

# Quicksilver Audio Sixty Watt Mono Amplifier Operating Instructions

*Thank you for purchasing the Quicksilver Audio Sixty Watt Mono Amplifiers.*

These amplifiers have been engineered to have a very wide band width, extremely low distortion, and superior dynamic range.

The output transformer used in this amplifier is based on the best designs of the past but uses superior new materials to achieve a very high level of performance. The high frequency characteristics of this transformer are very stable. Many different output tubes may be used without the need for circuit changes or compensation adjustments.

This is an all-tube design and uses no circuit boards or transistors.

## WARNING

This device has very high internal voltages. Never operate with the bottom removed!

Never operate your amplifiers with the speakers disconnected.

To prolong the life of your amplifiers, never turn them off and then on within a short period of time (45 seconds.)

## PLACEMENT

The Sixty Watt Mono Amplifiers should have at least 6 inches of ventilation space on either side and at least 6 inches above them. If this is not possible, then use a fan for cooling.

## SPEAKER CONNECTION

Five-way binding posts are used for speaker connection. For a better sonic performance, we recommend using the screw-down part of the post rather than banana plugs to connect your speaker wire. Make sure the ends of the speaker leads do not touch each other. The rating on the back of your speaker system will determine whether you use the 4 or 8 ohm tap for the positive lead. Connect the negative or ground to the black post.

There is a diagram on the bottom of the amp that identifies the three posts labeled 4 ohm, C, 8 ohm:



Use the 4 ohm tap for speakers from 4 to 8 ohms impedance or the 8 ohm tap for speakers from 8 to 16 ohms.

## 3 AMP SLO-BLO FUSE

Standard fuse value must not be exceeded. If a fuse blows, replace and check output tube bias. If there is a large change, then an output tube is probably damaged. If the bias has not changed, then the cause of the fuse blowing may be due to other problems, such as poor system grounding, unstable preamp, shorted speaker, etc. Interchanging the amps between channels will help localize the problem to either the system or the amplifier.

## TUBES

The input tubes in this amplifier were chosen for their specific performance characteristics. These tubes should last between one and two thousand hours. We can only guarantee the performance of this unit when used with input tubes supplied by Quicksilver Audio.

Quicksilver ships the Sixty Watt Mono Amplifiers with matched KT88 tubes but many different output tubes can be used. The output tubes should be matched.

Output tubes will need to be replaced periodically. When a degradation in sound occurs, the fuse blows repeatedly, or the tubes will not hold their bias anymore, it is time for new output tubes. We recommend purchasing tubes from Quicksilver Audio or your dealer and we recommend keeping extra fuses and an extra output tube on hand.

### OUTPUT TUBE BIAS SETTING

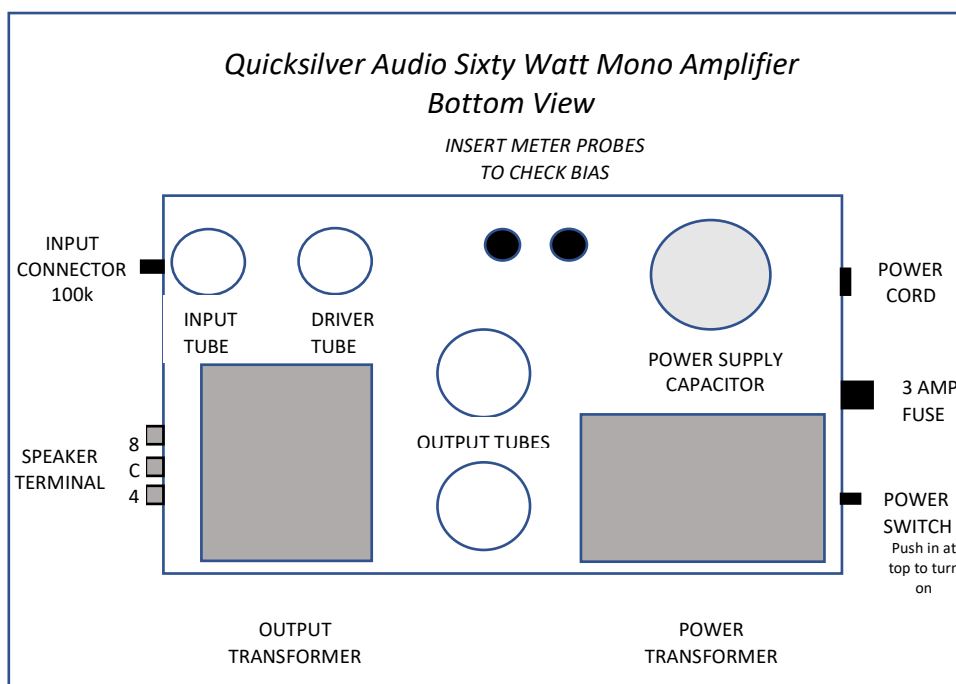
Output tube bias should be set immediately when new tubes are put in; then again in 15 minutes; and periodically the first few times of using the amplifiers. After that the bias should be checked monthly.

The bias control is located between the output tubes near the power transformer.

To adjust the bias you will need a slot-head screwdriver and a multimeter that reads millivolts. Adjust by turning clockwise to increase bias; counterclockwise to decrease bias.

Set the meter to read millivolts and insert the black and red probes from your meter into the black and red pin jacks on the amp. The millivolt reading on the meter is actually the sum of the bias currents through the 2 output tubes. Efficient speakers will sound better with lower bias (60mv) and inefficient speakers may require higher bias (80mv.) Bias should not be set higher than 100mv.

If the bias cannot be set low enough, then an output tube may be shorted and the amplifier should be turned off immediately. If the bias cannot be set high enough, then one output tube may be dead. In either case, the output tubes need replacing. Replace the output tubes as matched pairs—matched pairs will sound better and last longer.



### ***Sixty Watt Mono Amplifier Specifications***

Power Output	60 watts into 4 or 8 ohms
Power Bandwidth	14 Hz to 70 KHz
Damping Factor	20
Input Sensitivity	1.2 volts
Inout Impedance	100 K ohms
Power Consumption	105 watts at idle 210 watts at full power
Tube Complement	1 -12AX7 input 1 -12BH7 driver 2 -KT77, KT88, KT90, KT120 or KT150 outputs
Dimensions	5 ½" high x 14 ½" deep x 9 1/8" wide
Finish	Chrome chassis Black transformer covers
Weight	28 lbs, 34 lbs shipping
Warranty	3 years parts and labor 90 days tubes

#### **WARRANTY**

Quicksilver Audio warranties your amplifiers for a period of 3 years from the date of purchase (90 days on tubes.) Parts and labor are provided free of charge as long as the failure was not caused by misuse, accident or negligence. Shipping to the factory is not included.

Retain at least one packing carton in case a unit needs to be returned for service.

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