MANLEY

LABORATORIES, INC.

OWNER'S MANUAL

MANLEY LAB SERIES STEREO 75+75 WATT AMPLIFIER

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INTRODUCTION

THANK YOU!...
for choosing the Manley LAB SERIES STEREO 75 + 75 watt Amplifier. Designed by David Manley, the Manley LAB SERIES STEREO 75 + 75 watt Amplifier uses only the best available components, with the shortest and cleanest signal path possible.
The circuit and the components used have been chosen carefully after years of development and refinement for reliability, constancy and most importanly, musical, accurate, and emotional delivery of the sound. The circuit topology is similar to other designs in the MANLEY range. We emphasize big beefy resevoir capacitors in the high voltage supplies giving plenty of instant energy for dynamic performance of transient peaks and bass performance which often exceeds that of rival solid-state amplifiers. We run high voltages on the plates of the output tubes and are thus able to run them at lower current which will result in longer life for the output tubes. Each output tube has its own bias adjust, and the procedure for adjusting each tube's current draw is described in this manual.

GENERAL NOTES

LOCATION & VENTILATION
The Manley LAB SERIES STEREO 75 + 75 watt Amplifier must be installed in a stable location with ample ventilation. Allow a minimum of 2 inches of clearance on the top and sides of the amplifiers, such that a constant flow of air can flow. Do not place amplifiers directly on high pile carpet or any other surface that will block the ventilation vents underneath the amplifiers. If you have small children or pets, you should consider placing the amplifiers out of reach to prevent damage to the amplifier or damage to your small children or pets by the amplifier as the tubes do get hot during operation.
WATER & MOISTURE
As with any electrical equipment, these amplifiers should not be used near water or moisture.

SERVICING
The user should not attempt to service the amplifier beyond that described in the owner's manual. Refer all servicing other than biasing and tube replacement to Manley Laboratories

SPECIAL NOTES
Tubes may become loose during transit. Straighten and press down each tube before plugging the amplifier into the mains socket. Furthermore, do not touch the tubes after the amplifier has been switched on, as the tubes become very hot during operation and should only be handled after the power has been turned off and the tubes have cooled.
Your amplifier has been factory set to the correct mains voltage for your country. The voltage setting is marked on the serial badge, located on the rear panel. Check that this complies with your local supply.

Thank you again, and please enjoy!

MAINS CONNECTIONS

Export units for certain markets have a moulded mains plug fitted to comply with local requirements. If your unit does not have a plug fitted the coloured wires should be connected to the appropriate plug terminals in accordance with the following code.

GREEN/YELLOW	EARTH	terminal
BLUE	NEUTRAL	terminal
BROWN	LIVE	terminal

As the colours of the wires in the mains lead may not correspond with the coloured marking identifying the terminals in your plug proceed as follows;

The wire which is coloured GREEN/YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or coloured GREEN or GREEN and YELLOW.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked by the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked by the letter L or coloured RED.

DO NOT CONNECT/SWITCH ON THE MAINS SUPPLY UNTIL ALL OTHER CONNECTIONS HAVE BEEN MADE.

WARNING!

