

# JDK AUDIO



## API 500 Series MICROPHONE PREAMPLIFIER

MODEL V10

## **INTRODUCTION**

Thank you for choosing this JDK Audio V10 Microphone Preamplifier. The V10 is a single channel premium analog mic preamp in the popular API 500 Series format. This is one channel of the JDK Audio R20 rackmount microphone preamp. By using a continuously-variable gain control, the V10 can very precisely set the mic or instrument gain of the unit.

## **LAYOUT**

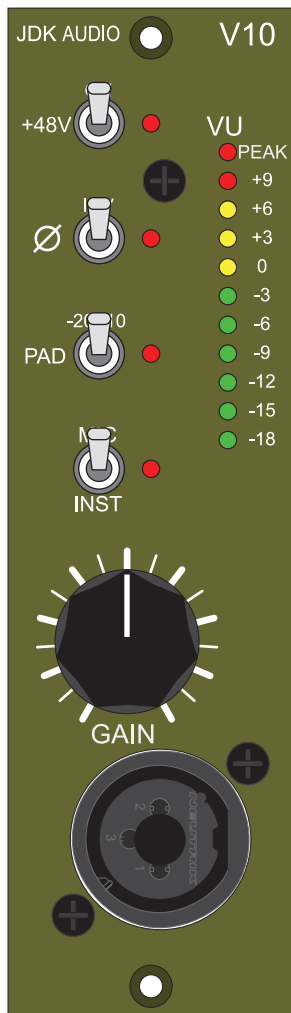
The popular 500 Series format architecture, pioneered by API, has since expanded to include a variety of other manufacturers who have banded together in the VPR Alliance. While free, voluntary and completely non-competitive, the VPR Alliance helps consumers with the assurance that other manufacturer's products work together in a powered rack to insure signal integrity and operational safety among different brands.

The V10 has been designed to be inserted into the powered rack chassis of an API 500 Series enclosure. The rear edge-connector plugs into the 500 Series chassis to power the V10 and provide for the Input and Output interface. There are both a mic and an instrument input and switches for phantom power, phase, and pad. Output levels are monitored via 10 LEDs, with an additional peak LED at the top.

## **DESIGN**

The design of the V10 circuitry is an entirely new design from API's design team. This single channel microphone preamp utilizes the THAT Corporation 1512 Mic Preamp IC with wafer technology producing near-discrete performance. The V10 offers an extremely wide gain range with very low noise and distortion. Along with the conveniently located front panel Instrument input and the electronically balanced THAT Corporation output stage, the V10 is a solid front end for any audio system. The front panel includes LED metering with a separate peak LED, phantom power, pad, and phase switch.

# FRONT PANEL CONTROLS



## PHANTOM POWER SWITCH

This switch will apply 48v phantom power to the front and rear panel XLR connector. When 48v is supplied, the LED next to the switch will illuminate.

## PHASE SWITCH

This switch selects either normal (XLR pin 2 or TRS tip as 'hot' or positive) or the reverse. If the INV (Inverted) position is switched, the LED next to the switch will illuminate.

## LED METER and PEAK LED

The 10 segment meter shows output level of the V10. The PEAK LED will illuminate at approximately +16VU.

## PAD SWITCH

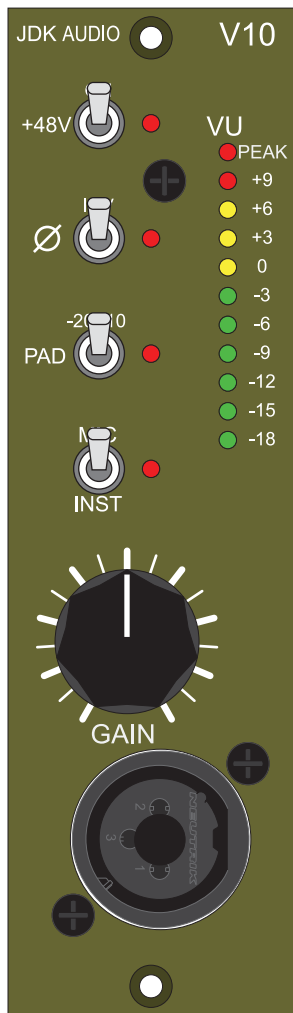
This switch inserts a pad into the signal flow if selected. If the MIC input is being used, the pad is -20dB; if the INST input is being used, the pad is -10dB. When the pad switch is active, the LED next to the switch will illuminate.

