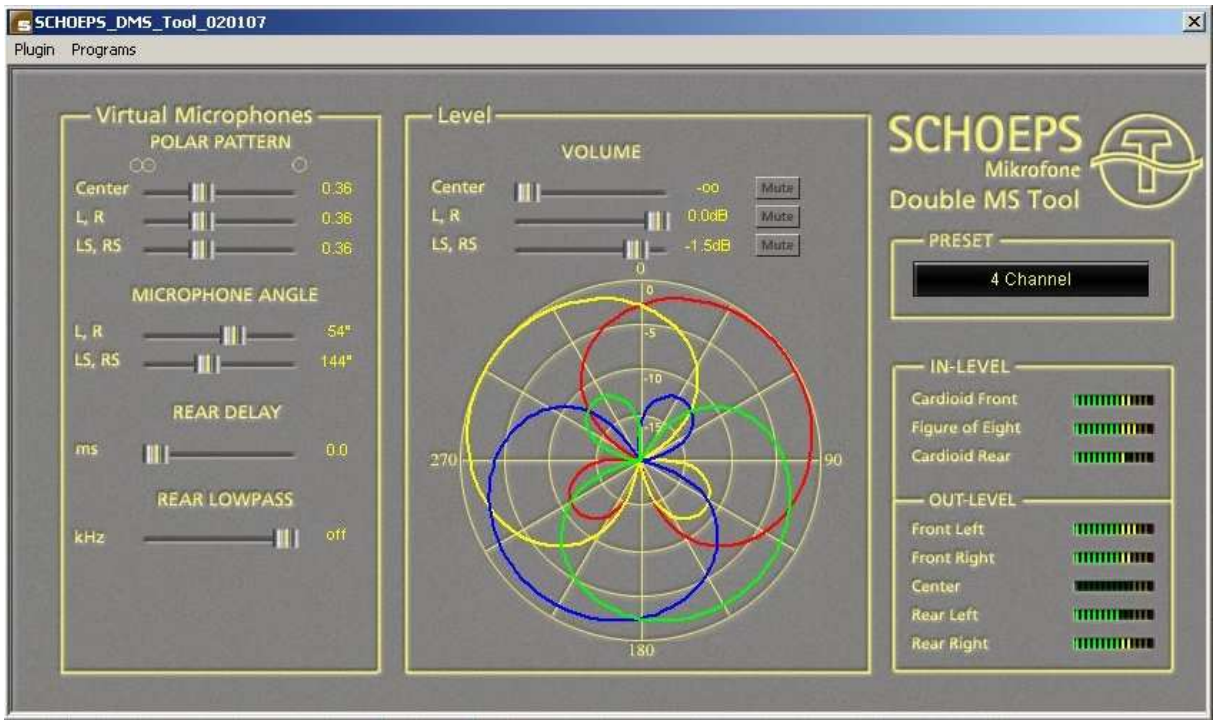

SCHOEPS "Double M/S Tool" Plug-in

Congratulations on successfully `ksjhk]`ejc the SCHOEPS "Double M/S Tool" plug-in. In addition to the description here, you can find information on the plug-in site online (www.schoeps.de/dmsplugin.htm). There is also information about the Double M/S system and short audio samples for download which enable you to test and play with the plug-in. The audio samples are constantly updated and the collection extended. Submit your sample recordings using the SCHOEPS Double M/S setup, if you like to present them to other users.

SCHOEPS
Double M/S setup

The SCHOEPS "Double M/S Tool" plug-in enables customized, intuitive decoding of the three signals of the Double M/S system.

After recording the three Double M/S signals (front cardioid, figure-8, rear cardioid) to three tracks in a sequencer program, they can be decoded by the plug-in to a 5.0 mix. Decoding is intuitive because the resulting polar diagrams of the virtual "output channels" are displayed in real time. Any change of a parameter is visible on the spot as a change of the polar diagram. The audio signal also changes in real time without interruptions, allowing settings to be optimized in a quick and comfortable way.

The plug-in is customized for the use of SCHOEPS microphones in a Double M/S setup. It has been tailored to the sensitivities of the CCM 4V and CCM 8 compact microphones (cardioid, figure-8) or the corresponding capsules MK 4V and MK 8. The built-in equalization is furthermore designed to match the CCM/ MK 8.

