

DIY81 Input Module Preamplifier with Equalizer

I hope you will enjoy your experience as this is my first published project. At first glance it may seem a little overwhelming but don't be scared off, it's not that difficult a project to complete. There are a lot of components involved so I stress for everyone to take their time. You will require prior experience with a soldering iron and basic general knowledge/understanding of electronics to get through (by that I mean you must at least know how to read the positive and negative side of a capacitor so as to avoid any accidents). This isn't an easy first project although I have given every effort to keep things as simple and clear as possible ... sort of like paint by numbers and connect the dots. As always, be careful when handling mains voltages and setting up your PSU. Nobody wants to take an unexpected trip to the doctor!

This project was derived directly from an original unit dating 1972 and has been kept as true to that original as much as possible. With the exception of a few out of manufacturing components (transistors) and the omission of a couple of non relative functions (i.e. Solo & Tone switching), all is as is on the original unit. I have provided NTE replacements for the components, which may not be available any longer. Of course, you may use other equivalents.

Included in this project are a full set of PCB traces ready to be printed and developed, the accompanying component overlay for guidance when stuffing your boards, a set of master reference pages which contain all the pad numbering and switch numbering/function data, and a full parts list with corresponding component designation. Also included are, all the PCB traces, overlay and parts listing for a power supply.

Thanks to Thomas Kristiansson for sharing his power supply with us!

www.vintagedesign.se / www.vintagedesign.tk ... [DIY!](#) The supply itself is contained on a separate PCB for use with an off-board transformer. It will allow you to mount inside a 1U case if you choose to make 1 channel. The supply will deliver +24V @ ~1 ampere (plenty for 2 channels) with the appropriate transformer, +48v for your microphones, and +6v for lighting up your box and/or switching relays all from a single 24V secondary.

All the connection data is included by section over several pages. The methodology behind the data sheets is simple. Every connection is identified with a number and/or pin assignment, i.e. P2 would mean connect to Pad #2 on Mainboard. Pin A would mean connect to Pin letter A on the corresponding connector. The pad designations can be found on the component overlay page for the mainboard. The entire project is made this way as to keep it simple ... again, paint by numbers. There are a lot of connections to make from the switches so it's important to take your time and double check your work. The Gain switch in particular can be a little tricky so again, take your time. This could not be avoided, as this is how the original unit is wired.

The components for this project are readily available and may be purchased via your favorite supplier with the exception of the following:

- Microphone Input Transformer – T1454
- Line Input Transformer – T1452
- Output Transformer – LO2567
- L1 Inductor - VT22675 or Carnhill VTB9048
- L2 Inductor - VT22674 or Carnhill VTB9047

These components are available through [Vintech Audio](#). The inductors are possibly available through [Carnhill](#) as well. You can of course use any viable substitutes for the input and output transformers. Just remember to respect the required specifications. I've sourced a series of switches for use that will not break your bank. You can of course use any make of switch you like as long as you conform to the requirements. I've had to separate the pot's from the switches in order to keep the costs down (dual concentric switches are \$\$\$) but I don't feel that it will be a bother having a separate gain control for the EQ section. The same goes for the Hi and Lo pass filters. Again, if you wished to, you may use concentric switches to save on space.

I think that's about all there is to say. Get working and soon you will have your very own clone!

Enjoy!

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