



Model MA-1A Monaural Amplifier
and
SW2P Powered Subwoofer System

Owner's Manual



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" with the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

1. **READ INSTRUCTIONS** - All safety and operating instructions should be read before the appliance is operated.
2. **RETAIN INSTRUCTIONS** - Safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS** - All warnings on the appliance and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS** - All operating and use instructions should be followed.
5. **WATER AND MOISTURE** - The appliance should not be used near water - near a bathtub, washbowl, kitchen sink, laundry tub; in a wet basement, near a swimming pool, etc.
6. **CARTS AND STANDS** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The appliance should be used only with a cart or stand that is recommended by the manufacturer.
7. **VENTILATION** - The appliance should be situated so that its location and position do not interfere with proper ventilation. The appliance should not be situated on a bed, sofa, rug, or any surface that may obstruct cabinet openings.
8. **HEAT** - The appliance should be situated away from heat sources such as: radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
9. **POWER SOURCES** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
10. **POWER CORD PROTECTION** - Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
11. **POLARIZED PLUG** - This appliance is equipped with a polarized line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not attempt to defeat this safety feature.
12. **LIGHTNING** - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the products due to lightning and power-line surges.
13. **OVERLOADING** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
14. **CLEANING** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
15. **NON-USE PERIODS** - The amplifier cord should be unplugged from the outlet when the appliance is left unused for a long period of time.
16. **OBJECT AND LIQUID ENTRY** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on this product.
17. **DAMAGE REQUIRING SERVICE** - The appliance should be serviced by qualified personnel when:
 - a. The power supply cord or plug has been damaged; or
 - b. Objects have fallen on or liquid has been spilled into the appliance; or
 - c. The appliance has been exposed to rain; or
 - d. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - e. The appliance has been dropped or the enclosure damaged.
18. **SERVICING** - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel. For service warranty information call the NHT Hotline number: 1-800-NHT-9993.
19. **REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitution may result in fire, electric shock, or other hazards.
20. **SAFETY CHECK** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Congratulations on your purchase of the NHT MA-1A amplifier or SW2P powered subwoofer system. The SW2P system consists of the MA-1A amplifier and the SW2P subwoofer. The SW2P was designed to provide both audio and home theater systems exciting, deep, low-distortion bass in an unusually compact package. The NHT SW2P's modular design makes it easy to install and operate, and is designed to bring you years of listening pleasure. The SW2P is an excellent powered subwoofer system for all NHT bookshelf speakers, as well as the VT-1 home theater speaker system.

Please take a few moments to read this Owner's Manual completely. This will allow you to realize the maximum performance from your investment. For your convenience, there is glossary on Page 10 which explains some of the more technical terms. This is also a good time to fill out and mail in your warranty card to register your purchase. This will keep you informed of product updates, special offers and future products.

MA-1A Amplifier Features:

- *80 Watt RMS, discrete output device amplifier.*
- *High-level inputs with fixed 100Hz, 6dB/octave high-pass crossover.*
- *Low-level inputs.*
- *Continuously variable crossover control from 35-150Hz for precise system integration.*
- *Gold-plated, 5-way binding post subwoofer output connectors.*
- *Barrier strip high-level input/output connectors.*

SW2P Powered Subwoofer Features:

- *10" high-excursion, polypropylene woofer*
- *Deep, low-distortion bass response to 21Hz (+/-3dB).*
- *Modular design for convenient placement.*

Note: If you have questions or need assistance during the installation or use of your new SW2P Powered Subwoofer System, please call your local NHT dealer or our Toll-Free Customer Service Hotline at:

1-800-NHT-9993



Caution: Prior to installing the SW2P/MA-1A, be sure that all AC power connections to your stereo or home theater system are either unplugged or turned off. Do not plug-in or connect the MA-1A amplifier to AC power until all connections are made.

SW2P Controls and Connections:

Please take a moment to familiarize yourself with the controls and connectors.

