SuperCMIT – shotgun with enhanced directivity

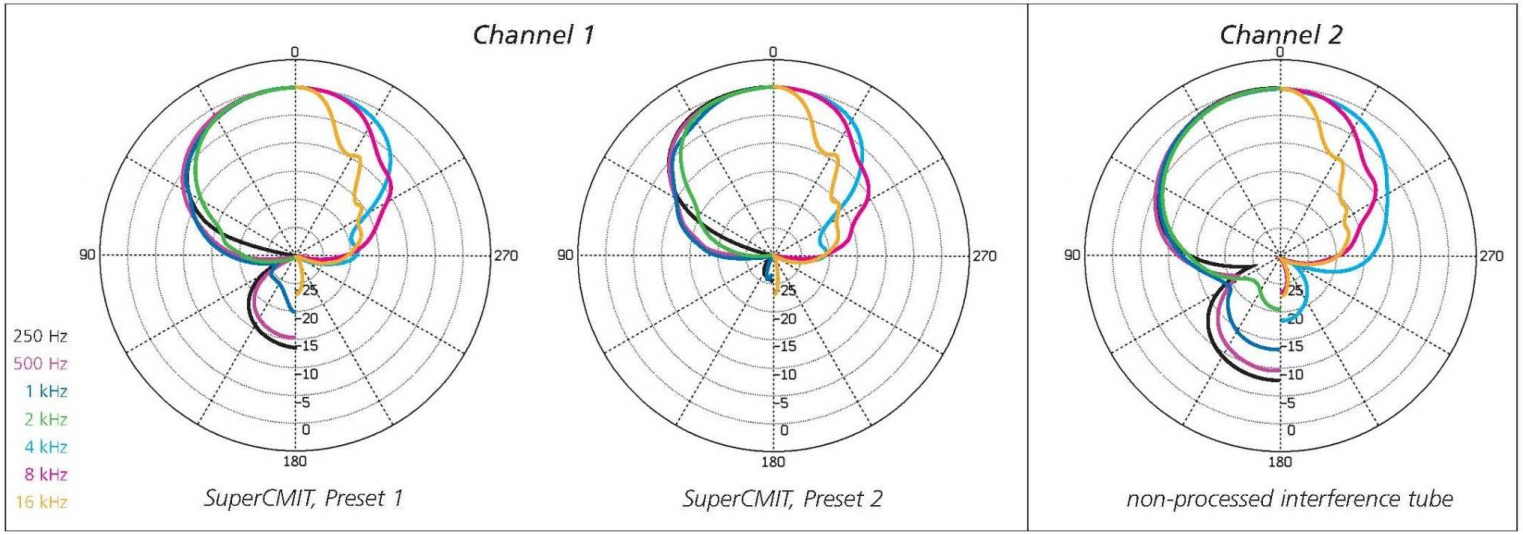
SuperCMIT - Shotgun, 21st century

SuperCMIT – shotgun with enhanced directivity

New
Microphone
Technology

Properties

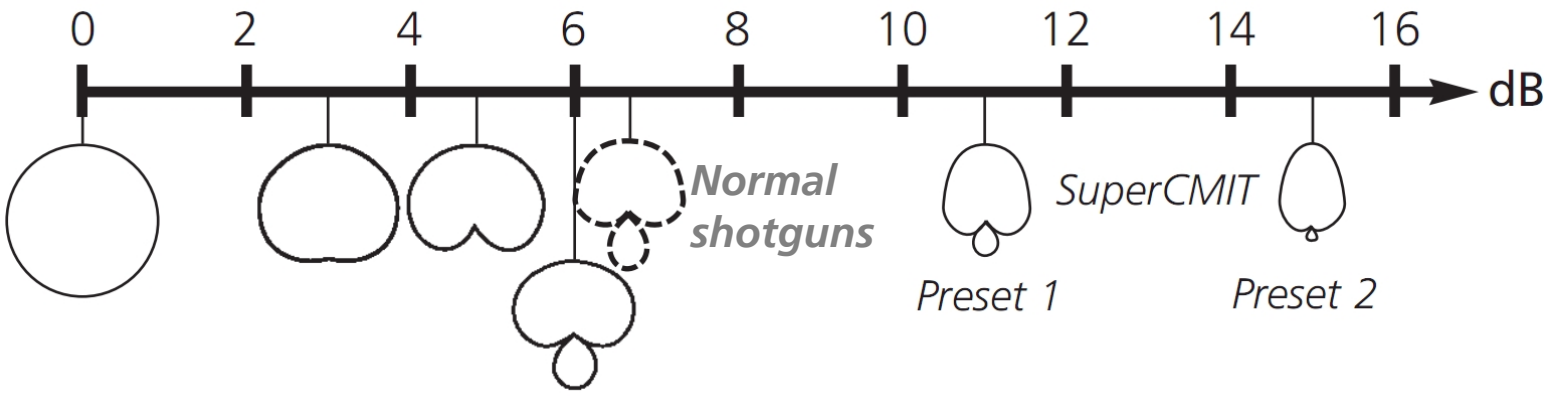
- Increased directivity through „Beamforming“
- Attenuation of diffuse sound by up to 15 dB!
- 2-channel output:
  - Conventional shotgun (ch2)
  - Beamforming, Presets 1 and 2 (ch1)



