Teledyne RESON

EC6081 mk2

VP2000 Voltage Preamplifier

The VP2000 is a 1MHz bandwidth Voltage Preamplifier designed for uses in conjunction with piezoelectric hydrophones.

VP2000 offers excellent low-noise performance over the entire frequency range and gain selections in 6 levels from 0 to 50dB.

A range of 12 high-pass and 12 low-pass filters allows for ideal band pass filter settings.

The VP2000 has a high input impedance which makes measurements at frequencies below 1Hz possible to perform with even very small hydrophone sensor capacities.

PRODUCT BENEFITS

- 1Hz to 1MHz bandwidth
- Gain selection from 0 to 50dB
- Options of 12 high-pass filters and 12 low-pass filters
- Excellent low-noise characteristics

TECHNICAL SPECIFICATIONS

INPUT:	
Impedance:	1Giga Ohm + 22pF
Max. level:	Up to 8Vp or 5.6Vrms depending on condition of rechargeable batteries.
OUTPUT:	
Impedance:	10 Ohm//100µF
Max. level:	Up to 8Vp or 5.6Vrms depending on condition of rechargeable batteries.
Max. load:	10nF (100m cable)
GAIN:	
Gain settings, 6 steps dB:	0–10–20–30–40-50 ±1dB
BANDWIDTH	
Frequency range:	1Hz to 1MHz -3dB at 0dB to 40dB gain; 1MHz and 50dB gain -6dB.
NOISE:	
Noise power density spectrum	20nV/√Hz (at 1kHz)
HI-PASS FILTERS	
-3dB @ Hz (6dB/oct):	1-10-50-100-500-1k-5k- 10k-25k-50k-100k-250k
LO-PASS FILTERS	
-3dB @ Hz (6dB/oct):	1k-5k-10k-20k-25k-50k- 100k-250k-500k-750-1M
POWER SUPPLY:	24VDC - 18 watt min. Recommended model: XP-Power type : VER18US240-JA
Voltage nominal/Current quiescent:	24VDC input for charging. Current consumption of EC6081 mk2 approx 30mA. Power consumption from battery: approx. 18mA. Operation time: approx. 10 hours with 2pcs. 9Volt rechargeable batteries.
Enclosure case, dimensions:	125, 80, 60mm. (l w, h) (Splash proof aluminum box)
Accessories included :	2.1mm DC connector and wire supplemented with black and red banana plugs.

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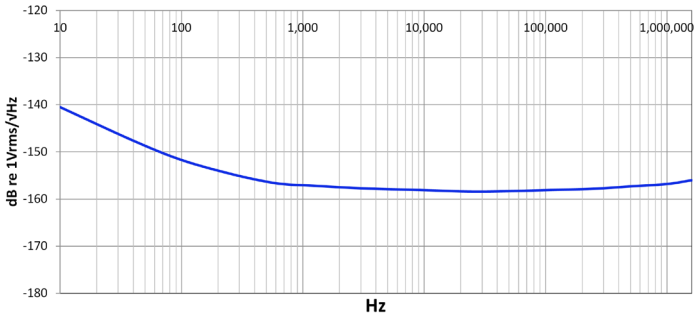
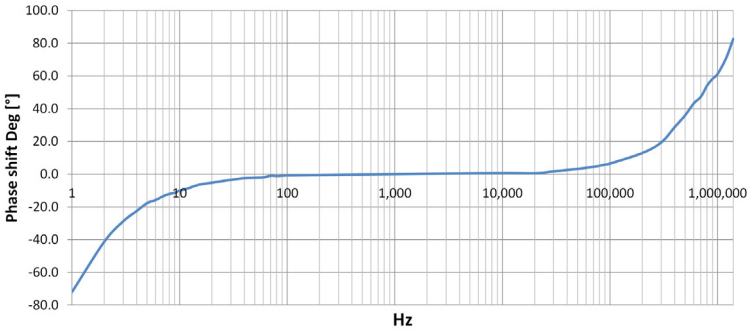
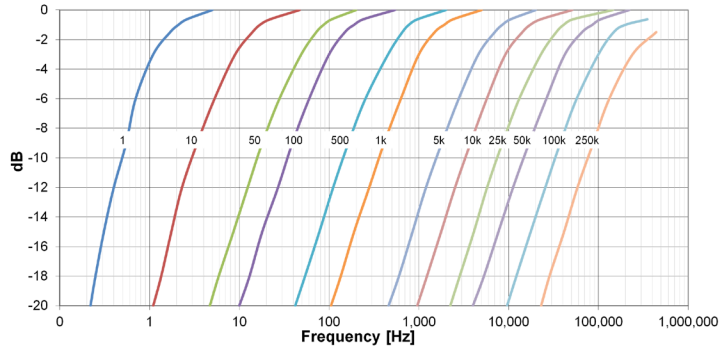
Noise power density spectrum EC6081G mk2 s/n1811006
Input load 1nF, gain 0dB, 1Hz HP filter



