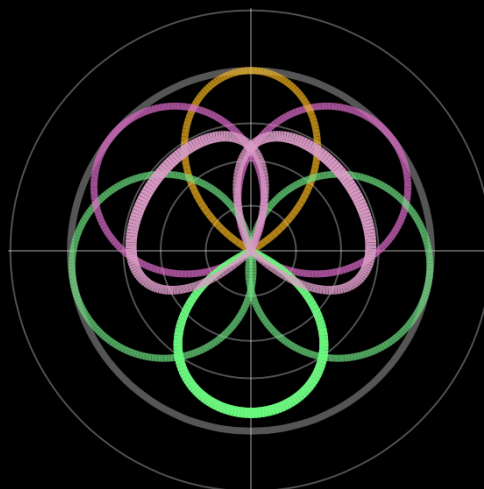
W Signal Bass

Cross-over

Gain 0 dB Frequency 50 Hz

Order Butterworth 3rd

Invert bass



Outputs

GAIN

Center 0 dB Front 0 dB Wide 0 dB Surround 0 dB

Rear -1.2 dB Front Height 0 dB Surround Height 0 dB Rear Height 0 dB

Delay / Shelving Surround

Delay off Frequency 2 kHz Gain -20 dB

Formats

Input format A-Format

Microphone distance 24 mm (NT-SF1) Microphone position normal

Output format 5.1 + 4H (ITU/SMPTE)

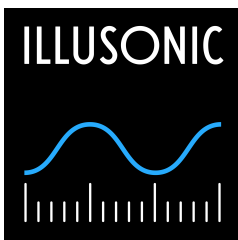
Binaural output

Channel ordering

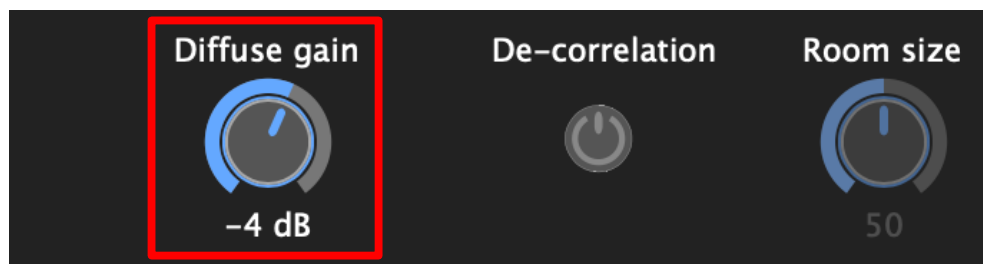
Input LF RF LB RB Output channel test

Output L R C LFE Ls Rs Lts Rts Ltr Rtr





## A/B – Format Decoder v5.3.0



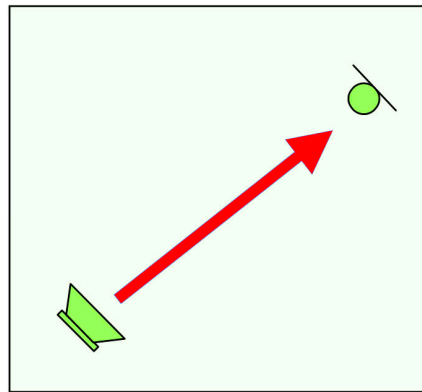
Diffuse gain = **DI** Directivité Index

↘ Diffuse gain dB = ↗ **DI** dB

Diffuse gain de **-6 dB** = **+6 dB DI**

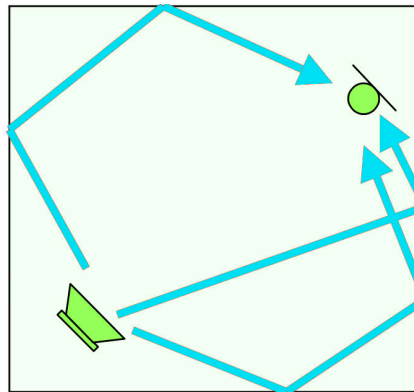
- **Diffuse gain** : ajuste la quantité d'énergie sonore diffuse contenue dans l'enregistrement de **-18 dB** à **+6 dB**. Le gain d'ambiance affecte directement les signaux d'entrée et modifie donc tous les canaux simultanément. Ce curseur de contrôle peut être utilisé pour ajouter plus de son de salle à un enregistrement sans ajouter de réverbération artificielle. Dans cet algorithme, le son diffus contenu dans les signaux d'entrée est extrait puis augmenté ou diminué.