The input and output channels of the plug-in:

- Input 1 (L): CCM / MK 4V front (cardioid)
- Input 2 (R): CCM / MK 8 (figure-8, positive phase left)
- Input 3 (C): CCM / MK 4V rear (cardioid)
- Output 1, 2: L, R
- Output 3, 4: C, -
- Output 5, 6: LS, RS

The plug-in features the following control elements:

- "Polar pattern" of the output channels C, L/R and LS/RS. It is continuously adjustable between 0 (= figure-8) and 1 (= omni)
- "Microphone angle" between the resulting output microphones L/R and LS/RS. It is continuously adjustable between 0° and 90°
- "Rear delay" of the LS/RS channels in order to avoid localization errors. It is continuously adjustable between 0 ms and 50 ms
- "HF roll off" of the LS/RS channels to avoid localization errors—a first-order low pass of 1st order (6 dB/oct.), with continuously adjustable between 1 kHz and "off"
- "Volume" for the C, L/R, LS/RS channels—continuously adjustable between 0 dB and "off"
- "Mute" for the C, L/R, LS/RS channels
- "Presets": Enables quick recall of factory presets as well as saving and loading of user settings
- Display of the polar diagrams of the output channel: Five polar diagrams in the corresponding colors make the resulting directivity characteristics visible. You always hear what you see.
- Peak meter to control the function and the level of the three input and five output channels

One of the shortcomings of conventional M/S recording is the mutual dependency of opening angle and polar pattern: When the opening angle is varied, the polar pattern is also changed and vice versa. In the Double M/S Tool the signal processing automatically avoids this artifact; all parameters may be varied independently. This also makes the plug-in interesting for two-channel recording. Thus the diversity of coincident recording is optimally demonstrated.
Use of the plug-in is intuitive, and does not require training.

Similar tools for Double M/S

A similar third-party plug-In for Double M/S on Mac can be found at http://www.radio.uqam.ca/ambisonic/dms2five.html and a Double M/S to B-Format converter at http://www.radio.uqam.ca/ambisonic/b2x.html.

Version history

1.1	1.8.2008: First version VST Mac and RTAS Mac version
1.1	10.7.2008: VST Windows version: Minor bug fix in the input section; now compatible with Merging Pyramix
1.0	January 2007: First version VST Windows

Of course, we hope that you will be satisfied with the plug-in. Please report any possible incompatibilities and bugs that you observe.

This plug-in is given to you for free. We hope that you will enjoy it, and that it will make your work better and easier. We are happy to receive comments and proposals as we constantly want to improve our work and our products. Please read the disclaimer below.

Please remember that the plug-in works properly only with **SCHOEPS** microphones. Visit the **SCHOEPS** Web site (www.schoeps.de) for more information.

System requirements and installation

VST Windows/Mac: The VST plug-in is used in a sequencer program offering a Steinberg VST interface. The host software has to offer a multichannel VST interface such as Sequoia, Samplitude (both from v9.0), Cubase, Nuendo, Wavelab, Audio Mulch and many more.

VST is a registered trademark of
Steinberg Media Technologies GmbH

RTAS Mac: Use the RTAS installer. The installation procedures will guide you and ask for the relevant paths. This multichannel plug-in can run properly only Digidesign Pro Tools HD systems.

Credits

The plug-in was designed and developed by SCHOEPS. The VST Windows plug-in was created with the help of the IHA at the University of Applied Sciences Oldenburg/ Ostfriesland/ Wilhelmshaven; the VST and RTAS Mac plug-in was created with the help of the Institut für Musikwissenschaft/ Musikinformatik at the *HfM Hochschule für Musik* Karlsruhe.

Disclaimer

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The **SCHOEPS** Double M/S System

The **SCHOEPS** Double M/S System (find more information online on the Schoeps website) is an ideal solution for 5.0 surround as well as 2.0 stereo recording in a number of applications, including:

- ambience
- sports
- theatre
- film
- documentary
- radio drama
- etc.

It utilizes three microphones, which can be recorded on three tracks of the recorder. A full 5.0 surround signal can be decoded in several ways:

- by using the **SCHOEPS** "Double M/S Tool" plug-in
- by using the MDMS U hardware decoder, which offers optimized 4- and 5-channel decoding (representing 2 presets of the PlugIn
- by using two ordinary M/S matrices for L/R and LS/RS

SCHOEPS MDMS
Double M/S decoder box