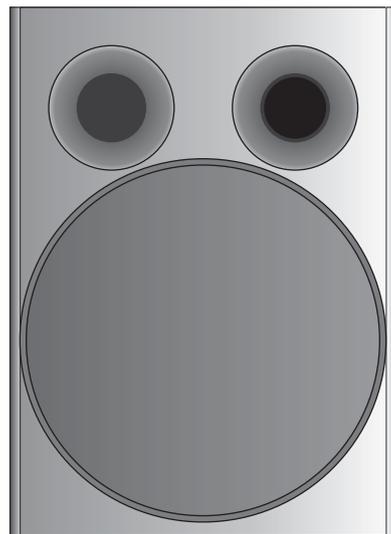


# AMC B1-19/B1-30

## POWERED SUBWOOFER



**INSTRUCTIONS FOR INSTALLATION AND OPERATION**



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



AFIN DEVI TER UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TEN TEZ PAS D'OUVRIR L'APPAREIL ET DE TOUCHER AUX COMPOSANTS INTERNES SANS LA PRESENCE D'UNE PERSONNE QUALIFIEE.



PARA REDUCIR EL RIESGO DE SACUDIDAS ELECTRICAS, NO DEBERA QUITARSE LA TAPA (NI PARTE POSTERIOR). CONSULTESE AL PERSONAL CAPACITADO PARA LAS REPARACIONES INTERNAS.

**WARNING:** TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**ADVERTENCIA:** PARA EVITAR EL RIESGO DE INCENDIO O SACUDIDA ELECTRICA, NO DEBERA EXPONERSE ESTE APARATO A LA LLUVIA O HUMEDAD.

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

**ATTENTION:** POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SILES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

**PRECAUCION:** PARA EVITAR SACUDIDAS ELECTRICAS, NO DEBERA UTILIZARSE ESTA CLAVIJA POLARIZADA CON UN CORDON DE PROLONGACION, RECEPTACULO U OTRO TIPO DE SALIDA A MENOS QUE SE HAYAN INSERTASO COMPLETAMENTE LAS LENGÜETAS PARA EVITAR SU EXPOSICION.

**NOTE:** Some AMC products are equipped with dual or multi-voltage transformers (which is indicated on the back panel). If you wish to change the voltage, please bring your unit to an authorised AMC service technician for internal conversion.

**ATTENTION:** Quelques pièces AMC sont munies de transformateurs à double ou à multi-voltage (indiqué au panneau arrière). Si vous voulez changer le voltage, veuillez apporter votre appareil au fournisseur de AMC pour le transformer.

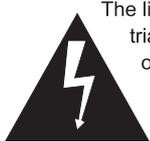
**ZUR BEACHTUNG:** Einige AMC Geräte sind mit Umschaltern für unterschiedliche Netzspannungen ausgerüstet (Ein Vermerk auf der Rückseite weist darauf hin).

Die Anpassung, wenn notwendig, muß von einem qualifizieren Techniker in einer AMC Servicestation vorgenommen werden.

**NOTA:** Ciertos componentes de AMC están dotados de transformadores de doble tensión o de varias tensiones (lo que se indica en el panel posterior). Si se desea cambiar la tensión, sírvanse llevar el aparato a un técnico autorizado por AMC para su conversión interna.

**NOTE TO CATV systems installer:** This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

**NOTA PARA EL INSTALADOR DE ANTENAS DE TELEVISION COLECTIVAS:** La presente advertencia se provee para llamar la atención del instalador al Artículo 820-22 de NEC (Código Eléctrico Nacional) donde se facilitan las directrices para la pertinente puesta a tierra y que especifica en particular que el conductor a tierra del cable debe conectarse al sistema de conexión a tierra del edificio, lo más proximo posible al punto de entrada del cable.



