

Quick guide to the SCHOEPS Polarflex technique

1. Microphone setup

Arrange an omni and a figure-8 microphone such that the membranes are coincident, *i.e.* there should be no offset in the horizontal plane for front-arriving sound sources. For two-channel stereo, two Polarflex microphone pairs should be set up.

Two options are depicted here. When using two CCM microphones, the A2P CCM Polarflex microphone is the most elegant solution:

Polarflex microphone A2P CCM consisting of suspension and the two microphones CCM 2S and CCM 8



When using two Colette microphones, a setup using the capsule swivel GVC is recommended:

Polarflex arrangements using the SCHOEPS Colette series:

- CMC 6 + MK 8
- CMC 6 + GVC + MK 2S
- SG 22 mod double clip



If the "Straus-Paket" variant is chosen rather than the classical Polarflex, an omni and a cardioid should be set up side by side. In the A2P CCM arrangement a CCM 4V would be used instead of the CCM 8, while with Colette microphones, a simple double clip such as the SG 22 mod can be used:



"Straus-Paket" consisting of MK 2H omni and MK 4 cardioid (+CMC 6) with SG 22 mod suspension

2. Routing

Mono mode:

The two microphone signals are separately recorded onto two tracks of the DAW. These tracks are routed to a stereo bus in which the plug-in (Mono version) is inserted:

Omni → input 1
Fig-8 /Cardioid → input 2

Stereo mode:

The four microphone signals are separately recorded onto four tracks of the DAW. These tracks are routed to a multichannel (e.g. Quadro) bus in which the plug-in (Stereo version) is inserted.

L Omni → Input 1
R Omni → Input 2

L Fig-8 → Input 3
R Fig-8 → Input 4

Output 1, 2 Output L, R

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3. Installation of the plug-in

The Plug-in is available *for free*:

www.schoeps.de/polarflex

The installation of the plug-in works as follows:

Choose the corresponding archive (Mac/Win, 32/64 bit), unzip it, double-click the installer file (.msi) and follow the commands.

4. How to use the plug-in

You will see very quickly how easy it is to use the plug-in.

Controls:

- **Microphone Selection:**
Choose your omni type and the figure-8 or cardioid
- **Input level meters:**
In the Mono version there are 2 level meters corresponding to inputs 1 and 2. The stereo version offers 4 inputs and 4 corresponding level meters. The order of the inputs corresponds to the order of the level meters. (→ 2. Routing)
- **Gain:**
Use the gain knobs for adjusting the levels according to the differences in sensitivity.
- **Solo:**
In Pre mode you can monitor the single input signals, in the Post mode you will hear the portions of the input signal that are mixed into the output signal
- **EQ:**
Low frequency boost in the figure-8 channel(s) for making up the inherent LF loss of the figure-8 capsule
- **Mixing ratio buttons:**
In the large window, the thick gray line with the three buttons denotes the mixing ratio between your omni (top) and figure-8/cardioid capsule

(bottom) throughout the whole frequency range.

You can move and alter the line by pulling the three buttons up/down as well as left/right. You can listen to the result in real-time.

