
Subject: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 01:07:50 GMT

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I have a Kustom 300 P.A. head and I can not get any sound out of it. everything inside looks good, caps are not swollen, nothing seems burnt,. i can not find any thing listed as 300. Is this similar to other models and can I use a different schematic to check it out. The main problem is the power switch. the wiring on this i white, white w/a black stripe and red. i can not find any such colors on any of the schematics I have found. It did work until the switch went bad. Thanks in advance for any help.

Subject: Re: K 300

Posted by [stevem](#) on Mon, 08 Jul 2013 13:54:05 GMT

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How did your switch fail? did it the plastic snap where the hold down nut mates to the metal bracket?

If so you can use two cable ties, one on each side of the switch shaft to pull and hold the switch back up to the inner side of the metal bracket.

I do this to all my amps for the metal face serise that use this type switch even if they are not busted yet as this will prevent the brakage from taking place.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 15:31:43 GMT

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one of the metal arms fell out. ZI saw your cable tie idea and it did not work for me. I do believe the only problem is getting the wires routed correctly but I can't find anything on the schematics that show a red wire involved w/ the switch and no green wire at all.

Subject: Re: K 300

Posted by [chicagobill](#) on Mon, 08 Jul 2013 15:57:45 GMT

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I believe that the red wire you are talking about is for the pilot lamp inside the switch. The white and white with black stripe are the ac power wires.

If you look at the polarity switch there will probably be a green wire added there for its' pilot lamp.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 18:30:41 GMT

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Yes , there is a green on the polarity switch, so then switching the white and white/ black should power it up but it goes not. Although I am not an amp tech, I have had a lot of experience w other electronic systems and I can't figure why I am not getting any sound. You can hear the power being drawn through the stereo speakers which are in the same room. A distinct pop when this should be powered up but no sound.

Subject: Re: K 300

Posted by [chicagobill](#) on Mon, 08 Jul 2013 19:17:43 GMT

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mrg2u wrote on Mon, 08 July 2013 13:30A distinct pop when this should be powered up but no sound.

Do either of the pilot lamps in the two front switches light up? If you are hearing the amp power up, then the lights should light up unless both lamps are burned out.

If you have electronics experience, try using a voltmeter to read the power supply voltages at the filter caps and see if you have plus and minus 40 volts.

If the voltages are there, then try and send a signal directly into the power amps to see if they are working.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 19:31:43 GMT

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Caps read good. Going to see if I get anything out of the power amp.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 19:42:32 GMT

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O.K. Now I am confused. Power amp is the board on the bottom of the unit.? Correct.? Blue , red, green coming off the capacitor side and black , orange pink on the other side which all three have infinity to ground. ????

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 19:48:18 GMT

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o.k. , so black .orange. pink are the return grounds from the output jacks, where do i get straight in to the power amp.?

Subject: Re: K 300
Posted by [mrg2u](#) on Mon, 08 Jul 2013 19:51:19 GMT
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o.k. , so black .orange. pink are the return grounds from the output jacks, where do i get straight in to the power amp.?

Subject: Re: K 300
Posted by [chicagobill](#) on Mon, 08 Jul 2013 20:48:31 GMT
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The power amp board should be marked PC5029. The input hot is an orange wire that comes from the mixer-reverb board. Black is ground, Blue wire is speaker output and the pink wire is the tape/monitor output.

Do not unhook the black ground wire during testing. I can't remember if the input of the power amp is capacitor coupled or not, so be careful with whatever you use to inject a signal into the power amp.

When you were testing power supplies, did you test the plus and minus 12 volts preamp supplies as well?

Subject: Re: K 300
Posted by [mrg2u](#) on Mon, 08 Jul 2013 21:30:51 GMT
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I do have sound there, it is weak though, clear but low volume w/a guitar going to it.

Subject: Re: K 300
Posted by [chicagobill](#) on Mon, 08 Jul 2013 21:41:33 GMT
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Did you test the 12 volt supplies?

