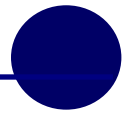




FAQ ADP015, ADP040 & ADP104 – Pre-amplifier signal adapters



How to gain access to the signal output from the preamplifier of an 831 or LxT.

At times it is helpful to gain access to the microphone signal directly from the output of the preamplifier in order to record the signal or perform additional analysis. This can be done by using the ADP015, ADP040 or ADP104 with optional cables. The Larson Davis adapters that can be used for this function are summarized below:

Item		Meter	Coupling	Notes
ADP015		831 or LxT	Direct	Provides direct access to preamplifier signal including the DC bias. Use with EXCxxx cables
ADP040		824	Direct	Provides direct access to preamplifier signal including the DC bias. Use with EXAxxx cables
ADP104		831 or LxT	DC blocking	Includes a DC blocking capacitor. Use with EXCxxx cables

Typical ADP015/040/104 usage



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Additional Information

ADP015

The ADP015 and ADP104 are identical except the ADP104 has a capacitor to block DC on the output. The ADP015 can be used when the connected device will accept the DC bias voltage which is up to 16 V and the full frequency response is desired. Some devices like the Roland R05 recorder do not work well with the ADP015 even though they are specified to accept the DC voltage. When using the Roland R05 it is recommended to use the ADP104.

Check the sound level meter documentation to find the actual DC bias for you instrument.

The ADP015 has 5-pin Switchcraft connectors for the preamplifier and SLM and a BNC output connector. It is designed to be used with the Larson Davis Model 831 and LxT models of sound level meter.

ADP040

The ADP040 is designed to be used with preamplifiers that have a 7-pin LEMO connector such as the Larson Davis System 824. The ADP040 does not include a DC blocking capacitor so any connected device must be able to accept the DC voltage plus the AC signal.

ADP104

The ADP015 and ADP104 are identical except the ADP104 has a capacitor to block DC on the output. The ADP104 should be used when the connected device will not accept the 16 V typical DC bias voltage. It is recommended that the ADP104 be used with the Roland R05 recorder.

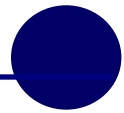
The ADP104 has 5-pin Switchcraft connectors for the preamplifier and SLM and a BNC output connector. It is designed to be used with the Larson Davis Model 831 and LxT models of sound level meter.

Because the ADP104 has a DC blocking capacitor of 5 μ F, it creates a high pass filter when combined with the input impedance of the recording or analyzing device. It is recommended to avoid loading the preamplifier that any connected device have an input impedance of 5 kOhms or greater. The chart below shows a typical frequency response when the ADP104 is used with a 5 kOhm input impedance. Higher input impedances will lower the high pass filter corner frequency.

Use the ADP104 for

- Hydrophone users who want to record the signal
- Microphone users who want to record the signal
- Impulse (gunshot) users using oscilloscopes

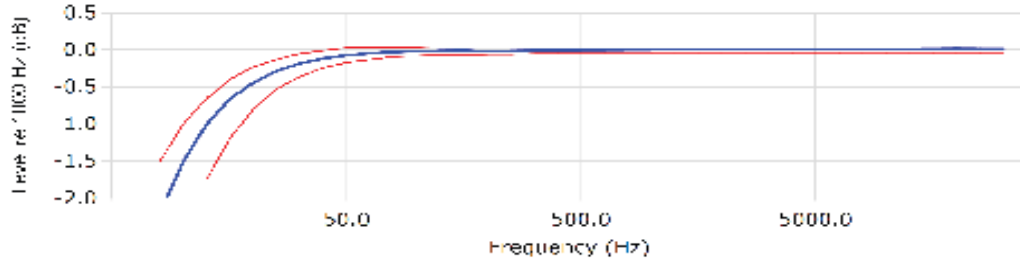
FAQ ADP015, ADP040 & ADP104 – Pre-amplifier signal adapters



How to gain access to the signal output from the preamplifier of an 831 or LxT.

Preamplifier Model: ADP104 with 5k Ohm load on PRM831 Serial Number: ADP104
Frequency Response Test Report

Frequency response electrically tested at 140.0 dB μ V using a 12 pF capacitor to simulate microphone capacitance.



Frequency (Hz)	Relative Level (dB)	Uncertainty (dB)	Limits (dB)	Frequency (Hz)	Relative Level (dB)	Uncertainty (dB)	Limits (dB)
6.3	-3.18	0.04	-2.19,-4.77	501.2	-0.00	0.02	0.05,-0.05
7.9	-2.23	0.04	-1.52,-3.56	631.0	-0.00	0.02	0.05,-0.05
10.0	-1.52	0.02	-1.01,-2.54	794.3	-0.00	0.02	0.05,-0.05
12.6	-1.01	0.02	-0.66,-1.76	1000.0	0.00	0.02	0.05,-0.05
15.8	-0.67	0.02	-0.40,-1.20	1258.9	0.00	0.02	0.05,-0.05
20.0	-0.45	0.02	-0.23,-0.81	1584.9	0.00	0.02	0.05,-0.05
25.1	-0.29	0.02	-0.13,-0.53	1995.3	0.00	0.02	0.05,-0.05
31.6	-0.18	0.02	-0.05,-0.36	2511.9	0.00	0.02	0.05,-0.05
39.8	-0.12	0.02	-0.01,-0.24	3162.3	0.01	0.02	0.05,-0.05
50.1	-0.07	0.02	0.03,-0.17	3981.1	0.01	0.02	0.05,-0.05
63.1	-0.05	0.02	0.04,-0.13	5011.9	0.01	0.02	0.05,-0.05
79.4	-0.03	0.02	0.04,-0.09	6309.6	0.01	0.02	0.05,-0.05
100.0	-0.02	0.02	0.04,-0.08	7943.3	0.01	0.02	0.05,-0.05
125.9	-0.01	0.02	0.05,-0.07	10000.0	0.01	0.02	0.05,-0.05
158.5	-0.01	0.02	0.05,-0.07	12589.3	0.01	0.02	0.05,-0.05
199.5	-0.02	0.02	0.05,-0.06	15848.9	0.01	0.02	0.05,-0.05
251.2	-0.01	0.02	0.05,-0.06	19952.6	0.02	0.02	0.05,-0.05
316.2	-0.01	0.02	0.05,-0.05	25118.9	0.02	0.02	0.05,-0.05
398.1	-0.01	0.02	0.05,-0.05	31622.8	0.02	0.02	0.05,-0.05

1000 Hz measured level: 139.762 dB μ V, -0.238 dB re input (0.035 dB uncertainty; -0.400 dB to 0.000 dB limit)

Environmental conditions: 23.5 °C, 33.9 %RH (0.3 °C, 3 %RH uncertainty)

Uncertainties are given as expanded uncertainty at ~95 percent confidence level (k = 2).

Test Procedure: PRM831 (ADP090) with ADP104 and 5 k Load.xml

This frequency response is in compliance with manufacturers specification for the item tested.

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Technician: Sean Childs

Test Date: 01 Jul 2016 14:16:26

Test Location: Larson Davis, a division of PCB Piezotronics, Inc.
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