

ARSENAL AUDIO

by API



SINGLE CHANNEL VPR SERIES 4 BAND EQUALIZER

MODEL V14

INTRODUCTION

Thank you for choosing this Arsenal Audio V14 Equalizer. The V14 is a single channel four band equalizer in the popular 500 VPR format. Equipped with continuously-variable dual concentric knobs, the V14 can be very precise in applying equalization to the selected audio material.

HISTORY

The design of the V14 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 Arsenal V14 is a faithfully updated re-engineered version of the original APSI 562.

LAYOUT

The Arsenal V14 contains four dual concentric knobs, the lower or larger of which selects the level of boost or cut applied to the audio signal, and the upper or smaller knob adjusts the center frequency to be adjusted .

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 2200Hz to 20kHz.

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

There is a lighted IN/OUT switch for the equalizer at the lower left.

The rear panel connection is via an edge connector that mates to a corresponding connector in either an API 500VPR 10-space rack or a 6 position API Lunchbox®

FRONT PANEL CONTROLS



CENTER FREQUENCY KNOB

This knob (the smaller, upper knob) selects the center frequency of the chosen EQ band. The pot is continuously variable allowing very precise selection of the desired frequency.

BOOST/CUT KNOB

The larger, lower 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.

IN/OUT SWITCH

The IN/OUT switch will place the V14 into the active audio path.

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

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.

CONNECTIONS

The V14 is designed to only be used with an appropriate card-frame enclosure that provides inputs, outputs and power supply voltages to the module. This includes the API 500VPR 10-space frame, the 6 position API Lunchbox®, or an API 1608 console.

PLEASE NOTE: NO OTHER ENCLOSURES ARE APPROVED FOR USE AND USE OF ANOTHER ENCLOSURE WILL IMMEDIATELY VOID YOUR WARRANTY!

TECHNICAL SPECIFICATIONS - V14

I/O: Balanced Input and Output through VPR Rack
(All measurements with 600 Ohm output load)

Bandwidth: +/- 0.5db, 20Hz - 50kHz

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

Maximum Level: +24dbu

Signal-to-Noise Ratio: -102db

EQ Bands: 4 bands, all +/-12db Peak/Dip type

Lo: 20Hz - 200Hz

Lo-Mid: 100Hz - 1kHz

Hi-Mid: 500Hz - 5kHz

Hi: 2.2kHz - 20kHz

Current: 30mA, 3.4VoltAmps

Dimensions: 1 VPR Alliance Slot

Height: 5.25 Inches

Width: 1.5 Inches

Depth: 7 Inches

Weight: 1.5 lbs

Input Impedance: 12K Ohms

Output Impedance: 300 Ohms Transformer Balanced

Arsenal Audio Product Warranty

- a. **Warranty Information:** This product carries a one year parts and labor warranty from date of purchase. Arsenal 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, Arsenal Audio, at its option, will repair or replace the product.
- b. Arsenal 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 Arsenal 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 Arsenal Audio by 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 Arsenal 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:

Arsenal Audio by API
8301 Patuxent Range Road
Jessup, MD 20794

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

- e. This is your sole warranty. Arsenal Audio does not authorize any third party, including any dealer or sales representative, to assume liability on behalf of Arsenal Audio or to make any warranty for Arsenal Audio.
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