Put everything back to normal and turn up the master reverb control. Shake the reverb tank, does it make any sound through the speakers?

Keep working forward through the circuits to find out where the signal stops.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 22:00:14 GMT

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Nothing on the reverb but don't I need a footswitch to turn that on./

Subject: Re: K 300

Posted by [Kustom_Bart](#) on Mon, 08 Jul 2013 22:05:18 GMT

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No switch needed to turn the reverb on. It is on all the time the pedal turns it off. You can turn it off by turning it down.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 22:23:05 GMT

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Nada on the reverb tank. I cleaned the crown connections and no go.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 08 Jul 2013 22:44:05 GMT

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can i bypass the reverb tank by placing a crown across the 2 terminals on the board./

Subject: Re: K 300

Posted by [chicagobill](#) on Tue, 09 Jul 2013 02:05:18 GMT

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Why are you trying to bypass the reverb tank? Try pulling the RCA plug from the tank output and then with the amp on and the reverb turned up touch the tip contact. If the circuit is working you should hear a buzz, just like when you touch the tip of a guitar cord plugged into the front of the amp.

If there is no buzz or no reverb, then there is no output from the mixer board. Again check the low voltage power supplies and check the output chips on the mixer board.

Subject: Re: K 300

Posted by [mrg2u](#) on Tue, 09 Jul 2013 04:03:30 GMT

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seemed like the next step but I will check the output. This is learn as you go for me.

Subject: Re: K 300

Posted by [stevem](#) on Tue, 09 Jul 2013 11:16:34 GMT

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You need to have the master reverb control up also to get any reverb out of the 6 channels.

Subject: Re: K 300

Posted by [pleat](#) on Tue, 09 Jul 2013 12:44:42 GMT

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Since the K300 uses the Molex connector plugs from board to board, I think I'd try cleaning the connectors and make sure everything is making a good connection. I've had kustom amps given to me that were considered dead. Quick cleaning of the connectors the amp comes back to life.
pleat

Subject: Re: K 300

Posted by [mrg2u](#) on Tue, 09 Jul 2013 15:03:50 GMT

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i get nothing on the reverb tank either shaking it or touching the positive on the out put. In looking at the man control board, inputs and volume controls, I am not finding power anywhere and on the main power amp, i have no power on the left hand side either. I have power to the switches both the main power and the polarity switch but after that i find none. I also cleaned all the connections before i started as I had seen that post before.

Subject: Re: K 300

Posted by [chicagobill](#) on Tue, 09 Jul 2013 16:15:49 GMT

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Please explain in more detail, as I don't understand what you are saying about the missing power.

Did you get correct dc voltages at the two main filter caps of plus and minus 40 volts dc?

Do you have the correct low dc voltages for the preamps of plus and minus 12 volts dc?

Subject: Re: K 300

Posted by [mrg2u](#) on Tue, 09 Jul 2013 17:23:02 GMT

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yes I do get both. where it disappears is on the left 3 resistors on the power amp and beyond the polarity switch on the control boards. I am absolutely sure that i am missing something stupid here so i have a friend w/ more knowledge coming by to take a look . He and I will go back through the checks you have given me and see if he comes up w/the same thing I am,.I really appreciate all the help but like I say, I believe I am missing something critical in all of this.

Subject: Re: K 300

Posted by [mrg2u](#) on Wed, 10 Jul 2013 02:32:30 GMT

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well, some progress anyway. The bridge rectifier has a crispy, intermittent resistor in it and so there is power to the control board and then not. Seems that is why it would work and then not work, depending on how it was moved as a whole so, tomorrow I will go and get all 4 new resistors and put them in. Hopefully this will solve the problem but if not, at least I will have power there and be able to trace further down the line. I will let you know how it turns out.

Subject: Re: K 300

Posted by [chicagobill](#) on Wed, 10 Jul 2013 17:11:32 GMT

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I'm glad that you found some sort of problem. Hopefully that will fix it right up.