MA-1A amplifier description:

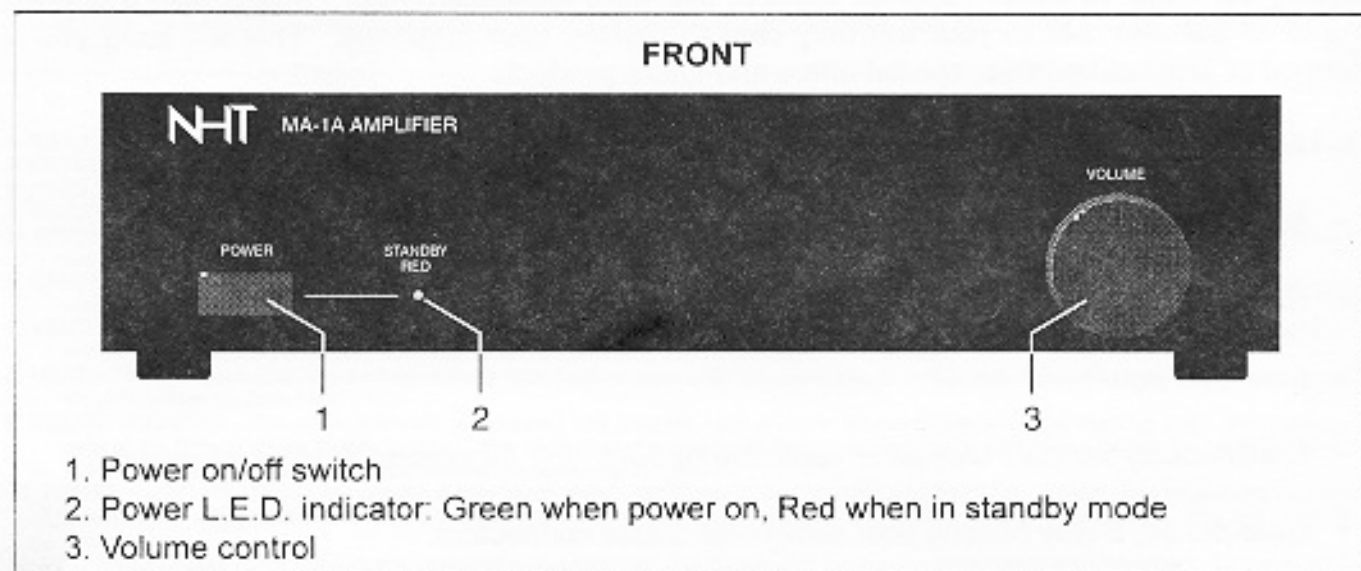


FIG. 1

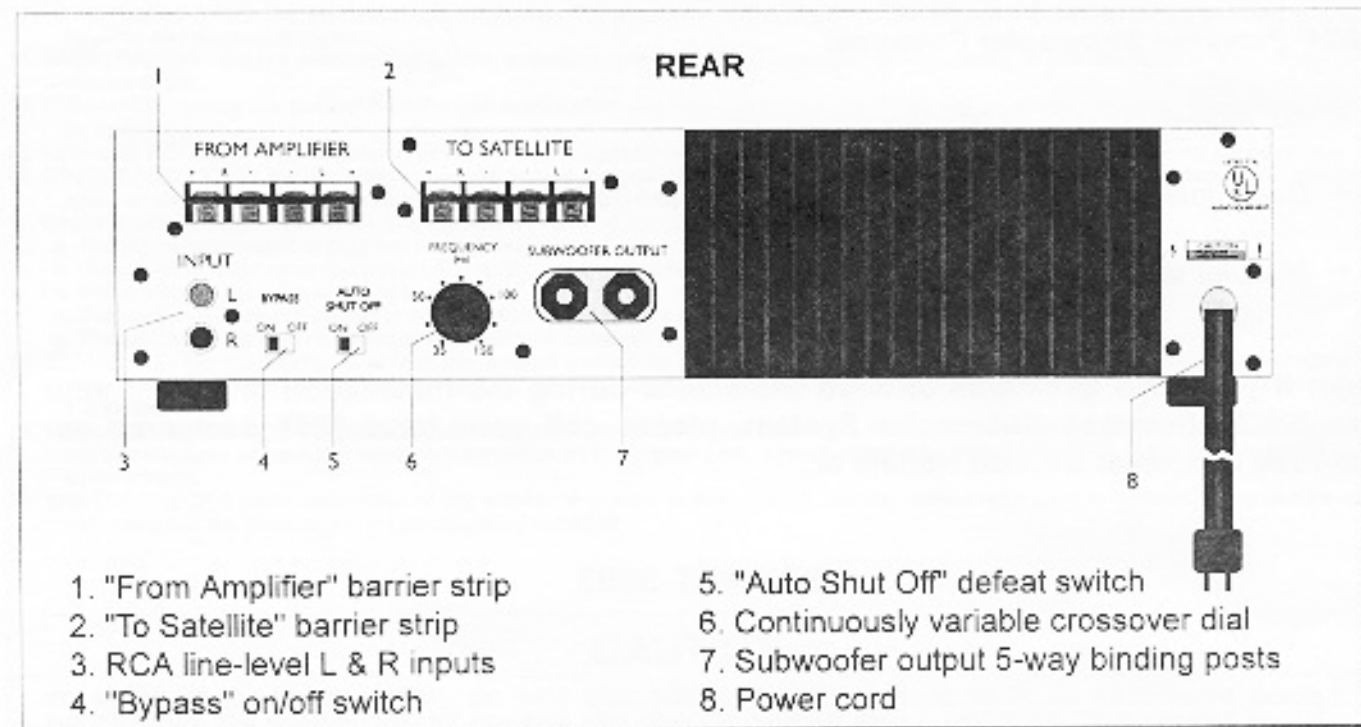


FIG. 2

SW-2P subwoofer description:

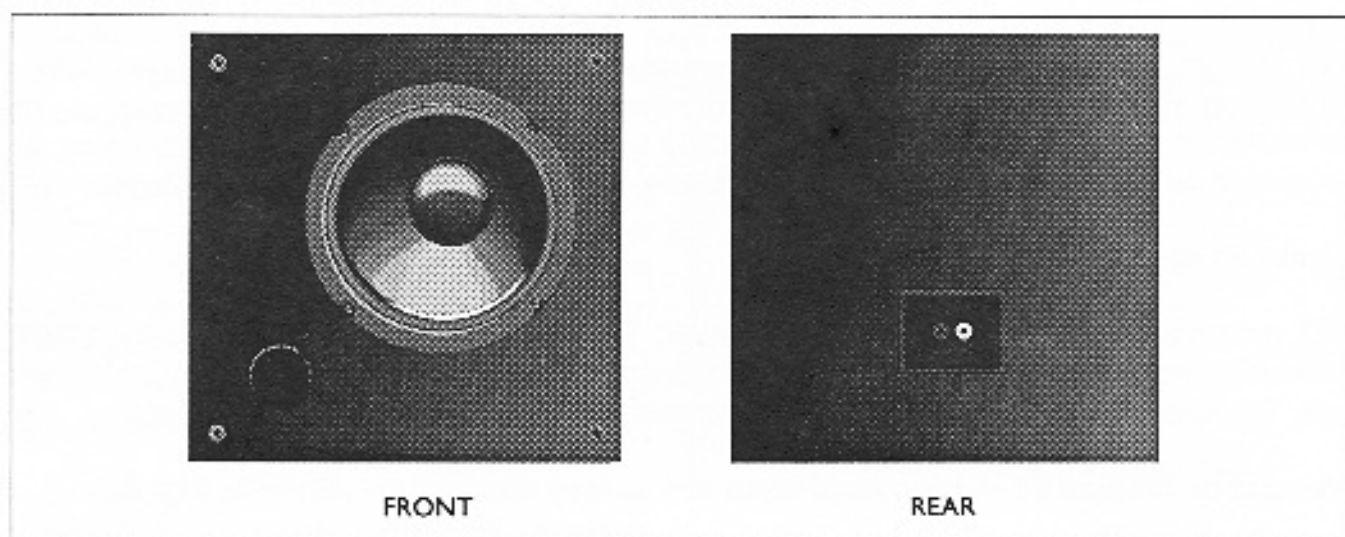


FIG. 3

Placement options for the SW2P system:

Physical Component Placement:

Due to the modular nature of the SW2P subwoofer system, you have a variety of placement options available. You may place the MA-1A amplifier with your other audio/video components, allowing easier access to the volume control, power switch and AC power. You may also locate the MA1A on top of the SW2P subwoofer as shown above.



