



LPF30

Low Pass Filter

www.wpiinc.com

INSTRUCTION MANUAL

Serial No. _____



World Precision Instruments, Inc.

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World Precision Instruments



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DECLARATION OF CONFORMITY

We: World Precision Instruments, Inc.
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USA

as the manufacturers of the apparatus listed, declare under sole responsibility that the product(s):

Title: LPF-30

to which this declaration relates is/are in conformity with the following standards or other normative documents:

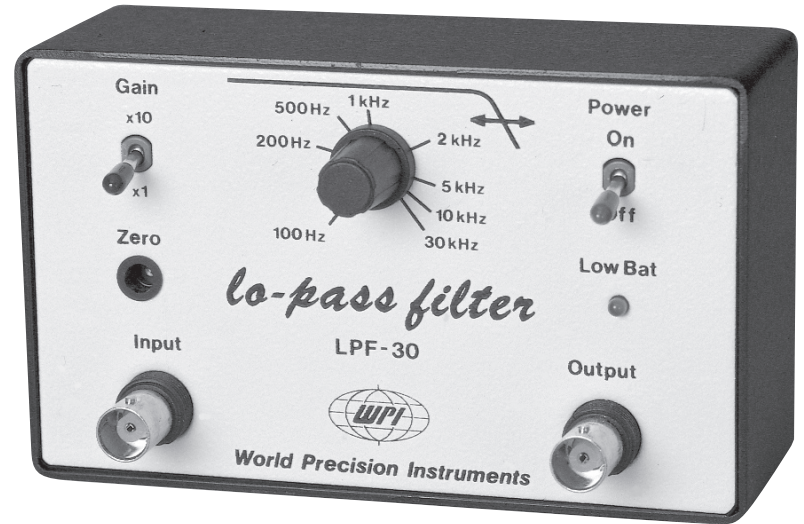
- Safety:** EN 61010-1:1993 (IEC 1010-1:1990)
- EMC:** EN 50081-1:1992
EN 50082-1:1992

and therefore conform(s) with the protection requirements of Council Directive 89/336/EEC relating to electromagnetic compatibility and Council Directive 73/23/EEC relating to safety requirements.

Issued on: 18th February 2000

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Operating Instructions

Battery-operated, LPF-30 is a quiet analog filter operating over a band which extends from DC to 30 kHz. A single knob smoothly moves the cutoff frequency from 100 Hz to 30 kHz. The user should set the high frequency band edge with this knob at a setting which allows maximum bandwidth to pass the data of interest but as low as feasible to effectively reduce high frequency noise. High frequency noise, if unattenuated, can cause errors when analog signals are being digitized.

A voltage gain of x1 or x10 is selected by the Gain toggle switch. Since the maximum output signal is ±5 volts, the input signal should not exceed 0.5 volts or 5.0 volts in the x10 and x1 gain positions, respectively.

Battery life exceeds 400 hours of continuous use. Batteries should be replaced when necessary or annually. To replace the batteries, remove the four screws on the bottom of the case and pull the front panel assembly out of the case. Alkaline 9-volt batteries are recommended for longer life. As the batteries age, it may be necessary to readjust the zero position screwdriver adjustment.

Specifications

Input Impedance	1 MΩ
Voltage Gain	x1 and x10
Bandwidth	100 Hz to 30 kHz
Rolloff	40 dB / decade
Equivalent Input Noise (input shorted).	100 Hz bandwidth 10 μV p/p 30 kHz bandwidth 30 μV p/p
Output Voltage Swing	±5 volts
Maximum Input Voltage	±10 volts
Low Battery Indicator, LED	Lights when approximately 60 hours of battery life remain.
Batteries	Two 9-volt alkaline
Dimensions	5 x 3 x 2 in. (12.7 x 7.6 x 5.1 cm)
Weight	1 lb
Shipping Weight	3 lb

Warranty

WPI (World Precision Instruments, Inc.) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of one year* from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

Claims and Returns

- Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within 10 days after receipt of shipment. Claims for lost shipments must be made within 30 days of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim settles. In some instances, photographic documentation may be required. Some items are time sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container.
- WPI cannot be held responsible for items damaged in shipment en route to us. Please enclose merchandise in its original shipping container to avoid damage from handling. We recommend that you insure merchandise when shipping. The customer is responsible for paying shipping expenses including adequate insurance on all items returned.
- Do not return any goods to WPI without obtaining prior approval and instructions (RMA#) from our returns department. Goods returned unauthorized or by collect freight may be refused. The RMA# must be clearly displayed on the outside of the box, or the package will not be accepted. Please contact the RMA department for a request form.
- Goods returned for repair must be reasonably clean and free of hazardous materials.
- A handling fee is charged for goods returned for exchange or credit. This fee may add up to 25% of the sale price depending on the condition of the item. Goods ordered in error are also subject to the handling fee.
- Equipment which was built as a special order cannot be returned.
- Always refer to the RMA# when contacting WPI to obtain a status of your returned item.
- For any other issues regarding a claim or return, please contact the RMA department.

Warning: This equipment is not designed or intended for use on humans.

* Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.