If the amp is original, the only bridge rectifier that I know of in the amp is mounted directly to the chassis. It connects directly to two of the wires from the power transformer. Is this what you are talking about?

It is made up of 4 diodes not resistors, so be sure that you get the right parts as replacements.

Subject: Re: K 300

Posted by [steven](#) on Wed, 10 Jul 2013 22:30:45 GMT

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The only dropping resistors in these amps stock off of the rectifier bridge are the ones that are bolted down to standoffs on the chassis floor.

Subject: Re: K 300

Posted by [mrg2u](#) on Thu, 11 Jul 2013 02:06:21 GMT

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Resistors on the chassis it s, i am mixing my metaphors, it is a long story . Any way, that is where the control board is losing power so even if there is something else wrong it will be easier to trace down w/the power on. could not get these at Radio Shack so it is online to Mouser. Couple of days to get them and I will let you all know the result. I really like the way this thang sounds so I will keep on it till it lives again.

Subject: Re: K 300

Posted by [mrg2u](#) on Fri, 09 Aug 2013 22:15:46 GMT

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i finally got my resistors.!1 I am dying to put them in and see if this cures it but I have to go pick the wife up at the airport and that will probably turn into dinner, which I don't mind , so , look for an update sometime tomorrow.

Subject: Re: K 300

Posted by [mrg2u](#) on Tue, 27 Aug 2013 02:32:00 GMT

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Well, finally got a chance to put the resistors in and still no sound. i can surely here the power side kicking on or off and I can hear the cabinet speakers hissing w/power on but.... the other thing happening is the 150 K resistors are both getting very hot which would explain the toasted one I found. Now it will be a matter of finding out what it is in the input board that is causing that and as you know, 6 channels w/12 inputs, that is where the most component parts are to sift through. wish me luck and if there is any advice out there i would certainly appreciate it and thank you in advance.

Subject: Re: K 300

Posted by [mrg2u](#) on Tue, 27 Aug 2013 02:52:27 GMT

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One more bit of new info. I tried moving the lock plunger on the reverb tank to see if I got any twang and what I get is super loud pops and static, like full volume pops. Hmmm.

Subject: Re: K 300
Posted by [steven](#) on Tue, 27 Aug 2013 10:39:16 GMT
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Those loud pops with the tank unlocked means that the tank has one or more of its two springs broken, so add a tank to your list for parts now.
In regards to the signal problem, now that you have the new resistors in place are you getting the + and - 12 volts into any of the preamp boards, or is it getting loaded down to less than 12 volts.
Do nothing more untill you get back to us with what you have voltage wise,

Subject: Re: K 300
Posted by [chicagobill](#) on Tue, 27 Aug 2013 15:53:09 GMT
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And I hope that the resistors you replaced are 10 watt, 150 ohm and not 150K.

Subject: Re: K 300
Posted by [steven](#) on Wed, 28 Aug 2013 10:36:26 GMT
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Yea bill I hope so also, but atleast if they are above 150 ohms no harm will come to the amp.

Subject: Re: K 300
Posted by [mrg2u](#) on Fri, 30 Aug 2013 16:14:25 GMT
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I got the resistors from mouser and they are exact replacements. i opened the reverb tank and the springs and coils all look good and solid.???? I will check the voltages and get back to you.
yhanks guys.

Subject: Re: K 300
Posted by [steven](#) on Fri, 30 Aug 2013 19:08:08 GMT
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Does the reverb lock work? all of these I have ever seen by now Have the foam gone on the face of the round plate due to dry rot.

Subject: Re: K 300
Posted by [mrg2u](#) on Fri, 30 Aug 2013 23:17:03 GMT

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The foam is still there but the lock portion on the shaft is worn off...no lock.

