



Two-Channel Microphone Power Supply

type 2807

FEATURES:

- Two signal channels with manual and automatic switching
- Frequency range 2 Hz to 200 kHz
- Cross-talk less than 60 dB
- Channel attenuation adjustable between 0,15 dB and approximately 40 dB
- Allows use of long cables between transducer and measuring instrumentation
- Outputs short circuit protected
- Fits B & K module system for rack mounting

USES:

- Power Supply for two microphone assemblies or preamplifiers
- Sound insulation measurements with B & K condenser microphones
- Vibration measurements with B & K accelerometers
- Remote switching between measuring points
- Simultaneous tape recording of sound and vibration data

The Two-Channel Microphone Power Supply Type 2807 is designed for use in connection with the B & K Microphone Preamplifiers Types 2633, 2639, 2645 and 2660. The 2807 supplies the necessary power for the preamplifiers and the 200 V polarization voltage for associated condenser microphones. In connection with preamplifiers, the 2807 acts as an impedance transformer with high input impedance and low output impedance allowing the use of long cables between the output of the 2807 and the equipment following it.

The 2807 further enables the use of the two channels simultaneously giving the possibility of measuring, for instance, sound and vibration at the same time, and the choice of manual or automatic switching between the two channels to one set of recording instruments connected to the output. This feature gives the possibility of building up measuring systems having the advantage of simplicity and flexibility.



ed for condenser microphones and the power required for the various B & K preamplifiers.

The two signal channels each consist of a seven pin B & K standard input socket, a multiturn potentiometer acting as an attenuator having the approximate range of 0 dB to -40 dB re the nominal sensitivity of the input transducer, and a "push-pull" amplifier acting as an impedance transformer

with 13Ω in series with 4,7 μF output impedance and an attenuation of less than 0,15 dB within the frequency range 2 Hz to 200 kHz.

The amplifiers are connected to the two output sockets by the function selector which has the following five modes:

1. Input 1 to Output 1
Input 2 to Output 2

Description

As can be seen from the block diagram (Fig. 1) the 2807 consists of a power supply, two identical signal channels and a switching circuit.

The power supply gives the stabilised 200 V polarization voltage need-

2. Input 1 to Output 1
Input 2 disconnected
Output 2 grounded
3. Input 2 to Output 1
Input 1 disconnected
Output 2 grounded
4. "Chopped Ext. Control"
Externally controlled switching between the two inputs to Output 1
5. "Chopped Int. Control"
Switching between the two inputs and Output 1 controlled internally with a switching frequency of approx. 0,5 Hz.

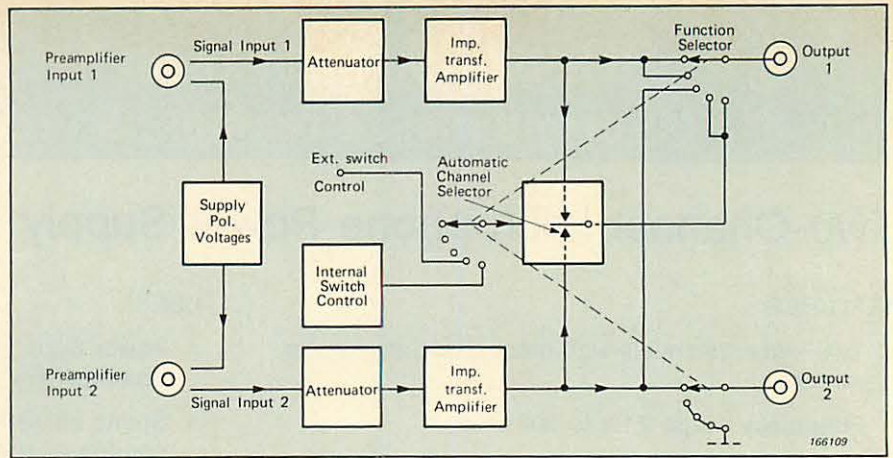


Fig. 1. Block diagram of 2807

Two lamps indicate which input is active.

The automatic channel selector consists of a relay controlled by an astable multivibrator. For external control (mode 4) a Level Recorder 2307 for instance can be used or the switch can be controlled by grounding the external control terminal.