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of "uninsulated" dangerous voltage" within 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 of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# APPLICATION AND FEATURE LIST

## FEATURES OF THE AMC™ MODEL B1-19/B1-30

- \* The AMC models B1-19/B1-30 are designed to meet professional quality performance standards and to provide superior value.
- \* Selected grade components are utilized throughout the circuit design with special emphasis on components within the audio path to assure stable and consistent performance.
- \* Built-in unique AMC smooth-clipping circuit to give soft, sweet and musical sound. It functions also an overload protection for safe and high volume performance.
- \* Provide gold-plated RCA jacks for low level inputs and high quality 5-way gold-plated binding posts for high level inputs and outputs, allowing easy connection to any system.
- \* Level, crossover (adj., 40 to 180Hz) and phase (con. adj. 0 to 180 degree) controls allow you to optimize performance to match your audio system, room acoustic, and program material.
- \* Incorporated with a high-end polypropylene cone 8" woofer in B1-19 and 10" woofer in B1-30.
- \* Fully discrete power amplifier design to ensure the amplifier is capable of supplying high power and current (100W/70A for B1-19 and 150W/100A for B1-30) into a very low impedance which is always a driver is actually acting.
- \* Auto mute circuit that automatically turns your subwoofer on when it senses a program signal. When no signal is present, the circuit mutes the subwoofer.
- \* One front firing bass port for B1-19 and two for B1-30.

**AMC B1-19/B1-30 are excellent products, based on new technology. They are very simple to install and operate and possess excellent performance and great flexibility.**

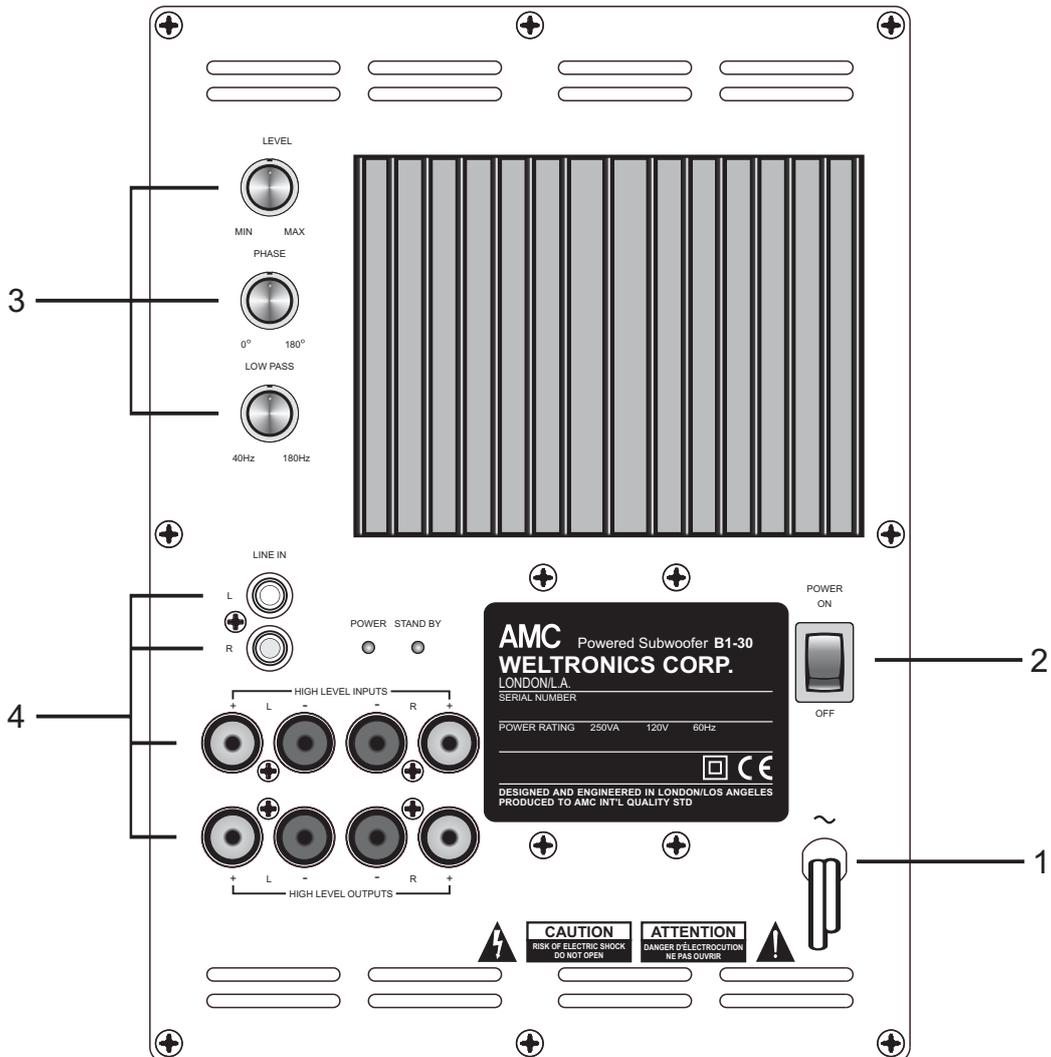
**In order to avoid risk of damage and ensure optimum performance from your subwoofer, you should take time to read this manual before proceeding to unpack and install it.**

