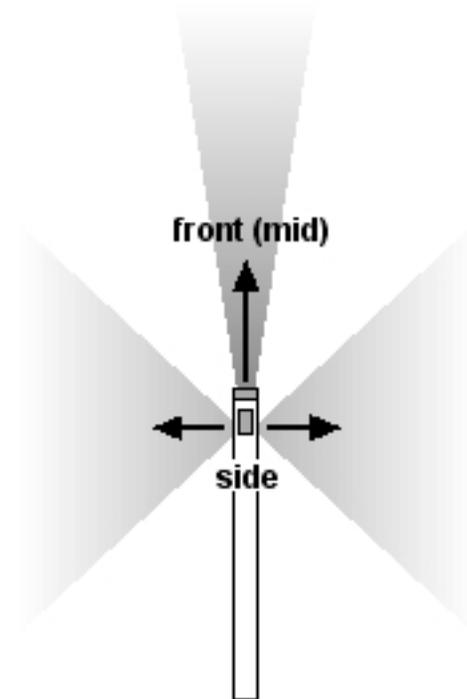


# USING THE SENNHEISER MKH 418S STEREO MICROPHONE

The Sennheiser MKH 418S is a stereo version of the MKH 416. It is an M-S (Mid - Side) stereo microphone. It is actually two microphones in one housing -- a directional mic (mid) picking up sounds from the front and a bi-directional mic (side) picking up sounds from the left and right sides.



The output of the 418S is two signals -- the Mid and the Side. As such they are NOT normal Left - Right stereo, but can be turned into L-R stereo with a special "matrix" circuit. The 418S is intended to be used with the Sound Devices hard disk recorders (722 and 744T) which have the M-S matrix circuit built in. **No other Cage equipment has this circuit.**

There are times and situations to record in stereo, and times and situations NOT to record in stereo. These are detailed on pages 2 and 3. On pages 4 and 5 are instructions about menu settings for the Sound Devices recorders for the different applications.

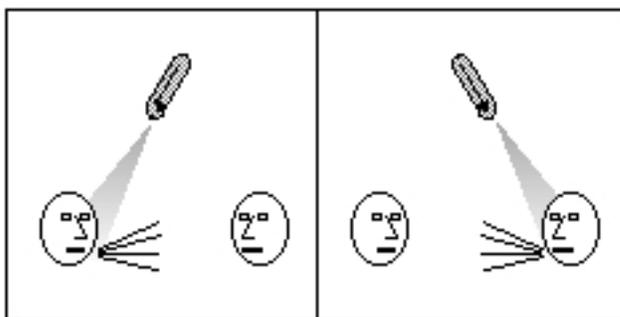
# MONO APPLICATIONS

## RECORDING DIALOGUE

Use the 418S exactly as you would use any other shotgun, and record only the MID. **DON'T RECORD DIALOGUE IN STEREO!** Really, don't. It's been tried and rejected, because it creates many more problems than it solves.

moving mic  
in mono

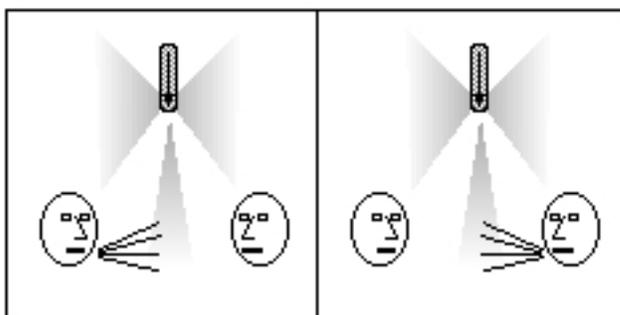
**YES**



Use the MID  
signal only.

stationary mic  
in stereo

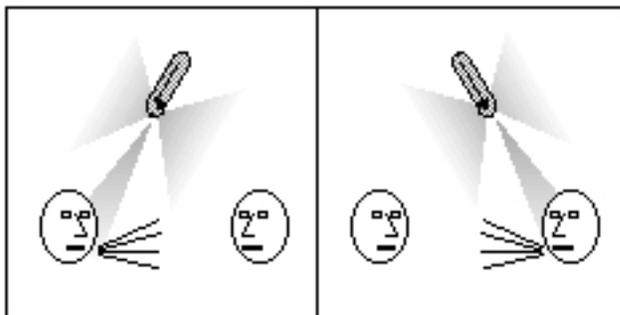
**NO**



The "sweet spot"  
of the mic isn't aimed at  
anyone.

moving mic  
in stereo

**NO**



The "sweet spot" is  
aimed at whoever is  
speaking, BUT the  
background will be  
heard moving.

