

Corey / Martin Tree



This setup has been published quite a while ago by Jason Corey and Geoff Martin in 1999.

We rebuilt the „Corey/Martin Tree“ using commonly available gear and more affordable microphones. Everything fits into a larger backpack and the total weight, including recorders, batteries, cables and tools, is less than 15 kg.

Although it is intended for 5.1 usage only, it still shows the possibilities and offers a lot of possibilities to learn.



This is what the "Corey/Martin Tree" will look like once the mechanical part is finished.

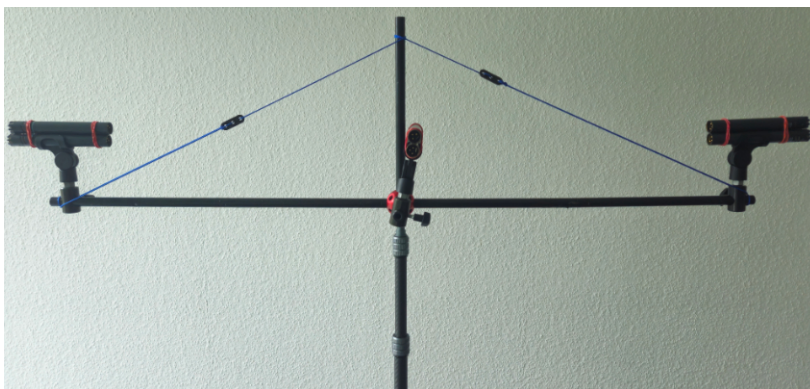
Now, let's take a closer look at the individual parts.

Since wide-cardioids are difficult to obtain without spending a lot of money, we used the same "trick" that Jason and Geoff used back in 1999: We combined an omnidirectional microphone and a cardioid microphone. The great advantage is that you can adjust the width of the wide cardioid in post by changing the relationship between the omnidirectional and cardioid microphones.

In the center position, the wide cardioid is on the same line as the left and right wide cardioids. Therefore, it must be mounted slightly backwards on either side of the middle rod where the blue string is attached.

This string holds the left and right microphones in place and prevents them from moving.

For this setup, we chose the following distances: L–C: 60 cm; C–R: 60 cm; Center: 0 cm; Front–Rear: 90 cm. The distance between the two cardioid microphones in the back is 30 cm, as suggested by Corey/Martin.



This is the basic setup. It starts with the red ball and two 26 cm rods for the left and right pairs of microphones.

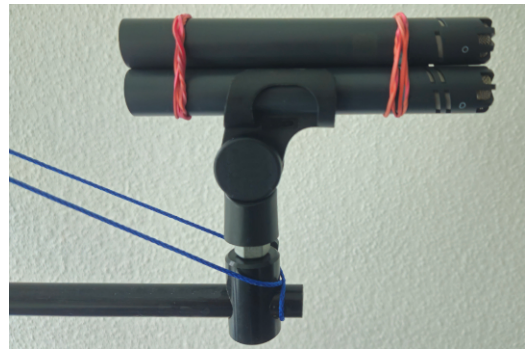
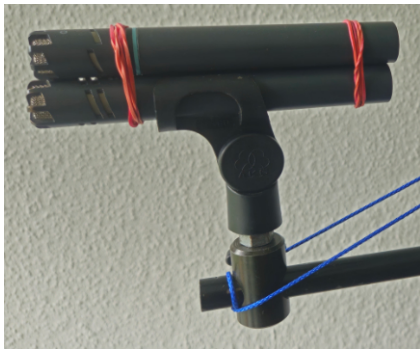
The blue nylon string is 2 meters long (~ 6 ft) and has rent open tensioners to fix the string firmly.

As you can see on the next picture, the 8 cm rod is mounted on the „inside“ of the array to make it possible to fix the center pair of microphones on the same line as the left and right ones.



You may wonder why we use the red rubber bands to fix the microphones. The main reason is, they were at hand when we thought about how to fix the two microphones above each other. Then they are very cheap and almost everywhere available. You may use clips with Valcro also, but this is more difficult to fix then just two pairs of rubber bands.

A better solution is in the making, but not ready yet.



These are close looks of the „wide-cardioid“ pairs of microphones.



Next step is to prepare the other stand and bring it to the same height as the other one.

Srew a thread male/male 3/8" adapter and thread cube to a combination of a 26 cm and a 50 cm rod.

Then screw it all to the 8 cm rod on which the center pair of microphone resides.

Now turn the cube into a position so you can screw the stand into it.

After this you screw two pairs of 8 cm rods into each side (left and right), add a rapid adapter and a microphone clamp and bring it into a position so the microphones are pointing straight upwards.



Fix their positions, so each of them is 15 cm away from the middle and the microphones have a distance of 30 cm (~ 1 ft.) to each other.

This setup can be considered as an regular AB stereo setup. With a basis of 30 cm, it provides a SRA of 180°. This covers the height and rejects sounds from the ground pretty well.

You should make the heights of the front pairs and these microphones about the same.



Great! Now we add the cables to this tree.

Because we have eight microphones, we will need to set of our preferred 4-channel multicores.

We chose to connect the left and right pair to on 4-channel multicore system and the front and back pairs of microphones to the other.
You may change this to your on discretion; it doesn't matter.
Of course you can use seperate microphone cables as well. Use what ever float your boat.



The colors are an optical support once you connect the male connectors of the splitter to your recorder. Chose how ever you like it. It doesn't matter.

Now it's time to connect the multicore cables, check if everything is connected as expected and then hit „record“ and make some awesome recordings.



In the picture up above you see all the parts we used to build the Curey / Martin tree.

The wind protection isn't the best and causes some issues. If you have a better idea, we would love to hear from you.

We are working already on a better solution. Once we are done, we will update this tutorial.

It was not easy to pack it all into the smaller backpack, but it worked!

Including all gear shown and the backpack, the total weight is 11,5 kg (~ 26 lbs.) This isn't nothing, but one could carry this for quite a distance.

Would love to hear your recordings and learn from the experiences you made.

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.