# CHAMP DIRECT - CHAMP DIFFUS - DISTANCE CRITIQUE $D_c$



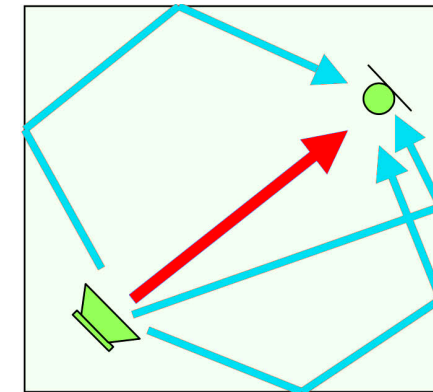
Champ direct

+

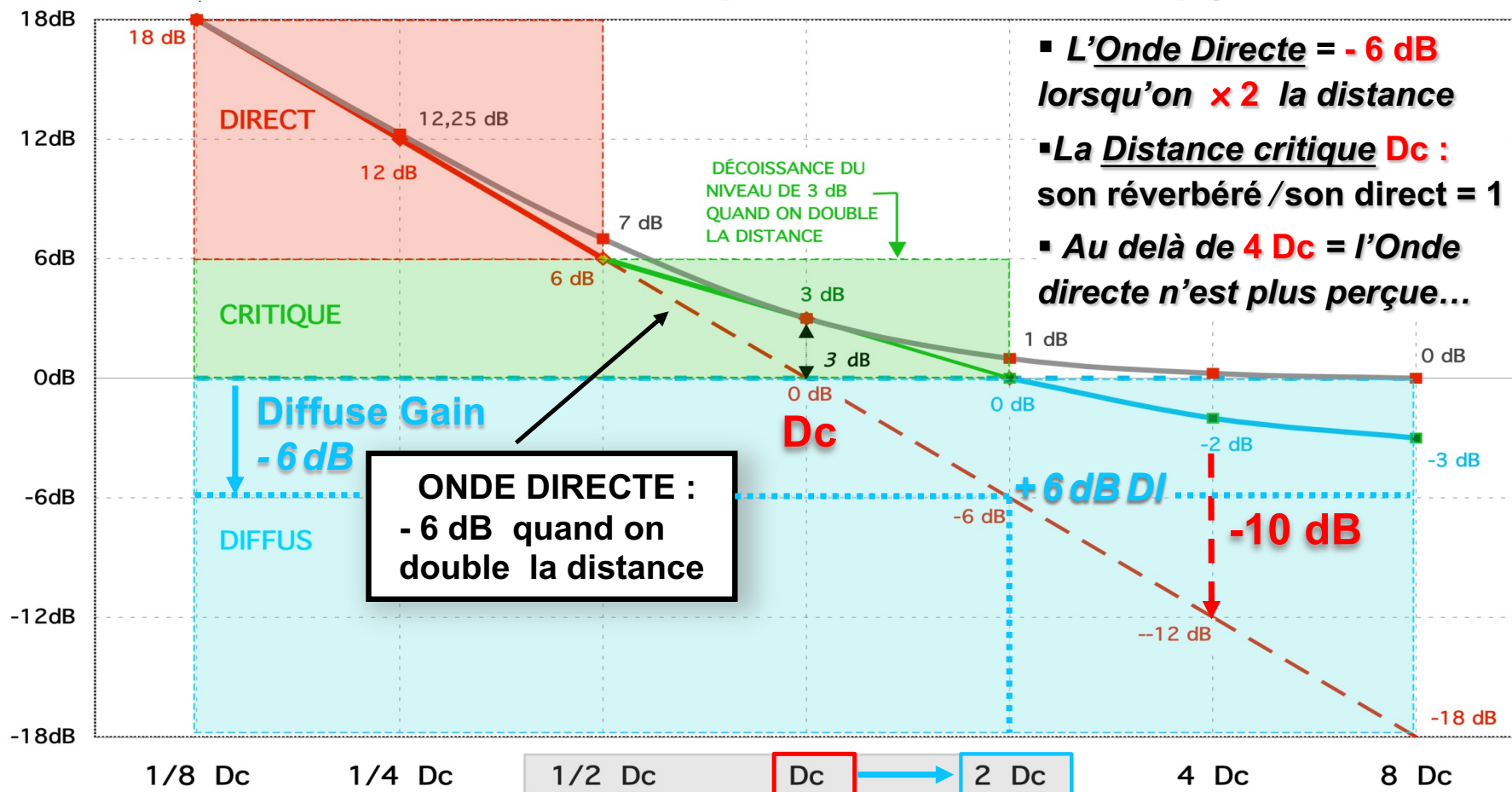


Champ diffus

=

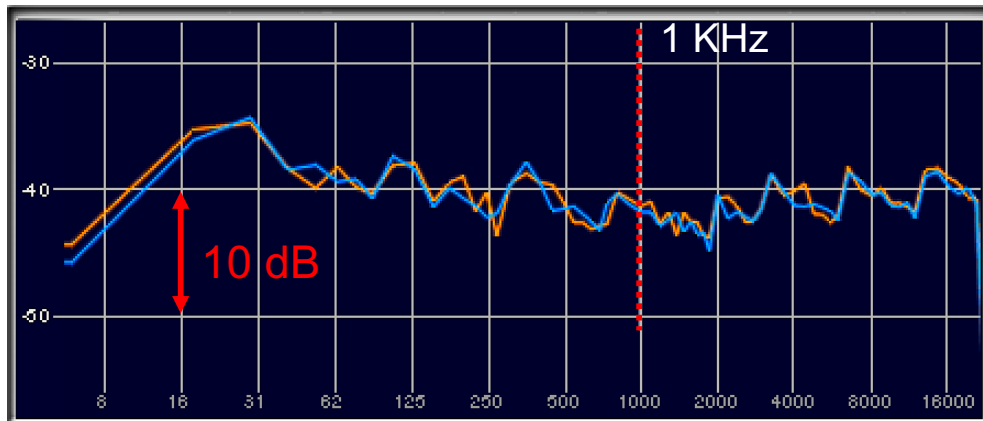


Propagation dans un local



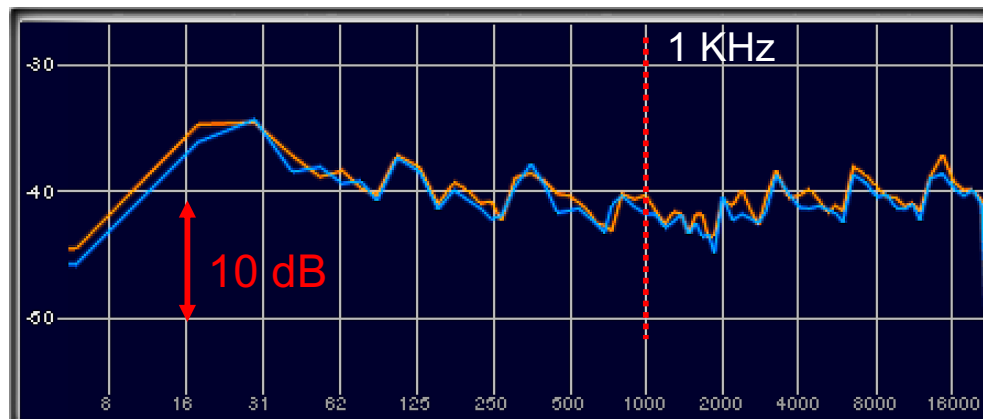


# Visualisation du canal **L**



IN **BRUIT ROSE A-FORMAT +0,5**

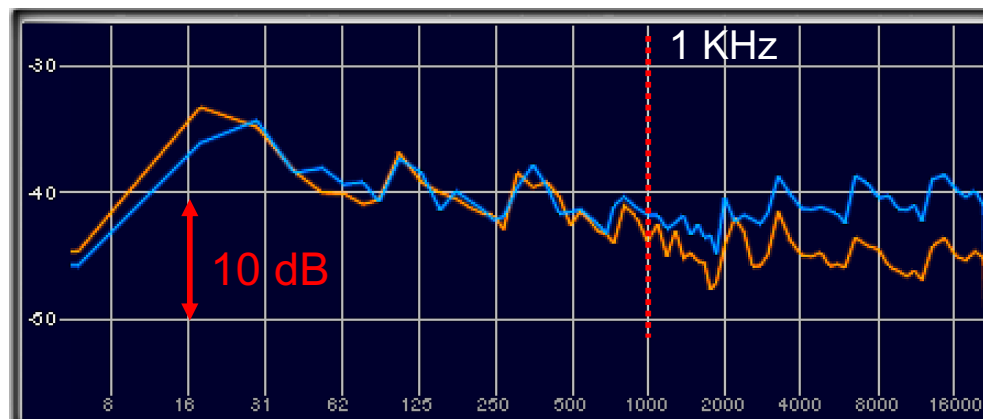