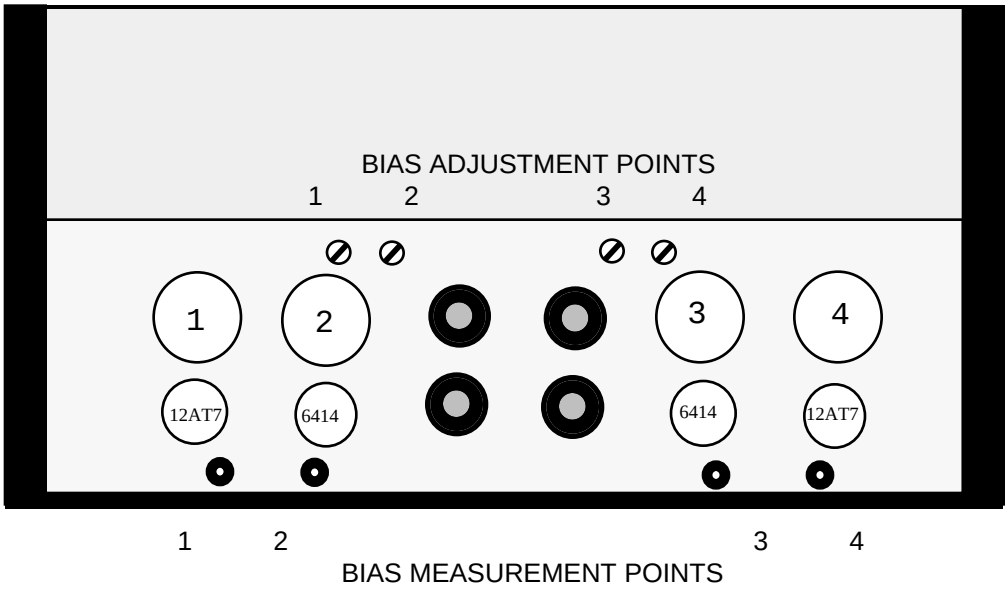
TO PREVENT THE RISK OF ELECTRIC SHOCK
DO NOT OPEN THE CABINET
REFER SERVICING TO
QUALIFIED PERSONEL

CONNECTING YOUR AMPLIFIER

Setting up your amplifiers is rather easy.

1. Connect all source components (turntable, CD, Tuner, Tape DAT, etc.) to your preamplifier.
2. Connect the RCA interconnects from the output of the preamplifier or switching center to the RCA input on the back of the amplifiers.
3. Connect the hot or "+" speaker cable to the red binding post and the common or "-" speaker cable to the black binding post. Ensure that the other end of the cable is connected correctly to the speaker. Tighten the binding posts by hand. If you use a nut-driver (3/8") **do not over-tighten** the posts or you may break the connections inside the amplifier.
4. Ensure that the "mains" switch on the front panel is in the "off" or "0" position.
5. Turn on Preamplifier and any source components you plan to use.
6. Plug amplifier into wall outlet.
7. Switch the square mains power switch to the ON position and allow the amplifier a minute or so to 'warm up'.
9. Turn up the volume and enjoy.

TOP VIEW



Amplifier Overhead View
Tube Location & Bias adjust points

OUTPUT TUBES:4 x RUSSIAN 6550

The 6550's used are the Russian up-rated 6550A's. This has been proven to be the rugged and reliable of this type. The MANLEY STEREO 75 + 75 has been thoroughly optimised around this tube. Use of unapproved tube types can and will void your warranty.

