

OPLabBox ver 2.0

Ultrasonic Pulser & Receiver with Bandpass Amplifier

<http://www.optel.eu/manual/english/oplabbox2>

OPLabBox 2.0 is particularly well suited for ultrasonic measurements. Wide bandwidth amplifier with a switched bandpass filter and integrated pulser makes this device suitable for a variety of ultrasonic applications in the **industry** as well as in the **laboratory**.

It is designed to work as a self-sufficient scope adapter, however, it can be used as an expansion box to other signal processing devices. Together with our ultrasonic testing devices (OPCARD or OPBOX) enables to implement a complete ultrasonic system with full hardware and software support.



Specifications:

Power supply:

-Supply Voltage: 12V DC (10.5-15V)
-Power: Typ 2.5W, max 6W

Size (LxWxD):

200x110x43 [mm]
7.9x4.3x1.7 [inch]

Analog parameters:

-Input channels: 2 (switched): send & receive and receive
-Input range: 550mVpp
-Input impedance: 50 / 200 ohms
-Bandwidth [-3dB]: 40kHz to 25MHz
-High Pass Filter [Hz] (switched): 40k, 80k, 160k, 320k, 640k, 1.25M, 2.5M, 5M
-Low Pass Filter [Hz] (switched): 200k, 400k, 800k, 1.6M, 3.2M, 6.4M, 12.5M, 25M
104dB total gain range:
-Input amplifier gain: -10 to 70dB step 0.1dB, +0 or +24dB switched post amplifier.
-Output range: 2.5Vpp
-Output impedance: 50 ohms

Trigger:

Internal or external

PRF:

max 10kHz
Step pulser, 0V -360V

Pulser:

fluently regulated,
<40ns edge falling time

Memory:

Memory settings up to 10 sets

Remote control:

USB (virtual RS232 COM)
ASCII protocol

General Description:

OPLabBox is a wide bandwidth (40kHz to 25MHz) low-noise amplifier with a switched bandpass filters and integrated step pulser. The device can be used in classic ultrasonic applications with one or two ultrasonic transducers as well as universal broadband signal amplifier. The new design has a graphical 2-inch LCD display and user-friendly interface. Remote control functionality allows being used in automatic measurements setups.

Features:

- Low noise pre-amplifier
- Switchable input impedance
- Separately switchable low- and high-pass filters
- More than 100dB total analogue gain range
- 80dB regulated range with 0.1dB step
- Intuitive user interface with graphics LCD
- Compact size, Various mounting options
- Low power consumption (typical 2.5 W)
- Easy to use ASCII protocol over USB
- Store up to 10 settings sets
- Self-hardware diagnostic

Customize:

Optionally, it is possible to make hardware versions for the special needs of the user.