## RECORDING STATIONARY SOUND EFFECTS

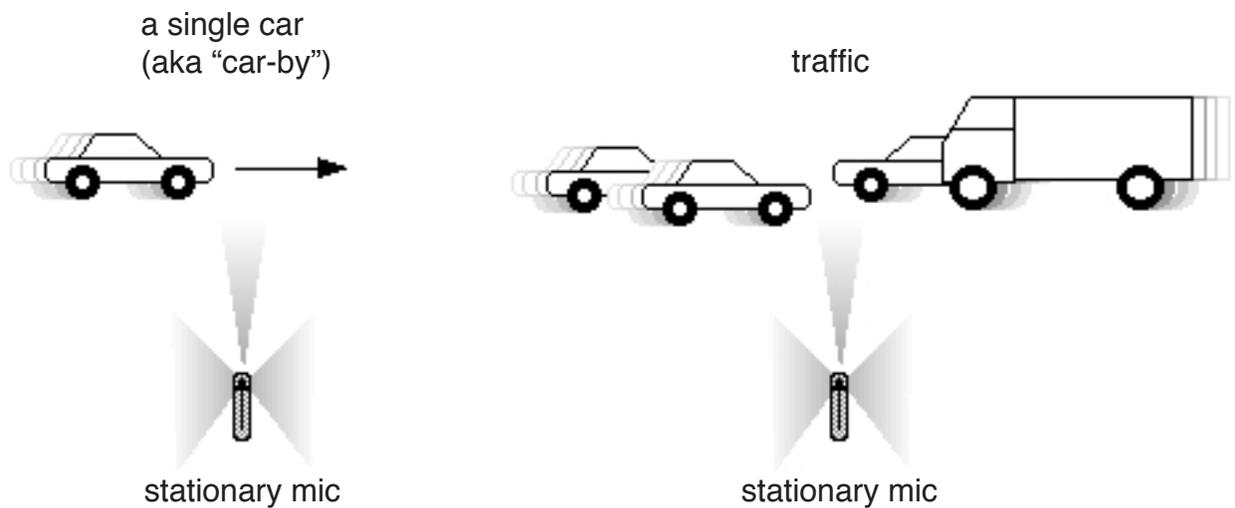
Specific sounds that are (usually) connected to something happening on the screen (e.g. door slam, toast popping up, hammer hitting nail, car starting, etc.) are best recorded in mono. Record them with the mic held or clamped in position, and in mono, using the MID signal only. It's preferable to use a less directional mic -- cardioids are very good for effects recording -- but the MID capsule of the 418S is useable.

# STEREO APPLICATIONS

## RECORDING MOVING SOUND EFFECTS

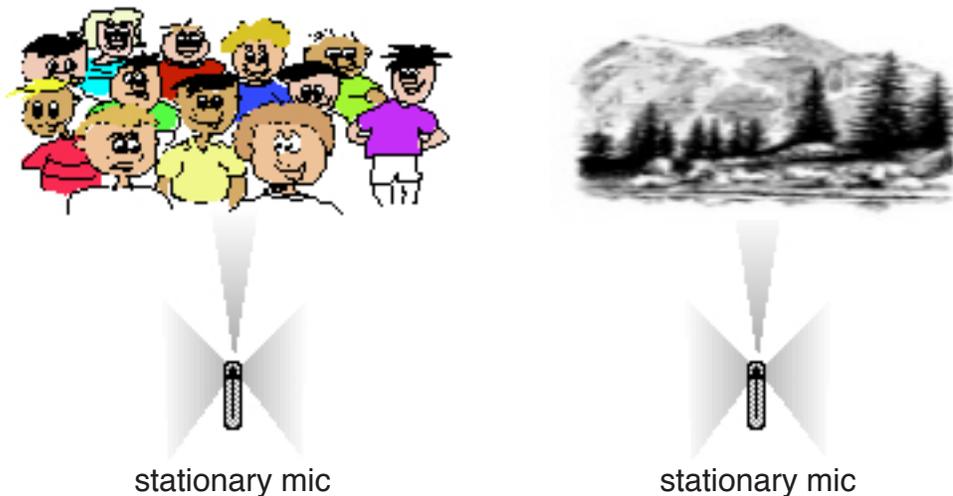
Very specific sounds -- and backgrounds -- that have movement should be recorded in stereo.

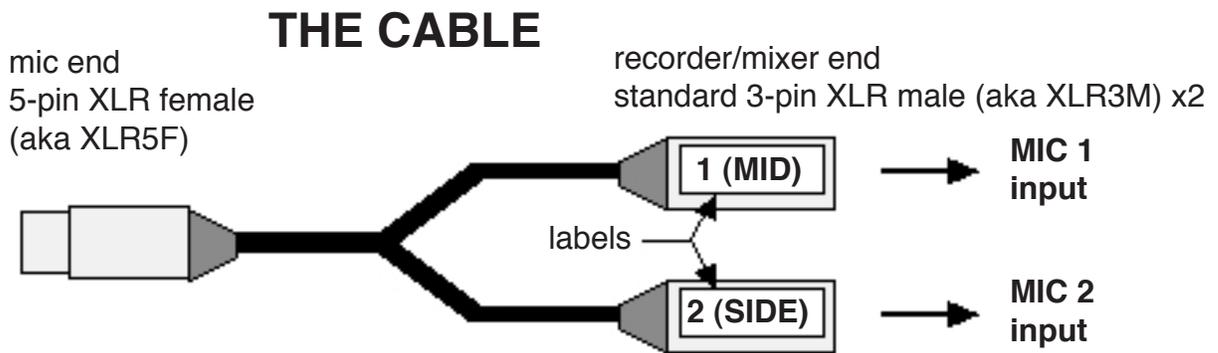
Keep the mic stationary as the moving object passes. If possible use a tripod or mic stand. *Panning the mic to follow the object* will defeat the purpose of recording in stereo.