### **Unpacking**

Remove the subwoofer from the carton carefully. If it is possible, please save the carton for later use. If the system is damaged in any way, contact your dealer immediately.

# REAR PANEL CONNECTIONS

## REAR PANEL



- 1. AC LINE CORD
- 2. POWER SWITCH

- 3. SETTING OF CONTROLS
- 4. INPUT/OUTPUT CONNECTIONS

# REAR PANEL CONNECTIONS AND CONTROLS

## 1. AC LINE CORD

Since the subwoofer contains its own amplifier, it must be connected to a mains outlet. Two versions of B1-19/B1-30 subwoofer model are manufactured, one for 110-120V and another for 220-240V operation. Check the manufacturer's labels to make sure that the correct model has been supplied. Plug the AC line cord into a switched outlet on your amplifier or into any AC wall outlet that provides the correct line voltage.

## 2. POWER SWITCH

The subwoofer can be turned on or completely switched off by pushing the rocker type power switch on the panel. The white lettering "1" on the power switch indicates power ON position and "0" indicates power OFF position.

### Automatic on/off

Since the subwoofer is equipped with an automatic on/off facility, turning the system on every time it is to be used is avoided. When the system is connected to the mains, an amber LED indicates STAND-BY status. In the presence of an audio signal with a level more than 5mV the system is automatically switched on as shown by a green LED. If there is no signal or a signal less than 5mV for five minutes, the system automatically shuts off.

This subwoofer is designed for continuous STAND-BY operation, and then draws negligible power. If the system is not to be used for a long period of time, such as a vacation trip, disconnect the system by pushing the power switch to off position or removing the mains plug to completely separate the subwoofer from the mains.

## 3. SETTING OF CONTROLS

In theory, the best position for the subwoofer is midway between the satellite speakers, with its front facing forward and in the same place as the fronts of the satellite speakers. The

subwoofer, B1-19 or B1-30 may, however, due to the very low harmonic distortion, in practice be moved quite far from this position without any detrimental effect on the sound reproduction as the subwoofer frequencies are not directionally.

There are three control knobs on the rear of the subwoofer. These controls make it possible to match the low bass frequencies from the subwoofer to the bass - midrange - treble sound of any good satellite stereo speakers for optimum sound, and at the same time to compensate for room-effects and different positions of the subwoofer.

**Your hearing is the final arbiter of correct settings.**

The adjustments can be optimized without the aid of any tools except ear and good quality music records. Before your making final adjustments, make sure your basic stereo system is in good working order.

