



## Features

- Compact Dual Channel Plug-in
- AC or DC Inputs, High Impedance
- Gain to X1000
- +/-10V Output, Low Impedance

## DESCRIPTION

The BA172 module provides two independent AC/DC amplifier channels with high impedance differential inputs. The gain of each channel can be individually set between X-1 to X1000 by changing or installing resistor. This gain is further adjustable by a front panel gain vernier. An internal jumper change allows single ended input connection. Each channel provides a + MO Vdc full scale output

The BA172 can also be used as a dual channel potentiometric signal conditioner, as up to + /-10 Vdc potentiometer excitation voltage is available from this module.

An MC170-32 case with 32 BA172 modules provides 64 amplifier **channels** in a space saving low cost system.

### FRONT PANEL CONTROLS & TEST POINTS

"A" Gain - to adjust gain from 10% to 110% of selected internal gain for Channel A

"B" Gain - to adjust gain from 10% to 110% of selected internal gain for Channel B

"A" DC - to allow monitoring of DC output signal Test Jack during setup and calibration of Channel A

"B" DC - to allow monitoring of DC output signal Test Jack during setup and calibration of Channel B

**NOTE:** All controls and adjustments are screwdriver actuated. Ground jack for oiliest points is on MC170 rear panel.

### INPUT OUTPUT CONNECTIONS

The plug-in module card can be used in any module position of the Module Case, as the case is internally wired to provide the proper operating and excitation voltages to all positions,

Signal input and output connections are made to the terminals or connectors at the rear of the module Case, connections should be made in accordance with the installation information in the Instruction Manual.

## Specifications

<b>Input:</b>	$\pm$ -12V max; will not be damaged by momentary application of 115V
<b>Gain Selection</b>	<b>Max. Diff. Input</b>
1.0	10V
10.0	1V
100.0	0.1V
1000.0	0.01V
<b>Input Impedance:</b>	22 megohms, each input to circuit ground
<b>Gain:</b>	1-1000 by changing one resistor mounted on bifurcated terminals
<b>Gain Vernier:</b>	Provides 10% -110% adjustment at each gain setting by 20 turn pot
<b>Output:</b>	+/-10V maximum Min. Res. for 10V nominal output: 6k ohms Min. Res. for 1V nominal output: 200 ohms. No damage if output terminals shorted. Less than 10 ohms
<b>Output Impedance:</b>	
<b>Output Filter:</b>	Flat, DC to 200 Hz May be increased by internal resistor change.
<b>Offset Voltage Input Bias Current:</b>	Adjustable to zero
<b>Potentiometer Excitation:</b>	20 nA typical each input. Up to 10 Vdc each channel, current limiting for short circuit protection; consult factory.
<b>Temperature:</b>	<b>Range:</b> 0°F to 150°F <b>Span Shift:</b> 0.005%/°F <b>Zero Shift:</b> +/-20 $\mu$ V/°F referred to input
<b>Power:</b>	+/-15 Vdc, 12 mA (per card), 6 mA per channel
<b>Size:</b>	2.76"H x 0.45"W x 7.5"D (7.01 x 1.14 x 19.05 cm)