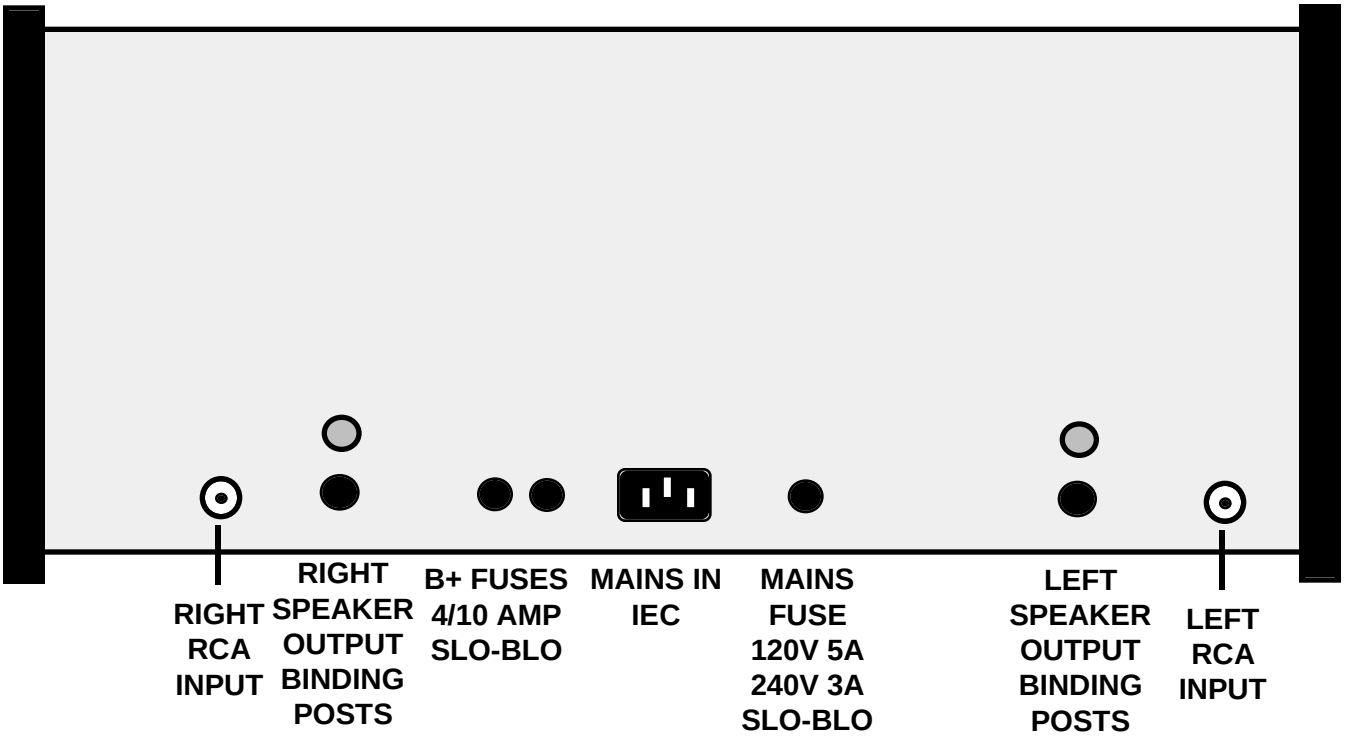
DRIVER TUBES: 2 x 6414

The 6414 is an American military uprated version of the 12BH7A with increased current drive.

