

2L Prism - Morten Lindberg



Morten Lindberg has been nominated for 37 Grammys and won one. For the famous ECHO project he brought the 2L Prism into the studio. It's kind of an extension to his world wide rewarded 2L Cube.

The 2L Prism consists exclusively of omnidirectional microphones. This ensures a very homogeneous and transparent sound image and also delivers a very natural bass reproduction.

Please read these instructions very carefully and note that we are operating at the maximum load capacity of the equipment. You can set up the array on your own, but it is easier and simpler to do so with two people.

Today we're not starting with the red ball on a stand, but with a kind of bridge



We recommend to adjust the height of the stands to a convenient height. Then we screw two 50 cm rods into the red ball into opposite threads.

At the end of the rods, we screw in a 3/8" male/male thread adapter and a cube. Then we screw in a stand into the down-side of the cubes. Now your setup should look like this.

In the background you already see the prepared rods, we are going to use in a minute.

This „module“ is key for the next step.

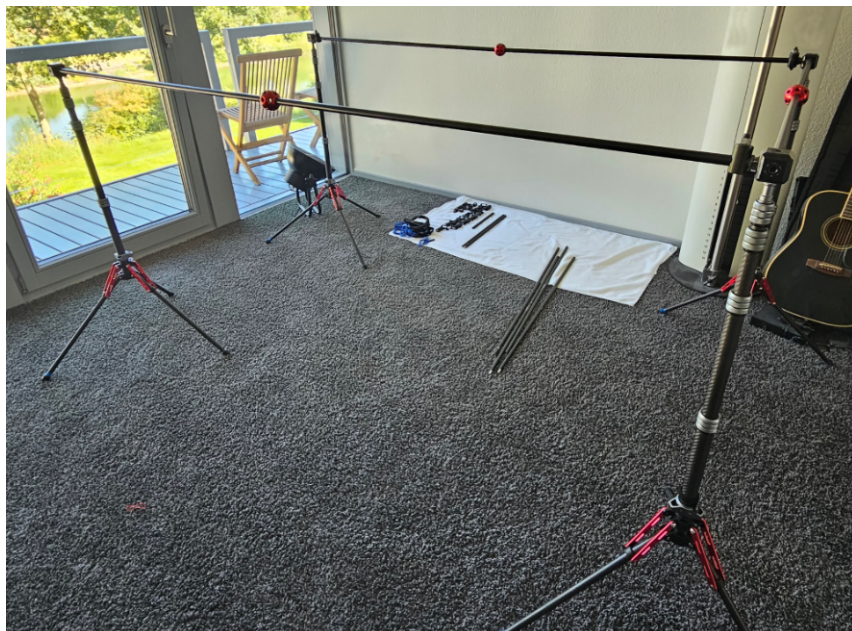
You screw two 96 cm rods into a red ball or cube. On the one end you should fix a rapid adapter and a 3/8" male/male thread adapter (here the upper end).

This is VERY important, as you can't fix it afterwards without unscrewing half of the array.

On the lower end you screw a 3/8" male/male thread adapter into the lower end and apply a cube to it.

Prepare two more stands and adjust them about the same height as the ones of the bridge.





Now, screw the end with the rapid adapter into the bridge cubes. Be careful not to let this long pipe slip out of your hands. Having another pair of hands here would be very helpful.

Once you screwed in the additional stands, we are ready to setup rods for the heights.

We use two 50 cm rods screwed into each other. On the upper end we also screw in a 3/8" male/male thread adapter and a microphone clamp.

Depending on the size of your microphones, it is helpful to position the microphone clamps with the longer end pointing toward the back of the array.

Before screwing the rods into the cubes at each corner, apply two nylon strings (~2.5 m or ~8 ft.) to the top of the rods. You'll need these to stabilize the rods a little later.

Now it's time to screw in these rods and apply the microphones to it. You may also apply the microphone cable extensions, if you like, but you can also do this later.

We also screwed in the 26 cm rod for the center microphone, added a 3/8" male/male thread adapter and a microphone clamp. Unfortunately these parts are not on the picture.



We use a neat trick here. In the middle of the horizontal rods, we screw in a silver 3/8" male/female adapter to fasten one nylon string of the height rods.

The other nylon string is wrapped around the 3/8" male/male thread adapter of the microphone clamp for the "Lss" or "Rss" microphone.

You can also wrap the string around the rod, but that is much more of a hassle.

Now all microphones will be applied if not already done.



The microphone clamps for the left and right microphones have been applied. Please note that the longer end of each clamp points backwards.

The clamps are slightly turned inward. This positions the microphones on the inner side of the height rods so that they don't touch them and you can mount the microphones as close to the „line“ of the rods of the bridge.

This little trick brings the microphones in a distance of 1 m to each other.

As shown, we screw in another 50 cm rod on the back of the array and apply two rapid adapters and a microphone clamp. The longer end of the clamp points backwards.

This unit is also turned slightly inward, as was done with the front microphones.

On the end of these rods we fix the other rapid adapter with a distance of some centimeters from the end.



This little trick provides significant stabilization to the array. It secures the height rods in place, stabilizes the back of the entire array, and helps keep the horizontal rods horizontal. As a result, the entire array becomes more stable and less prone to wobbling.

Of course, it will work without this. However, once you use wind protection, the end of the array will start to wave quickly and easily. Therefore, it's always worth the extra weight and effort to set it up.



Here you can see the entire array in all its glory. All the cables are connected, including the four-channel splitters (or multicores) and the single microphone cable for the center microphone.

A word about the nylon cords:

You should tighten them, but not too tightly. Their main purpose is to stabilize the entire array and keep everything in place. They act more like dampers than additional mounts. It takes a little practice to get the tension on the nylon cords just right.

That's why you should practice this setup a bit before making your first recordings or going into the fields with it.

It's important that none of the rods are bent by the tension of the nylon cords. If you see that happening, they're too tight.

This array could be recorded using an eight-track and a four-track. Make sure they are in sync and stay in sync throughout the entire recording.

We highly recommend using recorders that are not only timed but also synced by a word clock. This array is sensitive to small changes in size and distance between the microphones, as well as their position in the room. Therefore, it's no surprise that you should avoid unstable synchronization.

If you take care of these additional details, we are confident that you will experience a new way of hearing once you hear your recordings in post.



This is the whole gear needed to setup this nice array. And believe it or not, it fits in to the big bagback.

Be careful, when you pick it up. It weighs about 26 kg or 58 lbs.



Now it's time to bring this array to your favorite venues and record amazing sounds.



This tutorial is provided by the ambisonic.studio team.
It is free of charge and provided „as is“. There is no warranty or guarantee, no nothing.
You use it completely at your **own** risk.

We would love to hear your feedback and ideas on how to improve things.