## MIC/INST SELECTOR SWITCH

This switch selects either the XLR MIC input (Front or Rear) or the front panel INST input. When MIC is selected, the LED next to the switch will illuminate.

**NOTE:** Inserting a 1/4" plug into the front panel does NOT automatically switch the inputs - you must select the input via the MIC/INST switch. This allows for a permanent connection to both the MIC jack in the PSU rack, and the 1/4" without having to re-patch.

## FRONT PANEL CONTROLS - continued



### GAIN KNOB

This knob adjusts the gain of the preamp. The mic preamp section can provide a maximum of 55dB of gain, while the INST input can provide a maximum of 31dB of gain. By using a continuously variable gain pot, the gain of the V10 can be precisely adjusted.

### FRONT PANEL COMBO JACK

Either a MIC or an instrument may be connected at the front panel. The front panel XLR is connected in parallel with the XLR at the rear, in the powered rack. The INST in is a 1/4" jack that will accept an instrument input. The MIC/INST selector switch must be used to select the desired input. The red LED next to the switch will NOT be illuminated when the INST input is selected.

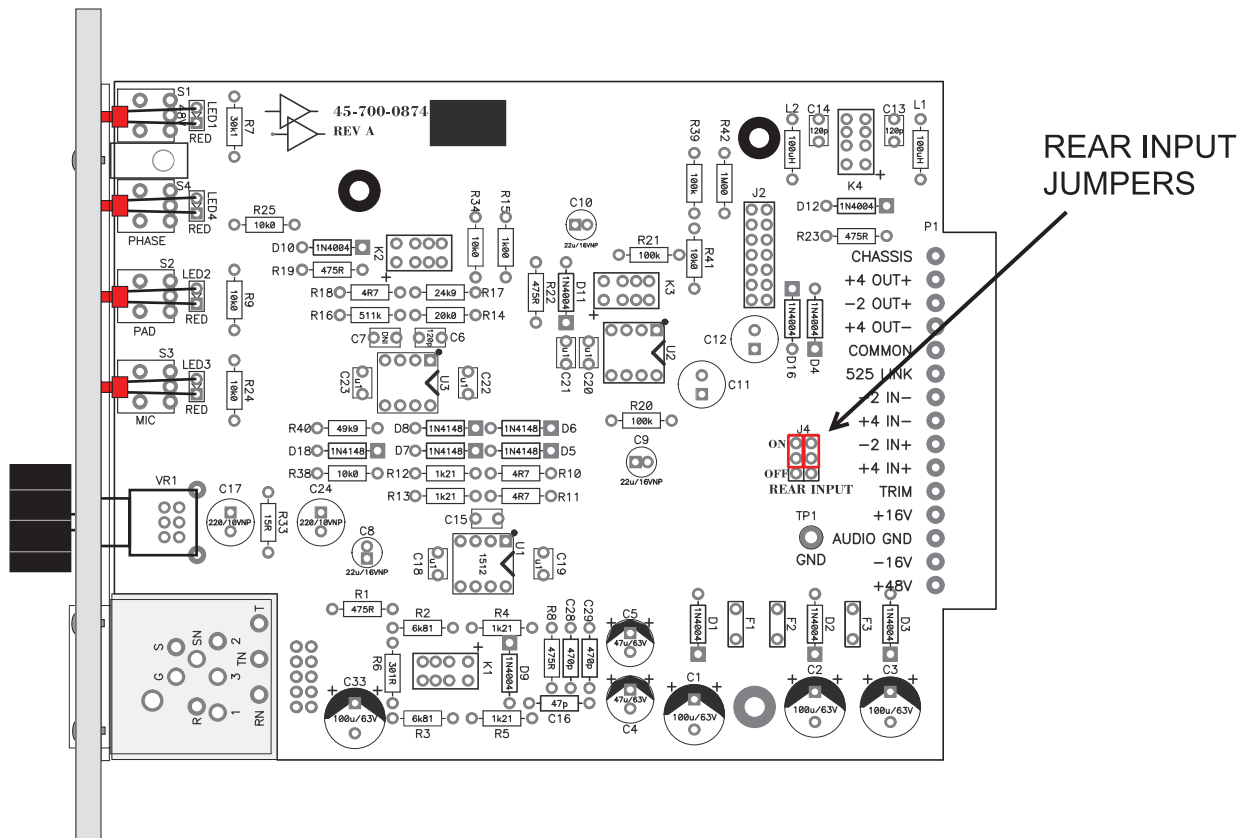
# JUMPER OPTIONS

## REAR MICROPHONE INPUT JUMPERS

There are 2 jumpers on the main PCB that allow you to disconnect the rear panel XLR of the API 500 Series enclosure that you have placed the V10.

This option allows you to insert the V10 into an enclosure that has the rear connections hardwired, use a phantom powered microphone connected to the front microphone input and not have +48 phantom power feed back into your patch bay.

Place both jumpers to the 'OFF' position to disconnect the rear enclosure input. Place the jumpers in the 'ON' position to allow connection of the rear enclosure input. *Remember to move and set BOTH jumpers together and to the same position.*



## Technical Specifications: V-10

Front Connector: Combo jack - XLR Microphone Input / HI-Z 1/4" Instrument Input

Rear Connector: API 500 Series Edge Connector -  
Microphone Input on edge connector, parallel with front  
XLR, - jumper disconnectable  
Balanced Output (pin 2 hot) on edge connector

Microphone Input:  
Max Gain: +55db (no pad), +36db (w/pad)  
Min Gain: +9db (no pad), -10db (w/pad)  
Pot Gain Range: 46db  
Pad: -20db  