Properties

- Digital microphone (AES42, Mode 1)
  - AES42 interfaces available

- Preset 1: Moderate diffuse sound attenaution (-5dB)
- Preset 2: Extreme diffuse sound attenuation (-10dB)



Hardware and Algorithm

- A 2nd capsule (cardioid) is placed behind the shotgun capsule
- These two capsules form a back-to-back geometry for “beamforming”
- The beamforming makes the microphone more directive
- Diffuse sound is attenuated
- The algorithm works below 6 kHz, where the interference principle is not efficient

- Weight: 112 grams (4 ounces)
- Length: 280 mm

Applications

- Broadcast
  - ENG: Reporters, Interviews
  - Sports: Special sound pickup (Ball kick in soccer, boxing, basketball, skiing, tennis, etc.)

The SuperCMIT is used at the 2010 Soccer WorldCup in South Africa

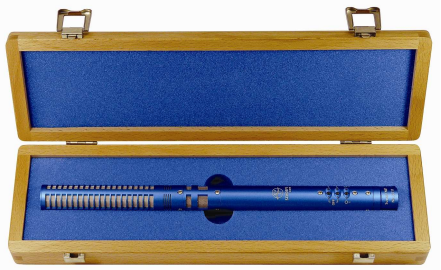
- Location sound in movies and documentaries
  - Difficult recording situations with noise or reverb
  - *The reference standard shotgun (CMIT 5) is included in the SuperCMIT on ch2 and acts as a backup!*
  - The SuperCMIT is *humidity-proof* due to the heating DSP!

- Conference, lectern, Worship audio
  - In reverberant rooms the reverb can be cut out
  - Feedback is killed, higher gain-before-feedback!
- Theatre, Opera

How to use it - 1

- 3 Pushbuttons on the microphone:
  - High-frequency boost (+5 dB at 10 kHz)
  - Steep Low-Cut (18dB/Oct)
  - 2 Presets (Preset 1 is moderate, Preset 2 is extreme in diffuse sound attenuation and recommended only for special applications)

- Available accessories (compatible with SuperCMIT and CMIT 5U)
  - Basket Windscreen with suspension (Rycote Kit 295)
  - Foam windscreen
  - Rycote Softie 18cm
  - Cinela OSIX CMIT



How to use it - 2

- Output format of the SuperCMIT
  - AES42, Mode 1. This is essentially: AES3 + 10V digital phantom power.
- You have different options of interfacing the SuperCMIT:
  - AES42 interface (e.g. SoundDevices 788T, RME DMC 842)
  - SCHOEPS PSD 2U (and subsequent AES3 input):

  - Interfacing options of the SuperCMIT:
    http://digital.schoeps.de/documents/Options-for-connecting-the-SuperCMIT.pdf

  - Sample Rate Converters:
    The SuperCMIT has to be connected to an AES3 input with Sample Rate Converters (SRC) because it runs on its own clock. SRCs are included in many standard AES3 interfaces and in above-mentioned AES42 interfaces.

  - D/A box for the SuperCMIT:
    There soon will be a special box available which will have an AES42 input for the SuperCMIT and which will output AES3 and analogue. It will also have adjustable digital gain and a headphone output.

More Information

- SCHOEPS website (www.schoeps.de; www.supercmit.com)
  - Info
  - Technical data
  - Audio Samples

- Press reviews
  - Resolution 06/2010
  - Audiomedia 07/2010

- Contact SCHOEPS!
  - mailbox@schoeps.de
  - +49-721-94320-0