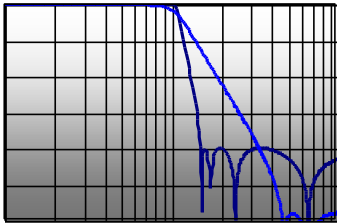


World Leader Presents the Incredible VBF44

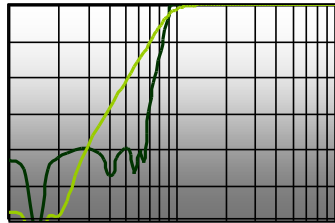
- Very versatile, easy to use
- 4 Channels from one system
- 1 Hz – 255 kHz filter range
- x 1000 (+60dB) gain
- 5 filter responses, 135 dB/Octave
- Non volatile memory
- BNC connectors – rear panel
- Signal level indication
- Built in Ethernet text interface



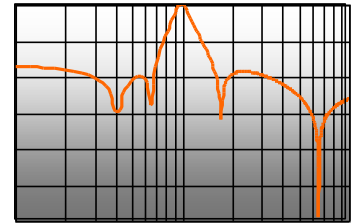
Lowpass (x2)



Highpass (x2)



Bandpass



The Kemo VBF 44 is a top of the range filter system, with 5 built in-filter responses, 2 low pass, 2 highpass, and one bandpass. The VBF44 is a compact benchtop instrument, manufactured to high standards including stainless steel panels and passive cooling. Control is an easy to use 'menu' style control with LCD panel, and selection buttons. The menu style control has a number of features to make operation and programming of each channel easy. The VBF 44 has a built-in Ethernet style interface, which accepts operating system independent text commands sent over Ethernet type hardware.

The VBF 44 has a wide range of gain control. x 100 (+40 dB) is available before the filter, in 1,2,5... steps. After the filter there is more gain in 1,2,5,10 steps. This combination allows optimization of signal levels both before and after the filter, as well as optimizing output signal levels for signal analysis systems. A 4 level signal indicator, and a signal overload indicator to aid in gain setting. Inputs are single end or differential, with AC and DC coupling, with IEPE transducer source. The VBF 44 can connect 2 pairs of filters in series and parallel, this give enormous flexibility for extracting, rejecting, or band limiting signals. Filters can be set in groups, a useful for setting bandpass and bandstop filters.

The combination of frequency range, pre and post-filter gain, 5 filter responses, channel tracking/grouping, and compact size make the VBF 44 a very versatile, flexible, top of the range filter amplifier. There is no benchtop unit like it. For the researcher with complex signal processing protocols, this is the solution.

VBF44 Performance Specification

Electronic	Typical specifications after 30 minutes warm up at 20°C ambient temperature.	
Channels	4 (common earth)	
Tuning Modes	Individual, or group set.	
Connection modes	Separate, Series, parallel.(set between channel pairs)	
Filter modes	Lowpass 1, Lowpass 2, Bandpass, Highpass 1, Highpass 2.	
Frequency range	1 Hz – 255 kHz	
Filter cut-off resolution	255:1 in 4 decade ranges 1 Hz – 255 Hz 10 Hz – 2 550 Hz 100 Hz – 25 500 Hz 1 kHz – 255 kHz	
Bandwidth	> 1 MHz, 1 volt signal, 0dB gain, filter highpass and bypass modes	
Cut-off accuracy	2 % of F_c	
Input impedance	100k Ω , 150pF	
Input gain	x1 to x100 in 1,2,5,10,20,50,100 steps	
Input voltage, linear	+/- 10 V	
Input voltage maximum	+/- 40 V	
Input modes	DC, AC, Differential, IEPE	
Input AC coupling	-3 dB @ 1.6 Hz	
Input connectors	BNC	
Output type	Single ended	
Output gain	x1,x2,x5,x10	
Output impedance	50 Ω	
Output voltage	+/- 10 V (load > 2k Ω)	
Output noise	< 200 nV/ $\sqrt{\text{Hz}}$ RTI (lowpass depending on frequency, gain, and signal levels)	
Output linearity	<0.03%	
Output connectors	BNC	
Offset voltage	<2.5 mV	
Offset drift	200 $\mu\text{V}/^\circ\text{C}$	
Cross talk	> -70dB	
Amplitude matching	+/- 0.1 dB to 0.8 of F_c (< 100 kHz, lowpass)	
Phase matching	+/- 1° to 0.8 of F_c (< 100 kHz, lowpass) The VBF 44 is a complex filter, typical matching values given. For more detailed response and matching data contact Kemo.	
Interface	Text over Ethernet, FICL II commands (see website for info)	
Power	105-125, 210-250 Vac 50/60 Hz 40 VA	
Connector	IEC 6 Amp	
Mechanical		
Size and weight	150 x 165 x 385 mm, 6.2 Kg 5.9" x 6.5" x 15.1", 14 lb (hwxwl)	

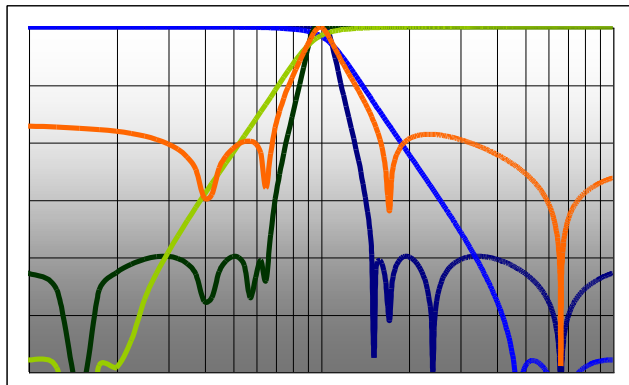


Rear Panel
BNC's in and out
Power

Filter Responses

- Lowpass L1** Flat to F_c -80 dB at 1.5 F_c
Stopband -80 dB
- Lowpass L2** Flat to 0.6 F_c -96 dB at 4 F_c
Stopband -96 dB
- Highpass H1** Inverse of L1
- Highpass H2** Inverse of L2
- Bandpass B1** 0 dB at F_c -35 dB at 0.67 F_c and 1.5 F_c ,
Stopbands -35 dB

The combination of flexible control, range of 5 filter responses, wide gain, channel grouping/tracking, plus the connection modes make the VBF 44 an excellent, versatile top quality filter/amplifier unit.



Due to continued product development Kemo reserves the right to change specification without notice.
Products made by Kemo, Limited, UK