

# Here's How to Make the Most of Your New Djammincabs Maxxx 4x12 Impulse Responses

(Tactical Munitions Manual)

Thanks so much for adding **Djammincabs Maxxx 4x12** to your IR arsenal. I'll assume you already know what an impulse response (IR) is or you wouldn't have volunteered for this mission. But for simplicity sake it is a type of comb filter used as an EQ placeholder. In this case these files imitate the sound of different guitar cabinets (over sized, angled, and flat) with each containing four 12-inch speakers. Everything presented in this **Djammincabs Maxxx 4x12** IR collection is based on the popular and venerable 4x12 guitar cabinet. Each IR is recorded in beautiful 24-bit 48K mono. And by using these cabinet IRs you are helping to save our earth; no trees were injured or killed in their manufacture.

## HOW THE CABS ARE DIVIDED

These files are basically divided into two parts: #1. close and #2. far sounding impulse responses. The dividing point is cabinet #450, with IRs beyond this point not using close microphone EQ impressions. So the folder contains 450 variations of close and 601 variations of far and specialized (inside cab) IRs for a total of 1051. The first 450 impulse responses use sonic variations of close microphone techniques (finger length or less) such as speaker cone (dome), speaker edge, and angled positions. This cab recording style tends to have more crispness, less bass, slightly less apparent dynamics, and almost no room or ambient sound. For the person who prefers a more in-your-face cab sound many of these are perfect. All IRs after #450 are variations on distant microphone technique sounds. These run from mic-inside-the-cab, to arm away from cabinet (roughly 3 feet or one meter), to somewhere behind the cabinet, to somewhere across the room from the cabinet. (NOTE: The inside-the-cabinet sounds are emulations of the old days when the cabinet handle was removed with a screwdriver and a microphone was placed inside producing a more phase-canceled hollow sound.) As these sonic impressions change so does the apparent phasing and EQ of the recorded sound. So a single cabinet with four 30 watt speakers can sound many different ways depending on microphone type and placement. And different cabs with different speakers add more variations, so the basic EQ curve changes are exponential. The devil with mixing two or more guitar cab IRs in stereo in a studio recording situation is phasing; always check your mix in mono (or better yet use a phase meter like the **InPhase** by Waves, the SSL Native X-Phase, the **FLUX Evo**, Melda Auto Align, Sound Radix Auto-Align, or the Voxengo PHA 979) to see if there are problems where the guitar seems to disappear or become thin and mosquito sounding (think

flanger). Add the cabs one at a time (unless your meter allows for more) and always check for phase cancellation. Then add the very small amount of delay needed to correct the problem(s). A phase meter is indispensable for using multiple cab IRs, so get one if you don't have one handy in your DAW (digital audio workstation). Any time multiple samples are used for the same sound source there will be phasing issues. That's just a fact of life so don't be misled. I'll mention this phase issue again and again because it is very important. Although most modern playback systems don't have issues with phasing, if your recorded music ever makes it to pressed vinyl then you will be glad you corrected it. There are some convolvers that claim to repair this common problem (especially if you purchase their expensive IRs), but doing it yourself can be an added guarantee of sound consonance and drive. And it makes your guitar sound precise, professional, and personalized. The price paid for a good phase meter will pay for itself several times over, especially if you use a real drummer using multiple microphones... you'll need a phase meter there too. After all, doing the work is still about your sound. And if you are more of an organic do-it-yourself guitar tone type, going the extra step is well worth it. From here on it's all about making sounds.

**Disclaimer: The following delay measurements for proper cabinet phase alignment are approximations. Not all studio recording gear is the same nor is the amplifier, or pedals used, and so on. Although these measurements were dead on exact in my recording studio does not mean they will work exactly the same way in yours. It's just another reason to use a phase meter in your IR mixing adventures. Having said that,...**

## **LET THE CREATIVE JUICES BEGIN!**

**MY HEAD HURTS. THERE'S JUST TOO MANY IR CHOICES.**

**WHERE DO I START?**

**SUGGESTED DJAMMINCABS MAXXX 4x12 COMBINATIONS**

Here's a few cab IR sounds to get you going and to use as a starting place to begin building your own. You'll need a convolver, a digital delay (or a convolver that can add delay in very fine increments), and a phase meter helps too.

And as you'll see, the sound choices go on and on and on and...

## **SINGLE CABINET SUGGESTIONS (mono mix)**

Cabinet you'll need: choose any one. If it has to sound in-your-face then choose one of the cabs from the first 450 IRs of the collection. This selection is not written in stone because some people prefer more room or ambiance, so choose what fits your situation, but I would suggest beginning with the first 450. If you prefer a little more room sound then choose a cab from the second part of the collection. Simply choose your preferred cab sound and that's it – simplicity. There is no real right or wrong way to use them in a mono situation. I wouldn't suggest choosing an inside-the-cabinet or back of room type of sound, but you are the final judge. If the sound needs more high end (a common complaint) there are two ways to do it: outboard EQ (**Scheps 73** by Waves is excellent for this), or better yet, use the presence and treble knobs on your amp. Like all music, it involves using your ears and your best judgment.

