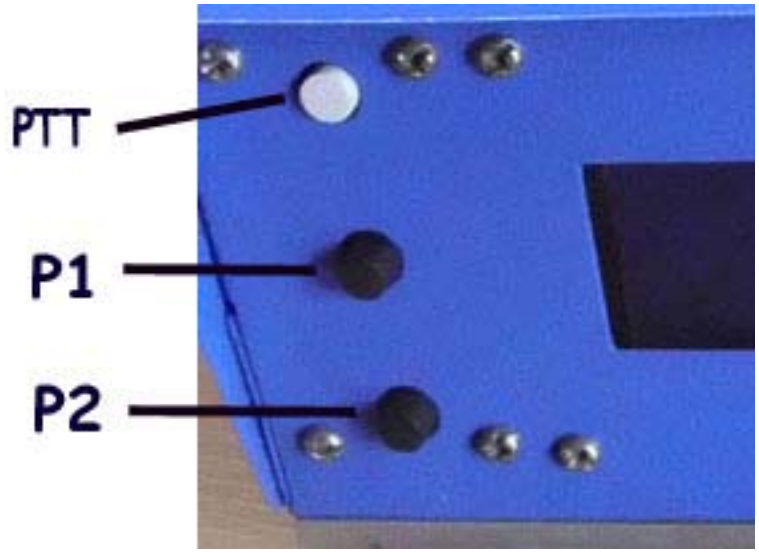
Fox Delta

Amateur Radio Projects & Kits

PA –100M

User information Document: PA100M RF POWER AMPLIFIER

Power ON:



At power ON, LCD will show FW Version and wait for USB connection, if present. It will communicate with PC and get ready for config. When connected, Run config software.

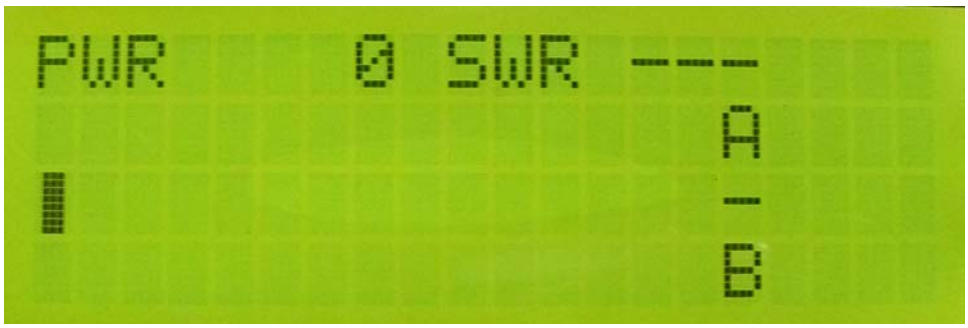
USB is used in this project only for configuration of measurement parameters.

For stand alone (non-usb) operation, press P1 once and CPU will exit USB mode and display standalone mode

Once LCD actively displays CHA & B, each press of P1 will change available display mode. Keep one that is good for you.

By default, we supply amp with following power setup:

CHA: 100W -–– Amplifier Output Power
CHB: 10W ---- Amplifier RF Input Power



Setup RF OUTPUT and INPUT POWER:

