Milab SRND 360

User Manual

Milab

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1. Introduction

The Milab SRND 360 is a unique surround microphone designed around three precision-matched Milab 2900 rectangular capsules, each operating in cardioid mode and positioned 120° apart in a near-coincident array.

By intelligently combining the outputs of these three capsules, the SRND 360 generates **six discrete cardioid channels**, spaced at 60° intervals. These "virtual" channels are created by summing and subtracting signals from adjacent capsules to form new, phase-coherent cardioid patterns.

This allows the SRND 360 to deliver a seamless 360° sound field from a single point, ideal for a wide range of stereo and surround applications.

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2. System Components

The Milab SRND 360 system includes the following:

- SRND 360 Microphone
- Power Unit
- 24V AC Power Adapter
- 5-pin XLR Cable
- Shockmount – custom designed by Rycote

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3. Setup and Connections

Mounting and connecting the Microphone

1. Attach the shockmount to a microphone stand.
2. Carefully insert the microphone into the shockmount and tighten the screws. Ensure that the lugs on the screws sit firmly in the lower slot of the microphone body.
3. Connect the 5-pin XLR cable to the microphone.

4. Connect the other end of the 5-pin XLR cable to the microphone input on the Power Unit.
   ⚠ **Important:** Only use the supplied SRND 360 Power Unit. Do not connect the microphone directly to other equipment.
5. Plug the 24V AC adapter into the '24 VAC' input on the Power Unit.
   ⚠ **Do not use any other power adapter.**
6. Connect the Power Unit outputs to your mixer or recorder. See configuration examples below.

Note: The SRND 360 does not require external 48V phantom power.

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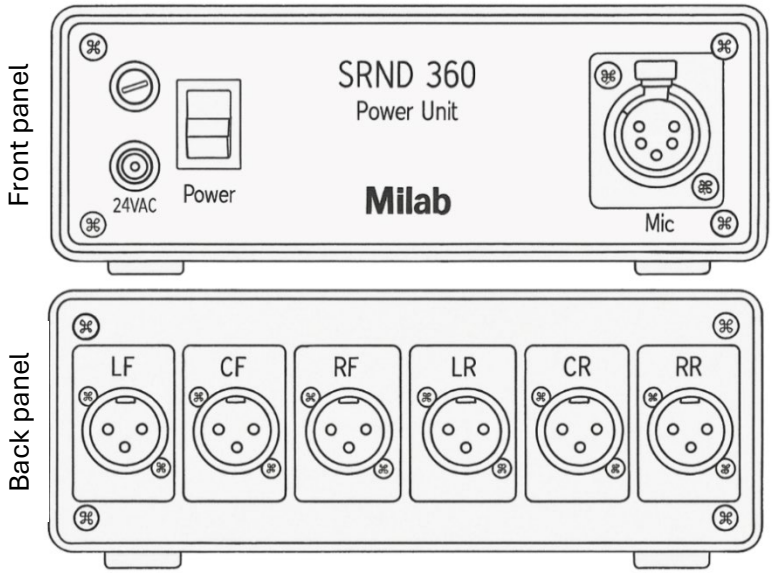
4. Power Unit



The fuse (1 A, 250 V) is positioned in the top left corner on the front panel.

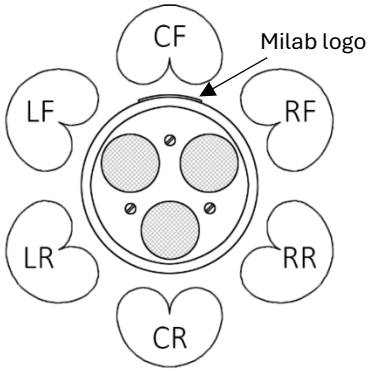
⚠ **Warning: Always disconnect the unit from the power source before replacing the fuse. Replace only with a fuse of the same type and rating (1 A, 250 V). Using an incorrect fuse may result in damage to the equipment or risk of fire.**

5. Output Channel Layout

The SRND 360 provides six individual balanced outputs, found on the back panel of the Power Unit (see section 4):

Output	Position	Capsule Type
LF	Left Front	Virtual
CF	Centre Front	Physical
RF	Right Front	Virtual
LR	Left Rear	Physical
CR	Centre Rear	Virtual
RR	Right Rear	Physical

Microphone Top View



Virtual capsules are phase-coherent signals generated by combining adjacent physical capsules.

