
Subject: 3X15 fun

Posted by [QModer](#) on Thu, 22 Nov 2007 22:42:10 GMT

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We've talked about these old big monsters in the past discussing possible ways to make them a bit more user friendly. I have finally got around to working on it and a lot of my other Kustoms. Ok she's big Silver/White sparkle 3x15 one of the early A series amps. In an effort to make it lighter I bought some bass lite speakers. Since they are not available in four or sixteen ohms. I got two of them in eight ohm.

The cab is much louder, lighter, and can be moved now. I left the one of the CTS fifteens in the bottom. Not hooked up. First reason is it looks as though the speaker is working and reason two its one heavy speaker that keeps the center of gravity low in the cab. So its not tippy.

The result is lots of volume but also lots of rattles too. So I took the back off and tightened up every bolt in it. Result it still rattles. I like the volume and the portability but these rattles are driving me nuts.

Here's a couple of solutions I have been thinking of and why. I think its not the cab that really rattling but that the bass lites are pushing their reflex air onto the none functioning CTS fifteen and causing these noises.

Solution number one, wire the two ohm bass lites in series making them into a single sixteen ohm speaker as far as the resistance is seeing. Then wiring them in parallel with the CTS fifteen inch sixteen ohm speaker. This would result in all fifteens workings as and eight ohm cab and also makes the rattles stop.

Solution number two, make a wooden plate that will act as a cover for the CTS fifteen in the bottom of the cab thereby removing the CTS. This keeps the cab's two bass lites in the top working as a four ohm cab. Result no more rattles. I might add a small weight in the bottom of the cab if I do that solution to keep it from rattling.

A some what weirder idea might be to put a sixteen ohm ten in the bottom wiring the entire cab for eight ohms as in the first solution above. Result rattles stop and all speakers work with at least some weight added in the bottom.

Whataya Think Fellas?

Subject: Re: 3X15 fun

Posted by [LesS](#) on Fri, 23 Nov 2007 01:18:59 GMT

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Qmoder,

I would do solution number two: remove the CTS 15 and replace it with a plywood cover. The amount of airspace in the 3x15 is probably better suited for only two 15's anyway.

What is the weight with the Bass Lites in it?

I would use 1/2" or 5/8" plywood and paint it flat black - since it is the lower speaker position it probably won't be too noticeable.

Did you tighten the bolts that hold the speaker baffle?

I've had Kustoms where every one of the speaker baffle bolts was loose.

-Les S

Subject: Re: 3X15 fun
Posted by [QModer](#) on Fri, 23 Nov 2007 02:04:15 GMT
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Hi Les, thank you for the reply. I assume you mean the thick bolts holding on the baffle board. If so yes I did. One thing thats not so right is that the bottom speaker is missing two speaker flange bolts.

Its the one I have not working at this time and another reason I chose the top two positions for the new bass lite speakers. I am sort of reluctantly coming to the same conclusion as you about the plate. That was another reason I mounted the bass lites high. They are the ones you'll see the most.

I did see a Kustom ten inch speaker for sale too though and parts express has new ones that are sixteen ohm. The ten inch would take five inches of speaker out of the equation for internal volume needed for bass reflex.

If I went to that option I'd make a plate and glue it down with liquid nails. Putting new speaker flange bolts in it for the ten inch.

Do you think that the wiring I talked about is a bad idea? Is that one of the reasons you're more for the plate? Could this amp stand another eight ohm speaker then with all wired in parrellell instead?

I think that would be just under four ohms something like near three ohms. I know that these amps like four ohms. I don't know if they could stand any less with out problems or not? I know that some of my amps mostly tube ones do it with seemingly no problems at all.

Subject: Re: 3X15 fun
Posted by [LesS](#) on Fri, 23 Nov 2007 16:22:22 GMT
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I believe that it's better if all drivers in a cabinet are identical. This way they work together as a team (with the same efficiency and tone). With two identical drivers, one will provide 50% of the sound volume and the other 50%. With two 12 inch BassLites and one 10 inch Kustom, the Basslites will provide maybe 40% each and the Kustom will provide maybe 20% of the output volume... so if you were to switch the Kustom 10 inch off and on you would not hear much difference. Also with speakers that are not identical, if one speaker is bass heavy and you turn up the treble to get more highs, you also increase the treble in the other driver.

I would make the plate as a 15 inch (or slightly bigger) circle with the bolt holes the same as a 15 inch speaker. Then you could just mount it with the bolts like you would install a 15 inch speaker. I would use bolts instead of gluing it down.

I would not do the series/parallel wiring... this would reduce the BassLites output.

The BassLite is a fantastic choice for bass use for three reasons:

- 1) The FS number is fairly low (lower is better for bass)
- 2) The xmax is high (that is how far the cone moves in and out.) More excursion will move more air. The BassLites will take more wattage than most speakers before they bottom out.
- 3) The treble response is very good. For proper response over 1,000 or 2,000 Hz you will need a midrange driver with any 12 or 15 inch speaker, but if you are not too fussy about the highs, you might be happy with the BassLites without a midrange driver or tweeter.

