

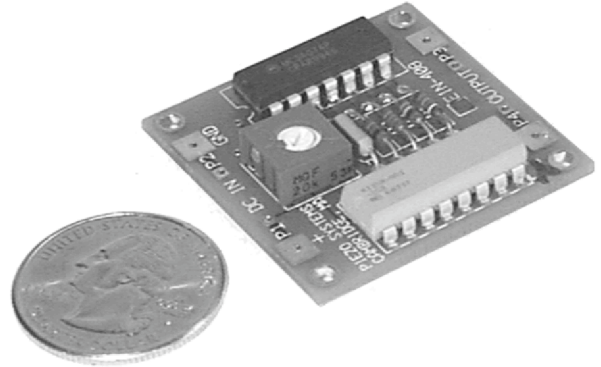
DC TO AC INVERTER DRIVE CIRCUIT

0 to ±15V_{peak}, 50 - 150 Hz, Low Power Version

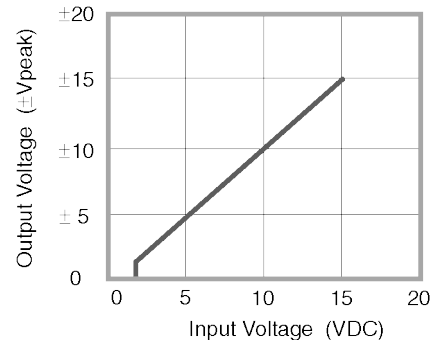
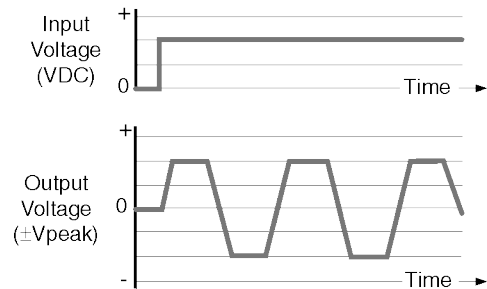
DESCRIPTION

The Low Power Inverter Drive Circuit converts a DC input voltage (from 0 to +15 VDC) to an AC output voltage (from 0 to ±15V_{peak}) for driving low frequency (50 Hz - 150 Hz) piezo devices such as fans, choppers, vibrators, and benders **at resonance**.

Output frequency is manually adjusted by turning the trimmer pot on the PCB. Optimum tuning is accomplished by observing device amplitude or the output waveform on an oscilloscope during operation. Large input and output terminal pads are provided for clip leads during bench-top testing, and small pads are provided for permanent wiring. #2-56 clearance holes are provided for mounting the board on stand-offs.

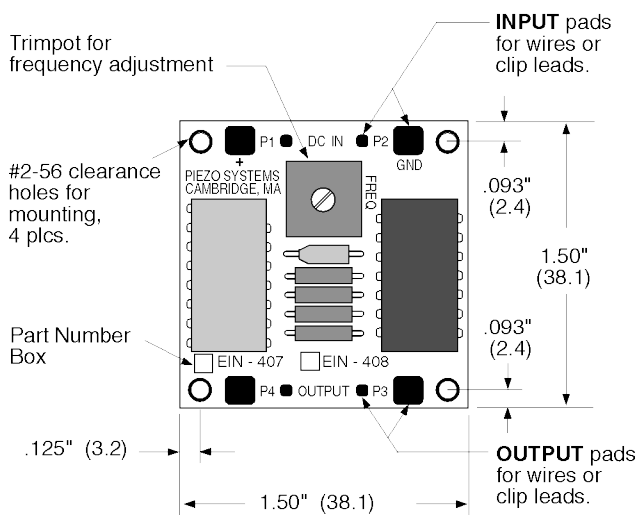


INPUT / OUTPUT WAVEFORM



DRIVING PIEZO RESONATORS

The Low Power Inverter Drive Circuit is primarily designed to drive the 12 -15VDC Low Power Piezo Fan Blade (see [page 13](#)) at resonance. However, it may also be used to drive piezo benders (see [pages 29-53](#)) and choppers (see [page 11](#)) up to ±15V_p at resonance to achieve high deflections at low power.



INVERTER SPECIFICATIONS

Inverter Model	EIN-401	
Input Voltage Range	+VDC	0 - 15
Output Voltage Range	V _p	0 ± 15
Frequency Range (±10%)	Hz	50 - 150
Temperature Range	°C	0 - 60
Weight	grams	8

ROHS

Compliant

ORDERING INFORMATION

	PART NO.	1 pc.	5 pc.	25 pc.	100 pc.
Low Power Inverter Circuit (±15V _p , 50 Hz - 150 Hz)	EIN-401	\$142	\$98	\$54	\$32