## **MIXED SINGLE CABINET SUGGESTIONS (mono mix)**

Here's where guitar cabinet sounds start to become complex and interesting but more time consuming. Although there's nothing wrong with choosing just one IR, some people add two or more of them together in mono for a deeper sound or more complex driving type of cab sound. A simple variation would be to choose a cab from the second part of the collection for cab body and depth. Once this is chosen slowly add in a close cab sound you like (from the first 450 cabs) which adds sparkle and definition and voila, you have a more interesting mono cabinet sound. This is a great way to invent your own complex personalized cab sound, and we all want that. As long as the mixing of the cabinets is in mono there are no phase problems when recording. For extreme perfection in consonance, though, you'll still have to use your phase meter. It's like that for all IRs ever made in the history of the world. Using the phase meter will help produce a more stable and forceful sounding mono sound. However, in the case of mono all that is really needed is your ear – if it sounds good it is good. Try experimenting with a tiny delay (3-20 ms) to give the sound more depth and drive. Another method consists of using two cabs that sound similar and then adjust them so aspects of the EQ don't become overbearing or obnoxious. If two or more cabs are summed to mono and they sound good mixed together they are good. Phasing is less of an issue in this case because it's mono, so use your ears for something you like. This mixed mono cabinet method is simple and quick. However, if you'd like to be exactly precise in a mix with or without using your ears you'll need (you guessed it) a phase meter. Here are some interesting combinations you may enjoy...

## **Try mixing these cabs...**

0005 and 0458 (add 0.71 ms delay to one cab for greater consonance)  
0009 and 0557 (add 2.24 ms delay to one cab for greater consonance)  
0077 and 0743 (add 3.03 ms delay to one cab for greater consonance)  
0117 and 0901 (add 0.95 ms delay to one cab for greater consonance)  
0371 and 0803 (add 1.75 ms delay to one cab for greater consonance)  
0412 and 1051 (add 5.12 ms delay to one cab for greater consonance)

## **DUAL MONO CABINETS**

This method can sound great (especially in Metal) but can also introduce phasing problems. Basically two cabinets that have similar sounds are chosen and one is panned hard left and the other is panned hard right. Always sum both sides of the stereo signal (or use a good phase meter) to assess for cancellation and then put them back to hard left and right stereo. Adding a very small amount of multi-tap delay can also widen the sound. And as I've said, make sure your phasing is as close as possible (or non-existent), especially (once again) if there is a chance your music may be pressed to vinyl. So here we go. Pan one IR hard right and other one hard left. Then proceed to ROCK. Here's a few examples that work with the slight delays indicated.

## **Try using these cabinet IRs...**

0002 and 0005 (add 0.72 or 1.93 ms delay to one IR for correct phase correlation)  
0012 and 0162 (add 2.75 or 8.36 ms delay to one IR for correct phase correlation)  
0019 and 0268 (add 1.14 or 4.14 ms delay to one IR for correct phase correlation)  
0021 and 0271 (add 1.67 or 8.51 ms delay to one IR for correct phase correlation)  
0027 and 0304 (add 2.74 or 8.60 ms delay to one IR for correct phase correlation)  
0028 and 0307 (add 2.40 or 8.70 ms delay to one IR for correct phase correlation)

## **STEREO "SINGLE" CABINET**

The difference between this method and the last is a third cabinet is added to the middle of the mix. This method is great if the band has only one guitarist. Don't forget to copy the single guitar track so there are two. A good place to start (although not written in stone) is to choose two cabinets that sound farther away and that compliment each other. They can be mixed to the extreme far left and right stereo or, for something more intimate, mixed about 10-35% left and right and the close sounding cab added somewhere between these two and a little louder. Once again, check the cabs for phasing by summing to mono or

using a phase meter (see examples below). Now blend in the close sounding cab of choice in the middle (or so) of this mix. Remember to check for phase issues once again. The guitar sound will seem to take on an ambiance and occupy a physical space or stage. Some people mix all close microphone sounds in this scenario (usually Metal situations) and this can also sound quite good. For another sonic treat add hard panned stereo reverb to only the hard panned stereo cabs and none to the third front cab. The guitar seems to take on a life of its own. Here a list of a few easier choices with the phase delay required.

### **On a stereo track try using...**

0487 and 0513 (add 2.17 or 7.83 ms delay to one IR for correct phase correlation)

On a mono track slowly add one of these close sounding cabs for the middle...