I have a single BassLite S2012 in my K100SC 1x15 and you would not believe the air coming out of the ports!

I'm sure you will like the sound and bass response of two BassLites in your 3x15 cabinet.

If you got the 15 inch BassLite, are you sure they are 8 ohms each? The BassLite C2515 is normally 4 ohms... maybe 8 ohm is available on special order.

Basslite S2012..DeltaLite II 2512..BassLite C2515(4ohm)

size12"12".....15"
FS48 Hz37 Hz.....38
X max ...5.2mm...4.9 mm.....4.5
SPL.....97 dB.....99.9.....98
Power..150w250w.....300w
Weight..4.1 lbs...5.1 lbs.....5.7 lbs
(all have neodymium magnets)

Subject: Re: 3X15 fun
Posted by [BC](#) on Fri, 23 Nov 2007 17:50:19 GMT
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I had a bad low freq buzz in one of my 3x15s once.....turned out to be the Kustom badge on the front had a loose screw so always check them! The only problem with the plywood blank in the bottom is raising the center of gravity.....that might need attention. BC

Subject: Re: 3X15 fun
Posted by [QModer](#) on Sun, 25 Nov 2007 06:38:33 GMT
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Thank you both Les and BC for your comments. They were greatly appreciated. You know I looked for some bass lite four or sixteen ohm fifteens but all I saw on U.S.speaker and PartsExpress was the eight ohm ones in fifteens. I'm not saying that they don't exist I just didn't find any or a part number and I would sure liked to have had them instead of the eight ohm standard series speakers that I bought for my other cabs. Here's why. I bought two fifteen inch sixteen ohm speakers (none bass lites) that will handle four hundred watts each and put one each in the bottom of each one of double cab set of Cascade cabs. I did that to make sure that one of active electronics basses didn't blow the original speakers out. I ordered one other set of twelve inch sixteen ohm speakers and put both of them into my new to me 150. It was a lead cab but will come in handy more as a bass cab. In both of those cases I would have much rather had the bass lites as they are near the same cost and the other thing is that the 150 is one heavy amp. I think its made of lead and lined with concrete LOL.. So with it and in the Cascade set the weight saving would have been nice. Well I might go ahead and make the plate. I've got the wood and a scroll saw to cut it with and I can drill the holes to match the speakers no problem'o. But as BC pointed out it will be a little bit

top heavy. Maybe not too much though as the bass lites are next to nothing in weight compared to the originals. If it worked and was top heavy I would think that I could put a weight in the bottom to hopefully level things out.

Good call on the Kustom name plate BC but I already tried that one LOL.. I tightened up the port hole screws too. I'm getting desperate and I'm not over looking any thing I can see and any thing that anybody tells me either. In fact I decided to wait until Monday before doing anything else to this thing and try to gather all of the information that I could on it before acting in haste.

The wiring thing I was proposing might not be a perfect balance but it would probably work alright. Its the same system used in four twelve cabs. Its also used in my stock Kustom 2x12 in the bottom and 2x10 in the top of that Kustom cab. I bought it brand new so it came that way for sure. I have seen one other one like it as well.

I used the same system in the way back machine to get louder. We did anything back in those days to get louder. Big Pa's were not on the scene big yet. I used four Fender cabs for guitar then thru a Bassman head. Two of the cabs were Bassman cabs with 2x12's each and the other two were 2x10's in Tremolux cabs. I still have the Bassman cabs. Wish I had kept the Tremolux cabs too now.

BC while I make plates what do you think of a standard old heavy weight bass ten inch sixteen ohm in the bottom wired up as I suggested? I ask because I think you may be the only one here who has any tens in a 3x15 cab.

(PS. BC, the original speakers that came out of the Cascades went to old Blue and he gave up the Yamie's.)

Subject: Re: 3X15 fun

Posted by [ET !](#) on Tue, 27 Nov 2007 11:38:32 GMT

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your "unplugged" 15 will move sympathetically, but I don't know that I'd call it a rattle..more like warm distortion..if you're getting a rattle I'd still look elsewhere for the problem..also..how hard are you hitting that cab?..are you using a more current higher powered bass amp?..I've loaded heavier drivers in my 2x15 cabs and hit them with 1200 watts only to realize that the cab airspace can only allow for so much...I eventually backed down on my expectations and pursuit of power and found that I get "perceptably" as much bass out of the cabs with a 350watt beringer head which has some additional preamp controls that allow me to tune my tone...or just go back to my older days when I would push my pair of 2x15s with a standard kustom 200 head but had a boss bass eq pedal in front that gave me as much as 15db of boost and with the ability to push certain freqs.. I got so much more out of the overall rig.

Also..if you're hitting that cabs that much harder..pop the casters off and get that thing firmly planted on the floor..you hit a small light cab (yes, I consider those 3x15 skinny rigs small) with that much hammering bass and you'll create noise just from the sonic wave impact. don't get me wrong.. I love my kustoms..played bass through em for ages and even used my 3x15s and 2x15s as my main pa for years..but found that there simply are limits to the box..course some of my rattles were from GI joe toys that Ethan stuck through the ports when he was little..but that's another post (grin)...

