

- Flexible system
- Programmable Gain + Frequency
- Wide range of filter responses
- 19" or portable enclosures
- -12 to +58 dB Gain
- RS 232 Interface, ASCII control
- DC power
- Optional IEPE supply
- Windows Driver



The Kemo RackMaster series is a flexible system of programmable filter/amplifier systems. Based around the established Kemo 1600 filter modules and 6U range of carrier cards. The systems are controlled by a high level language, and RS232 interface. Simple text based control of the gain and filter settings is operating system independent. Locating the critical analogue circuits outside the PC or controlling computer allows for lower noise and reduces influence from power supply and PC noise.

#### Frequency Range

A range of frequencies can be selected by using either the linear 255:1 steps of the standard 1600 filter module, or the semi-logarithmic 100 steps of the 1600W module covering a 1792:1 frequency range. A range of modules are available to giving frequency ranges from 1 Hz to >100kHz.

#### Filter Responses

A full range of filter responses are available. Response 01 optimised for anti-aliasing, response 41 low distortion linear phase filter, 03 the traditional 8 pole Butterworth, and a range of other responses to meet specific applications.

#### Optional Gain

The RackMaster Series has the choice of unity gain or with programmable gain. This gain is in 3 ranges of 0.25 – 7.75 in 16 steps of 0.25, 5 –80, and 50 –800. Inputs can be configured to single ended, differential ended, AC, DC, icp (manually switched).

#### Control Interface

Control is via RS 232 interface using the Kemo FICL text based filter language. This allows for control from any RS232 device, a Windows driver is available.

Compact size and DC power make RackMasters ideal for portable filtering applications.

Due to continued product development Kemo Limited reserves the right to change specification without notice

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# RackMaster Series Performance Specification

Electronic (Typical specifications after 30 minute warm up at 20° C ambient temperature)

Cut off frequency steps  
Standard type 255 linear steps,  
over 255:1 range  
'W' type 100 logarithmic steps  
over 1792:1 range  
Step accuracy +/- 2%  
Input Types <sup>1</sup>  
Single Ended  
Differential  
IEPE transducer source  
Input Impedance 1MΩ°  
Input Modes Single/Differential/Ground  
Input Coupling AC/DC  
Input Noise 35µV RTI, 25kHz BW <sup>2,3</sup>  
Input Voltage +/- 10 V Max

Output Impedance 47 Ω +/- 15%  
Output Current 5mA Max  
Output DC drift 150 µV/ °C at 25° C <sup>3</sup>  
Amplitude Matching +/- 0.25 dB <sup>4</sup>  
+/- 1% <sup>4</sup>  
Phase Matching +/- 2° <sup>5</sup>  
Gain 3 ranges of 16 steps  
x 0.25 – x7.75 in x0.25 steps  
x5 – x80 in x5 steps  
x50 – x800 in x 50 steps  
Connectors  
Input and Output Colour coded BNC  
RS 232 9 way 'D'Type

## Notes

1. Non Programmable
2. Noise and Distortion values are dependant on a number of factors, including input levels, filter response type, and cut off frequency selected
3. Typical values.
4. Whichever value is the greater.
5. Closer tolerances may be possible, by selection at additional cost, depending on filter response

## Mechanical Specification

8 Channel Compact Version  
Dimensions 290 x 280 x 52 mm Case size  
Weight 3 Kg

16 Channel 19" Version  
Dimensions 1U 19", 422 x 430 x 45 mm  
Weight 4.5 Kg

Power Input  
10 – 30 V DC via 'XLR' Type connector. 50 Watt (typical)  
100 – 250 V AC external supply.



Windows Driver



8 Channel RackMaster

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