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6. Positioning and Orientation

To ensure correct channel mapping:

- Mount the microphone **upright**, with the **Milab logo facing the sound source** or center of the performance area.
- The cable should point **downward**.
- When looking at the sound source **from behind the microphone**, LF corresponds to Left and RF to Right.
- If you mount the microphone upside-down, Left and Right will be reversed.

7. Recording Formats

Surround Recording (5.0 / 5.1)

For standard surround recording:

- LF → Left Front
- CF → Centre Front
- RF → Right Front
- LR → Left Rear
- RR → Right Rear

The **CR (Centre Rear)** output is not used in a 5.0 or 5.1 setup.
To create an LFE (Low-Frequency Effects) channel, mix one or more mic outputs and apply a low-pass filter externally.

Surround Recording (6.0 / 6.1)

Same as above, but include the **CR (Centre Rear)** output for enhanced rear center imaging.

Stereo Recording

The SRND 360 offers great flexibility in stereo configurations. Several options are possible, for instance:

Standard X/Y Stereo
Use two of the real capsules (e.g., CF and LR or CF and RR) for a coincident stereo setup with a 120° angle.

Enhanced Stereo Imaging
Combine two virtual capsules (LF and RF) for Left and Right, and optionally add some CF signal to both channels for increased center definition.

Wide Image Stereo
Use LR and RR for a wider stereo field, and mix in CF for center support.

Recording all six channels opens up virtually limitless possibilities for experimenting with stereo and surround configurations during post-production.

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8. Cleaning and storing

Disconnect the power adapter from the power unit before cleaning.

The microphone and power unit may be cleaned with a soft damp cloth. Alcohol or methylated spirits can be used to carefully clean the metal surfaces.

⚠ **Always protect the capsules and electronics when cleaning.**

When the equipment is not in use it should be stored in a dry place at room temperature. Store the microphone in its case to protect the capsules from dust and dirt.

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9. Warranty and Service

Your microphone is covered by **Milab's lifetime warranty**.

The warranty is intended to protect the customer from manufacturing and/or material defects. It does not cover careless or improper handling (intentional or unintentional) such as physical negligence, electrical overload etc.

Detailed terms and conditions apply and can be downloaded from our website. Visit www.milabmic.com/warranty for more information.

If you should experience a problem with your microphone, please contact your dealer/distributor or Milab directly for further instructions. You can also make a service request directly on our website: www.milabmic.com/service-request/

Please note that all technical service should be carried out by Milab Microphones or by a party that has been approved by Milab.

10. Troubleshooting

This guide can help you troubleshoot some issues you may encounter. If the problem persists, please contact your local dealer/distributor or Milab Microphones directly.

No sound

Possible cause	Possible solution
No power	Ensure that all cables are properly connected. Make sure that the power switch is turned on. Check power unit fuse (see section 4).
Signal path issue (Problems with mixer/preamp, cables or connectors)	Make sure that mixer/preamp is working, that the channel is unmuted, and volume is up. Ensure that the XLR cables are working and properly connected. Replace if necessary.

Distorted sound, noise, pops and/or clicks

Possible cause	Possible solution
Overloading mixer/preamp	Turn down gain on mixer/preamp
Sound pressure level is too high	Increase the distance between mic and sound source.
Popping/plosive sound when recording vocals	Use pop filter; increase the distance between mic and singer.
Air humidity too high	Reduce humidity levels or move the microphone to a location with lower humidity.
Condensation caused by sudden temperature change	Let the microphone acclimatise before use.

11. Declaration of Conformity (CE)

Milab Microphones AB declares that this device conforms to all applicable EU directives/regulations. The equipment may only be used for audio purposes and in configurations and environments approved by the manufacturer.

CE

Please contact Milab Microphones to request further documentation.

