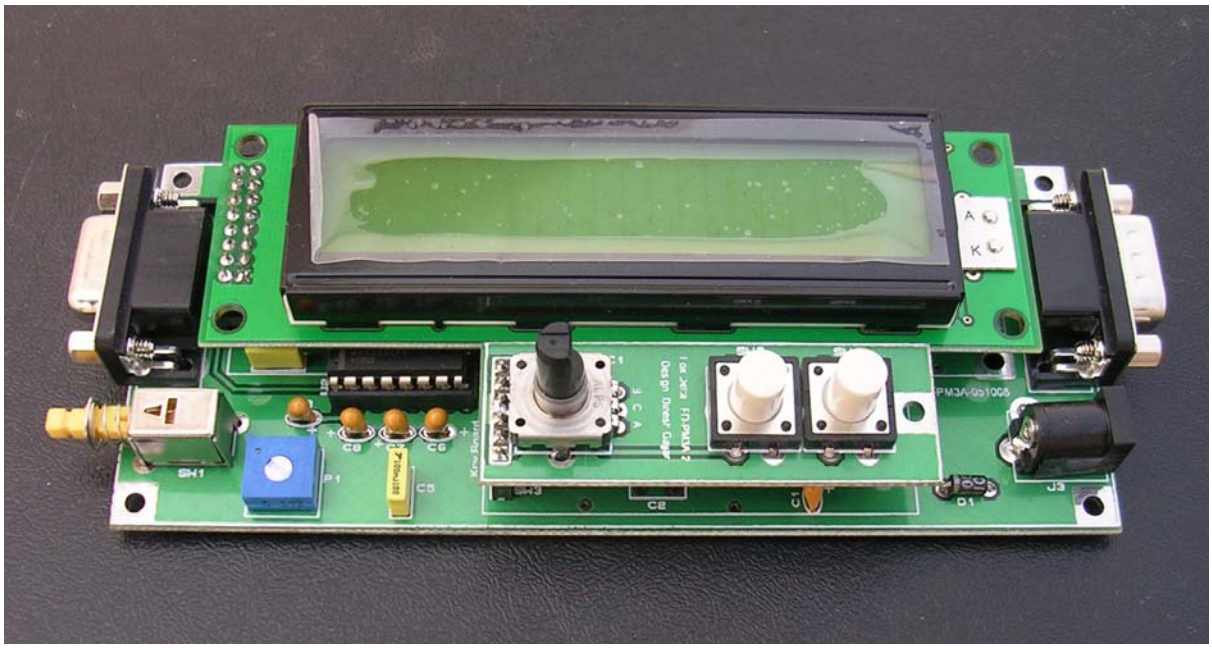
Fox Delta

Amateur Radio Projects & Kits

FD- PM3A

Menu Configuration for PM3A: Firmware Version 1.04

PM3A:



Firmware info / User guide for version 1.04

The main start-up screen shows:

dBm, status, RF-voltage
Bar-graph, RF-Power-watts

If no attenuator is used, the dBm readout goes from -63 (noise floor) to +30 dBm (1W)

The status readout show the selected frequency band, and attenuator mode
Use the band dial to change between LF, HF, VHF, UHF and SHF calibration memories

The Firmware is calibrated: 0 dBm at:

LF=3.5MHz,
HF=14MHz,
VHF=145MHz,
UHF=430MHz,
SHF=440MHz

You may calibrate at your own favorite frequencies for best performance.

In the RF-Power meter screen, and the Return Loss screen, use the SELECT button the enter RELATIVE mode.

In this mode dBm and Bar-Graph is shown, when entering this mode the dB read out for Channel A is zeroed and all subsequent readings are relative to this reference value.

The Menu:

To enter the menu / settings use the MENU button

When in menu, use the band dial (or Up/Down) to get the desired setting, at the required setting use SELECT to activate, this is also shown in the display.

Here are the Menu Points:

0: Set attenuator value from -1 to -59dB. Use Up/Down to set the value, SELECT to set it

1: Toggle the attenuator ON/OFF using SELECT

2: DC Voltmeter, actual and min. and max.

3: RF Power-meter, the default start-up screens.

4: SSB PEP Wattmeter, with peak hold and variable decay

5: Return loss with SWR readout for a single channel.
Press SELECT to set the reference value on Channel A

6: Dual Channel Ratio Measurement with SWR

7: Calibrate 0 dBm at the selected band for Channel A

8: Calibrate 0 dBm at the selected band for Channel B

9: Read all calibration values

10: Zero all calibration memories

11: Display update delay 2-80mS, and Peak hold and decay speed

12: About Info shows software version and so on.

DC voltmeter:

The DC voltmeter can measure from 0 to 20 volt only positive, with a resolution of 20mV.

Nothing will damage if input is reversed, it just won't measure!

Calibration is done in hardware:

Use one or two 10meg resistors to parallel R3 or R4 until correct voltage is shown.

In the DC voltmeter screen, actual voltage, Minimum and Maximum is displayed.

To reset Min and Max press select button

The voltmeter can be used to monitor the battery voltage if a battery supply is used, or what ever you want to measure, but remember the input impedance is about 80 k Ohm.

Dual Channel Mode:

The system now uses Channel B in the Dual Channel mode.
Connect the reference value to Channel B and the varying value to Channel A.
The system will then return the difference between A and B in dB (i.e. the ratio of A/B).

If a return loss bridge is used, connected the reference (forward) port to Channel B and the reflected port to Channel A.

Note – in the Dual Channel Mode, there is no check to see if either Channel is at the noise floor.

Dinesh Gajjar / 14th Nov. 2008

For more details, please visit Project Page: http://www.foxdelta.com