Note: To prevent the MA-1A amplifier from overheating, always be sure to provide adequate space for proper ventilation.

Acoustic Placement Considerations:

Contrary to popular belief, subwoofers are sensitive to placement. By investing time in experimenting with different placement positions, you can achieve significant improvements in performance. Generally, a subwoofer should be located in the same horizontal plane and on the same wall as the main speakers. Low frequencies produce long wavelengths and thus interact with room boundaries significantly. Generally, locating the subwoofer closer to room boundaries (ie. wall or corner) will increase its bass output for better or for worse and conversely, locating the subwoofer away from room boundaries may decrease its bass output.

Connecting the SW2P to your system:

There are a variety of ways to connect your SW2P powered subwoofer system to your audio/video system. The best connection method depends on the rest of the components in your system, your main speakers' bass capability, and system use and placement. When connecting speaker wires, pay attention to relative phase. Normally speakers must be connected in-phase, red(+) to red(+) & black(-) to black(-), however the subwoofer may be connected out-of-phase, red(+) to black(-) & black(-) to red(+), for a better overall integration.

A note on speaker wire:

NHT recommends that you use at least 16 AWG wire from the MA-1A amplifier to the SW2P subwoofer module for runs up to 15 feet. For longer runs, you should use 14 AWG or larger wire. For specialty wire recommendations, consult your local Authorized NHT Dealer.

Connection method #1 -- High-level input and output connection. Refer to Fig. 4.

This method of connection is recommended when using small main speakers like the NHT SuperZero or 1.1. Using this method, the MA-1A amplifier removes the low bass from your main speakers with a passive filter, allowing your amplifier to drive only the main speakers while the MA-1A amplifier powers the SW2P subwoofer. This increases the dynamic range capability of your main speakers and reduces the load on your amplifier.

Tip: 1/4" spade connectors or ring terminals are available at most electronic parts stores and fit the barrier strip on the MA-1A perfectly. Correctly installed, these connectors provide a secure, neat installation for the speaker wire connections.

1. Connect speaker wires from the main speaker outputs of your amplifier to the "FROM AMPLIFIER" barrier strip on the MA1A amplifier. Make the connections on the MA-1A amplifier by removing 1/4" to 3/8" of insulation from your speaker wires and twist the exposed wire strands tight. Pay close attention to correct phase as stated above. PLEASE DO NOT OVER-TIGHTEN THE SCREWS. Make sure there are no stray wire strands exposed.
2. Connect speaker wires from the "TO SATELLITE" barrier strip on the MA-1A amplifier to the main speakers. Make the connections to the MA-1A amplifier as you did in the Step 1. Pay close attention to correct phase.
3. Connect a speaker wire from the MA-1A amplifier's "SUBWOOFER OUTPUT" to the SW2P subwoofer. Connect the speaker wires to these connectors using either: a)"bare wire" inserted into the holes through the shaft, b)wire terminated with "spade connectors", or c)"banana plugs" inserted into the rear of the connectors.

