JDK AUDIO

2 CHANNEL
MICROPHONE PREAMPLIFIER

MODEL **MP-R20**

INTRODUCTION

Thank you for choosing this JDK Audio R20 Microphone Preamplifier. The R20 is a two channel premium analog mic preamp in a two rack-space chassis. By using a continuously-variable gain control, the R20 can very precisely set the mic or instrument gain of the unit.

LAYOUT

The JDK Audio R20 contains two identical mic preamp channels in a single chassis, sharing only a common ON/OFF switch.

Each channel features both a mic and an instrument input and switches for phantom power, phase, and pad. Output levels are monitored via a custom analog VU meter, with an additional peak LED just above the gain control knob.

Rear panel connections include both balanced XLR connectors as well as balanced 1/4" jacks.

DESIGN

The design of the R20 circuitry is an entirely new design from API's design team. This two channel microphone preamp utilizes the THAT Corp. 1512 Mic Preamp IC with wafer technology producing near-discrete performance. The R20 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 Corp. output stage, the R20 is a solid front end for any audio system. The front panel includes a back lit analog meter with separate peak LED, phantom power, pad, and phase switch for each channel in a robust 2U chassis.

FRONT PANEL CONTROLS

(1 channel shown)

POWER SWITCH

The front panel power switch turns power to the R20 on and off.
The indicator immediately above the switch will glow RED when the R20 is powered on.

INST IN JACK

INST is a 1/4" jack that will accept an instrument input. When using this input, select the INST position of the selector switch immediately to the left of the jack. The red LED above the switch will NOT be illuminated when the INST input is selected.

MIC/INST SELECTOR SWITCH

This switch selects either the rear panel MIC input or the front panel INST input. When MIC is selected, the LED above 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 immediately above the switch will illuminate.

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 immediately above the switch will illuminate.

PHANTOM POWER SWITCH

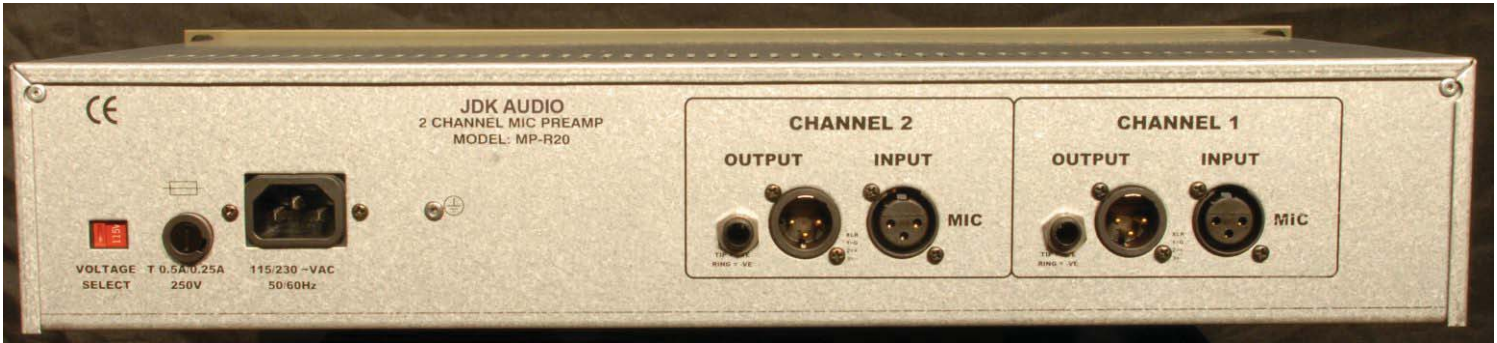# FRONT PANEL CONTROLS - continued

(1 channel shown)

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 R20 can be precisely controlled.

VU METER

The custom analog VU meter in conjunction with the PEAK LED over the GAIN knob gives the user an excellent indication of the output gain from the R20

REAR PANEL

INPUT CONNECTORS

The inputs to the R20 can be either by a 3 pin XLR-type balanced connector on the back panel, or via a 1/4" unbalanced jack on the front. The input XLR connector is wired pin 2 hot (or +) with the PHASE switch in the down position.

OUTPUT CONNECTORS

The outputs of the R20 can be taken from either the 3 pin XLR-type connector, or via the 1/4" balanced TRS (tip, ring, sleeve) connector on the rear panel. Like the input, the output XLR connector is wired pin 2 hot (or +), and the 1/4" TRS connector is wired tip hot (or +). These two connectors are wired in parallel, so output audio will appear on both connectors.

AC MAINS CONNECTOR

The mains AC connector is the standard IEC-type 3 pin connector. The ground of this AC connector is permanently internally connected to the chassis of the R20 for safety. **Be sure the Voltage Select switch is in the correct position for your country and the appropriate value fuse is in the holder before applying AC voltage to the R20.**

AC FUSE HOLDER

When set to the 115V position use a 500mA GMA fuse with Slo-Blo characteristics. At the 230V setting use a 250mA Slo-Blo fuse. **It is important to change the fuse when changing the supply voltage.**

AC VOLTAGE SELECT SLIDING SWITCH

Technical Specifications - R20

Inputs: Balanced XLR Mic jack (rear)
    Un-Balanced 1/4" Intrument jack (front)

Outputs: Balanced XLR and 1/4" parallel jacks

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

Current: 65mA, 7.3VoltAmps

Dimensions: 2U EIA 19" Rack
 Height: 3.5 Inches
 Width: 19 Inches
 Depth: 10 Inches

Weight: 12 lbs

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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