Subject: Channel jumping inputs fender to Matchless
Posted by walters on Sat, 30 Apr 2005 05:54:39 GMT
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1.) What happens when i daisy chain inputs?or channel jump the channels from different amp designs?a.) Does the impedance get mismatched?because the two amps have different circuits and are different designs?b.) Does it change the Frequency Response?c.) Does it load down the inputs? example: guitar goes in fender normal input#1jack.normal input#2 jack goes to a Orange amp input jack#1 with a daisy chain cord.input jack#2 of orange amp anotherdaisy chain cord goes to a Matchless ampinput jack#1 2.) The Signal parallels off to the other amp but is there any REFLECTED load current or voltage when channel jumping? 3.) Does anyone know any cool Channel jumping path ways?

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Tue, 03 May 2005 16:32:27 GMT
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Two-channel inputs ("normal" and "low") are in 90% cases made of two 68k "input" resistors in series with input grid and one 1-Meg grid leak resistor, see the typical "Fender" schematics. Input 1 ("high", or "normal") has input impedance ~1Meg (ignoring 68k resistors for simplification), and input two ~2*68=138k. When you connect 3 amps in a way you described, you`ll get the total input impedance ~1Meg/3 ~333kOhms. With high-impedance source (guitar PUs) you can count on some high-frequency loss/change of sound (with little help with all those cables, too). But, you can often count on a ground-loop buzz, and hiss,too.Then (non-identical) signal phases through 3 amp together can give you weird effects sometimes. But, often the sound is full and good:-)I tried even some swither/multioutput/impedance converter devices, mixer/line outs, FX loops...but I was never quite satisfied with the results (sound/noise, even oscillations/radio stations, haha) with unequal old amps...but, try it and see.:-)

Subject: Re: Channel jumping inputs fender to Matchless
Posted by walters on Tue, 03 May 2005 16:47:47 GMT
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Don't your get a different voicing from each amps input impedance?

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Tue, 03 May 2005 17:07:05 GMT

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It`s a "primitive" 3-way "Y" cable, the resultant sound can be "big and full", but ground-loops problem I never resolved. I had even the "guitar rack" full of everything and once blowed brand new "Drawmer" compressor...there are some sophisticated ways (signal "splitter"/booster/mixer), but I forgot almost all about it:-)In rarely occcasions when I play the guitar, I use just the "blackface" Deluxe Reverb (in the last 10 years). And yes, I used with good results M.Boogie "Studio" preamp for that "stereo" things - 2 output for two power amps and two guitar boxes.Try and see, the same power outlet for all amps and check for possible AC difference between the "masses" of the amps...

Subject: Re: Channel jumping inputs fender to Matchless
Posted by walters on Tue, 03 May 2005 17:21:03 GMT
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If i Y Cord 2 amp channels whats the difference in impedance from a Y cord to 2 amp channels and Daisy chaining 2 amp channelsthe impedances are both different 1.) Y cord impedance going into 2 amps channels?2.) Daisy Chain inputs going into 2 amp channels impedance?3.) Im looking at it in a impedance way Y cord VS Daisy Chaining input channels

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Tue, 03 May 2005 17:36:19 GMT
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Google search with "key" words guitar, splitter, buffer, etc. can give you tons of answers, for example you can check "Harmony-Central" and reviews of such devices, for example "Axess Electronics" BS2 Guitar Audio buffer/splitter...And I found some FAQ:
http://www.customaudioelectronics.com/frequently_asked_questions.htm

Subject: Re: Channel jumping inputs fender to Matchless
Posted by walters on Tue, 03 May 2005 17:45:33 GMT
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No i want to know about the impedance of it the Y cord VS daisy chain what is the Impedance Difference and how does it work the difference between Y cord VS daisy chaining 3 or 5 amps input channels together?

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Tue, 03 May 2005 18:18:57 GMT
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In both cases, all your input impedances are paralelled, if you have two amp with "Y" cord, or "daisy chaining" them, input guitar cord would "see" about 1Meg/2 = 500kOhms in both cases.Must go now...