### Acoustic feedback

Since the subwoofer can produce a considerable output level at low frequencies, acoustic feedback via the turntable can occur. To ensure that this is not the case, perform the following test at installation of the subwoofer, if it is possible.

Set up the equipment with record playing. Place the pick-up on a non-rotating record (disconnect the turntable power cord if necessary). Tap the turntable while gradually increasing the volume control. If there is a shift in the sound character from the loudspeakers (towards sustained sound) before the volume control has been advanced to a setting that represents loud listening, acoustic feedback is a problem. Moving the turntable or the speakers may remedy this problem. Or try placing an anti-vibration pad under the turntable.

### **A. LOW PASS**

The lower frequency limit of the subwoofer is always 30Hz. With this control, an adjustable, second order (12dB/octave) low pass filter gives an upper limit between 40Hz to 180Hz.

### **B. PHASE**

With this control, the phase shift between input signal and output signal can be continuous adjustable from 0 to 180 degree. You can use this control to eliminate the possible standing waves around the position of your listening seat.

### **C. LEVEL**

With this control the volume of the subwoofer is set to properly match the satellite speakers.

The easiest way is to set this control to the point where the acoustic power of your subwoofer is close to the satellite speakers or surround speakers.

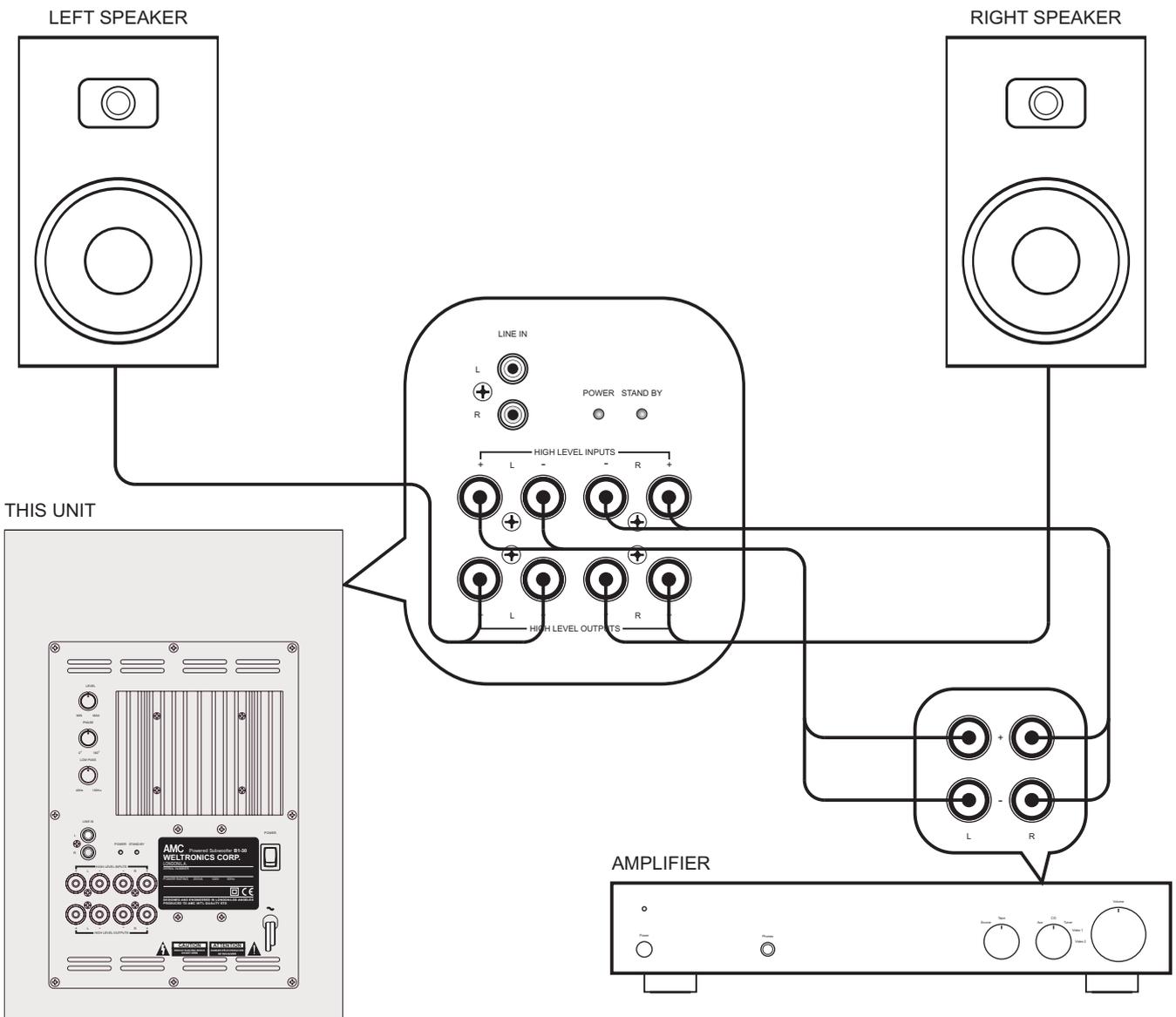
#### 4. INPUT/OUTPUT CONNECTIONS

Before attempting to make any connections to or from this unit, be sure to first switch OFF the power to this unit and to any other components to which connections are being made. When making connections between this unit and other components, be sure all connections are made correctly and consistently, that is to say, L (left) to L, R (right) to R, "+" to "+" and "-" to "-".

B1-19/ B1-30 can be connected to either the speaker terminals or the line outputs of the amplifier. Some examples of connections are shown below:

