
Subject: frankie troubles

Posted by [conductortom](#) on Tue, 08 Mar 2011 17:42:07 GMT

[View Forum Message](#) <> [Reply to Message](#)

Help!!! Bill Collins has been working on my frankie head and has done wonders for it. There is one problem that is kicking our butts. He replaced the bad bulb in the tremolo section and now the tremolo works real fast and extremely fast. Will not shut off. All new caps and has replaced all the transistors on the left side but still it will not shut off tremolo. Any idea's?

This is a 5 transistor frankie that he is working on. Thank you for any help you can give us.

Tom

Subject: Re: frankie troubles

Posted by [chicagobill](#) on Tue, 08 Mar 2011 18:27:38 GMT

[View Forum Message](#) <> [Reply to Message](#)

Not knowing what the circuit in your amp is, all I can offer is the following info. The later frank heads were actually equipped with vibrato (pitch shift) not tremolo (volume change). There was no on/off function or footswitch. To kill the effect, you turned down the depth control.

Assuming that it uses a typical phase shift oscillator circuit, if it is running too fast, then the values of the feedback RC components might be too low in value.

Can you supply a schematic of what's in the amp?

Subject: Re: frankie troubles

Posted by [stevem](#) on Tue, 08 Mar 2011 21:24:56 GMT

[View Forum Message](#) <> [Reply to Message](#)

So did he use a #48 type bulb to replace I301, also if you/he recapped that whole circuit did cap C313 get installed the right way with its positive end going to ground?

Are both I301 and CR101 both well covered from light migration?

Is the grounded side of the speed pot truly making a good ground connection?

How do the voltages check out on those six transistors that make up that circuit when compared to what the schematic calls for.

Besure to double check all the cap values in that circuit as a even a slight change in value that makes the circuit oscillate will make for a big speed change.

Subject: Re: frankie troubles

Posted by [conductortom](#) on Tue, 08 Mar 2011 22:11:45 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thanks for the info. Will relay to Bill and will let you know.
Tom

Subject: Re: frankie troubles
Posted by [cassent5150](#) on Tue, 08 Mar 2011 22:58:46 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hey: this isn't directed to anyone in particular, but because I own one of these "GEMS", its only to add to the topic at hand. Man, if we had a schematic for these things it sure would solve a lot of head scratching problems. Sadly enough I have exhausted every avenue trying to locate one to no avail. These dont have a number on them anywhere for identification other than the paper sticker on the back pannel. Its like these were a one shot experi "mental" amp or something and the designer kept all the notes a secret. I've got mine going and all, but thats about the end of it. If its working correctly or not, I don't know, but I know how Bill feels trying to work on an issue like that without one (schematic that is). Question is, does the effects board in these 5 transistor Franks even have a PC-number on it? Mine doesn't have effects, just the two channels so I don't have that to worry about. In my case I'm just wondering how it should compare to like a 200A or B model amp. Mine can get fairly loud but its not a 200A or B series punch. In bill's case theres got to be some similarities in the effect circuits like the PC-303, (isn't it a ptch effect as well?) that could shed light on its primitive ancestor. Thats my penny and a half's worth, I'll leave the rest to ya'll who know more about this stuff.
Steve C

Subject: Re: frankie troubles
Posted by [chicagobill](#) on Tue, 08 Mar 2011 23:13:24 GMT
[View Forum Message](#) <> [Reply to Message](#)

It's not that I need a schematic to work on something, but trying to discuss something without having any idea of what the other person is trying to describe is very difficult. I can only assume that the amp has vibrato and the circuit is similar to the later Frank models, but without the amp in front of me I have no way of telling.

There may never be a factory schematic for these amps. It is fairly obvious that there weren't that many of them made. But you own one, so you could draw one up or at least make a few comparisons notes to the known Frank schematic. That is really what I was asking for, some sort of hint as to what the amp had for the trem circuit.

Subject: Re: frankie troubles
Posted by [cassent5150](#) on Wed, 09 Mar 2011 00:12:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

Most of this stuff is way over my head and that which I learn is mostly the information I collect from the intelligence of people like you and the others on the web site that know whats going on inside these amps. PLEASE don't be offended by my coments as they weren't directed towards

anyone as I mentioned. My only concerns in the matter was to get an educated view of the 3 items I was talking about which was, could there be no schematics for any of these 5 transistor style amps, how should they compare to K200 A or B model and is it possible to refer to a later model such as the PC-303 effects section for a possible solution to Bill Collins issue. I'm definitely not any tech so resolving issues without a schematic for reference is a problem for me even somewhat with one. Mine doesn't have the effects board so I can't help there. Bill did send some nice shots of different parts of the amp to try and compare solder trace problems and such, maybe he can get a good shot of that effects board for you to look at. You may see something worth checking out for him. Steve C

Subject: Re: frankie troubles

Posted by [conductortom](#) on Wed, 09 Mar 2011 01:37:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

I want to thank everyone for any info on my amp. As my electronic knowledge is limited to putting on a grounded 3 prong cord, I'm of no help and all info is appreciated. Yes we do need to try and piece together a schematic. If there is anything I can do will be glad to help, just keep in mind my abilities.

Now if you want to learn how to run a locomotive, I can help you there !

Subject: Re: frankie troubles

Posted by [stevem](#) on Sat, 12 Mar 2011 16:00:23 GMT

[View Forum Message](#) <> [Reply to Message](#)

A current era A/C generating Traction sensing locomotive is no easy beast to understand either, so my hats off to you in that regard!