The frequency response at the high end of the range is dependent on the load capacitance and the signal level.

Fig. 2 shows typical curves for the frequency cut-off.

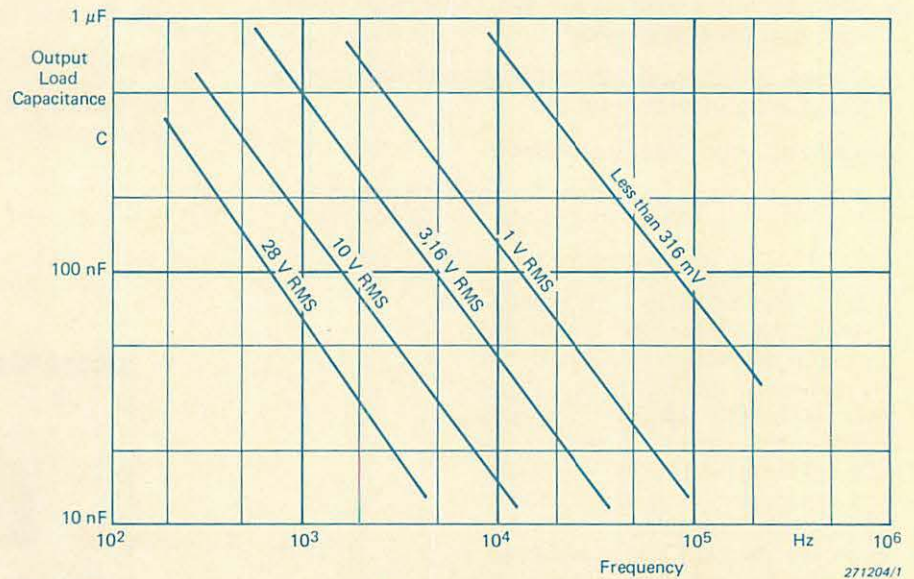


Fig. 2. Typical curves showing the high frequency cut-off with capacitive loads at different output levels (Standard B & K coaxial cable capacitance is less than 100 pF/m). The curve to the right indicates the 3 dB limits, the others indicate the limits for 1% distortion

Specifications 2807

<p>FREQUENCY RANGE: 2 Hz to 200 kHz ($\pm 0,2$ dB)</p> <p>ATTENUATION: < 0,15 dB. Adjustable down to -40 dB approx.</p> <p>OUTPUT VOLTAGE: 28 V RMS (2 Hz to 20 kHz)</p> <p>MAX. OUTPUT CURRENT: 8 mA RMS per channel</p> <p>OUTPUT IMPEDANCE: 13 Ω in series with 4,7 μF</p> <p>INHERENT NOISE: < 15 μV (20 Hz to 200 kHz)</p> <p>CROSS-TALK ATTENUATION: > 80 dB up to 20 kHz > 60 dB at 200 kHz</p>	<p>CHOPPER FREQUENCY: approx. 0,5 Hz</p> <p>SWITCHING TIME: Typical 1 ms</p> <p>POLARIZATION VOLTAGE: 200 V. Stability better than 0,5% for $\pm 10\%$ variation of mains-voltage</p> <p>POWER SUPPLY: 100, 115, 127, 220, 240 V (50 to 400 Hz) $\pm 10\%$ AC 10 VA Complies with IEC 348 safety class I</p> <p>PREAMPLIFIER SUPPLY VOLTAGES: (for Input Sockets 1 and 2) Preamplifier Supply: + 150 V (EMF), 16 kΩ source, Max. 2 mA Preamplifier Heater Supplies: + 12,6 V(EMF), < 0,1 Ω source</p>	<p>+ 12,6 V(EMF), 30 Ω source The sum of the currents from the two heater supplies should not exceed 80 mA</p> <p>DIMENSIONS: Height: 132,6 mm (5,2 in) Width: 69,5 mm (2,6 in) Depth: 200 mm (7,9 in) (B & K module cabinet KK 0022, $\frac{2}{12}$ of 19" rack module)</p> <p>WEIGHT: 2,2 kg (4,9 lb)</p> <p>ACCESSORIES INCLUDED: 1 Power cord.....AN 0010 Fuses Two adaptors DB 2609 for connecting earlier type B & K male plugs to input</p>
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