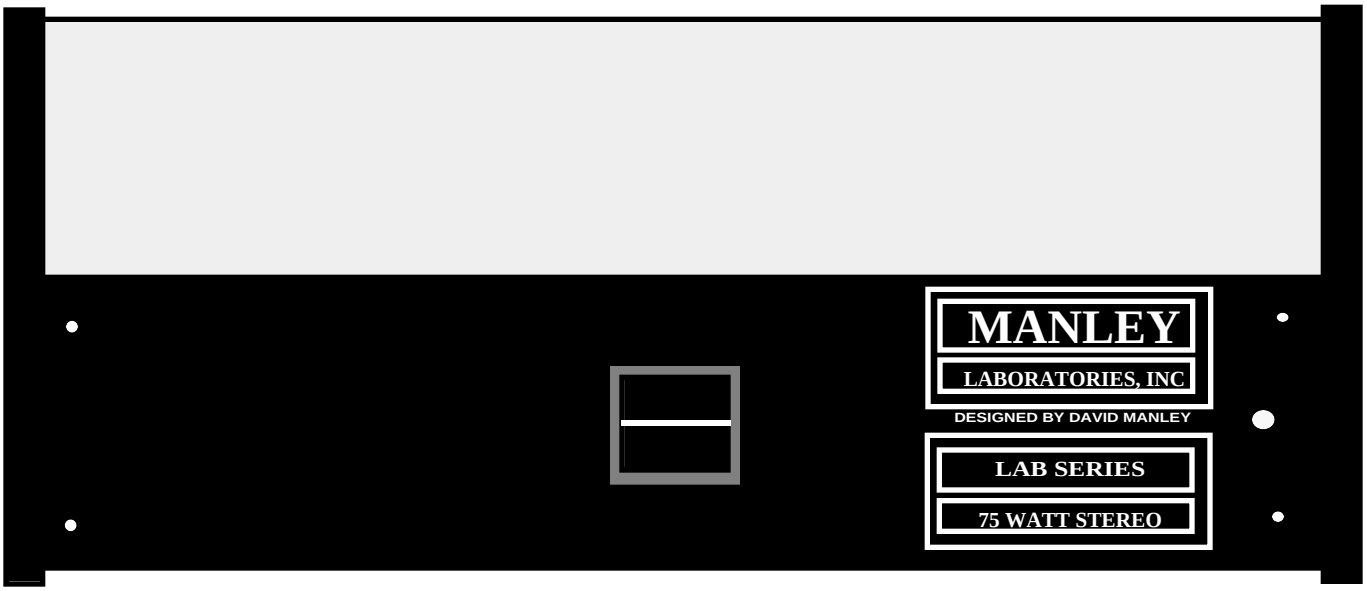
INPUT TUBE: 12AT7WA

The 12AT7WA has several equivalent numbers, (12AT7, 12AT7A, 6201, ECC81, etc.) Any of these types may be used. We have selected this 12AT7WA very carefully for noise, microphonics, and constancy. Replacement tubes of premium quality are always available from MANLEY LABORATORIES.

REAR VIEW



FRONT VIEW



BIAS PROCEDURES

The Manley STEREO 75 + 75 watt Amplifiers use a fixed bias system that requires very little attention. We recommend checking the bias every 2-3 months or any time you replace an output tube. To adjust or check the bias, follow the following steps.

For this procedure you will need a voltmeter (a hand held autoranging DMM digital multimeter is the easiest) and a small flat screwdriver.

1. On page 6, which shows the top view of the amplifier, you can see4 black tip jacks towards the front of the amplifier. To measure the current draw of each output tube place the positive meter probe into the first black tip jacks which corresponds to tube number one. Place the negative meter probe into the negative black output binding post to make a good ground connection.
Set the meter to read 'millivolts' DC (direct current).

2. Each of the four output tubes can have its own bias adjusted by adjusting its own bias adjust pot. On the top view picture on page 6, you can see the numbering sequence for the 4 output tubes. The corresponding tip jacks (measurement points) and bias adjust potentiometers are also shown.

3. The first step to setting the bias is to turn on the amplifier and ensure that there is zero signal input, either leave the preamplifier or source signal turned off or unplug the amplifier input. Also, leave your loudspeakers connected as these provide an ideal load on the output. (DO NOT EVER OPERATE YOUR AMPLIFIER WITHOUT SPEAKERS CONNECTED!) It is recommended that you leave the amplifier on long enough to ensure that the tubes have reached their stable current draw, at least 1/2 hour is recommended.

5. With the meter probe in the first black tip jack, adjust the first bias trim pot slowly until you measure 275mV to 300 mVDC (0.275V to 0.300VDC). Since you are measuring across a 10 ohm cathode resistor, this would correspond to a 27 to 30 mA current draw for each tube by Ohm's law.

6. If you are unable to bring the bias voltage down to 300 mV on any tube, you may alter the setting on the master bias adjust pot which will change the bias for all of the tubes at the same time. Rebias all the tubes as described above. If after lowering the master bias adjust to its minimum setting you are still unable to bring the voltage down to 300mV on any tube, then we recommend that that tube be replaced.

7. Follow step five with the remaining tubes, switching to the next test point and adjusting the next trim pot each time. After you have adjusted all the output tubes, recheck and repeat the procedure as they will drift a little bit during adjustment. Once they are all set, your amplifier should be in perfect operation.

OPERATIONAL NOTES

TUBE LIFE

You should expect extended life from the tubes in your MANLEY STEREO 75 if you adhere to the procedures described above and check your bias at least once every 2-3 months. We stock all the tubes in these amplifiers should you ever need replacements (and at very reasonable prices too!)

FUSES

The fuses used in your amplifier are standard 1/4" x 1 1/4" SLO-BLO types. The correctly rated fuse has been installed at the factory for your country's voltage. If replacing a fuse, always unplug the amplifier's power cord from the wall outlet and always use the exact same type and ampere rating fuse as the one you are replacing. Failure to do so will void your warranty and can be a dangerous fire hazard. NEVER replace a fuse with thick wire, tin foil, gum wrappers, or anything else other than the correct fuse!