##### A. Connecting to the speaker terminals of a stereo power amplifier or integrated amplifier or receiver

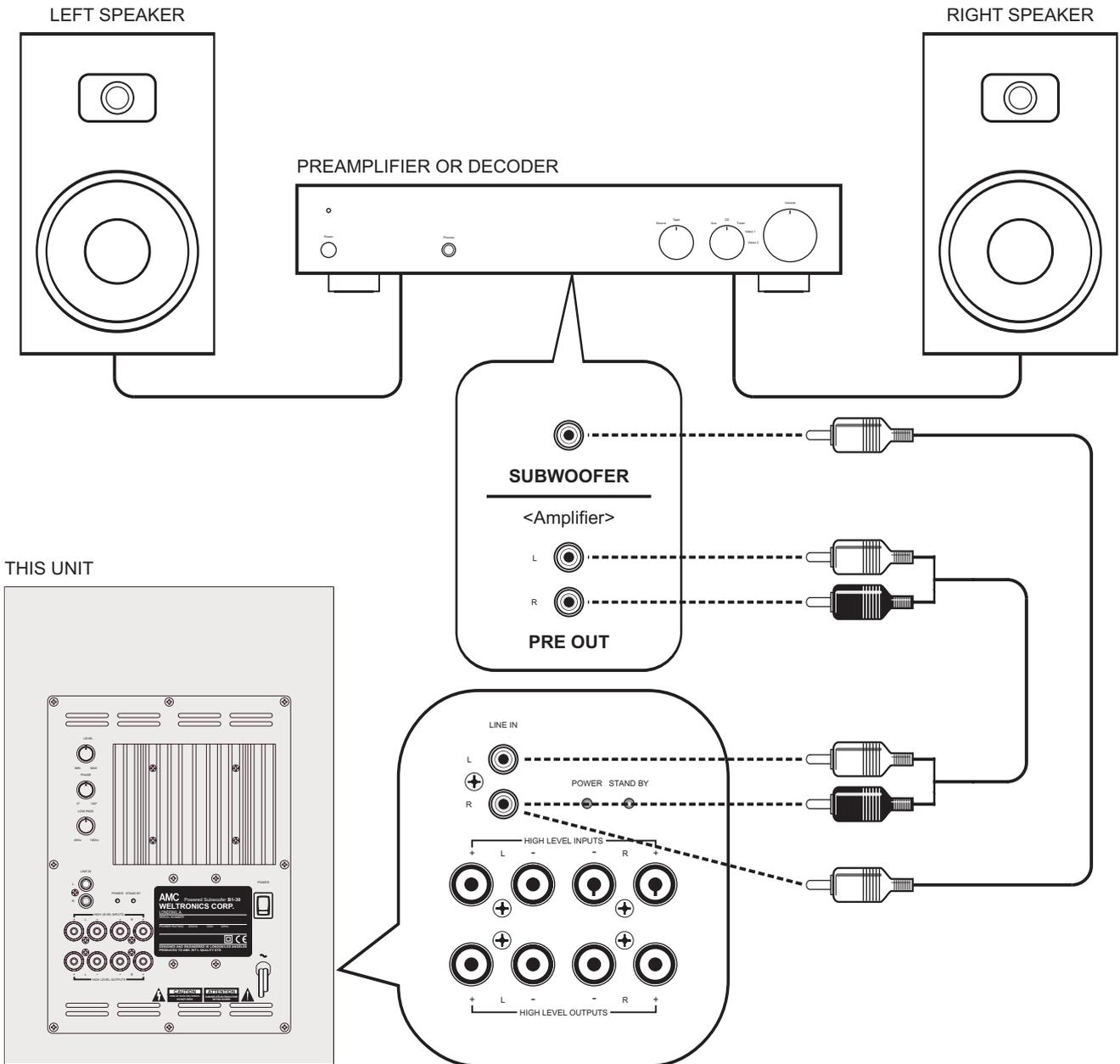
Connect L and R speaker terminals of the power amplifier or integrated amplifier or receiver to High Level Inputs of the B1-19/B1-30 subwoofer and route the High Level Outputs of the subwoofer to the L and R satellite speakers. With this connection, the music content below 85Hz (if the impedance of the satellite is 8 ohm) will be amplified and come out of the subwoofer. At the same time the music content above 85Hz will be out of the satellite speakers as normal..



**B. Connecting to pre out or subwoofer out terminal(s)**

For pre out terminal connection, the amplifier must possess at least two sets of pre out terminals. With some amplifiers with only one set of pre out terminals, connection can result in no sound from the main left and right speakers. In this case, select the method of connecting to the speaker terminals.

When connecting Subwoofer out to B1-19 or B1-30, be sure to turn crossover clockwise to 180 Hz for the best reproduction of low frequencies content.



## SPECIFICATIONS

| Description               | B1-19  | B1-30  |
|---------------------------|--|--|
| <b>Frequency response</b> | 30-180Hz<br>Adjustable, 40 to 180Hz  | 30-180Hz<br>Adjustable, 40 to 180Hz  |
| <b>Sensitivity</b>        | 89dB   | 89dB   |
| <b>Amplifier section</b>  |  |  |
| <b>Continuous power</b>   | 100W @ 100Hz, 4 ohm, 0.1% THD  | 150W @ 100Hz, 4 ohm, 0.1% THD  |