Subject: Re: 3X15 fun

Posted by [QModer](#) on Tue, 27 Nov 2007 14:14:57 GMT

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I agree ET. They do have their limits like any cab. But I'm not at it or at least I don't think so LOL.. I too use a Behringer head from time to time just not on that cab. Mine is a 450 watt. They had a misprint I guess it was one and sold to me new for 189 cause the next issue had it up to 259. Still a pretty good value even then really.

I use it thru my two Cascade cabs. I have used the same head thru my little 150 now since I put two Eminence Delta twelves in it and it worked pretty good too. I've got two sixteen ohm twelve inch speakers in it for a total load of eight ohms so it cuts the Behringer back just a bit though.

However its a nice tight cab

The old 3x15 is as old as my Cascade cabs. They are pretty much the same age. But I think its got a few more hard miles on it. It doesn't really look any worse than the Cascades. But they don't have stripped out speaker lugs inside of them and such as that either. Even all of the back screws have been changed. Those mostly by me as it had almost none in it when I acquired it.

It was in a band here locally called Hour Glass. They had a couple of hits and made two albums and went on tour as far as California. They later pretty much became the Allman's. But minus the drummer and bass player who lived here. So I came in possession of the old girl then.

Although I have used a 800 watt power amp on my Cascades before I have never used anything exotic on this amp. Its amp head is very strong and all of my basses have humbuckers on them. A few even have active pickups. The one I am using on it to test it right now is a Hofner Icon.

Nothing really fancy.

I'm the guitar player I just wound up collecting these old Kustom amps over time. Mostly all this amp has ever been used for with us was keyboards. We have all gotten older and weaker LOL.. It had gotten to be a stay at home cab because of its weight and size. So I decided to make it available for bass usage again and lighten it up to do it.

I worked on it last night. The problems to me are with the mounting of the lower speaker. A lot of the lugs are stripped out and its not held on very tightly. By tightening the few that did work it was better. Not perfect but better.

I wired up the speakers as I had talked about with the eight ohm ones in series and then to the bottom one in parallel. That got it better too. But taking the speaker out it got better still. Almost no rattles after that.

I am gonna go ahead and make a plate for it. I doubt I can get new lugs into this thing with out taking it completely down to nothing. So I am thinking seriously of glueing this plate in with RTV. There would definitely be no more rattles from it then. I am gonna go ahead and make a cut out for a ten inch speaker in the plate too. I can put good lugs in it with out any problem of course. That will massively reduce the air needed for bass reflex, be installed very stiffly, and give some low center of gravity back to the cab.

It will be a sixteen ohm ten inch so that I can use the wiring that I used last night unless everybody thinks that a Kustom 200 head can safely handle 2.7 ohms? Thats the impedance if I added another eight ohm in parallel.

I run it on about three to four or where they would be on a Kustom 200 if it had numbers LOL.. I have no plans to ever run it any louder than that either. Any more than that would just be distortion and would serve no useful purpose.

Any advice on the ten inch purchase as to weather to make it a eight ohm or sixteen ohm will be greatly appreciated.

Subject: Re: 3X15 fun
Posted by [QModer](#) on Mon, 10 Dec 2007 07:53:19 GMT
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Well I took the speaker out and put the back on. It sounds great. Air is still being pumped normally out of the port holes. That seemed a bit strange with all of that bottom area to push the air out of. So I went to work and made the plate. This thing only has four speaker mount bolts left in the bottom fifteen position but fortunately they are four directly opposite each other. I bolted the plate in snug and then put the back on. Result, it is again rattling like all get out. I guess this cab just does not like having a bottom speaker in it at all. Not a good out come in a way. But in another its great as the amp is now working its fine and its louder than ever before. I just thought I'd let every one know.

Subject: Re: 3X15 fun
Posted by [C4ster](#) on Wed, 12 Dec 2007 02:39:56 GMT
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I have 4 3x15 siren cabinets so right off the bat I only have 2 15's in each cabinet. In one pair I have JBL E140 speakers in the normal siren cab configuration. I routinely push the 4 speakers with 1700 watts for subs in a 3-way triamped setup. I have had speaker rattle, but after a recone the problem is gone. The cabs have NEVER rattled. The other pair has 2 E140's and 2 E130's in a triamped setup with just 2 cabs. These cabs just don't sound right even though I am pushing much less power in each. These are early, non porthole Ross cabinets with 4 smaller ports behind the grill. They just can't reproduce the lows the other cabs can. I may need to separate the lows and the mids from each other with a baffle, but I still need some volume for the subs to operate in. But that will wait until summer.
Conrad

Subject: Re: 3X15 fun
Posted by [QModer](#) on Tue, 18 Dec 2007 05:23:50 GMT
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I have two brand new Kustom's that have 2x15's and one horn. They sound great. But I use subs too. These new Kustom cabs are deeper than my old 200 series at the bottom and all the way up to the very top. My old 200 series did not rattle either when I played guitar thru it or keyboards just bass. Add to it that these new Basslite speakers have more bass reflex with more cone extrusion and I guess thats what does it.
