JDK AUDIO

2 CHANNEL COMPRESSOR

MODEL **MP-R22**

INTRODUCTION

Thank you for choosing this JDK Audio R22 Compressor. The R22 is a dual channel compressor featuring two channels of API's patented award winning compressor circuit in a rack mount unit with internal power supply. Each channel includes the patented 'THRUST' switch to protect the sensitive high frequency content of the audio signal even under the most vigorous of compression ratios.

This is the same compressor circuit originally designed into all ATI Paragon mixing consoles. Audio Toys, Inc. (ATI) was founded in 1988 to manufacture audio equipment for live sound reinforcement use. The most revered product was the API Paragon P40 and later, its successor, the Paragon II mixing console. Paragons could be found on many of the top tours of the past 20 years. One of the many distinctive features of the Paragon was the inclusion of on-board dynamics processing - a gate and a compressor, both of which were the favorites of many of the top live engineers on the road. The compressor circuit from the Paragon is faithfully replicated in the JDK R22.

ATI was able to aquire API in 1999. Today, the engineering approach and manufacturing processes of ATI have been incorporated into the company which has become API.

The perfect companion to your R20 mic-preamp and R24 EQ, the R22 compressor provides comprehensive easy-to-use control of the audio signal with custom VU metering of both output and gain reduction. While there are no Attack or Release controls, the R22 uses an automatic timing circuit, which automatically varies the attack and release characteristics in response to the audio signal passing through the unit. This results in very pleasing audio compression without the potential clicks and pops of either hard-edged attack or super-fast release times.The two channels can even be linked for use as a stereo compressor with true RMS power summing of the left and right signals.

LAYOUT

The JDK Audio R22 contains two identical channels of compression in a single chassis, sharing only a common ON/OFF switch.

Each channel features switches for the patented THRUST circuit, hard or soft knee, and bypass. Compressor controls are set via continuously variable potentiometers for threshold, compression ratio, and output makeup gain. The custom analog VU meter can be switched between monitoring output levels and gain reduction, with an additional LED to indicate when the input signal is above the set threshold level.

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

FRONT PANEL CONTROLS

(1 channel shown)

POWER SWITCH

The front panel power switch turns power to the R22 on and off.
The indicator above the switch will glow RED when the R22 is powered on.

THRESHOLD

The Threshold control sets the signal level above which compression will occur and can be adjusted
 from -40dBu to +15dBu.

ABOVE LED

LED will light when the input signal is above the set threshold level. Note that LED will light regardless
of state of bypass switch.

RATIO

This control sets the compressor ratio, which is variable
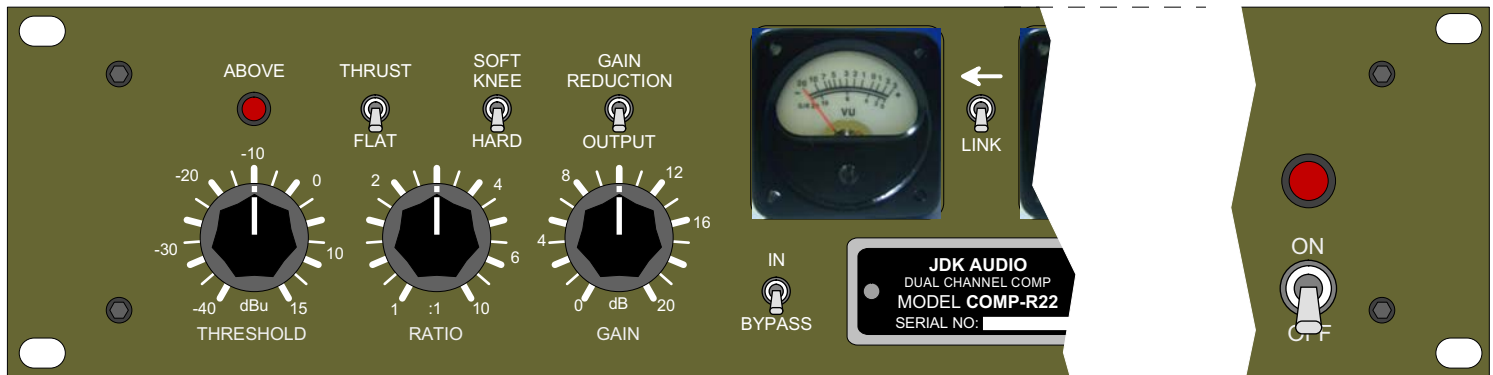from 1:1 to 10:1.

SOFT / HARD KNEE

When in the up "Soft" setting, compressor threshold
knee is "rounded" (see graph).