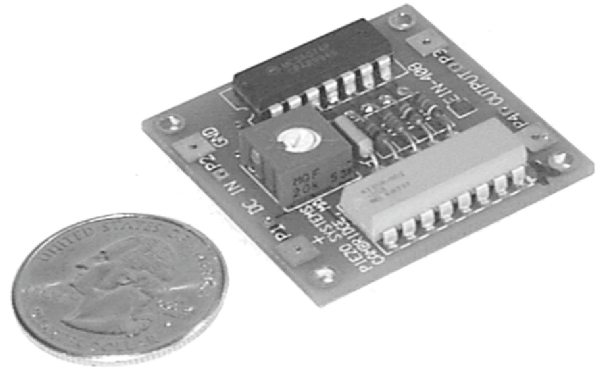
DC TO AC INVERTER DRIVE CIRCUITS

0 TO ±44V_{peak}, 50-150 Hz & 150-450 Hz VERSIONS

DESCRIPTION

The Inverter Drive Circuits convert DC input voltage (from 0 to +44VDC) to AC output voltage (from 0 to ±44 V_{peak}) for driving low frequency (50 Hz - 450 Hz) piezo devices such as fans, choppers, vibrators, and benders **at resonance**.

Output frequency is manually adjusted by turning the trimmer pot on the PCB. Optimum tuning is accomplished by observing device amplitude or the output waveform on an oscilloscope during operation. Large input and output terminal pads are provided for clip leads during bench-top testing, and small pads are provided for permanent wiring. #2-56 clearance holes are provided for mounting the board on stand-offs.



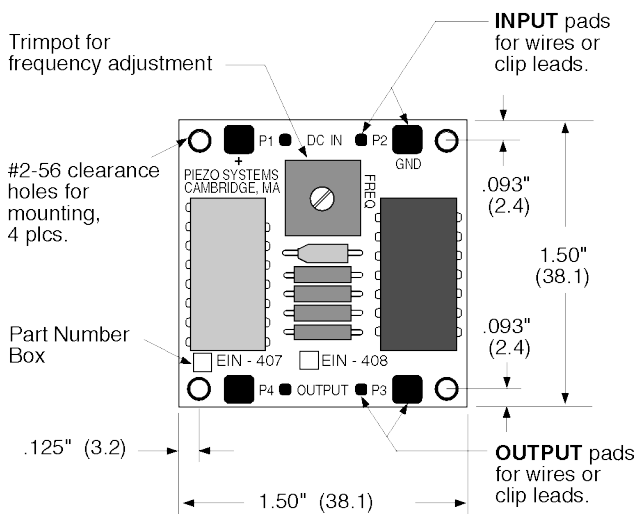
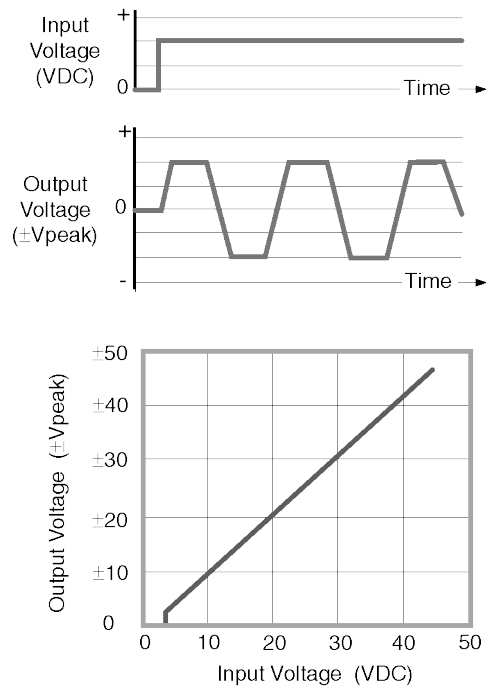
DRIVING PIEZO RESONATORS

Resonant Piezo Chopper: The 100 Hz piezo chopper (see page 11) may be driven using the EIN-407.

Piezo Benders: Bending elements (see pages 29-53) may be driven at resonance to achieve high deflection at low power. Depending on tip load, use the appropriate inverter circuit.

Piezo Fans: Piezo fans are driven at resonance. Depending on the design, resonant frequency is typically between 60 - 250 Hz. Use the appropriate inverter circuit (see pages 12-13).

INPUT / OUTPUT WAVEFORM



INVERTER SPECIFICATIONS

Inverter Model		EIN-407	EIN-408
Input Voltage Range	+VDC	0 - 44	0 - 44
Output Voltage Range	V _p	0 ± 44	0 ± 44
Frequency Range (±10%)	Hz	50 - 150	155 - 450
Temperature Range	°C	0 - 60	0 - 60
Weight	grams	8	8

ROHS

Compliant Compliant

ORDERING INFORMATION

	PART NO.	1 pc.	5 pc.	25 pc.	100 pc.
Inverter Circuit (±44V _p , 50 Hz - 150 Hz)	EIN-407	\$142	\$98	\$54	\$32
Inverter Circuit (±44V _p , 150 Hz - 450 Hz)	EIN-408	\$142	\$98	\$54	\$32