Subject: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Sun, 14 Feb 2010 19:57:39 GMT
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I have these schematics (PC-900 and 703) and they are not very readable. Does anyone out there have good clean readable schematics of these 2 PC boards that you could send me @ "cassent5150@hotmail.com" Thanks Steve C
PS: be sure to put "PC-900 and 703" in the subject line so I don't kick it out as junk!

Subject: Re: Need PC-900 and PC-703 schematics
Posted by chicagobill on Mon, 15 Feb 2010 19:14:11 GMT
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Check your mailbox.

Subject: Re: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Tue, 16 Feb 2010 03:10:13 GMT
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Thank you so much for the clear copy of those boards. I got emailed several and I'm good to go if I can ever get a good understanding of how the regulator section works. I'm having a real hard time with the 703 I'm working on. The darn thing don't make sense. I checked the caps, resistors and replaced all the transistors on both sides - and + except that fz952 that I can find no cross for and still get 1.5 to 2.0 volts from the red supply. Do you know what or if there is a differance between the 2N3638 and the 2N3638A I replaced them with, I have all the old transistor that came out and want to test them but I need to know if I'm testing them properly. Tell me if this is correct, lets say I'm testing these 2N3638 transistors I've removed from this board. This is a PNP transistor therefore the current flow (With some resistance) is to one common pin (N) and I ain't figured out what thats called yet but for simplifacation purposes I'm going to just say Base for now, I will get flow only from emmiter to base and collector to base and it should not flow base to emmiter or base to collector or emmiter to collector. The 2N4002 is a NPN transistor therefore the current should flow "again with some resistance" from a common pin, "again I don't know what this would be so we'll call it base for now" Base to emmiter and base to collector and should not flow emmiter to base, collector to base or emmiter to collector. I'll stop there cause if this is the case there wasn't anything wrong with the ones I took out. Steve C

Subject: Re: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Wed, 17 Feb 2010 04:02:17 GMT
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update on the regulator problem. One of the new 2N3638 transistors I put in had an open pin and was screwing up the voltages. I have the pre amps hooked up and both channels work but it has a slight hum and the sound gets distorted as you turn it up to like 3. I unpluged everything put all controls full on turned it back on and checking some voltages and regulators are -8 at the green

and 7.7 at the red. Q-700 is rite on the money at .6 comming in but I'm only getting 2.1 on the other side instead of 4.4. both 701 and 702 are a volt higher than posted. thats as far as I got so for anyone got any Ideas I can try next? Steve C

Subject: Re: Need PC-900 and PC-703 schematics
Posted by stevem on Wed, 17 Feb 2010 11:39:39 GMT
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Of those two other sides of Q700 you are talking about, one is at ground and should not read any voltage potential.
The Emitter lead should be at gorund, is it?
Are you re-grounding that board when you are making these voltage test?

C703 may be leaky, so I would in the least lift the ground end up out of the circuit to see what that does to the voltage at Q700.

Its odd that you had a bad 2n3638 powered off of the - 40 volt power rail, yet the low voltage plus rail that should be a tad over 8 volts is near .5 volts low.

Without a transistor and a cap tester that can tell you if the componet is breaking down or leaky you could be in for a hair pulling repair!

Subject: Re: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Wed, 17 Feb 2010 17:40:02 GMT
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Thanks stevem, yes, it is odd that one of those 2N3638's were bad but thats what get for not checking them when I put it in. On Q-700 one pin is going to ground (now I don't exactly know if thats the emmitter or not though). Gandering at the schematic it has an arrow pointing from the flat line in the middle of the transistor diagram pointing to ground, what is the signifigance of this arrow cause I see them in all the other diagrams, but they dont always point the same way. I pulled out C-703 from ground and something happened in the regulator when I turned it back on. Now I don't have negative voltage its setting at -.94. I still have +7.8 at the red pre amp supply wire. I'll have to get back to ya. I still got the +2.2 V at the bottom of Q-700 instead of 4.4 and the middle pin is at .64. Look, this sure is just a learning thing for me, but if I can just get the simple stuff it sure will save me in the long run. I'm going to run tests on the regulator section and get it working again and I'll get back to ya. Steve C

PS: Again, what do the arrows in the transistor diagram stand for?
I have a digital hand held multitester I use to test what components I know how to test, it has a 2K setting on it with the symbol of a diode under it "is this a usefull setting for checking the diode in this board"?
This hand held I have also has the little Black square on it with 2 rows of holes and above them is ECBE and on the side of it is PNP and NPN, is this the kind of tester you were talking about?