THRUST

When the patented THRUST circuit is engaged, a high-pass
filter is placed in front of the RMS detector. The result is
preserved punchy bottom end while still compressing the
overall signal.
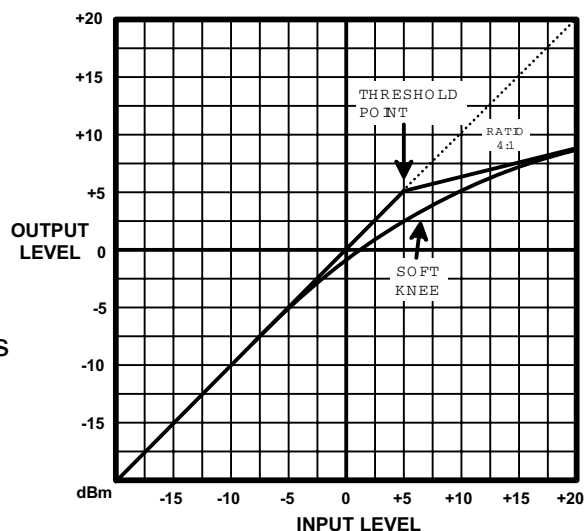
FRONT PANEL CONTROLS - continued

(1 channel shown)

GAIN

This control adds a variable 0dB to +20dB of make-up gain to compensate for compressor loss.

VU METER

The custom backlit analog meter shows either output VU level or gain reduction in dB. Note that the meter will always show output and gain reduction for the compressor controls in circuit.

OUTPUT / GAIN REDUCTION

This switch allows you to change each channel meter from output level to gain reduction. This switch is NOT linked as part of link mode, so you can monitor each channel how you would like.

IN / BYPASS

When in the up (IN) position, the channel is effected by the compressor controls. The bypass is a hard relay bypass. If the unit loses power, it will default to this hard relay bypass. This switch is NOT linked as part of the link mode, so you can still switch in and out each channel independently.

LINK
In link mode, *the channel A controls for threshold, ratio, gain, THRUST, and knee control both channels*. The audio signal from both channels are combined in true RMS power summing to create the compression control signal. Then the resulting compression is applied to both channels evenly for proper balance.

REAR PANEL
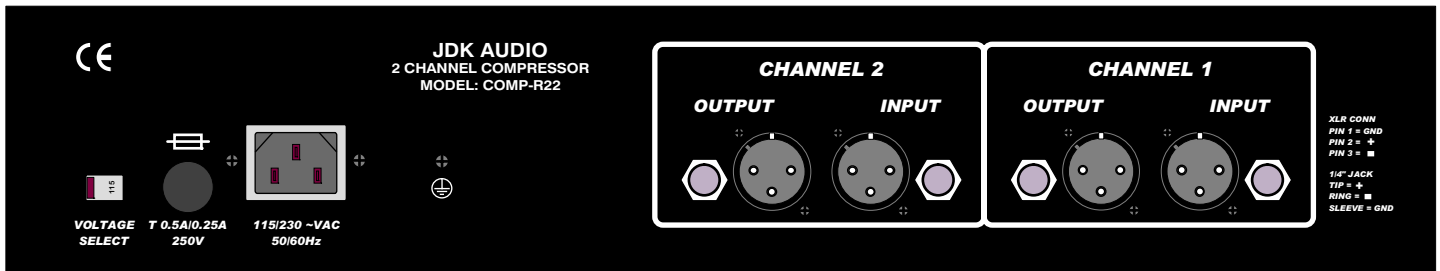
INPUT CONNECTORS

The inputs to the R22 can be either by a 3 pin XLR-type balanced connector or the 1/4" balanced (tip, ring, sleeve) jack. Note that if you were to connect to both connectors, the signal from the 1/4" jack takes priority. The input XLR connector is wired pin 2 hot (or +).

OUTPUT CONNECTORS

The outputs of the R22 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 R22 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 R22.***

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

For line voltages from 100V to 120V, set the switch to 115V. The 230V position is good for all line voltages from 200-240 Volts.

Technical Specifications - R22

Inputs: Balanced XLR (pin 2 hot) and 1/4" jack (wired tip hot) (1/4" normalled priority)

Outputs: Balanced XLR (pin 2 hot) and 1/4" (wired tip hot) parallel jacks

Input Impedance: 15KOhms Balanced
Bandwidth: +/- 0.5db, 20Hz - 50kHz
THD+N @ 1kHz, +4dBu: <0.005%
Maximum Level: +19dBu
Signal-to-Noise Ratio: -88dBu (comp in), -92dBu (bypass), -106dB
Crosstalk: <84dB @ 20kHz
Stereo Link: True RMS Power Summing
Meter: -20 to +3 VU Output Level, 0 to -15 dB Gain Reduction, switchable

Compressor Controls:
Threshold Range: -40dBu to +15dBu
Ratio Range: 1:1 to 10:1
Makeup Gain Range: 0dB to +20dB
Hard or Soft Knee switchable
Flat or Thrust side chain filter switchable
Attach Time: Program and Control Adaptive, 10mSec to 40mSec
Release Time: Program and Control Adaptive, 30mSec to 400mSec

Current: 93mA, 10.8VoltAmps

Dimensions: 2U EIA 19" Rack
        Height: 3.5 Inches
        Width: 19 Inches
        Depth: 10 Inches
Weight: 12 lbs

(Specifications subject to change without notice)

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:

   <div align="center">

   JDK Audio c/o API

   8301 Patuxent Range Road

   Jessup, MD 20794

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

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JDK AUDIO

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