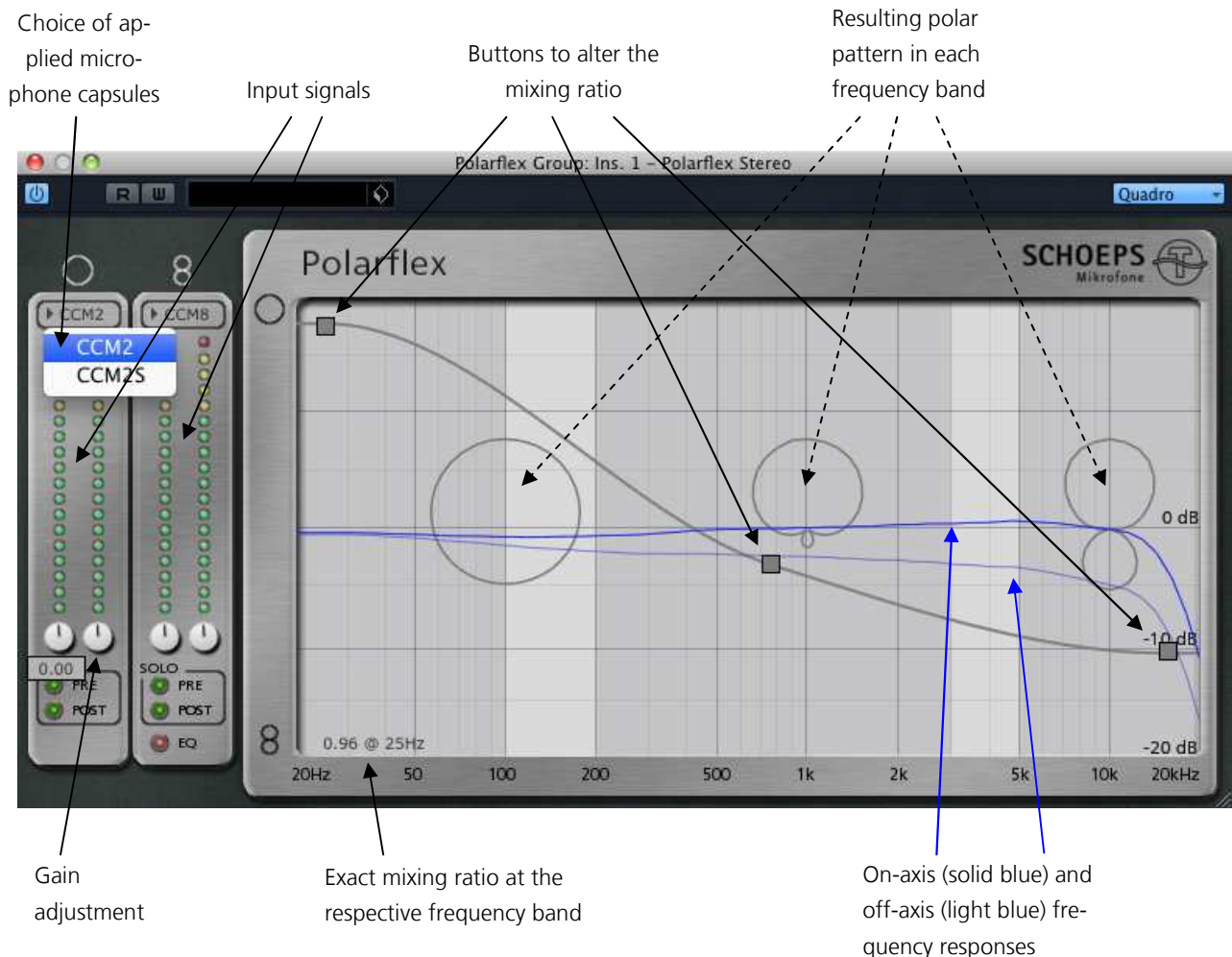
While clicking on the buttons, you will see the exact mixing ratio in the bottom left corner of the frequency chart window.

- **Polar pattern:**
The three polar patterns denote the chosen polar patterns at 100 Hz, 1000 Hz and 10 kHz.
- **Frequency graphs:**
The blue graphs show the on-axis (solid blue) and off-axis (light blue) frequency responses. Note that as the directivity of the microphone increases, the distance between these two curves will also increase.

5. Examples

- When the gray line is all the way at the top of the window, only the omni signal is present in the output
- When the line is in the middle, the result will be a cardioid, which is the sum of an omni and a figure-8 pattern mixed in equal proportions.
- If you choose a wide cardioid at low frequencies, a cardioid at middle frequencies and a hypercardioid at high frequencies, the sound will mimic that of a dual-membrane, large-diaphragm condenser microphone.
- Try different settings in stereo mode. By altering the mixing ratio, the correlation of the diffuse recorded sound is varied in real time. This offers a powerful means to vary the room sound of your stereo pickup.

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6. Applications

The Polarflex technique has been successfully used in numerous applications. Its particular strength is the possibility of fine-tuning the sound after the microphones have been installed or even after the recording has been made.

Due to this capability, it is used in prominent places in the studio and on stage. As a vocal microphone it offers distinct possibilities for playing around with the sound color and proximity effect.

On stage it is primarily used for the soloist (piano, singer).

In addition, the possibility of altering the stereophonic image makes Polarflex ideal for use as a spot or main microphone pair.