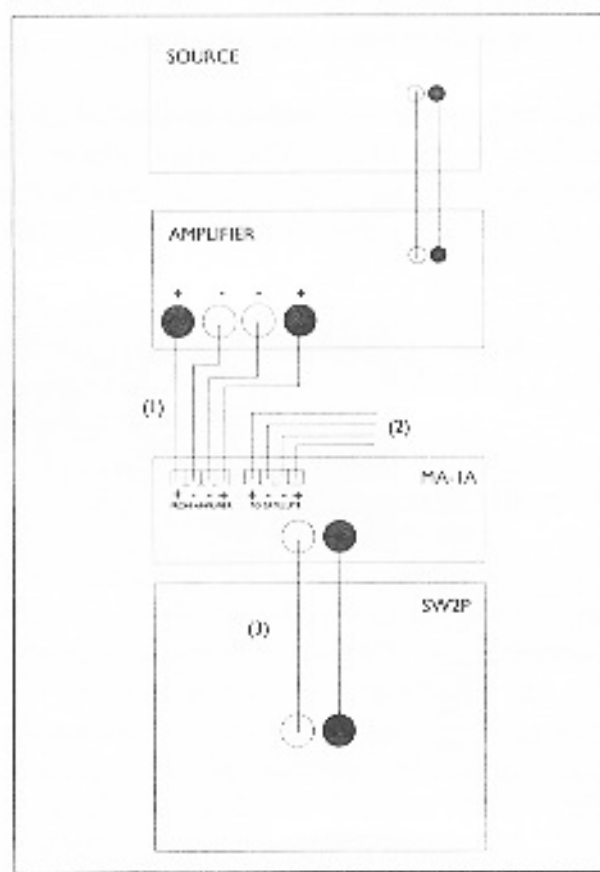


FIG. 4

Connection method #2 -- Line-level input connection from subwoofer, mono or pre-amplifier outputs. Refer to Fig. 5.

If your components offer line-level outputs, such as pre-amp out, or subwoofer or mono out, you may use this hook up method. Using this method, your main speakers will receive full range signals from your amplifier.

Tip: If you are using a single "subwoofer" or "mono" output, you may connect it to either the left or right low-level input on the MA-1A amplifier. For the best result, we recommend that you purchase a RCA "Y" adapter to connect this single output to both the left and right RCA inputs on the MA-1A amplifier.

1. Connect RCA interconnect cable(s) from line-level outputs on your amplifier to the MA-1A amplifier's RCA left and right line-level inputs.
2. Connect speaker wires from your amplifier to main speakers. Pay close attention to correct phase as stated on page 6.
3. Connect a speaker wire from the MA-1A amplifier's "SUBWOOFER OUTPUT" to the SW2P subwoofer. Connect the speaker wires to these connectors using a) "bare wire" inserted into the holes through the shaft, b) wire terminated with "spade connectors", or c) "banana plugs" inserted into the rear of the connectors.

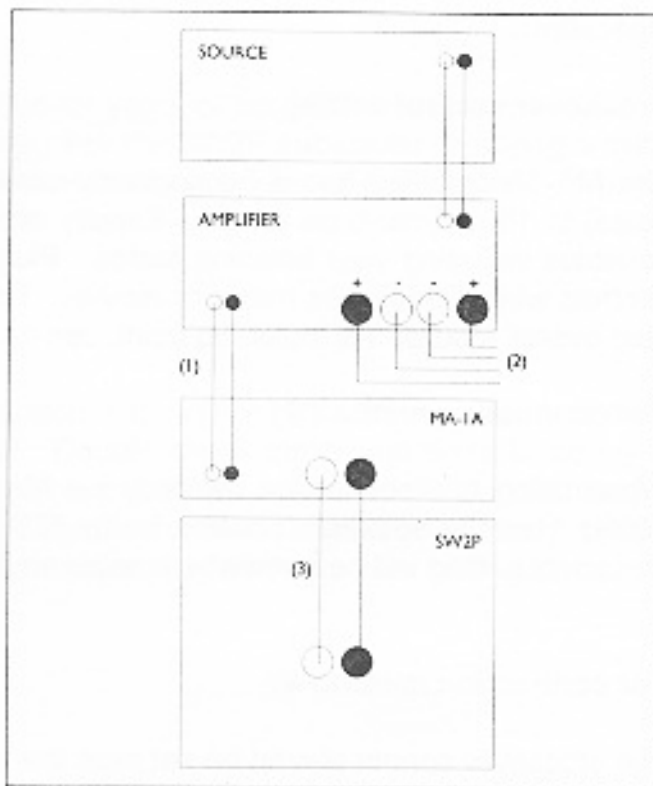


FIG. 5

Special Convenience Features:

Auto Shut Off:

The MA1-A features a auto shut-off circuit which shuts off the MA-1A amplifier when there is no signal present for about 10 minutes and the front L.E.D. indicator will turn red. The MA-1A draws negligible amount of electrical current when in this mode, so we recommend that you leave the MA-1A amplifier on all the time. The amplifier will automatically become active when a signal is received into any of the MA-1A's input connections and the front L.E.D. indicator will turn green.