Input Impedance: 6.8K Ohms  
Bandwidth: +/- 0.5db, 20Hz - 50kHz  
THD+N @ 1Khz, +4dbu: 0.013%  
Maximum Level: +20dbu  
Signal-to-Noise Ratio: -90db

Instrument Input:  
Max Gain: +31db (no pad), +21db (w/pad)  
Min Gain: +10db (no pad), 0db (w/pad)  
Pot Gain Range: 21db  
Pad: -10db  
Input Impedance: 500K Ohms  
Bandwidth: +/- 0.5db, 20Hz - 20kHz  
THD+N @ 1Khz, +4dbu: 0.002%  
Maximum Level: +20dbu  
Signal-to-Noise Ratio: -80db

Power Consumption: +/- 16VDC @ 50mA

Size: 1.5" x 5.25" x 7" Deep  
Weight: 12oz

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## JDK Audio Product Warranty

- a. **Warranty Information:** This product carries a one year parts and labor warranty from date of purchase. JDK Audio does not cover claims for damage due to alteration and/or abuse. This warranty is limited to failures during normal use, which are due to defects in material or workmanship. If any defects are found in the materials or workmanship, or if the product fails to function properly during the applicable warranty period, JDK Audio, at its option, will repair or replace the product.
- b. JDK Audio reserves the right to inspect any products that may be the subject of any warranty claims before repair or replacement is carried out. Final determination of warranty coverage lies solely with JDK Audio.
- c. This warranty is extended to the original purchaser and to anyone who may subsequently purchase this product within the applicable warranty period. Proof of purchase may be required.
- d. To obtain service:
  - a. Call JDK Audio c/o API at 301-776-7879, 8:30 AM to 5 PM Monday through Friday (Eastern Time) to get a Return Authorization (RA). Products returned without an RA number may not be accepted.
  - b. Pack the defective part by wrapping in plastic and cushioning material. Seal securely in an approved shipping container. If you do not have a sufficient shipping container, ask JDK Audio for advice when calling for the RA number.
  - c. Include a note explaining the problem and conditions of the service request. Include your complete return address (no P.O. Boxes, please)
  - d. Ship the product freight prepaid to:

JDK Audio c/o API  
8301 Patuxent Range Road  
Jessup, MD 20794

**IMPORTANT: Be sure the RA number is plainly written on the shipping carton**

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