0003 (add 4.54 or 6.65 ms delay for correct phase correlation)

0005 (add 4.50 or 10.61 ms delay for correct phase correlation)

0032 (add 2.75 or 8.22 ms delay for correct phase correlation)

0155 (add 3.90 or 9.00 ms delay for correct phase correlation)

0213 (add 3.85 or 5.30 ms delay for correct phase correlation)

0308 (add 5.65 or 10.32 ms delay for correct phase correlation)

0425 (add 2.55 or 9.95 ms delay for correct phase correlation)

0445 (add 2.55 or 8.25 ms delay for correct phase correlation)

### **Here's another stereo track experiment. Try using...**

0660 and 0742 (add 2.15 or 7.06 ms delay to one IR for correct phase correlation)

On a mono track choose and slowly add a close sounding cab for the middle like...

0006 (add 5.65 or 10.78 ms delay for correct phase correlation)

0009 (add 5.85 or 10.85 ms delay for correct phase correlation)

0035 (add 5.00 or 10.05 ms delay for correct phase correlation)

0086 (add 5.65 or 10.90 ms delay for correct phase correlation)

0122 (add 3.90 or 7.37 ms delay for correct phase correlation)

0212 (add 5.62 or 10.75 ms delay for correct phase correlation)

0342 (add 5.70 or 10.70 ms delay for correct phase correlation)

0428 (add 5.62 or 10.70 ms delay for correct phase correlation)

Whoa, somebody point me to the mosh pit...

## THE OUTDOOR FESTIVAL – A MASSIVE WALL OF CABINETS

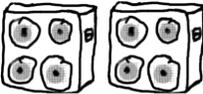
**WARNING:** This method may cause legal issues – a listener’s pace-maker may malfunction causing severe brain hypoxia, anoxia, and death. (Well, not really.) Anyway, this method is simply a giant version of the last one. Some paid convolvers are capable of blending several cab IRs, and the free versions don’t do this trick as easily. But as you can guess, there is a work-around for everything. Without going into a lot of detail or a lot of work (music is supposed to be fun, right?) I’m going to put together a simple outdoor stage sounding cabinet setup. There are difficult ways to do this, but here’s the easiest (and it is free) and that’s what I’m trying to accomplish here – easy and inexpensive. To actually hear how massive this method can be mandates owning a (I’ll bet you can guess what is needed by now). That’s how it is with IRs – one of life’s simple facts – phase correction. There are paid convolvers that say they make quick work of this mixing job, but some require an internet connection on your main music making computer and I hope no one is that foolish. Do your research, due diligence, and decide for yourself if you are going to spring for a paid version of convolver – sometimes a supposed improvement can be a money-sucking hidden step backwards. But I digress. To continue on topic, choose the cabs you want (in this case I’m going to close my eyes and choose any six) and I’ll put them in the stereo field. I’ve had excellent results just picking IRs at random, but choosing similar cabinets is also quite good. Once again, there are no real hard and fast rules except for using your ear. Anyway, copy the guitar file to three tracks. Using any free stereo IR convolvers (**Ignite Amps STL Tones** is excellent and so is the amp that comes with it) put one on each track. On all of the tracks set the convolver to stereo and choose six different cabinets. Use your phase meter to correct for problems on each stereo track (or use the stereo examples listed above). Try to place the various cabs across the stereo field. Now sum all these tracks to stereo and use your phase meter once again to correct any final problems. The guitar sounds massive – like standing on a big stage – it becomes huge and seems to come from everywhere. Do you want a big sound that sounds different but just as cool? Pan all your back-line cab IRs hard left and right and add some of your favorite sounding stage reverb (panned hard left and right) to the back-line cabinets only while putting none or little on the front-line cab(s) mixed to mono and up front. Wow! The sound is suspiciously similar to a couple of popular (but late) 1980’s guitarists whose last names both start with the letter V. For yet more variation use different complimentary amplifier emulations: German and English or American and English amps. Aww hell, try all three. This process can be quite time consuming, but it’s worth it. And it’s fun to discover new sounds.

Well, I hope all these cab combinations give you a few ideas. Thanks so much for trying the new **Djammincabs Maxxx 4x12** impulse responses. My main goal in this cab pack was to provide many more, better, and impossible guitar cabinet choices than are commercially available, and I think these IRs demonstrate that. My second goal was to offer a generous amount of useful impulse responses that most electric guitarists would enjoy no matter what ones they already have on hand. There are hours and hours of sound discovery in this collection. I hope you have as much fun with them as I did designing them. And if you'd like to take the time to invent your own personalized cabinet IRs there are detailed instructions on the Djammincabs web page. Enjoy.

Knowledge, art, and music for all.

Fred Kissell

## **Djammincabs Maxxx 4x12** "Murder Your Competition"

**Djammincabs** 

The fine print. **Djammincabs Maxxx 4x12** IRs come with no warranty implied or expressed – absolutely nothing. You are completely on your own using these IRs. If you accidentally poke your eye out, blow your hand off, or any other problem that may arise while using these IRs, it is not the fault of the manufacturer.