— ab ADVANCED DECODER **BREWERS**  
— **BRUIT ROSE** A-FORMAT (CANAL 1)



IN **BRUIT ROSE A-FORMAT +0,5**

— A/B-FORMAT DECODER **ILLUSONIC**  
— **BRUIT ROSE** A-FORMAT (CANAL 1)

**+ 6 dB DIFFUSE GAIN ILLUSONIC**

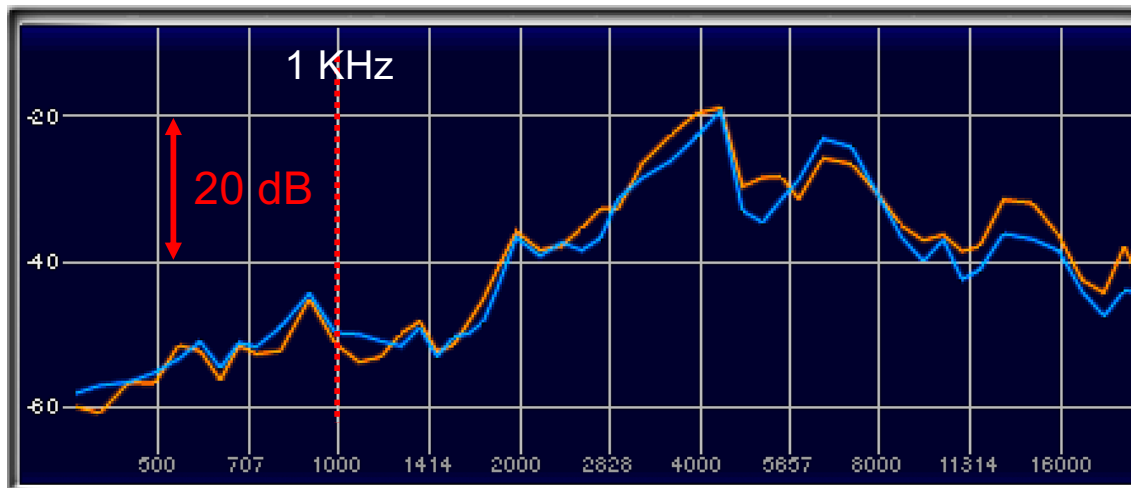


IN **BRUIT ROSE A-FORMAT +0,5**

— A/B-FORMAT DECODER **ILLUSONIC**  
— **BRUIT ROSE** A-FORMAT (CANAL 1)