Subject: Re: Need PC-900 and PC-703 schematics
Posted by ellum68 on Wed, 17 Feb 2010 18:18:29 GMT
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cassent5150 wrote on Wed, 17 February 2010 12:40
PS: Again, what do the arrows in the transistor diagram stand for?
I have a digital hand held multitester I use to test what components I know how to test, it has a 2K setting on it with the symbol of a diode under it "is this a usefull setting for checking the diode in this board"?
This hand held I have also has the little Black square on it with 2 rows of holes and above them is ECBE and on the side of it is PNP and NPN, is this the kind of tester you were talking about?

Arrows are the emmitters. Arrow pointing in is an PNP (points in proudly) and arrow out is NPN (never points in).

Subject: Re: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Thu, 18 Feb 2010 04:08:12 GMT
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Thanks for the info. I just spent about 3 hrs pulled every transistor again checked good no shorts and current flow only in the direction it supposed to. Diodes not shorted. no shorted caps although I did get some readings on some. Its all back together and -1.5 and +2.1 on the regulator voltage. Looks like I'm over my head here. I can't figure out where its going. + and voltages coming in look good 39.5 and 39.7 but its not steady, it goes up to 40+ at times. Its got to be something bad in there somewhere!!!! Steve C

Subject: Re: Need PC-900 and PC-703 schematics
Posted by stevem on Thu, 18 Feb 2010 11:41:57 GMT
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On a transistor diagram the arrow pointing in IS A NPN TYPE,if the arrow is pointing out ITS A PNP TYPE.
Dont get this screwed up or you will never get a SS amp fixed!

Your meter sounds like its has the needed section to test transisotrs, so I would get the meters instructions out and learn how to use it, as just testing lead to lead resistance wise will not pick up a leaky condition which could be driving you nuts!!

Caps checked resistance wise should only read on a meter for about 1.5 seconds unless they are 5 mfd or higher in rating.
If a cap holes a resistance reading out of circuit then it is leaky and will break down under volatge.

Subject: Re: Need PC-900 and PC-703 schematics

Posted by cassent5150 on Thu, 18 Feb 2010 17:18:11 GMT
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Thanks again for the info. Yes, I do know that the transistors are in right and the correct type. I have a good working K-200 setting close for comparison. I am getting steady readings from some of the caps and I assumed it was coming from the surrounding components so I'll pull them out and check them out of the board and get back to you on that. I still need clearifacation on those arrows in the diagram. ellum68 below said that the arrows are the emitter. Is this the direction of current flow from the emitter, is it pointing to the emitter or is it literally a symbol for transistor type (NPN or PNP)? Thanks Steve C

Subject: Re: Need PC-900 and PC-703 schematics
Posted by stevem on Thu, 18 Feb 2010 17:43:48 GMT
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The arrows are the Emitter lead of a transistor, and like I posted a arrow pointing into the circle is a PNP type.
Did I post wrong early this morning, now I must go back and look?
too dam early to have my mind in gear!

Subject: Re: Need PC-900 and PC-703 schematics
Posted by cassent5150 on Thu, 18 Feb 2010 19:56:59 GMT
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Yes you said it perfectly. I just had 2 ways of looking at it because of another message I recieved before yours. Both right but just enough gray area there to wonder off so I meerly wanted clearity. I got it now. On a brighter note, we're off and running again with this cotton pickin PC-703. Seems some bone head did get a transistor in wrong. I'd like to say it wasn't my fault cause the pin out on the board suggested something totally opposite. I'm talking about Q-711 and on the schematic it called for a arrow in (PNP) 2N3638 and that would've pinned up correct in the board, even though only 2 legs are used, but I used the FZ952 like the PC-900, not knowing this was a NPN type, cause I didn't have anymore of the 2N3638's left. I turned the pins the other direction and also found a bad resistor R-935 (2.7 ohms) so I replaced it and now we got some juice flowing in both directions -8.5 and +8.7, I believe that'll work!!! Hows Q-700 sittin at .6 at the base and 5.1 at the collector? Steve C

PS: I hooked the pre amps up and other than the crappy Bright control on channel 1 she's kickin and clean sounding, yea, I'm smiling and still got some hair left toooo!!!