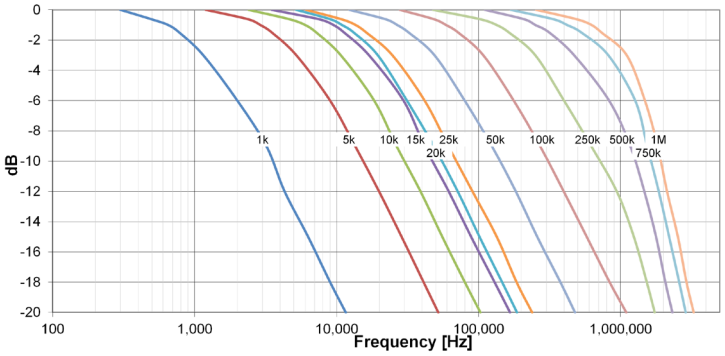
EC6081G mk2, S/N1811006
Phase shift, High pass 1Hz, Low pass 1MHz, 0dB gain



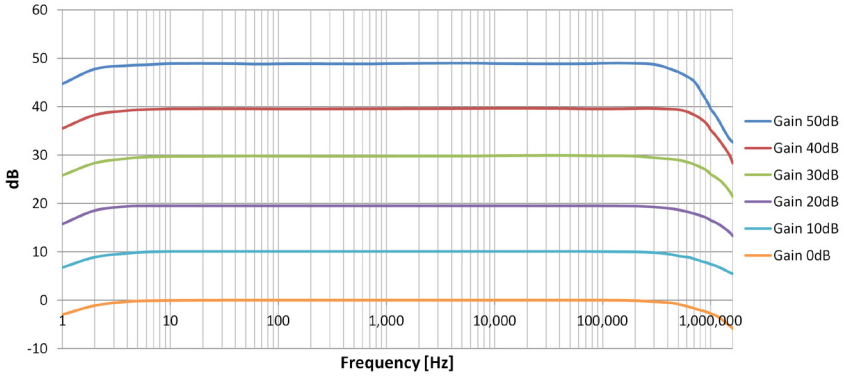
EC6081G mk2 s/n1811006 High Pass Filter Characteristics