**- 4 dB DIFFUSE GAIN ILLUSONIC**

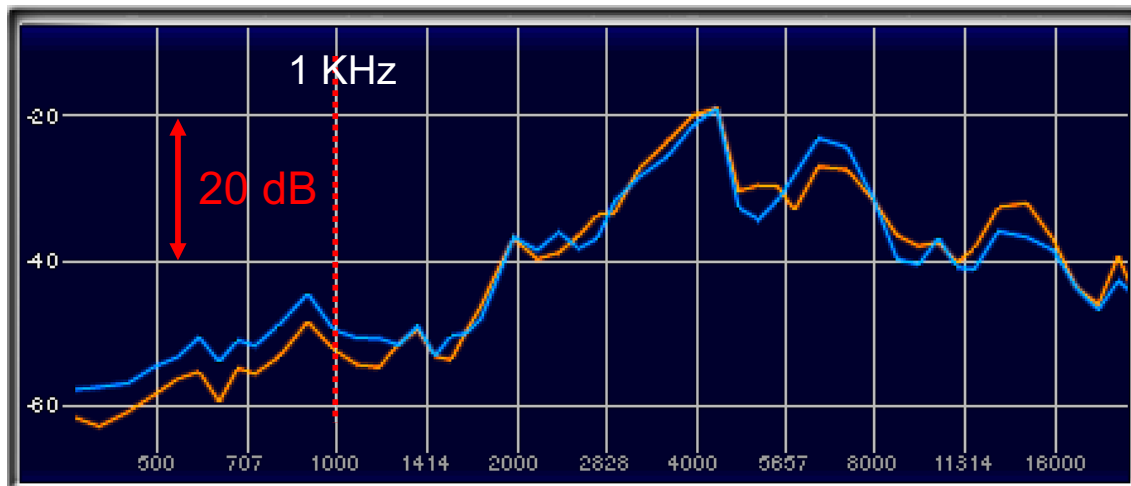
# Visualisation du canal **L**



— A/B-FORMAT DECODER **ILLUSONIC**  
— ab ADVANCED DECODER **BREWERS**

**PEAK** oiseaux

**+ 6 dB DIFFUSE GAIN ILLUSONIC**

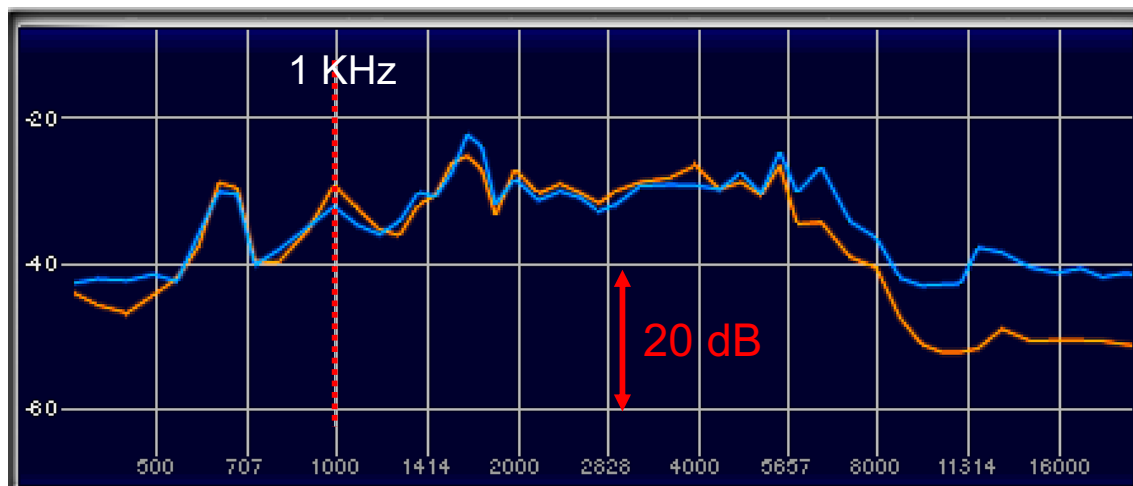


— A/B-FORMAT DECODER **ILLUSONIC**  
— ab ADVANCED DECODER **BREWERS**

**PEAK** oiseaux

**- 4 dB DIFFUSE GAIN ILLUSONIC**

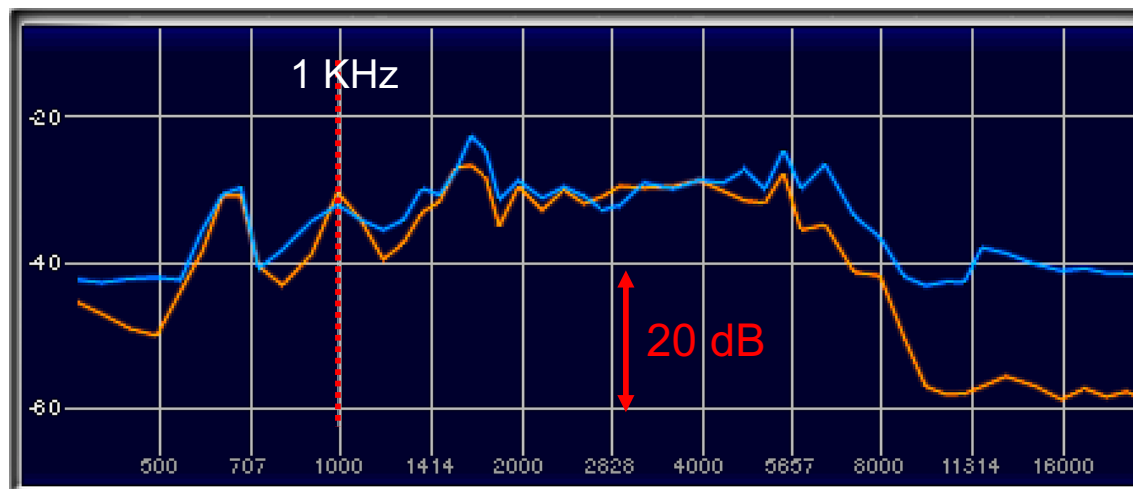
## Visualisation du canal **L**



A/B-FORMAT DECODER **ILLUSONIC**  
ab ADVANCED DECODER **BREWERS**

**RMS oiseaux**

**+ 6 dB DIFFUSE GAIN ILLUSONIC**

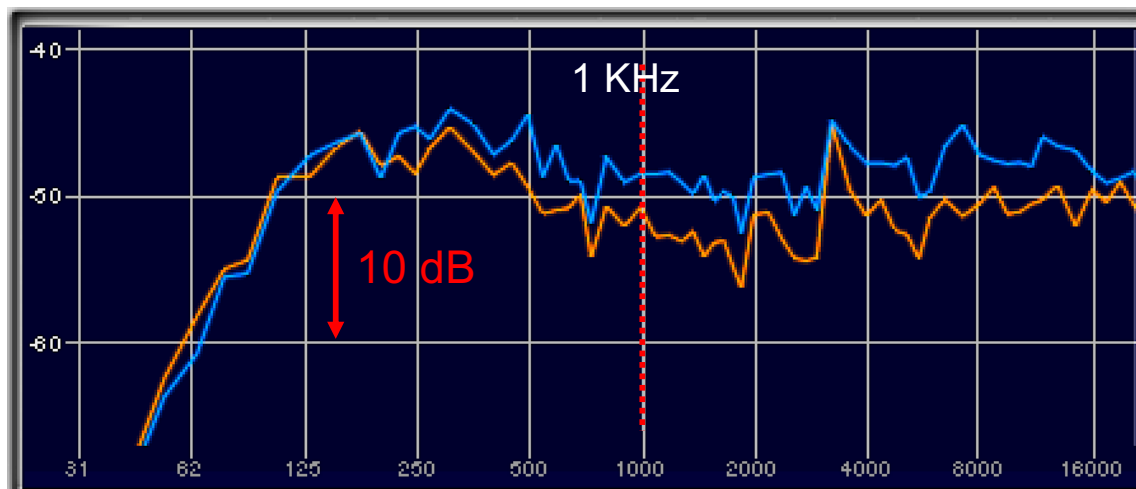


A/B-FORMAT DECODER **ILLUSONIC**  
ab ADVANCED DECODER **BREWERS**

**RMS oiseaux**

**- 4 dB DIFFUSE GAIN ILLUSONIC**

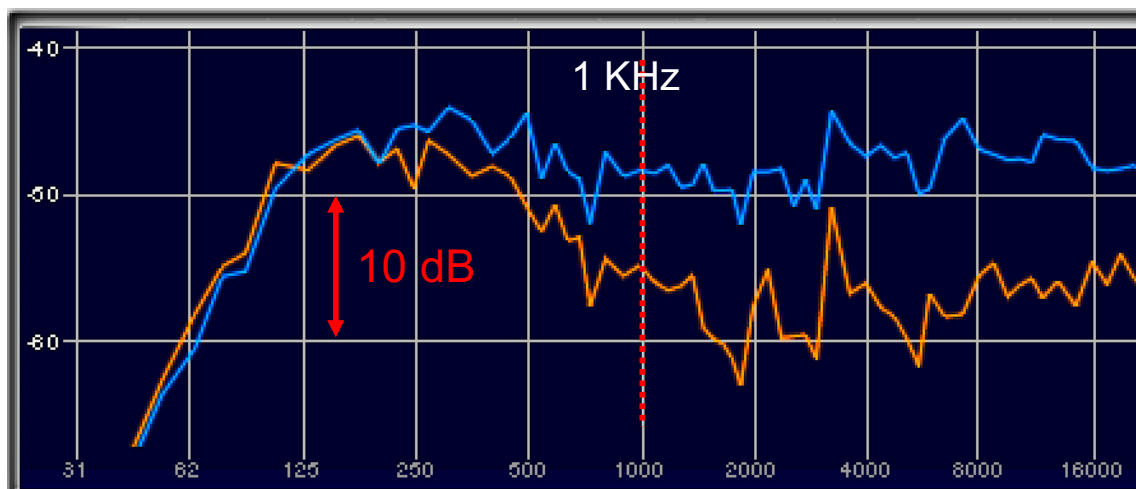
## Visualisation du canal **L**



— A/B-FORMAT DECODER **ILLUSONIC**  
— ab ADVANCED DECODER **BREWERS**

**FOND** sonore oiseaux

**+ 6 dB DIFFUSE GAIN ILLUSONIC**



— A/B-FORMAT DECODER **ILLUSONIC**  
— ab ADVANCED DECODER **BREWERS**

**FOND** sonore oiseaux

**- 4 dB DIFFUSE GAIN ILLUSONIC**



# A/B- Format Decoder d'ILLUSONIC

**LA SOLUTION : Diffuse gain OFF pour 4.0 au 9.1.6 !!**

**« MODE BED »**

**A/B-Format Decoder**

**Decoding**

Rotation: 0° Elevation: 0°

**FOCUS**

Center: 100 % Front: 50 % Wide: 50 % Surround: 30 %

Rear: 49 % Front Height: 70 % Surround Height: 100 % Rear Height: 50 %

**ANGLE**

Azimuth: Front: ± 50° Wide: ± 60° Surround: ± 100°

Rear: ± 90° Front Height: ± 55° Surround Height: ± 180° Rear Height: ± 150°

**Diffuse gain**: OFF -4 dB

De-correlation: ON Room size: 50

**W Signal Bass**

Cross-over: Gain: 0 dB Frequency: 50 Hz

Order: Butterworth 3rd

Invert bass

**Outputs**

**GAIN**

Center: 0 dB Front: 0 dB Wide: 0 dB Surround: 0 dB

Rear: -1.2 dB Front Height: 0 dB Surround Height: 0 dB Rear Height: 0 dB