Subject: Re: K 300

Posted by [mrg2u](#) on Wed, 25 Sep 2013 22:37:07 GMT

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O.k. So things have been insane here and I am just getting back to this. The resistors are an exact match, 2 ea, 150 ohm and 2 ea. 400 ohm, same as what came out. I do get the + - 12 on the boards but the volume, w/a guitar plugged in is very low. The reverb tank springs are in tact and have continuity through them. If you move the reverb springs you get a very loud static sound and as I am probing for voltages I get the same loud pops when the meter lead contacts the test point.

Subject: Re: K 300

Posted by [chicagobill](#) on Thu, 26 Sep 2013 16:09:51 GMT

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It sounds like the power amp and the mixer boards are working to some degree. Have you tried all of the individual pre-amp channels? Are they all low in volume?

Subject: Re: K 300

Posted by [mrg2u](#) on Thu, 26 Sep 2013 22:24:59 GMT

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Yes, all across the board, low .

Subject: Re: K 300

Posted by [mrg2u](#) on Fri, 27 Sep 2013 23:14:31 GMT

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Found that the rectifier had power on one side only, changed that and have power but still no sound.

Subject: Re: K 300

Posted by [chicagobill](#) on Sat, 28 Sep 2013 00:11:11 GMT

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I thought that you had already fixed the power supply earlier on.

Subject: Re: K 300

Posted by [mrg2u](#) on Sat, 28 Sep 2013 21:00:54 GMT

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I did have power on both sides, = - 12 volts , then the voltage on the red lead out of the control board disappeared. some time it reads 6, sometime 3, sometime 0, all the way back to the power coming in. I am now taking out the fuse holder at thr power in and start checking from there forward.

Subject: Re: K 300

Posted by [steven](#) on Sun, 29 Sep 2013 11:31:27 GMT

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When you get the 12 volts supply source back up and stable try this check out / test.

You will need a lenght of 22 or 18 gauge wire and some red crimp type butt conectors and the tool to crimp them.

Once you have these go into the amp a cut the orange wire that feeds the driver / output board.

Cut this wire so you have enough lengh to work with to cut it yet again so you can get it back together when all is done.

Once you have this wire cut go to any of the 6 preamp boards and cut the brown main signal wire and butt splice this to the orange wire.

With this done you basically have a K150 OR k250 amp without the master E Q section and you should have good volume level out through the speaker, if not cut the purple wire on the preamp board. This wire feeds signal to the reverb drive section of that master board.

In this way you can also test all 6 preamp boards.

If this makes for good volume level than your signal load down problem lies in the reverb section and now we can help you out better hopefully.

Subject: Re: K 300

Posted by [mrg2u](#) on Sun, 29 Sep 2013 23:20:24 GMT

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Will do, thank you very much for taking the time to type all that for me.!!!

Subject: Re: K 300
Posted by [mrg2u](#) on Mon, 30 Sep 2013 02:46:11 GMT
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SOUND!!!! not terribly loud, nice clear sound w/ the brown jumped to the orange.

Subject: Re: K 300
Posted by [steven](#) on Mon, 30 Sep 2013 10:18:20 GMT
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Yes thats due to the added gain the signal would have had if it ran thru the master section, now clip the purple wire and see if you get a large amount more volume?

Subject: Re: K 300
Posted by [mrg2u](#) on Tue, 01 Oct 2013 02:18:23 GMT
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I get sound but the volume is about the same . not as loud as you would expect w/it all the way up. I listen to my stereo louder than that....LOL

Subject: Re: K 300
Posted by [steven](#) on Tue, 01 Oct 2013 11:28:55 GMT
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Its time to start checking things on that 5030 master board.
If I had to take a educated guess I would say the Q3 (the FET type transistor) or Q4 is bad.
This is due to the fact that your reverb volume is low too.
The master board has a totally seperate reverb preamp section so its volume / output is mixed back in to the non-effect signal at Q3 and then passed back on to Q4. if these two where ok, but the opamp befor for the non-effect signal that is before these two was bad you would have tons of just reverb volume only, and you do not.

