The demodulator is designed to receive a modulated laser beam and to convert the variations in light intensity to an electrical output signal. The output signal can be a sound wave or other information superimposed on the laser beam.
The incident light is received by a photodetector mounted just behind the 8 mm diameter entrance aperture at one end of the detector.
The detector is supplied with a threaded (10 mm) stainless steel mounting rod for attaching the demodulator to an optical bench or to a support stand.

Power connection

The demodulator module is connected to a 230 V AC power source using a power cable. The LED in the upper right hand corner indicates that the power is on.

Measuring light intensity

The light beam to be measured should be aimed so that it enters the receiver aperture and strikes the photocell. A 3.5 mm jack connector marked "DC" on the rear panel can be used to connect a two lead cable to a voltmeter for measuring an output voltage which is proportional to the light intensity.

Measuring signal content

The light beam to be measured should strike the photocell. The following light sources can be used:
An ordinary laser or other concentrated light source where the signal is added to the light beam on its path to the demodulator by mechanical or electrical means.
A laser which can be directly modulated by an input signal (e.g. a music or voice signal from a radio or a CD-player, or a signal from a tone generator).
The demodulated signal can be passed to an appropriate detecting instrument using the BNC-connector marked "AC" on the rear of the demodulator module. Because the signal strength is rather low, shielded cable should be used.
The signal can be measured using a counter, oscilloscope or frequency meter according to the type of signal.

Built in low frequency amplifier with loudspeaker

The demodulator is supplied with a built in low frequency amplifier and a loudspeaker. The modulated light signal which contains music or speech can be heard directly from the unit by turning up the volume control on the rear panel of the demodulator just above the output connectors.

Technical specifications:

Supply Voltage: 230 V AC ±10%/50-60Hz.
Fuse: 125 mAT.
DC-output: (3,5 mm Jack connector).
Class 2 laser (0.5 – 1 mW): Approx. 0-1 VDC.
Class 3a laser (1 – 2 mW): Approx. 0-2 VDC.
AC-output: (BNC-connector)
Class 2 laser (1.5 – 1 mA): Approx. 0-2 Vpp
Frequency range:
20 Hz – 1 MHz at –3dB.
Transferred signal/noice ratio min. 80dB.
Distortion max 1%.
Dimensions: (l x w x h) 135 x 75 x 80 mm.
Weight: 0.6 kg, less the mains cord.