Delay / Shelving: Surround Delay: off Frequency: 2 kHz Gain: -20 dB

**Formats**

Input format: A-Format

Microphone distance: 24 mm (NT-SF1) Microphone position: normal

Output format: 5.1 + 4H (ITU/SMPTE)

Binaural output

**Channel ordering**

Input: LF RF LB RB Output channel test

Output: L R C LFE Ls Rs Lts Rts Ltr Rtr

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## A/B- Format Decoder d'ILLUSONIC

**LA SOLUTION : Diffuse gain ON pour Mono ou Stéréo seulement !!**

**« MODE SPOT »**

**A/B-Format Decoder**

**Decoding**

Rotation: 0° Elevation: 0°

**FOCUS**

Center: 100 % Front: 50 % Wide: 50 % Surround: 30 %

Rear: 49 % Front Height: 70 % Surround Height: 100 % Rear Height: 50 %

**ANGLE**

Azimuth: Front: ± 50° Wide: ± 60° Surround: ± 100°

Rear: ± 90° Front Height: ± 55° Surround Height: ± 180° Rear Height: ± 150°

**Diffuse gain**

**ON** -4 dB

**De-correlation** **OFF** 50

**W Signal Bass**

Cross-over: Gain: 0 dB Frequency: 50 Hz

Order: Butterworth 3rd

Invert bass

**Outputs**

**GAIN**

Center: 0 dB Front: 0 dB Wide: 0 dB Surround: 0 dB

Rear: -1.2 dB Front Height: 0 dB Surround Height: 0 dB Rear Height: 0 dB

Delay / Shelving: Surround Delay: off Frequency: 2 kHz Gain: -20 dB

**Formats**

Input format: A-Format

Microphone distance: 24 mm (NT-SF1) Microphone position: normal

Output format: Mono

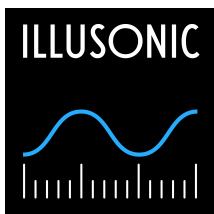
Binaural output

**Channel ordering**

Input: LF RF LB RB Output: M

Output channel test

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# Beamforming : Enhanced Pattern

Le Beamforming aussi appelé filtrage spatial, formation de faisceaux ou formation de voies est une technique de traitement du signal utilisée dans les réseaux d'antennes et de capteurs pour l'émission ou la réception directionnelle de signaux. [Wikipédia](#)