## RECORDING BACKGROUNDS and AMBIENCES

This is the most common use for a stereo mic. Use a tripod or mic stand. Step away while recording and avoid making any noise.





The cable that comes with the 418S is pretty much a no-brainer, except that you **MUST** plug the 3-pin XLR labeled **1 (MID)** into the **MIC 1 input**, and the one labeled **2 (SIDE)** into the **MIC 2 input** of a **Sound Devices 722 or 744T**. **THIS IS VERY IMPORTANT.**

Even if you're recording mono (MID only), plug both XLRs into the recorder so you don't have a cable end just dangling.

## RECORDER SET-UP AND SETTINGS

**NOTE:** *These instructions assume that you are familiar with the operation of the Sound Devices 722 and 744T. If necessary, refer to the PDF hand-outs "722 Quick Start" and 744T Quick Start."*

**NOTE:** *Menu numbers on the 722 or 744T may differ from those used here. This is because Sound Devices issues frequent firmware updates, often including menu revisions. Even if the number differs, the name will be correct.*

### MONO RECORDING (MID ONLY)

Make sure that INPUT 1 is set to MIC.

Turn INPUT 1 48V phantom power ON. **18) Input 1: 48V Phantom** (menu)

Set Input-to-Track routing to 1 -> A

	1	2
A	☀	●
B	●	●

Set Headphone Source to 1 (or A) **1** (main display)

You are now ready to record.

# STEREO RECORDING (MID-SIDE)

Make sure that INPUT 1 and INPUT 2 are set to MIC.

Turn INPUT 1 and INPUT 2 phantom power ON. 18) Input 1: 48V Phantom (menu)  
19) Input 2: 48V Phantom

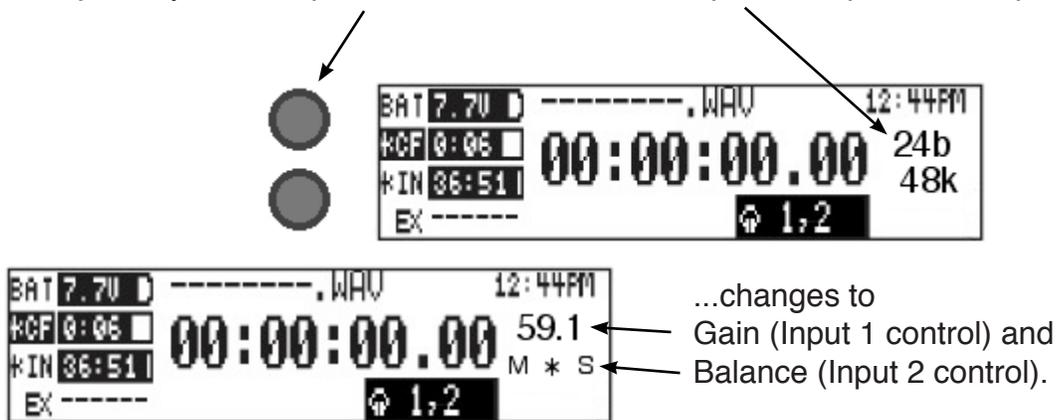
Set Input-to-Track routing to 1 --> A and 2 --> B 1 2  
A ● ●  
B ● ● Set Headphone Source to 1,2 (or A,B) 1,2

Set Input 1,2: Linking, MS to Linked 1/2 and MS

29) Input 1,2: Linking, MS  select → Input 1,2 Gain Controls  
 Unlinked  
 Linked 1,2  
 > Linked 1,2 and M/S <  select

Input 1 and 2 Gain controls are now “linked.” This means that the Input 1 knob controls the level of both Input 1 and Input 2, and the Input 2 knob controls the balance between them. Selecting M/S activates the matrix circuit, sending normal L and R to your tracks.

Now when you adjust the Input Gain controls, the Bit-Depth / Sample Rate display...



A moving bar shows the balance.

<b>M</b>	<b>S</b>	all Mid
<b>M</b>	<b>S</b>	mostly Mid, some Side
<b>M</b>	<b>S</b>	mostly Side, some Mid
<b>M</b>	<b>S</b>	all Side
<b>M</b> *	<b>S</b>	equal Mid and Side

Start with the balance equal. Because of the high directionality of the Mid mic, you may want to balance slightly (or not so slightly) in favor of the Side mic in order to achieve a natural-sounding stereo. You are now ready to record.