If you wish to disengage the "auto shut-off" circuit for any reason, you can defeat the circuit by selecting the "Auto Shutt Off" switch located on the back panel to the "off" position.

Bypass:

The MA-1A amplifier becomes a full range (20Hz - 20KHz) mono amplifier when the "bypass" switch is switched to the "on" position. If your pro-logic amplifier already has a low-pass crossover built-in, you can use the bypass feature to run your MA-1A amplifier full range, or you can use this feature to power the center channel or in a variety of mono amplifier applications.

Operation:**Crossover control setting:**

The MA-1A amplifier has a continuously variable crossover. Its range is from 35Hz(lowest notes) to 150Hz(mid-bass range). Exactly which setting is best depends on a wide variety of variables including your listening tastes. Please experiment with the crossover and volume controls while listening to music or movies. Listen from different positions in the room for the best overall results. As a starting point, use one of the following guidelines:

For connection method #1:

When using this connection method, the MA-1A amplifier removes the bass signals below 100Hz from the speakers hooked to the "TO SATELLITE" barrier strip. Therefore the best crossover setting will be somewhere between 70Hz and 130Hz.

For connection method #2:

The crossover control should be set near the rated low frequency limit of your main speakers. Some examples are as follows:

Small speaker -- 70Hz to 120Hz

Medium speaker -- 50Hz to 100Hz

Large speaker -- 30Hz to 80Hz

Volume control adjustment:

Turn down the volume control of the MA-1A amplifier to its lowest position(counter-clockwise). Turn on your system including the MA-1A amplifier. Play some music you are familiar with and set your amplifier volume to a comfortable listening level. Slowly increase the volume on the MA-1A amplifier until its output is balanced with the rest of the system. From this point on, the volume control on your amplifier will control the overall volume of your system including the SW2P Powered Subwoofer System.

Tip: Because of the various ways in which the two crossovers in the MA-1A amplifier interact with the characteristics of the other electronics and speakers used in the system, you may not be satisfied with the overall result. In this case, reversing the phase (see page 6) of the speaker wire connected to the SW2P subwoofer may improve the overall performance. Try this and listen for better integration between the SW2P subwoofer with the main speakers.

Maintenance:

Your SW2P subwoofer system has been designed for years of trouble-free operation. Use a soft cloth to keep the amplifier clean and dust-free. For the SW2P subwoofer, applying a mild glass cleaner and wiping with a lint-free cloth occasionally will keep it looking new. Never attempt to clean the actual speaker cone in the unit.

Troubleshooting:

If the amplifier fails to operate when the power button is turned on, check the power cord and all your input and output connections thoroughly. Double check the output wires to be sure that no small strands are shorting together. If the front panel LED indicator fails to illuminate, it is possible that mis-wiring or an electrical power surge has caused the internal protection fuse to blow. It must be replaced with the correct type and value. Contact your NHT Authorized Dealer or NHT immediately for assistance.

Specifications:

MA-1A Amplifier:

- ♦ Power Rating: 80 watts into 8 ohms, RMS at <.025%THD
- ♦ Line-Level Sensitivity: 50mv -- variable
- ♦ High-Level Sensitivity: 2V -- variable
- ♦ Frequency Response: 20Hz - variable crossover frequency
- ♦ Continuously Variable Low-Pass Crossover: 35Hz to 150Hz
- ♦ High-Level, High-Pass Crossover: fixed 100Hz, 6dB/octave
- ♦ S/N Ratio: 95dB
- ♦ Line-Level Input Impedance: 47Kohm
- ♦ High-Level Input Impedance: 47ohms
- ♦ Dimensions: 3.125"H x 16.125"W x 11.25"D (including volume knob)
- ♦ Weight: 11 lbs.