**POLAR PATTERN**

☐ First Order

☒ Enhanced Pattern

C  0.33

L, R  0.33

Ls, Rs  0.50

Focus  1.00

**AMBIENCE** = Diffuse gain

Gain  +0.0 dB

☐ Decorrelation

**MICROPHONE ANGLE**

L, R  55 deg

☐ Ls, Rs  180 deg

Rotate  0 deg

**SURROUND DELAY**

☐ Ls, Rs  20.0 ms

**SURROUND LOWPASS**

☐ Ls, Rs  3500 Hz

**DOUBLE M/S TOOL BF**

SCHOEPS Mikrofone

ILLUSONIC

**OUTPUT FORMAT**

☐ L, R

☒ L, R, C

☐ L, R, Ls, Rs

☐ L, R, C, Ls, Rs

**OUTPUT GAIN**

☒ C  +0.0 dB

☒ L, R ☒ -∞ dB

☒ Ls, Rs  +0.0 dB

**INPUT LEVEL**

Cardioid Front

Figure of Eight

Cardioid Rear

**OUTPUT LEVEL**

Left

Right

Center

Left Surround

Right Surround

# ANNEXE

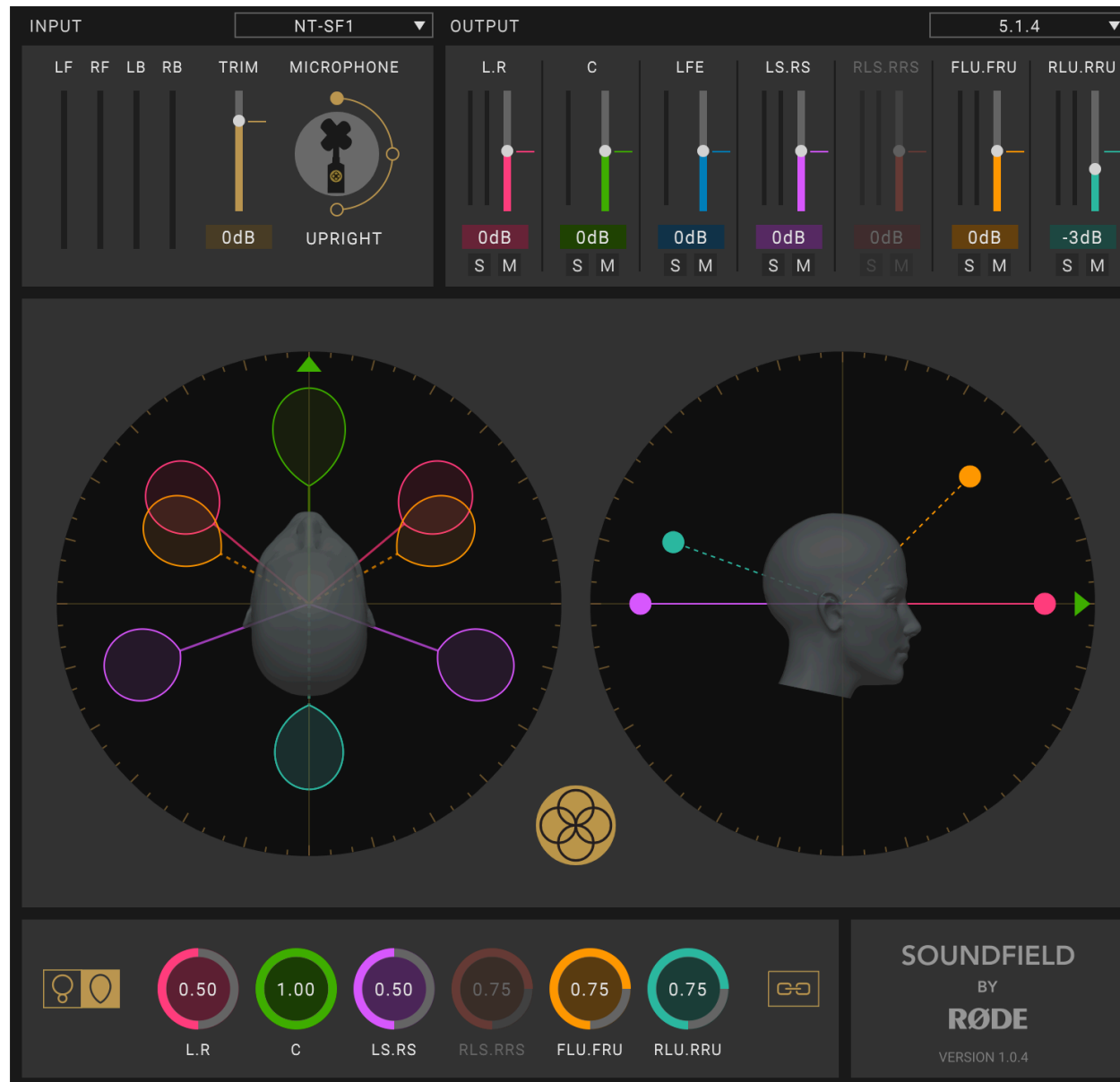
**SOUNFIELD BY RODE** <https://rode.com>

**ab Advanced Decoder** <https://www.audiobrewers.com/plugins/>





## Captation micro RODE NT-SF1 ( **IN** A-Format vers **OUT** 5.0.3 )



# A/B- Format Decoder d'ILLUSONIC

*Captation RODE NT-SF1* ( **IN** A-Format vers **OUT** B-Format AmbiX )