SPECIFICATIONS

Vacuum Tubes:	4 x 6550A (Output), 2x 6414 (Driver), 2 x 12AT7 (Input)	
Output Power	80 Watts (@1.5% THD 5 ohm load)	
Frequency Response, +/- .5 dB	10 Hz - 30 KHz	
Input Sensitivity	800 mV	
Input Impedance	100 KOhm	
Load Impedance	5 Ohm (fixed)	
S/N Ratio @75W	-80 dB	
Power Consumption	120 Watts	Quiescent
	540 Watts	Both channels driven to full power
Mains Fuse	100, 110, 120V	5 A (Slo-Blo)
	220, 240 V	3 A (Slo-Blo)
B+ Fuse	4/10A (250V)SLO-BLO	
Dimensions	W=14.5, D=10, H=6 inches	
Shipping Weight	34 lbs EACH	

WARRANTY

All Manley Laboratories equipment is covered by a limited warranty against defects in materials and workmanship for a period of 90 days from date of purchase to the original purchaser only. A further optional limited 5 year warranty is available to the original purchaser upon proper registration of ownership within 30 days of date of first purchase.

Proper registration is made by filling out and returning to the factory the warranty card attached to this general warranty statement, along with a copy of the original sales receipt as proof of the original date of purchase. Only 1 card is issued with each unit, and the serial number is already recorded on it.

If the warranty registration card has already been removed then this is not a new unit, and is therefore not warranted by the factory. If you believe this to be a new unit then please contact the factory with the details of purchase.

This warranty is provided by the dealer where the unit was purchased, and by Manley Laboratories, Inc. Under the terms of the warranty defective parts will be repaired or replaced without charge, excepting the cost of tubes. No warranty is offered on tubes, unless:
1. a Manley Laboratories preamplifier is used with a Manley Laboratories amplifier, and
2. the warranty registration card is filled out.

In such a case a 6 month warranty on tubes is available with the correct recording of the serial number of the preamplifier on your warranty registration card.

If a Manley Laboratories product fails to meet the above warranty, then the purchaser's sole remedy shall be to return the product to Manley Laboratories, where the defect will be repaired without charge for parts and labour. The product will then be returned via prepaid, insured freight, method and carrier to be determined solely by Manley Laboratories. All returns to the factory must be in the original packing, (new packing will be supplied for no charge if needed), accompanied by a written description of the defect, and must be shipped to Manley Laboratories via insured freight at the customer's own expense. Charges for unauthorized service and transportation costs are not reimbursable under this warranty, and all warrantees, express or implied, become null and void where the product has been damaged by misuse, accident, neglect, modification, tampering or unauthorized alteration by anyone other than Manley Laboratories.

The warrantor assumes no liability for property damage or any other incidental or consequental damage whatsoever which may result from failure of this product. Any and all warrantees of merchantability and fitness implied by law are limited to the duration of the expressed warranty. All warrantees apply only to Manley Laboratories products purchased and used in the USA.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damges, so the above exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WARRANTY REGISTRATION

We ask that you please fill out this registration form and send the bottom half to:

MANLEY LABORATORIES
REGISTRATION DEPARTMENT
13880 MAGNOLIA AVE.
CHINO CA, 91710

Registration entitles you to product support, full warranty benefits, and notice of product enhancements and upgrades. You MUST complete and return the following to validate your warranty and registration. Thank you again for choosing to use Manley Laboratories.

MODEL _____ SERIAL No. _____

PURCHASE DATE _____ SUPPLIER _____

PLEASE DETACH THIS PORTION AND SEND IT TO MANLEY LABORATORIES

MODEL: MANLEY LAB SERIES STEREO 75 + 75
SERIAL No. _____
PURCHASE DATE _____ SUPPLIER _____

NAME OF OWNER _____

ADDRESS _____

CITY, STATE, ZIP _____

TELEPHONE NUMBER _____

Serial #'s of Associated Manley Laboratories Equipment _____

_____