JDK AUDIO

2 CHANNEL
4 BAND EQUALIZER

MODEL **EQ-R24**

Operations Manual - 910-0844 REV A, 12/04/2014

INTRODUCTION

Thank you for choosing this JDK Audio R24 Equalizer. The R24 is a two channel four band equalizer in a two rack-space chassis. With a dedicated knob and/or switch for each control function, the R-24 is both easy to use and easy to re-set. By using continuously-variable controls for both frequency and boost/cut, the R24 can be very precise in applying equalization to the selected audio material.

HISTORY

The design of the R24 circuitry is not entirely new. For a brief period in the late 1970's and early 1980's an audio company called APSI manufactured consoles and equalizers. The APSI 562 was a 4-band Parametric equalizer which was made by APSI, but sold through API. A variety of APSI modules were included in the sales brochures and literature produced by API. The 562 has over the years remained on the 'favorites' list of a number of studio engineers. The original APSI 562's, however, have become more difficult to find and nearly impossible to find in good working condition. The R24 is a faithfully updated re-engineered version of the original APSI 562.

LAYOUT

The JDK Audio R24 contains two identical equalizer channels in one chassis, sharing only a common ON/OFF switch.

The equalizer covers the range from 20Hz to 20kHz in four EQ bands of overlapping frequencies - 20Hz to 200Hz, 100Hz to 1000Hz, 500Hz to 5000Hz, and 2000Hz to 20kHz.

Each band has a boost/cut control with a range of +/- 12dB.

There is a separate IN/OUT switch for each equalizer channel.

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

FRONT PANEL CONTROLS

POWER SWITCH

The front panel power switch turns power to the R24 on and off.

The indicator immediately above the switch will glow RED when the R24 is powered on.

IN/OUT SWITCH

The IN/OUT switch for each EQ channel will place the R-24 into the active audio path via a silent relay.

In the OUT position, there is no active circuitry between the IN and OUT rear panel connectors

CENTER FREQUENCY POT

This pot selects the center frequency of the chosen EQ band. The pot is continuously variable. allowing very precise selection of the desired frequency.

BOOST/CUT POT

The larger knob controls Boost or Cut within the chosen frequency range. With the pot in the straight up (12 o'clock) position, no change in the tonal balance of the selected range will be applied.

All 4 equalizer bands have peaking (also called “bell” in the UK) response characteristics. While the central frequency of that boost (or cut) is the one engraved on the panel, there is of course amplitude variation that occurs to a lesser extent on nearby frequencies. This is termed the 'Q' where higher Q's have less effect on adjacent frequencies.

REAR PANEL

INPUT CONNECTORS

The inputs to the R24 can be either by 3 pin XLR-type connector, or via 1/4" balanced TRS (tip, ring, sleeve) connector. The XLR connector is wired pin 2 hot (or +), and the 1/4" TRS connector is wired tip hot (or +). The two connectors are wired in parallel, so **DO NOT** connect an audio source (*especially a different audio source*) to both the XLR and TRS connectors at the same time.

OUTPUT CONNECTORS

The outputs of the R24 can be taken from either the 3 pin XLR-type connector, or via the 1/4" balanced TRS (tip, ring, sleeve) connector. Like the inputs, 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, like the inputs, 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 R24 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 R24.***

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 - R24

Inputs: Balanced XLR and 1/4" parallel jacks

Outputs: Transformer Balanced XLR and 1/4" parallel jacks
(All measurements with 600 Ohm output load)

Bandwidth: +/- 0.5db, 20Hz - 20kHz

THD+N @ 1kHz, +4dbu: 0.01%

Maximum Level: +23dbu

Signal-to-Noise Ratio: -100db

EQ Bands: 4 bands, all +/-12db Peak/Dip type
- Q range from 0.60 to 0.85 with boost/cut from 0 to +/- 12dB
- Lo: 20Hz - 200Hz
- Lo-Mid: 100Hz - 1kHz
- Hi-Mid: 500Hz - 5kHz
- Hi: 2kHz - 20kHz

Current Draw: 65mA, 7.3VoltAmps

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

Weight: 13 lbs

Input Impedance: 12k Ohms

Output Impedance: 300 Ohms Transformer Balanced

(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:

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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