BASE 5.0.3 ok

Param 16 in+out UI

## A/B-Format Decoder

**Decoding**

Rotation 0° Elevation 0°

**FOCUS**

Center 100 % Front 50 % Wide 50 % Surround 30 %

Rear 49 % Front Height 70 % Surround Height 100 % Rear Height 50 %

**ANGLE**

Elevation 0° Front 0° Wide 0° Surround 0°

Rear 0° Front Height 55° Surround Height 35° Rear Height 35°

Diffuse gain -4 dB De-correlation 0 Room size 50

**W Signal Bass**

Cross-over Gain 0 dB Frequency 50 Hz

Order Butterworth 3rd

Invert bass

**Outputs**

**GAIN**

Center 0 dB Front 0 dB Wide 0 dB Surround 0 dB

Rear -1.2 dB Front Height 0 dB Surround Height 0 dB Rear Height 0 dB

Delay / Shelving Surround Delay off Frequency 2 kHz Gain -20 dB

**Formats**

Input format A-Format

Microphone distance 24 mm (NT-SF1) Microphone position normal

Output format B-Format AmbiX

Binaural output

**Channel ordering**

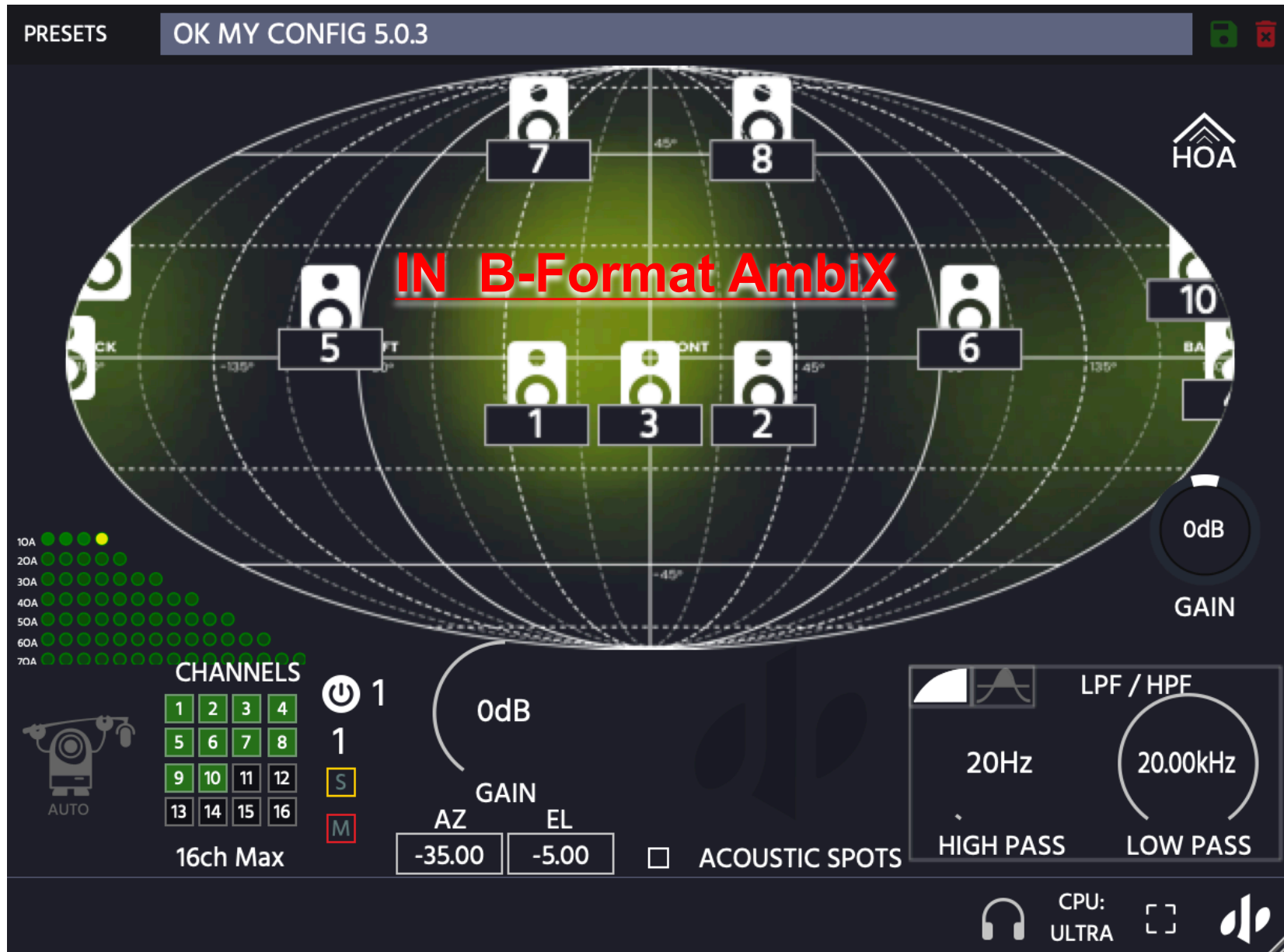
Input LF RF LB RB Output channel test

Output W Y Z X

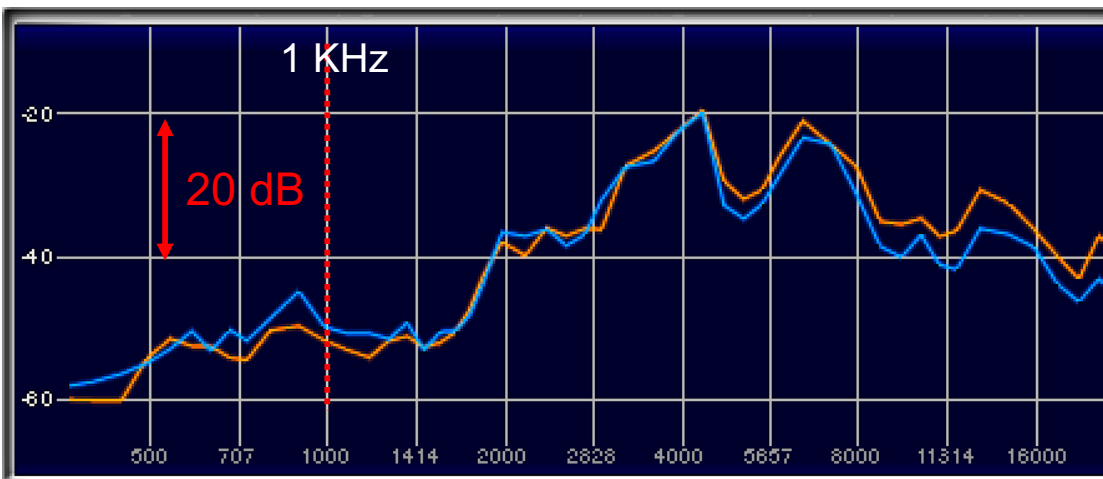
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# HOA Ordre 7

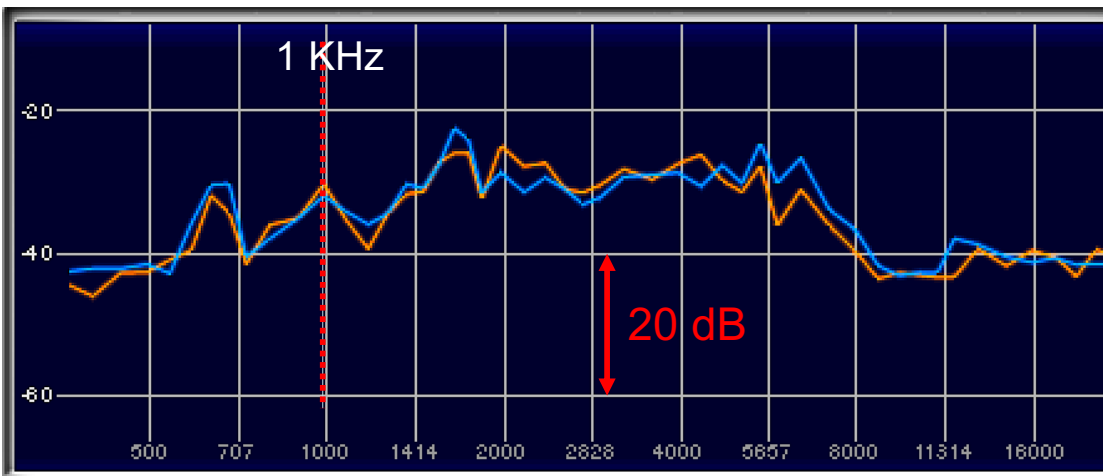
ab Advanced Decoder ( **IN** en B-Format AmbiX vers **OUT** 5.0.3 )