CHA: Amp OUT

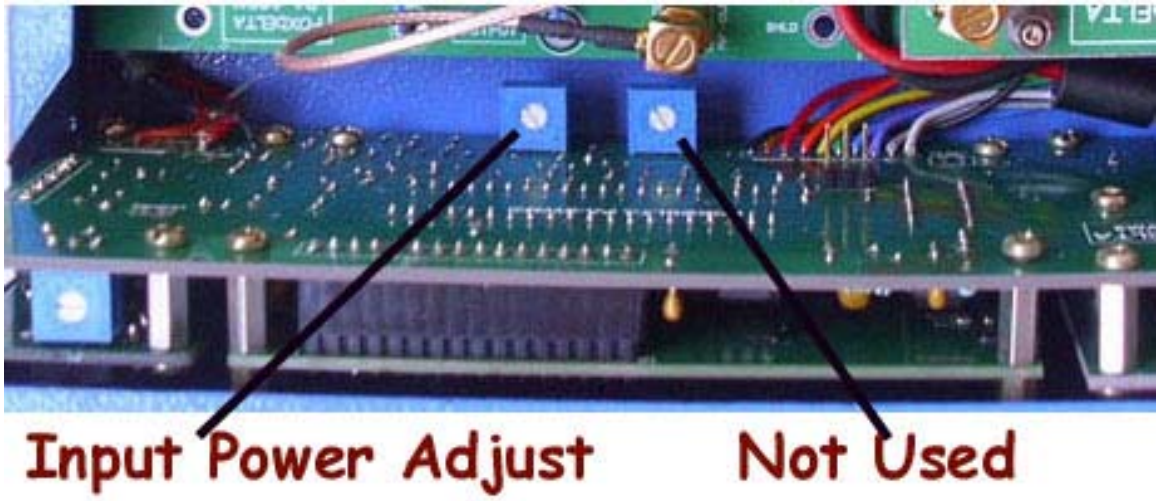
RF OUTPUT power measurement is set by a FWD Preset located on BK board near SO239 connector

Connecting a 50 0hms dummy load to antenna terminal does adjustment of REF power, to read 1:1.

CHB: RF INPUT FROM TX/TRX

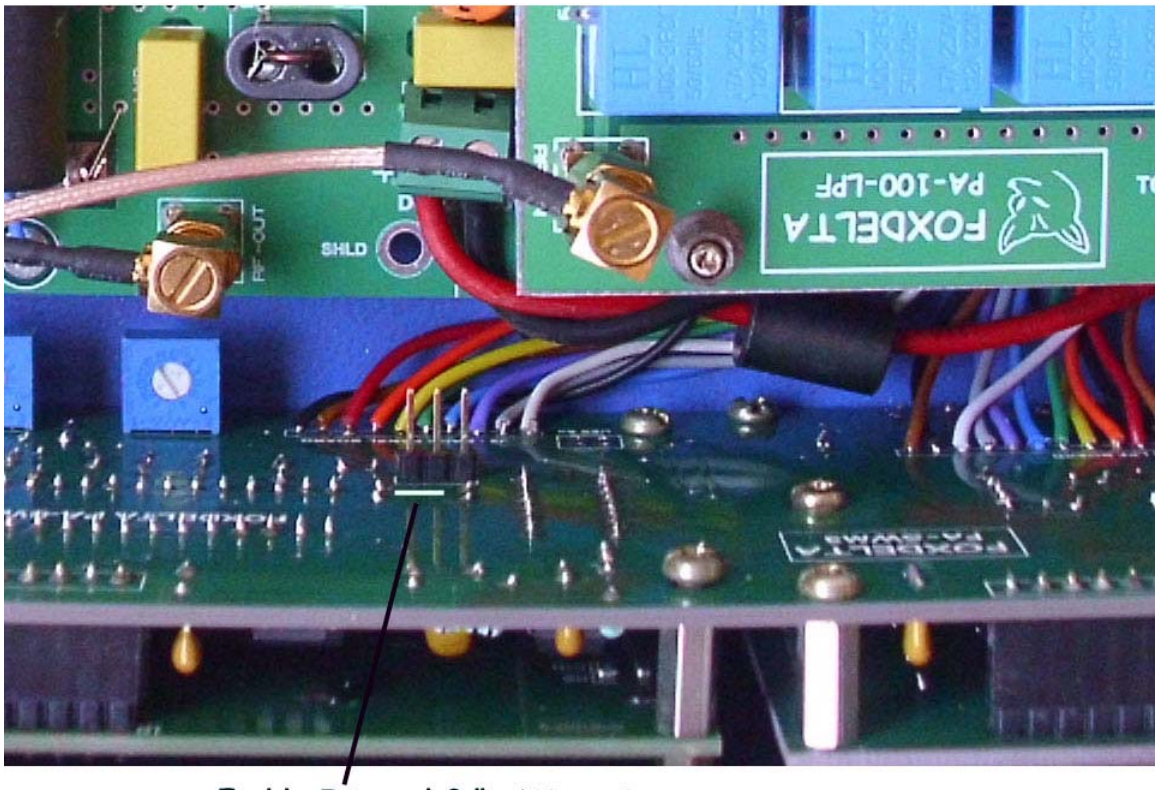
RF input is rectified on BK Board and routed to CPU for display of input RF power from transmitter/transceiver

