

## Specifications (continued)

### Output Jumpers:

Circuit board jumpers select the output style. Snap off left cover for access.

### Power Requirements:

7Vdc min., 24Vdc max. 10mA quiescent current.

### Operating Temperature:

-40 to +80°C (-40 to +176°F)

### Dimensions:

2.47 in. high, 2.52 deep, 0.70 wide (63 x 64 x 18 mm).

# JH376

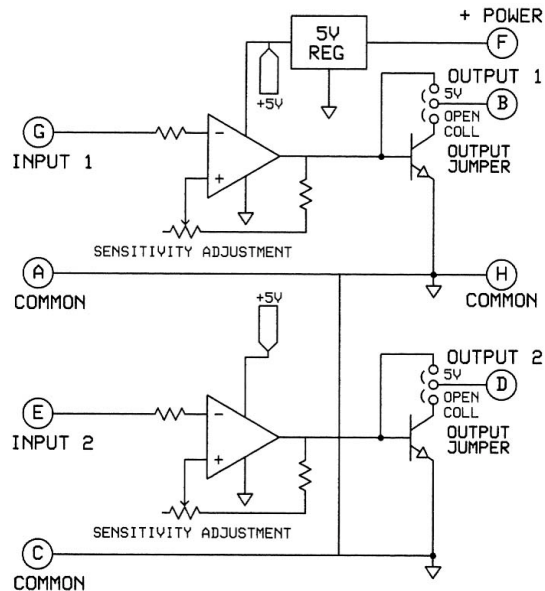


## 2-CHANNEL MAGNETIC COIL PULSE AMPLIFIER For Tachometer & Turbine Meter Applications

Model JH376 is a compact 2-channel pulse amplifier designed for use with tachometers, turbine flowmeters and similar magnetic coil pickups. Inputs of varying waveform and amplitude are amplified and converted to well-defined logic pulse outputs. DC input coupling (no capacitor) permits operation down to zero Hz. Sensitivity adjustments, built-in hysteresis and input filtering minimize interference from noise pickup. Specifically designed for magnetic coil pickups, the JH376 generally will not respond to TTL or other positive-only input pulses. For such applications see our companion product, Model JH377.

Two identical channels are provided. Sensitivity controls allow each input's threshold to be independently adjusted. Internal jumpers allow a choice of either 5V logic or open-collector outputs. The DC power source may be anywhere between 7 and 24Vdc. A green LED indicates power.

There is no circuit isolation. Input, output and power commons are internally connected.



## SEVEN-YEAR WARRANTY

The JH376 will be replaced free if it fails due to defects in materials or workmanship within seven years of the date shipped.

09/2009

## **JH TECHNOLOGY, INC.**

Sarasota, FL USA  
(800) 808-0300 or (941) 927-0300  
Fax: (941) 925-8774  
[www.jhtechnology.com](http://www.jhtechnology.com)

## INSTALLATION & CONNECTIONS

JH376 snaps onto DIN rail. Its terminals are designated by letters molded into the enclosure. Terminals A, B, C and D are on the top edge when mounted on DIN-rail. E, F, G and H are on the bottom.

Connections are as follows. You may also refer to the block diagram on the last page.

<b>Terminal B:</b>	Output 1.
<b>Terminal D:</b>	Output 2.
<b>Terminal E:</b>	Input 2.
<b>Terminal F:</b>	+ Power.
<b>Terminal G:</b>	Input 1.
<b>Terminals A, C &amp; H:</b>	Common.

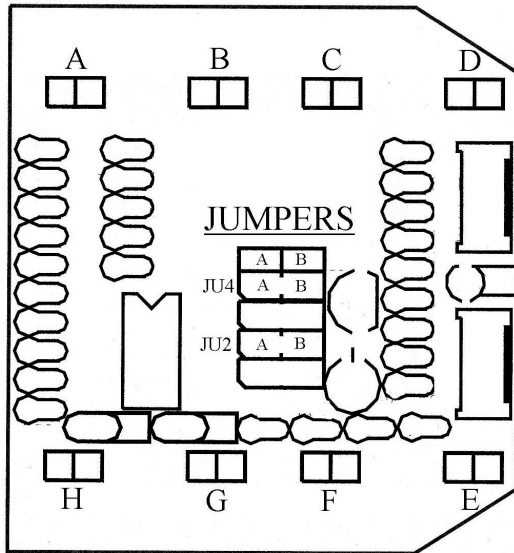
The three common terminals are internally connected. Use them for the minus (-) power connection, input commons and, when using 5 volt logic outputs, output commons. With open-collector outputs there is no output “common” – the output loads connect between the positive supply and the output terminals.

## OUTPUT JUMPERS

Internal jumpers provide two choices of output style:

- Open collector outputs.
- 5 volt logic pulse (TTL style) outputs.

The jumpers are factory-set to whichever choice is ordered but are easily changed.



To change the jumpers, first pry off the left cover (the cover with the JH Technology logo sticker). Use a small screwdriver or other tool. Set the jumpers as follows:

**Channel 1 Output - Jumper JU2:**

Position A = 5V Logic Pulse Output. Position B = Open Collector Output.

**Channel 2 Output - Jumper JU4:**

Position A = 5V Logic Pulse Output. Position B = Open Collector Output.

*CAUTION: NEVER connect pullup resistors to the output when the amplifier is set for 5 volt logic outputs. Doing so will damage or destroy the amplifier and, possibly, whatever it is connected to.*

## SENSITIVITY ADJUSTMENTS

Each channel's sensitivity threshold is independently adjustable. Turn the trimpot clockwise to increase sensitivity and counterclockwise to reduce it.

The input is DC coupled (no capacitor). At maximum sensitivity (full clockwise) the low-frequency sensitivity threshold (full clockwise) is approximately 20mV peak-to-peak. At higher frequencies the sensitivity is reduced to compensate for increasing tachometer output and to minimize possible noise pickup (see Specifications). Minimum sensitivity (full ccw) reduces the sensitivity (raises the threshold) by about 10:1.

## SPECIFICATIONS

### Input Style:

DC coupled. Input must swing both plus & minus, no DC bias or offset.

### Input Sensitivity Adjustments:

1-turn trimpots. At low frequencies full cw (max.) 20mV pk-pk, full ccw (min.) 200mV pk-pk.

### Frequency Response:

0-20kHz. High frequency filtering compensates for increased tachometer output at higher frequencies. Typical sensitivity at max. setting:

10 Hz	20mV pk-pk
100 Hz	22mV pk-pk
1kHz	60mV pk-pk
10kHz	800mV pk-pk
20kHz	2.2V pk-pk

### Open-Collector Outputs:

NPN, 30V max. 40mA max. current. Max. “on” voltage drop at 40mA is 1 volt.

### Logic Pulse Outputs:

0/+5V logic pulse, 500 ohm or greater load.

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