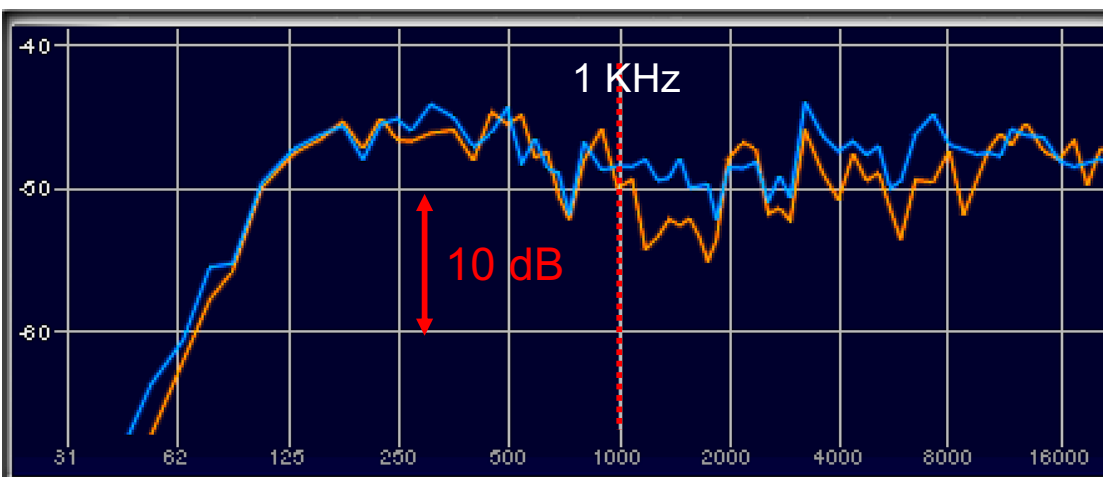
## Visualisation du canal G



**PEAK** oiseaux



**RMS** oiseaux



**FOND sonore** oiseaux





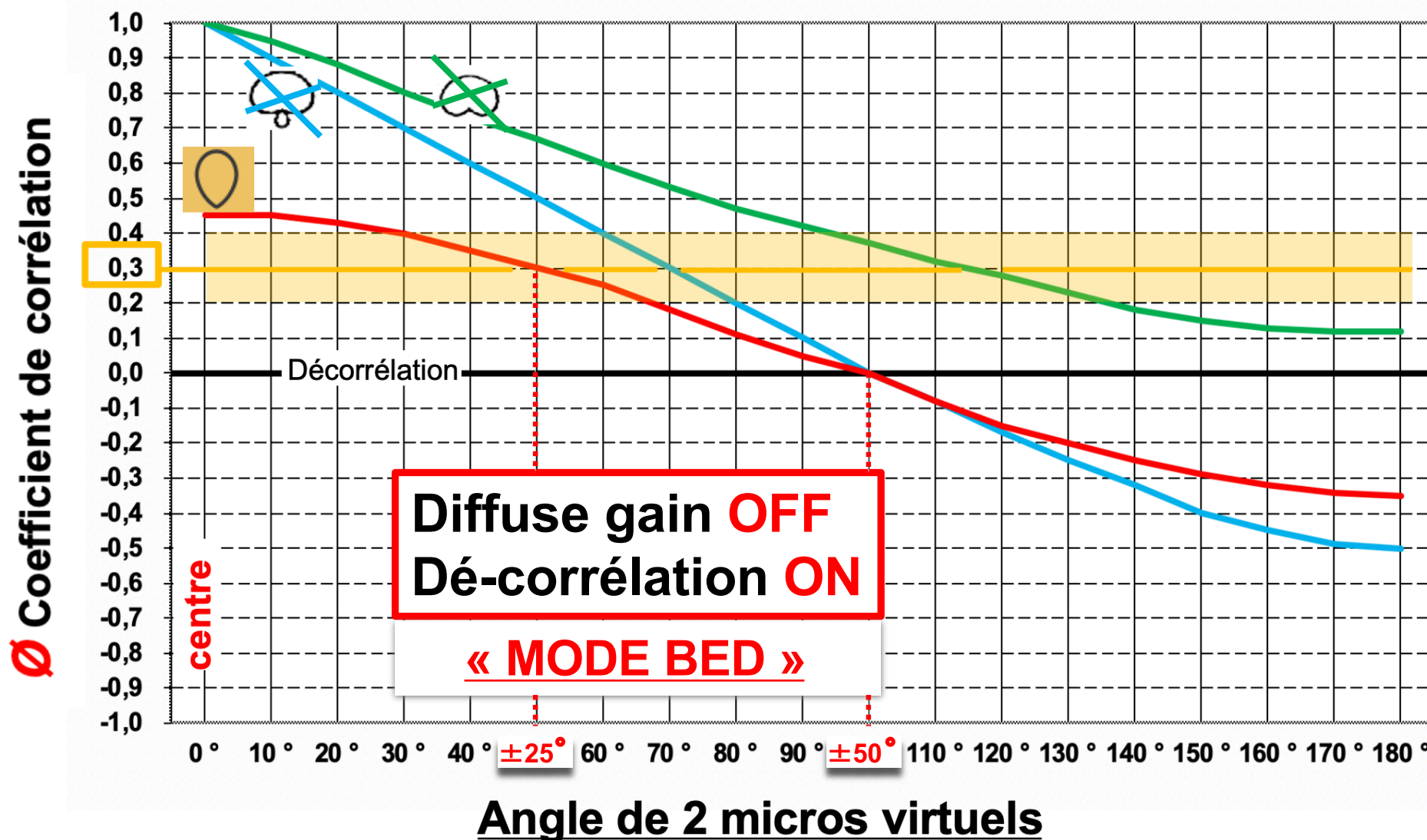
# Soundfield by RØDE

V 1.0.4



Corrélation de +0,45 à 0° ?

Dé-corrélation *identique* quelque soit la valeur du Focus



Merci de votre attention

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