SW2P Subwoofer:

- ♦ System Type: 50 liter vented enclosure
- ♦ Response: 21Hz to 150Hz, +/- 3dB when used with MA-1A Amplifier
- ♦ Driver Complement: One - 10" high-excursion, polypropylene woofer
- ♦ Impedance: 8 ohms nominal, 3.75 ohms minimum
- ♦ Dimensions: 16"H x 16"W x 16"D
- ♦ Weight: 40 lbs.
- ♦ Finish: High gloss black, high-pressure laminate

In accordance with NHT's policy of continuously upgrading the performance and value of our products, all specifications are subject to change without notice.

Glossary:

- Active: Utilizes electrical power.
- Amplifier: An electronic device that amplifies the line-level signal to drive the speakers (ie. power amplifier, integrated amplifier, and receiver).
- Barrier Strip: A row of screw type connectors which are separated by insulating dividers.
- Crossover: Filter
- High-Level Connection: Speaker wire connection.
- High-Pass Crossover: Removes low frequencies from signal.
- In-Phase: (+) to (+) and (-) to (-).
- Integrated Amplifier: Has pre-amplifier and power amplifier built in one chassis.
- Line-Level Connection: RCA/Phono type connection.
- Low-Pass Crossover: Removes high frequencies from signal.
- Main Speakers: Front L & R channel speakers.
- Out-of-Phase: (+) to (-) and (-) to (+).
- Passive: Utilizes no electrical power.
- Phase: Relative polarity of the speaker connection.
- Pre-Amplifier: An electronic device that selects sources and passes line-level signal to amplifier.
- Receiver: Has pre-amplifier, power amplifier and tuner built in one chassis.
- Satellite: Front L & R channel speakers. Referred to as "main speakers" in the manual.
- Surround Speakers: Speakers located in the side or rear for surround channel effects.

Limited Warranty: (Valid Only in the U.S.A.)

Warranty Period: For the period of 5 years for parts and 5 years for labor for loudspeaker products and 1 year for parts and 1 year for labor for electronic components from date of original purchase(the warranty period) from an authorized NHT dealer, Now Hear This, Inc. (NHT) warrants that if our product fails to function properly under normal use due to a manufacturing defect when installed and operated according to the owner's manual instructions enclosed with the unit, it will be repaired or replaced with a unit of comparable value at the option of NHT without charge to you for parts or actual repair work. Parts supplied under this warranty may be new or rebuilt at the option of NHT.

What's Not Covered: This warranty does not cover any product which is used in any trade or business, or in an industrial or commercial application.

This warranty does not cover the cabinet or any appearance item, or any damage caused to the product resulting from: alterations, modifications not authorized in writing by NHT, accident, misuse or abuse, damage due to lightening or power surges, or being subjected to power in excess of the speaker's published power rating.

This warranty does not cover the cost of parts which would otherwise be provided without charge under this warranty, obtained from any source other than an authorized NHT service location.

This warranty does not cover defects or damage caused by the use of unauthorized parts or labor or from improper maintenance.

Altered, defaced or removed serial numbers void this warranty.

Your Rights: The liability of NHT will be limited to the purchase price of the product, and NHT will not be liable for incidental or consequential damages. NHT limits its obligations under any implied warranties under state laws to a period not exceed the warranty period. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. The above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

To Obtain Service: NHT has appointed a number of authorized service companies throughout the USA should your product ever require service. To receive warranty service, you will need to present your sales receipt showing place and date of original owner's transaction.

To find the name and address of the nearest authorized NHT service location, call or write: **Customer Service Department, Now Hear This, Inc., 535 Getty Court, Building #A, Benicia, CA 94510. 1-800-NHT-9993.** Please do not return product to this address, it's not a service location. Keep this warranty with your sales receipt. Record date and place of purchase for future reference.