Using MMDVMCal

NOTE: MMDVMCal will test Tx/Rx on ZUMspot boards and the MMDVM-Pi boards. The ZUM AMBE Server board is not supported.

- Turn on a radio and set it to 433.000 MHz and set it to analog mode.
 - If you want to test VHF (for ZUMspot Dual Band only) try using 145.615MHZ
- Boot up pi-star
- Go to Configuration -> Expert -> SSH Access
- Login to pi-star
- Type in the following command: sudo pistar-mmdvmcal

| | Pi-Star: 3.4.16 / Dashboard: 201 |
|------------|--|
| | Pi-Star Digital Voice - Expert Editors |
| | Dashboard Admin Update Upgrade Backup/Restore Configura |
| | iick Edit: DStarRepeater ircDDBGateway TimeServer MMDVMHost DMR GW YSF GW P25 GW NXDN |
| Full Edit: | DMR GW PIStar-Remote WiFi BM API DAPNET API System Cron RSSI Dat Tools: CSS Tool SSH Ac |
| | SSH - Pi-Star |
| H/h | Display help |
| Q/q | Quit |
| W/w | Enable/disable modem debug messages |
| E/e | Enter frequency (current: 433000000 Hz) |
| F | Increase frequency |
| f | Decrease frequency |
| Т | Increase deviation |
| t | Decrease deviation |
| Р | Increase RF power |
| р | Decrease RF power |
| C/c | Carrier Only Mode |
| D/d | DMR Deviation Mode (Adjust for 2.75Khz Deviation) |
| M/m | DMR Simplex 1031 Hz Test Pattern (CC1 ID1 TG9) |
| K/k | BER Test Mode (FEC) for D-Star |
| b | BER Test Mode (FEC) for DMR Simplex (CC1) |
| В | BER Test Mode (1031 Hz Test Pattern) for DMR Simplex (CC1 ID1 TG9) |
| J | BER Test Mode (FEC) for YSF |
| j | BER Test Mode (FEC) for P25 |
| n | BER Test Mode (FEC) for NXDN |
| S/s | RSSI Mode |
| I/i | |
| V/v | Display version of MMDVMCal |
| (SDACA) | Toggle transmit |

- You will see this menu
- Press the spacebar on your keyboard to do the transmit test
- The red PTT LED should turn on. You should hear a tone on the radio. This shows that the transmit function of the board is working
- Press the spacebar to stop the transmit test.
- Press the "s" key on your keyboard for the RSSI test (RX test)
 - RSSI test will not work on MMDVM-Pi board

- Press the PTT button on the radio.
- You should see the RSSI drop to around 47-48. This shows that the receive function of the board is working.

| Pi-Star:3.4.16 / Dashboard:20190205 | | |
|---|--|--|
| Pi-Star Digital Voice - Expert Editors | | |
| Dashboard Admin Update Upgrade Backup/Restore Configuration | | |
| Quick Edit: DStarRepeater ircDDBGateway TimeServer MMDVMHost DMR GW YSF GW P25 GW NXDN GW Full Edit: DMR GW PiStar-Remote WiFi BM API DAPNET API System Cron RSSI Dat Tools: CSS Tool SSH Access | | |
| SSH - Pi-Star | | |
| K/k BER Test Mode (FEC) for D-Star | | |
| b BER Test Mode (FEC) for DMR Simplex (CC1) | | |
| B BER Test Mode (1031 Hz Test Pattern) for DMR Simplex (CC1 ID1 TG9) | | |
| J BER Test Mode (FEC) for YSF j BER Test Mode (FEC) for P25 | | |
| | | |
| n BER Test Mode (FEC) for NXDN | | |
| S/s RSSI Mode | | |
| I/i Interrupt Counter Mode | | |
| V/v Display version of MMDVMCal | | |
| <pre><space> Toggle transmit</space></pre> | | |
| Set transmitter ON | | |
| Set transmitter OFF RSSI Mode | | |
| RSSI Mode RSSI: max: 101, min: 95, ave: 97 | | |
| RSSI: max: 101, min: 99, ave: 99 | | |
| RSSI: max: 100, min: 96, ave: 101 | | |
| RSSI: max: 106, min: 47, ave: 56 | | |
| RSSI: max: 47, min: 47, ave: 47 | | |
| RSSI: max: 47, min: 47, ave: 47 | | |

• Press the "q" key on your keyboard to exit out of MMDVMCal.