I am a big Railroad nut myself both 1 to 1 scale and HO. 3/4s of a mile across the Hudson river from where I live is the busy CSX west shore single track main line and a big long siding so when north and south bound freights pass each other I hear those wonderful sounds of the Loco horns a lot!

Subject: Re: frankie troubles

Posted by [conductortom](#) on Sun, 13 Mar 2011 14:00:13 GMT

[View Forum Message](#) <> [Reply to Message](#)

I was running old Alco C-420's off of the D&H, LV, and a few other northern lines. The Arkansas & Missouri RR only uses old Alco's. Would run them to Van Buren, Ark from Springdale Ark. I bet most of them had run on the tracks across from your house. When I worked for the Eureka Springs & north Ark RW, I got to run a 1906 Baldwin cabbage head woodburner 2-6-0. Loved that loco!! They also had a 1906 Alco oilburner 2-6-0 that had been used on the Panama canal. I made the last run on her on Oct. 27, 2001. Broke my heart to bring her into the depot for the last time. Last 6 years over there, I ran a 1942 EMD SW-1 600hp switcher. For a diesel it was a sweetheart. Very easy to run. Took out the old #6 independent brake valve and put in a #26 independent made that thing so easy to operate. I could stop the dinner train and not even spill your drink!! LOL

I was big into ho also. D&rgw was the line I was modeling. Then I started working with the 1 to 1 scale and didn't have any time to model. Still have a few n-scale, but Kustoms seem to be on my mind now days.

Tom

Subject: Re: frankie troubles

Posted by [stevem](#) on Sun, 13 Mar 2011 18:51:43 GMT

[View Forum Message](#) <> [Reply to Message](#)

Cool stuff!

I love those big Alco C420s, they always looked tuffer than a similar horse power EMD. It must be the big rear porch that the SD40-2s had that made them look slimmer and less massive.

Subject: Re: frankie troubles

Posted by [conductortom](#) on Sun, 13 Mar 2011 19:03:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

They were fun to run. Sometimes you wondered if you would make it back, but we always did. never got to run anymore then 2 c420's at one time, in a train. Did hossle 6 together many times getting them serviced for the turn. Running the steam loco's is where it's at. Awsome experence!!! They are living, breathing, creatures. Most engineers gave their locomotives lady names. One day she was a sweetheart, everthing worked great, next day she was tempermental as all hell!!! Had to really sweet talk her. LOL Loved every minute of it!!!

Subject: Re: frankie troubles

Posted by [conductortom](#) on Sat, 19 Mar 2011 02:39:43 GMT

[View Forum Message](#) <> [Reply to Message](#)

Well this tremolo section is whipping us! Is there anyone out there with a working 5 transistor frankie with reverb and tremolo that would take some pictures of the front and back of the circuit board for us. Bill has got it to where it will now shut off, but still can't turn down the speed. With no schematic, it's being a real hemaroid to Bill.

I know its a pain in the ass to get pictures, so I'll send a \$20 bill to the first ones I get. Thanks for any help.

Subject: Re: frankie troubles

Posted by [cassent5150](#) on Sat, 19 Mar 2011 02:48:08 GMT

[View Forum Message](#) <> [Reply to Message](#)

Man, if I had that board I sure would pull it and get pics for ya, but unfortunately my 5 transistor frank doesn't have the effects in it at all. sorry!! Steve C

Subject: Re: frankie troubles

Posted by [Marc](#) on Sat, 19 Mar 2011 23:42:05 GMT

[View Forum Message](#) <> [Reply to Message](#)

First post here!

I am hoping I can horn in on this post for some help too-I think I have amps that are 'frankies'. I usually only do hollow state repairs but I thought I'd take a shot at this.

I have two Kustoms in my shop:L 995 RV and a J 595 RV. the owner is a collector and brought the second one for a comparison. At a casual glance they appear identical.

The 995 works as it should , the 595 effects channel does not. It is missing the light bulb and the sound crackles out. The reverb return works (crash!)but the send does not.

So a #48 lamp will work assuming the LDR is OK.

Any tips on the reverb?

Are pics still desired of the boards?

Anybody got a schematic they would share?

thanks in advance!!

Marc

Subject: Re: frankie troubles

Posted by [Kustom_Bart](#) on Sun, 20 Mar 2011 00:24:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi Marc,

I am not a tech, but have fiddled with tube amps for a long time and now collect these old beauties and have done some repairs. I know enough about it to be dangerous, but the reverb sounds to me as if it is within the reverb tank itself. If one of these heads or amps take a big jolt or is dropped or shipped they can have reverb problems. I would look inside the reverb tank before I did anything and make sure that both springs are hooked up as they should be and not tangled together or unhooked etc. I would also make sure that all of the connections are very clean and every thing is grounded, etc.

I hope this helps.

Bart

Subject: Re: frankie troubles

Posted by [Marc](#) on Sun, 20 Mar 2011 02:45:15 GMT

[View Forum Message](#) <> [Reply to Message](#)

Bart,

thanks for the tip, unfortunately that was the first thing I checked. Tried a different tank too. The

tanks do break wires or blow transducers. But I am pretty sure this problem is in the preamp. It may be a bad cap? after all it is a late '60's amp...

thanks!
Marc
