**T41 BPF Board Prototype Testing Report**

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| Board Rev Version | Tester | Date |
| V12.06 03/09/2024 | Bill K9HZ | 04/12/2024 |

**Test #1 – Board Voltage: 3.3V.**

Connected board to 12V supply at J3, measure voltage between regulator output and GND at TP15.

Measurement: Voltage measured = 3.285 VDC

**RESULT OF TEST #1 –> PASS.**

**Test #2 – I2C Address Test: 0x24 for BPF #1**

1. Solder JP4 closed. JP3 and JP2 remain open for 0x24 address.
2. Compile and load “I2CScan” utility into T41 V12 Main board Teensy processor.
3. Connect “BANDS” cable from V12 Main to BPF #1.
4. Connect 12V to Main board and BPF #1 board.
5. Observe Scanned addresses:

Scanning Wire ...

I2C device found at address 0x0A ! [Correct Address for Teensy Audio Hat]

done

Scanning Wire1 ...

No I2C devices found

Scanning Wire ...

Scanning Wire2 ...

I2C device found at address 0x24 ! **[Correct Address for #1 BPF MCP23017]**

done

**RESULT OF TEST #2 –> PASS.**

**TEST #3 – Filter Attenuation Test, Each Band**

1. Compile and load “BPFTest” program into T41 V12 Main board Teensy processor.
2. Connect Rigol 3030E Spectrum Analyzer input to the J5 “To Receive” connector,
3. Connect the SA Tracking Generator signal to J6, the “From LPF” connector.
4. Set the span of the SA to 1 MHz-150 MHz.
5. Test each band 160M, 80M, 60M, 40M, 30M, 20M, 17M/15M, 12M/10M, 6M and Bypass. Save and publish scan.
6. From scans, determine Upper/ Lower second and third harmonic dB reduction values.

**RESULTS OF TEST #3 ->**

**<Write the code and plots go here>**

**TEST #4 – Test RXTX Switch.**

1. Use setup from TEST #3 except…
2. Connect SA Tracking generator signal to J2 “From Excite” connector.
3. Connect SA Input to J1 “To PA” connector.
4. Test band using “BPFTest” program to 40M.
5. Energize PTT to ground on Main Board.
6. Show result of scan. Should match the scan from 40M above.

**RESULTS OF TEST #4 ->**

**ERRATA And CHANGES**

None.