EC6081G mk2 s/n1811006 Low Pass Filter Characteristics



EC6081G mk2 sn1811006 Gain versus frequency
High Pass 1Hz, Low Pass 1MHz



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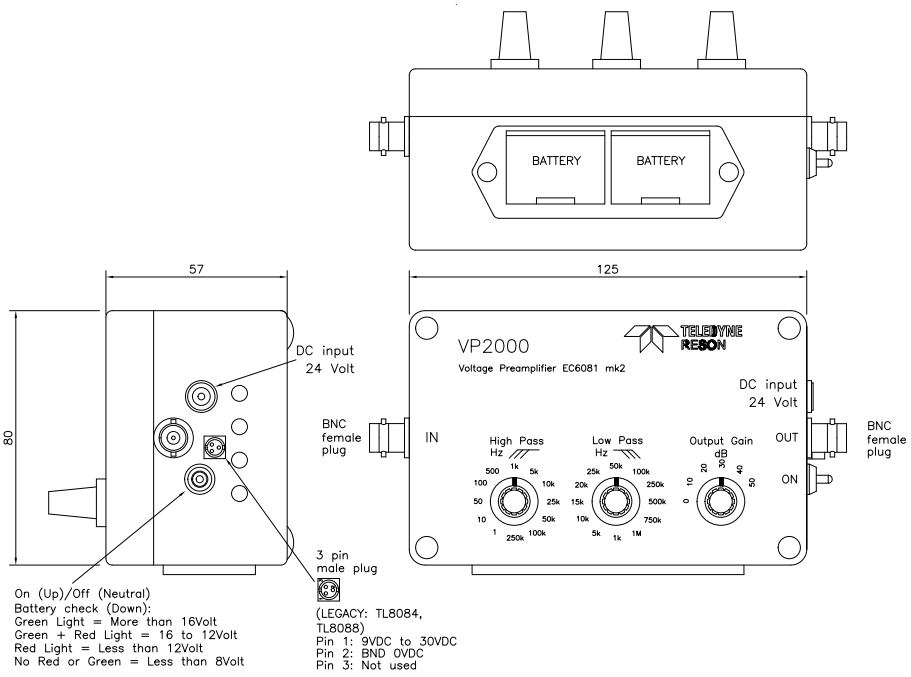
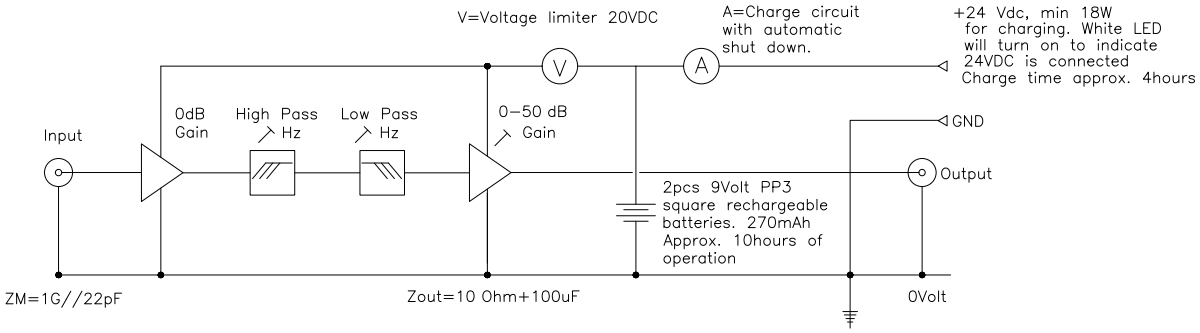
OUTLINE DIMENSIONS AND LAYOUT



FUNCTIONAL BLOCK DIAGRAM



ACCESSORIES INCLUDED

2.1mm DC connector and wire with black and red banana plugs

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User guide

EC6081 mk2
VP2000 Voltage Preamplifier

When switched on the LED below the switch turns blue

For battery check press switch down. The LED next to the blue will be green to indicate good condition of the battery.

Green LED = >16V
Green and red LED = 12V to 16V
Red LED= <12V
No LED= <8V

For low noise performance – utilize internal battery or EC6069 as supply. Disengage wall supply.

The two rechargeable 9V batteries can be replaced. If replaced temporarily with 9V alkaline batter-ies: DO NOT attempt to recharge as this will dam-age both batteries and the EC6081 mk2.

EC6081 mk2 can run on power from the old EC6068/ EC6069 or the old EC6072 supply when connected with the old TL8084 cable. Remove the rechargeable batteries first as the old EC6068/6069/6072 operates at 12VDC and 18VDC. EC6081 mk2 operates at 18VDC nominal (range min 10VDC to max 30VDC) but the charge circuit in EC6081 mk2 requires 24VDC.

For charging, use a 24VDC minimum 18 Watt wall supply with a 2.1mm center pin DC connector or the old TL8088 supply cable connected to a 24VDC lab supply or a 24V bat¬tery. The LED on the right will turn white.

Recommended wall supply: XP-Power type: VER18US240-JA

PLD19335-2

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