Subject: Re: Channel jumping inputs fender to Matchless
Posted by walters on Tue, 03 May 2005 18:30:27 GMT
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I thought Y cord was different because its not using the other 68K resistor in the Low input mostly used on amps to daisy chainDaisy chain uses both jacks using both 68K resistors example- guitar goes into 68k input resistor hi input jack The Low input jack 68K input resistor is daisy chained to the other amps channel input so there is another 68K So Daisy chain uses 3 input 68K resistors so the impendances is different because there is 3 68Ks resistors in parallelThe Y cord just uses 2 input 68K resistors i don't know if its in parallel i know the signal from the guitar is parallel to the amp channals example: guitar output gets Y cord the Y cord splits to Two different different amps channels one being a marshall and other amp being a fender amp. So there is only 2 68K resistors and not in parallel i thinkSo the Y cord uses 2 68k resistorsThe Daisy chain uses 3 68K resistors in parallel or more if you have more and more amps So the impedances are way diffeerent from using a Y cord than Dasiy chain what do you think im guessing here

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Wed, 04 May 2005 17:44:22 GMT
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If we count in 68k resistors (and we should), then the situations are like that:a) 2 amps, both input 1 with Rin=1Meg with "Y" cord - guitar "see" the two 1Meg loads in parallel, or 1Meg/2=500k. Three amps - 1Meg/3=333k.b) 2 amps, "daisy chaining" - guitar in input 1 (Rin=1Meg), then out through input 2 to the second amp and its input 1 again (Rin=1Meg). BUT, we now have two 68k resistors in series between inputs 1&2 on the first amp, or in another words, guitar "see" 1Meg in parallel, then 2*68k=136k in series, then 1Meg in parallel. The resultant resistance is now (1000k+136k)//1000k = 531,8 kOhms. Not much of the difference, but if we connect the third amp on the same way (another 2*68k in series, and 1Meg in parallel) then resultant resistance is (531,8+136)//1000k = 400k, larger then "triple" Y-cord result of 333k. But, first amp get full signal voltage, and other two little attenuated signal through 136k/1Meg combinations.Normally, this is correct if the inputs are wired at the same way, you can try it with ohmmeter, amps switched off, cables installed.-All in all, you can try both solutions, but personally I don`t like either of them, as I

said, our tiny voltage/high impedance source (guitar PUs) probably needs better solution, see splitter, etc, theory.

Subject: Re: Channel jumping inputs fender to Matchless
Posted by walters on Wed, 04 May 2005 18:52:15 GMT
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By the way thats alot for your time and informations on thisyou helped me out alot.Yea someone told me the same to use a isolation transformer with polarity switch and 3 to 5 isolation outputs to not get ground loops and impedance mismatching.Ok so know we seen it from an impedance out look But another way i see it is Tone because if i daisy chain or Triple Y cord 3 different amps like a matchless amp to a fender to a marshall those are all three different impendances that are mismatched and the preamp section has a different VOICE designso with daisy chain set up your putting the 3 different VOICINGSdesigns in series where with a triple Y cord the 3 diffrent voicing preamp designs are in parallel.I guess its like 3 different frequecy response in series with daisy chain and for Y cord is like 3 different frequency responsein parallel. Because the guitar is not just seeing the impendanceits seeing more past the impendace the design reactance of capacitance i would think by 3 different voicing either parallelor in series.Someone told me either the preamps can have a POLARITY im not sure what that means really is the impendance out of phase then?i know some of the preamps in fenders the outputs of the preamps have a polarity and the output of the preamps is out of phase from the normal channel to the vibrato channel. But if you daisy-chain or Y cord amps we looked at the impedance of the amps in both ways but what about this Polarity then?I know Jimi Hendrix use to have a Triple Y cord setup and Daisy chain this is SERIES/PARALLEL impedance and voicing designs So the guitar sees 1.) the impedance either in series or parallel or both 2.) sees the polarity of the impedance 3.) and sees the capacitance of the preamp Voicing The polarity im confussed about ?and the Voicings of preamps im confussed about?Thats alot for your time and information about this

Subject: Re: Channel jumping inputs fender to Matchless
Posted by Damir on Wed, 04 May 2005 20:09:14 GMT
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In "daisy chain" system the last amp gets the "weakest" signal and the least high-frequency, you can observe that like series/parallel R and paralell C cascaded filters.In every amp, every gain-stage inverts the phase, you have 3 different amps, and chances are that 3 output signals are very different, phase and "soundwise". But, with little experiments/placements that doesn`t have to be a bad thing, as I said, you can expect a "big" sound:-)Again, try both ways, do a "Google" search/reading about it, and probably some "Y box" is in order... Good luck!

Subject: Re: Channel jumping inputs fender to Matchless
Posted by DMW on Wed, 25 May 2005 21:11:03 GMT
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Here's a good company and good source for A/B or ABY switchers/pedals.
PacifiCustom Pedals