Subject: Re: K 300
Posted by [mrg2u](#) on Tue, 01 Oct 2013 17:57:38 GMT
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Well , that gives me some work to do. Thanks for the help. I will post as to what I can find out. I have come this far so I will keep going. It is me or the amp now. LOL. and when I get it done I will post the pics of the unit I started building, of which this was a major part of and is already don.!

Subject: Re: K 300
Posted by [mrg2u](#) on Sun, 24 Nov 2013 05:01:07 GMT
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o.k. This is driving me nervous. I checked the transistors according to what procedures I found on the web and they are good but , going back to the beginning , I go from the transformer through the rectifier and down line to the resistors and...on the green side I get minus 42 on the transformer side and minus 27 on the other side of the resistor. On the red side i get plus 42 on the transformer side and nothing on the other side of the resistor. I have tried other new resistors and also took the one from the green side and placed on the red side and I get the same thing. in my mind, this is not possible. How can I have power on one side and not the other. I am at a standstill. when you turn the amp on, you get a strong power hum through the speakers but no sound. It is in that 5030 board some where but I am not finding it. any suggestions will be appreciated. thanks, Mark.

P.s. Can I buy that board some where...LOL

Subject: Re: K 300
Posted by [chicagobill](#) on Sun, 24 Nov 2013 08:23:49 GMT
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Have you checked the Zener diodes on the 5030 board as well as the filter caps for the 12 volts supplies? If the positive side is shorted, you will get zero volts on the output side of the big resistor and the resistor will get very hot.

As for the hum on the output, please check to see that there is no dc voltage on the speaker output jack. If there is, you have a power amp problem and can damage the speakers.

Subject: Re: K 300
Posted by [mrg2u](#) on Sun, 24 Nov 2013 17:52:55 GMT
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i will be checking that out. the resistor is getting very hot. the question I have about that is... looking at the 5030 schematic, it has the diodes in line , as an amateur at this , I am concerned that I have put them in wrong as I replaced them both a while back in this adventure.

Subject: Re: K 300
Posted by [chicagobill](#) on Sun, 24 Nov 2013 19:30:48 GMT
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The diodes are polarized and the case should be marked with a stripe close to one end. The diodes connect to the circuit from the voltage supply line to ground.

On the positive side the stripe end should connect to the hot side and on the negative side the stripe end should go to ground.

Make sure that you test each of the diodes to be sure that they were not damaged.

Subject: Re: K 300

Posted by [mrg2u](#) on Sun, 24 Nov 2013 20:56:01 GMT

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SUCCESS GENTLEMEN...SUCCESS.

One diode was in backward but not damages. I now have all channels working. all i have to do now is remove all the test leads connecting everything on the bench and put it all back together.

when I have this assembled and back in the rack I built for this and the other P.A. amps I will post some pics so you all can see just what your combined help has given to me. Can't say thank you enough.

Next, the pre production Mesa boogie 295 simulcast amp I have.

WHY NOT...lol.

Subject: Re: K 300

Posted by [steven](#) on Mon, 25 Nov 2013 11:42:52 GMT

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Congrats on the repair and sticking with it thru the hair pulling session`s!!

Is the Mesa model you speak of the one with a back panel full of switchs and jacks and a graphic EQ on the front?

If so repairing certian sections of that amp, like on the main circuit board will make the repair you did on the Kustom seam like sand box play!!

Let me know what you got wrong with that amp when you can.

Subject: Re: K 300

Posted by [mrg2u](#) on Mon, 25 Nov 2013 21:02:14 GMT

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the Mesa is the model w/ just a volume and presence on the back, 12 tubes total though but the sound is incredible. at least now w/one success under my belt I will be more motivated as I know it can be done..LOL But i will sure let you know and, if any of you are on Facebook, send me a friend request . Just search my namr , Mark Gruici, and it will bring you to my page. thanks guys.
