EC6070

Hydrophone Audio Amplifier

EC6070

- **Bandwidth up to 700kHz**
- **Total signal amplification up to 90 dB**
- **Input selector for two types of Hydrophones**
- **Individual input and output gain settings**
- **Input low frequency sea wave cut-off filter**
- **Build-in envelope sonar detector**
- **Build-in Loudspeaker amplifiers**
- **Build-in Headphone amplifier**
- **Individual volume controls**
- **Recording and Playback switch**
- **Input and Output's both on BCN's and mini jack's**
- **Supplied with Loudspeakers and Headphones**
- **Supplied with Cables**
- **Battery powered 24 Volt (Battery not supplied)**

RESON's EC 6070 is a sophisticated preamplifier and audio amplifier system with loud-speakers designed for monitoring underwater acoustic signals from 10Hz to 700kHz.
This system is ideal for listening and recording both low frequency whale vocalization and high-frequency echo-location sonar signals of dolphins and porpoises. A selectable envelope modulation detector converts high frequency signals to human-audible range. The versatility and user-friendly operation of the EC 6070 make it a beneficial addition to many acoustic research laboratories, aquariums, and bioacoustic programs. It operates on 24VDC, with several stages of adjustable input and output gain, built-in high-pass filter options, convenient output lines for ocsilloscopes, analyzing equipment, or recorders (tape, minidisc, etc), and input lines for playback.

TECHNICAL SPECIFICATIONS		
Frequency range ±3dB:	10Hz to 700kHz	
Ultrasound detector range:	20kHz to 200kHz	
Input gain:	-20 to +30dB	
Output gain:	-20 to +30dB	
Envelope detector gain:	-20 to +30dB	
Output power:	2x10Watt/8ohm	
Line output level:	100mV to 1Vrms	
Line input level:	100mV to 1Vrms	
Voltage supply:	24 Volt (2x12 Volt Batteries)	
Current consumption/standby:	0.14Amp	
Current consumption/maximum:	4Amp	
Rack case 19":	Dimensions:	19"x12"x3.5" (w.d.h.)
Weight:	4.3kg	
Loudspeaker :	Impedance: 8ohm	
Effect:	60Watt	
SPL/W:	86dB	
Dimensions w.d.h.:	160x160x230	
Weight:	3.5kg each	
Accessories delivered with EC6070:		
Loudspeakers:	Monacor type LSP-60-2 pcs	
Headphones:	1 set	
Loudspeaker Cables:	1x5 meter	
Battery Cable:	1x2 meter	

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Description

The EC6070 Audio Amplifier is designed for detection of underwater acoustic sounds. It contains a low noise broadband Hydrophone preamplifier combined with a loudspeaker power amplifier in the same case. The amplifier has been designed especially for optimum operation with the RESON TC4032 and TC4033 Hydrophones.

The TC4032 has a built in low-noise preamplifier and should be used generally where long cables and/or extremely low-noise are required. The TC4033 without pre-amplifier is a spherical type and provides a broad frequency range up to very high-frequencies.

The Hydrophones are connected directly to the input connectors located at the rear panel. The BNC input connector for the TC4033 incorporates an extra 30dB amplifier in order to match the level of the TC4032.

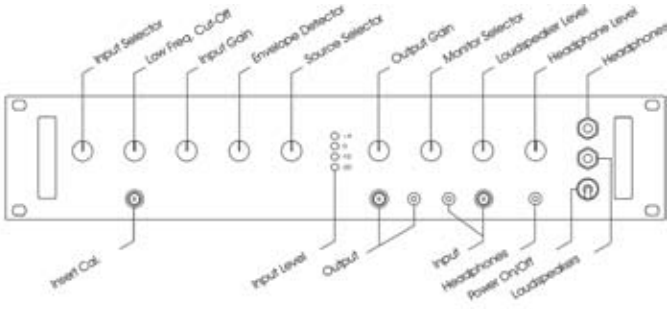
The EC6070 provides high quality real-time reproduction of sound from marine mammals such as whales dolphins and porpoises.
With the sonar detector engaged are frequencies above 20kHz envelope detected and reproduced in the audible frequency range of the human ear.
The wide frequency range of this amplifiers from 10Hz to 700kHz enables detection of sound from low audible frequencies to high ultrasound frequencies.

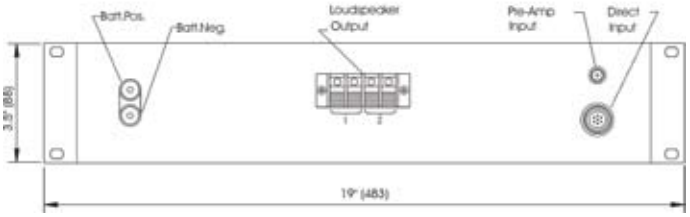
The EC6070 is supplied with two loudspeakers and a set of headphone for monitoring.
The loudspeakers supplied with the system are for usage in sheltered/indoor areas only.
The sound level of the speakers should be sufficient for most indoor applications.
For outdoor applications under ambient (often humid and noisy) conditions the use of water-resistant horn loudspeakers is recommended. Common horn speakers may deliver up to 10 times the sound pressure level of that of the indoor speakers.
The EC6070 is contained in a 19 inch. rack case which enables permanent mounting in laboratories / research stations or other facilities where fixed installations are required.

The input and output BNC connectors on the front panel enables direct connection to oscilloscopes, spectrum analyzers or other storage equipment.
The output signal covers the full frequency range of the Hydrophone at line level for recording and analyzing.

Line input and outputs are available on mini jack connectors enabling recording and Playback from common Tape recorders or Mini Disk recorders.
The insert Cal. BNC connector on the front panel, enables connection of an insert voltage signal for calibration of the TC4032 with the EC6070.
The EC6070 is to be powered from external 24Volt batteries.

Schematic drawing of the EC6070 front and rear panel, showing the function title and location of the selector knobs, indicator diodes and connectors.





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