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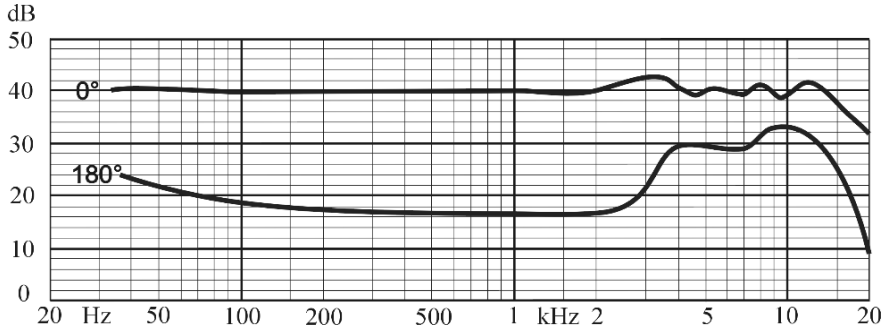
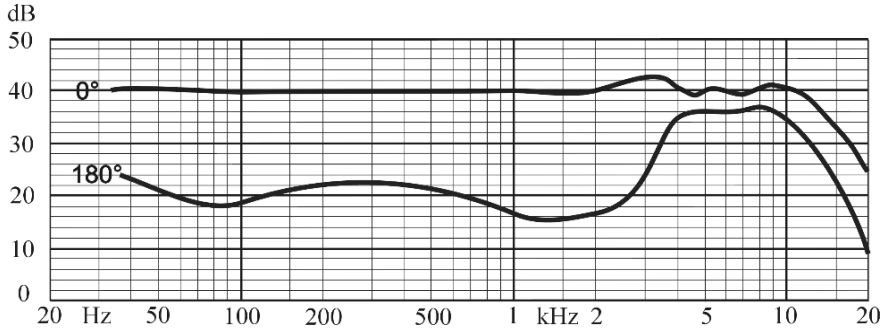
12. Specifications

Product name:	Milab SRND 360
Type:	Condenser
Article number:	1134
Frequency response:	20 to 20,000 Hz
Polar pattern:	6 x cardioids at 60° spacing
Max SPL (1 % THD at 1 kHz):	130 dB
Sensitivity at 1 kHz:	14 mV/Pa (± 1 dB)
A-weighted noise level (IEC 179-A):	12 dBA
Power supply:	From power unit
Output impedance:	<200 Ω
Minimum load impedance:	1 kΩ
Connection:	6 x 3-pin XLR
Microphone cable length:	10 m or customer specified
Microphone length:	120 mm
Microphone diameter:	60 mm
Microphone net weight:	685 g
Power unit length:	165 mm
Power unit width:	165 mm
Power unit height:	55 mm
Power unit net weight:	845 g

Frequency response at 1 m (physical capsules):

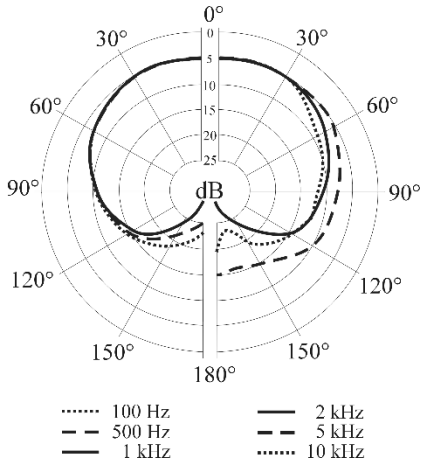


Frequency response at 1 m (virtual capsules):

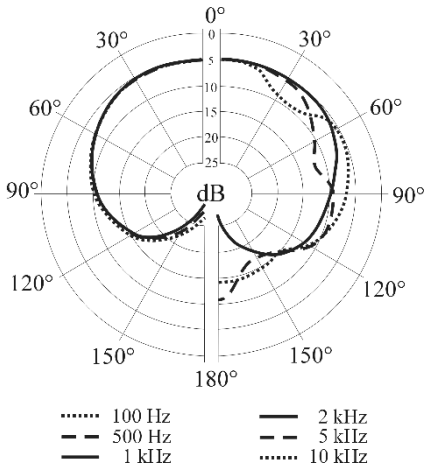


Polar diagram:

Physical capsules



Virtual capsules



13. Environment

This product must be disposed of in accordance with local applicable regulations for electrical and electronic equipment.

14. Legal Notice/User Agreement

Milab Microphones AB assumes no liability for damages, direct or consequential, which may result from the use of the supplied product. Under no circumstances and under no legal theory, tort, contract, or otherwise, shall Milab Microphones be held liable to you or any other person for any indirect, special, incidental, or consequential damages of any kind, including, without limitation, damages for loss of goodwill, work stoppage, computer or equipment failure or malfunction, or any and all other commercial damages or losses. This limitation of liability shall not apply to liability for death or personal injury to the extent applicable law prohibits such limitation.

This User Agreement shall be exclusively subject to the laws of Sweden.

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15. Contact Information

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