| <b>Dynamic power</b>      | 150W(21.8dBW)  | 250W(24dBW)  |
| <b>THD @ rated power</b>  | 0.008%   | 0.008%   |
| <b>Max. o/p current</b>   | >70A(1mS)  | >100A(1mS)   |
| <b>S/N @ rated power</b>  | 100dB  | 100dB  |
| <b>LPF</b>                | Butterworth, -12dB/octave, <325Hz<br>-24dB/octave, >325Hz  | Butterworth, -12dB/octave, <325Hz<br>-24dB/octave, >325Hz  |
| <b>Acoustic design</b>    |  |  |
| <b>Woofers</b>            | 8", Injection PP cone  | 10", Injection PP cone   |
| <b>Internal volume</b>    | 19 litter  | 30 litter  |
| <b>Design type</b>        | Bass reflex - front port x1  | Bass reflex - front port x2  |
| <b>Dimension (WxHxD)</b>  | 270x396x305 mm   | 305x420x470 mm   |
| <b>Weight</b>             |  |  |
| <b>Net</b>                | 14Kg   | 20Kg   |
| <b>Shipping</b>           | 17Kg   | 23Kg   |
| <b>Finish</b>             | Black oak<br>Cherry, teak  | Black oak<br>Cherry, teak  |
| <b>Features</b>           | 5-way gold-plated binding post - in/out<br>Stereo gold-plate RCA jack - line in<br>Con. adjustable, 0 to 180 degree<br>Auto-turn on/off<br>Soft-clipping facility<br>Captive power cord<br>One-piece fiberglass double side PCB<br>Master power switch | 5-way gold-plated binding post - in/out<br>Stereo gold-plate RCA jack - line in<br>Con. adjustable, 0 to 180 degree<br>Auto-turn on/off<br>Soft-clipping facility<br>Captive power cord<br>One-piece fiberglass double side PCB<br>Master power switch |

