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Rockland 7530B Spectrum Analyzer plugin Date ▼ (/g/TekScopes/topic/7965108?p=Created,,,20,1,0,0:,,,0,0,0,7965108)



Dennis Tillman W7pF (/g/TekScopes/profile/@Dennis_Tillman_W7pF)

1/08/18  (<https://groups.io/g/TekScopes/message/143390>)

Rockland Instruments has a good reputation for their test equipment but they were definitely pushing the technological state of the art in this 7000 series plugin and it shows in a bad way: It is a nightmare to troubleshoot! I have one of these and I have tried to troubleshoot but there are many substantial obstacles that must be overcome first. Here are some I remember:

- 1) It requires TWO flexible extenders since the plugin has to be several feet from the scope when troubleshooting because the seven computer cards are connected together by a backplane bus which in reality is a front-plane bus since it is located in the front of the plugin behind the front panel controls. This causes its own unique problems.
- 2) A front-plane bus that all seven computer cards plug into requires that you have a special 7530 extender card so that you can troubleshoot each of the seven cards outside of the card cage. Since each card being troubleshooted (sp?) is sticking out of the rear of the plugin you need the two flexible extenders I mentioned above. I have never seen or heard that such a 7530 extender exists which means it is going to be something you have to make custom because the dimensions have to fit the card cage and have the correct contact spacing and contact count.
- 3) The plugin uses bit-slice computer chips. Apparently there were no microprocessors fast enough to run their FFT software algorithms so they had to use a complicated bit slice arrangement. I think there are actually two different bit slice computers inside the plugin. One handles the incoming data and one handles the formatting and display of the FFT. I don't know which one runs the FFT algorithm.
- 4) Aside from the front panel the entire thing is a self-contained specialized computer that digitizes the analog signal, processes it into a spectrum, and converts the digital data back to analog form to display on the CRT of a 7000 series scope. Whatever program it runs is inaccessible without a logic analyzer that works on that particular bit slice microprocessor instruction set. I don't think there ever was a logic analyzer for this chip set.
- 5) The plugin has so many TTL logic chips and bit-slice processor chips that are in it that it has to have its own switcher power supply to convert the high voltage power supplies of the mainframe down to the lower voltages and higher current needed by the logic chips. The switcher had to be contained in a thick sealed metal case (to prevent EMI from contaminating the incoming signal) so that may be even more difficult to troubleshoot.
- 6) There is no documentation, no schematics, no Theory of Operation, no Specifications.
- 7) The plugin covers a 0-100KHz range which makes it an audio-only spectrum analyzer. The 5L4 for the 5000 series Tek scopes covers the same range and the 5L4 has a built in Tracking Generator. The 7530B does not have a tracking generator and as far as I know Rockland did not make one.
- 8) Since this is an audio spectrum analyzer but the puzzling thing is it has a 1Meg input and does not have a more standard (for the audio industry) 600 ohm input as well.


Dennis Tillman W7PF

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Colin Herbert

1/07/18  (<https://groups.io/g/TekScopes/message/143359>)

Fair enough, I wondered what it was and looked it up on Tekwiki, which gave me the information I passed on. Sorry to cause any confusion. It is listed under 7000-series third-party plug-ins, but the item page then says it is for the TM500 series. Confusing or what?


Colin.

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s92187


1/07/18  (<https://groups.io/g/TekScopes/message/143358>)

Sorry, that is incorrect, it DOES NOT fit in a 500 series mainframe.

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Colin Herbert

1/07/18  (<https://groups.io/g/TekScopes/message/143356>)

Do you realise that this is a plug-in for the TM500 system, not the 7000-series scopes? Check it out on Tekwiki:

http://w140.com/tekwiki/wiki/Wavetek_Rockland_7530A
(http://w140.com/tekwiki/wiki/Wavetek_Rockland_7530A)


Colin.

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s92187

1/07/18  (<https://groups.io/g/TekScopes/message/143353>)

Around 20 years ago I bought a 7530B plugin. I only used it once or twice and then put it on the shelf where it sat until last week. That's when I pulled it out and put it in a 7603 only to find that it doesn't work, doesn't seem to even power up. Since I have no service information or extender cards for this unit I decided to sell it instead of trying to repair it, it's a nice clean unit, complete, nothing missing, the only significant cosmetic issue is the CAL knob on the front panel which is slightly damaged. I have it on Ebay, that's where you'll find it (seller name is "laser-artistry").

Terry

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