Level to display on LCD is controlled by preset located at the backside of CPU board.



PA-100M INPUT POWER ATTENUATION:

A 3db INPUT attenuation may be activated by placing a shorting pin on this header.



Enable Internal 3db Attenuator
Front panel ATTN LED lights up

This internal attenuation is applicable to all bends. New CPU design will have provision to attn a particular band or choice of bands

Header LEFT+CENTER = FIX ATTN ON
Header RIGHT+ CENTER = OFF (or as set on LPF Band SW)

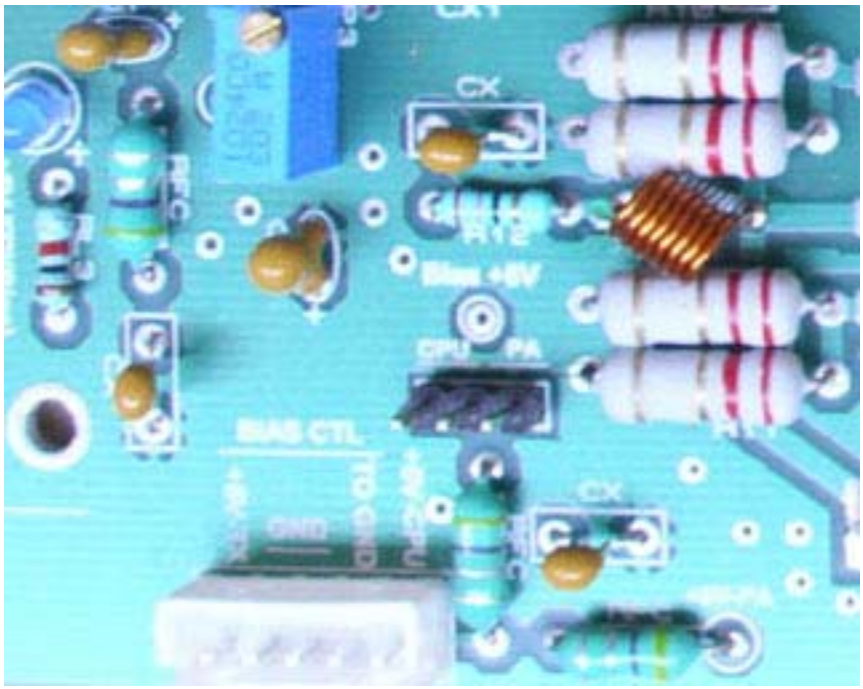
PA Board Bias setting:

By default, +5V for bias circuit is supplied from CPU.

However, we have a possibility to provide +5V from PA's +24V supply.

This is designed so that PA module may be used independently without CPU.

Bias +5V Source Header:



Insert a shorting pin on 3pin header marked as “CPU” to Supply +5V for bias circuit from CPU.

For using PA module alone for your own project, place a shorting pin at “PA” to power bias voltage of +5V from HV +24V supply.

We have a +5V regulator under the PA board which step down 24V supply to +5V for above bias circuit.

For full PA100M amplifier kit or assembled, we set bias +5V source from CPU.

Dinesh Gajjar / 16rd OCT 2025

? vu2fd
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