

SUMIKO “IRON CHEF” SPEAKER SETUP PROTOCOL

This protocol was presented to me by John Hunter the owner of Sumiko. They are USA distributors for SME, Sumiko, Sonus Faber, Vienna Acoustics, REL and others. This is the best room set up tool I have ever used.

The most critical part is getting the speaker rake angle adjusted after you have them finally situated. So I hope your speakers have spikes. You will need them to set the rake angle.

If you have no spikes, you can get door shims at Home Depot or Lowes. These are wedges used to hang the door frames to the studs surrounding the doors. There will be people to help you find these shims. They are inexpensive and you can use them to figure the angle you need, and then find something more in tune with your decor to provide the final angle.

So here is the Iron Chef Speaker Set Up Protocol

Proper speaker set up requires music. John Hunter of Sumiko uses a Rob Wasserman song featuring Jennifer Warnes called "Ballad of the Runaway Horse". You will find this on his "Duets" cd and his "Trio" CD as well. This is the best set up song I have ever found. So get a copy of this. You will always be glad you did. Another tool I like to use for fine tuning the speakers is Bob Chesky's Jazz Sampler Number 1. Cuts 10 and above really help you nail it down solid.

Step 1 will be to remove whatever removable sound absorbers you have. Take them out of the room. Anything that is permanently fixed and all your furniture and stuff are ok to leave alone.

Step 2 recommends you either remove the speaker stand spikes to make moving the speakers easier, or at least level all the spikes so the speaker is completely level. If you own heavy speakers you are probably better off adjusting the speakers with the spikes in place and set level.

Step 3 is to establish your listening seat. Optimally you will set up the speakers and your listening seat in the shape of a triangle. I like my speakers at least 8-12 ft apart and the listening seat 12-15 ft back. When properly set up, the speaker will be out at least 18" from the rear boundary wall. Your listening seat likewise should be at least 24 inches from a back boundary.

Step 4 places both left and right speakers directly against their wall facing straight out into the room. No inward "toe in" angle should be attempted yet.

The left speaker is going to become the anchor for the set up.

Step 5 gets you grooving. Now you can begin playing the "Ballad". What makes this song so effective for set up is that the plucked string bass is at realistic volume at realistic timber. So the goal is to get the bass properly coupled to the room and the drivers.

Play this track at volumes where you can easily detect bass quality. I am usually between 80-95 db when I do a set up. Sometimes you will need to crank it up a bit. Just make sure it is loud enough to fully engage the room.

Step 6 involves a buddy. Have your buddy slide your left speaker (the anchor) out into the room until the bass becomes solid and authoritative. Mark this spot with some masking tape.

Now slide the speaker right and left to find the best bass quality. Mark this spot.

Now slide the speaker further out in the room to find other points where the bass couples properly in your room. There are likely to be a dozen spots within a 3 ft diameter of your first spot. Be patient. 1/3 of an inch is all that differentiates a good bass quality from a lifeless bass sound.

Listen to all of these good bass points until you find your favorite bass spot.

All this is done with just the left speaker playing straight out. The right speaker is playing straight into the room from the back wall. Each speaker playing at the same volume.

Step 7 establishes the “toe in” angle of your left speaker toward your listening seat. You want the widest possible sound stage without the sound being too thin. I usually end up seeing about 2/3 of the inside wall of the speaker when I have this about right. Do not toe in excessively, you will just ruin your sound stage. A little dab will do you! If the toe in is right, the sound will be very natural, if it is too wide the sound will be thin, and with too much the sound will seem to come from two speakers not from the space in between.

Your anchor is now set. Mark this spot carefully with masking tape.

Step 8 requires reinsertion of the left speaker's spikes leaving the speaker level at this time.

Step 9 is to set up the right speaker position. Simply slide or move the right speaker out into the room. Move it slowly listening for the sound stage to line up equally before you. By this I mean a stage is flat in front of you. The sound stage should not sound tilted, like one speaker sounding closer to you than the other. Remember to keep the speaker oriented directly straight ahead. No angle yet.

Step 10 involves moving the speaker right and left until you hear the soundstage become cohesive, and Jennifer should sound like she is right dab in the middle.

Step 11 Then toe in the angle the speaker very slightly until you hear Jennifer Warnes voice become a “body” centered in the sound field. You will hear the sound congeal nicely at this time. Things are really beginning to sound better now.

You should now have accomplished sound coupling of the speakers to your room boundaries. To test if this is the case, you should be able to stand directly over either speaker and clearly hear the other speaker.

It may be necessary to make very minor angle adjustments of the right speaker to get her voice centered. Be patient and you will be rewarded.

Now if the sound stage is not linear, meaning one speaker sounds more forward than the other, then simply slide that right speaker front or back until the sound field is "level." (Moving it right or left adjusts the centering of Jennifer Warnes voice).

Make sure you mark the final location of both speakers with masking tape.

Insert the right speaker spikes.

Step 12 begins with adjustments to the rake angle of the left speaker. You accomplish this by adjusting the spikes to get the speaker level across the front, and raked back to get the beam of the tweeter firing above your ears. You need to listen to the quality of Jennifer Warnes voice. She should appear to be ear level or slightly above ear level in the sound field. This is a personal choice. Many of my friends prefer ear level because it is a slightly fuller sound. I prefer a little above ear level cause I like the voice to sound ultra natural, like a live musical event.

Carefully listen to the tweeter response of the left speaker and make sure that the "beam" is at least an inch or two above your ear when you are seated in your listening seat.

Step 13 begins by adjusting the spikes on your right speaker to match the "height" of the left speaker.

At this time, you should hear her voice almost as a whisper, when originally it may have sounded shrill and harsh. Her voice should be centered in the sound field now, with solid and good quality bass.

Step 14 suggests you take measurements of the speaker location to the walls. Take digital photos. Someone will mess with your set up some time. You need to have these so you don't have to repeat the process unnecessarily. When you have this locked in, don't let anybody touch your set up!

I like to follow up the set-up with some confirmation tests. I prefer the Bob Chesky Jazz Sampler 1 CD. On cut 10 the speaker starts out 2 ft from the microphone in center stage. Then he moves midway right, full right, and off-stage right. He then repeats this on the left. Simply slide your right speaker right or left to get the sound staging perfect. Then use cut 11 which is "Over", "Lateral", "Under" and "Up" to verify your rake angles.

Your friends will be amazed. Just two CD's let you make the magic. Rob Wasserman's Duo or Trio CD, and Bob Chesky's Jazz Sampler 1.

Step 15 bring back any sound absorbers and reflectors to see if you can improve upon the sound. But don't touch the speaker's location.

What you have done, in short, is to couple the speaker's response to your room based upon your listening seat.

This process will take me 20-30 minutes or longer. On your first dozen set ups it may take longer.

Let me know if you have any questions about this process. I can do this all alone. Having a buddy slide your speaker is much faster and easier. If you have hard floors instead of carpet, you can set the speaker on a soft towel to assist in the sliding.

Make sure your buddy stands behind the speaker when he/she moves it, because their body will affect the sound if they stand along side of the speaker.