



NFBF-1

Notch Filter/Band Pass Filter

Manual Revision: 2007-02-02

Covers Hardware Revisions:

NFBF-1: B & Higher

SPECIFICATIONS

Operating Voltage	6.5-18 VDC
Operating Current	3.8 mA
Operating Temperature	-30 - +60 C
Input Level	20 mV – 1 V RMS
Input Impedance	>50 K
Frequency Range	
NFBF-1A	1200-2600 Hz
NFBF-1B	700-3000 Hz
NFBF-1C	80-200 Hz
Band Width	0.5%
Device Gain or Loss	Unity
Notch Filter Depth	30 dB
Audio Output Impedance	1.0 K
Dimensions	.64" L X .83" W X .37" H

GENERAL INFORMATION

The NFBF-1 can act as a notch filter or a band pass filter. As a notch filter the unit will remove the tuned tone from the incoming audio. When acting as a band pass filter the unit will block all but the tuned tone.

HARDWARE INSTALLATION

Be certain to follow standard anti-static procedures when handling any of Midian's products.

Red – B+ (6.5-18 VDC) – Connect to a switched battery point in the radio.

Black – Ground – Connect to the nearest ground plane in the radio.

Orange – Signal Input – Break the radio's audio path at the output of the discriminator. Connect this lead to the discriminator side of the break.

Green – Bandpass Output – Connect to the opposite side of the break made for the Signal Input. This output passes the desired tone.

Violet – Notch Output – Connect to the opposite side of the break made for the Signal Input. This output removes the undesired frequency.

HARDWARE ALIGNMENT

Band Pass – Send the unit a 0.7 mV p-p signal on the Orange Signal Input line. Monitor the Green Band Pass Output line with an Oscilloscope or Sinadder. If using an Oscilloscope tune R-13 (15 turn potentiometer) for maximum amplitude. If using a Sinadder tune R-13 for -12 to -10 dB of sinad. Use an Oscilloscope or Frequency Counter to read the tone frequency on the output.

Notch Filter – Send the unit a 0.7 mV p-p signal on the Orange Signal Input line. Monitor the Violet Notch Filter Output line with a Sinadder. Tune R-14 for -27 to -42 dB of sinad (-30 dB recommended). It may be necessary to tweak R-13 to get R-14 lower.

TECHNICAL NOTES

Radio Compatibility: Midian has taken the utmost care to ensure the option board integrates into the radio with minimal impact to the features of the radio. However, some features may not be available in the radio when an option board is used.

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