Weltronics Corp. reserves the right to improve its products at any time. Specifications are subject to change without notice.

# SAFETY INSTRUCTION

## 1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

## 2. RETAIN INSTRUCTIONS

The 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 - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

## 6. CARTS AND STANDS

The appliance should be used only with a cart or stand that is recommended by the manufacturer.

- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



## 7. WALL OR CEILING MOUNTING

This equipment is not designed for use mounted on a wall or a ceiling.

## 8. VENTILATION

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.

## 9. HEAT

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

## 10. POWER SOURCES

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

## 11. POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

## 12. CLEANING

The appliance should be cleaned only as recommended by the manufacturer.

## 13. NON USE PERIODS

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

## 14. OBJECT AND LIQUID ENTRY

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

## 15. SERVICING

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

## 16. DAMAGE REQUIRING SERVICE

The appliance should be serviced by qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure is damaged.

## 17. POWER LINES

(APPLIES TO TUNER AND RECEIVERS ONLY)

An outdoor antenna should be located away from power lines.

## 18. OUTDOOR ANTENNA GROUNDING

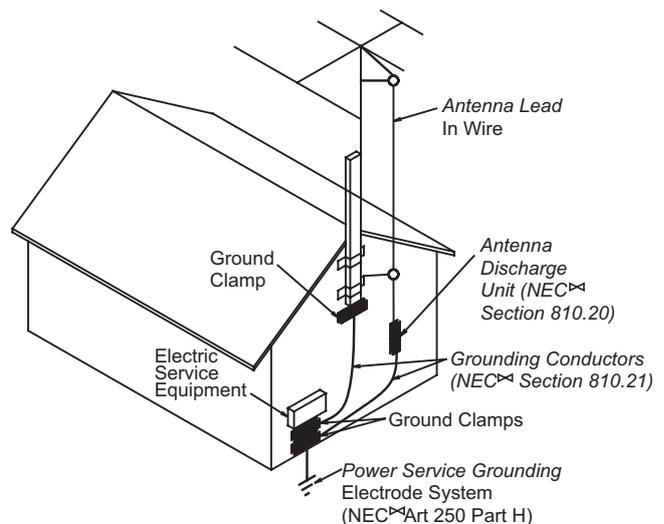
(APPLIES TO TUNER AND RECEIVERS ONLY)

If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

- Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as a ground wire.
- Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83 m) apart.
- Mount antenna discharge unit as close as possible to where lead-in enters house.
- Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

Antenna Grounding According to the National Electrical Code



† National Electrical Code  
Available from Library, book stores, or National Fire Protection Association (Batterymarch Park, Quincy, MA 02269).

**WELTRONICS CORP.**

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