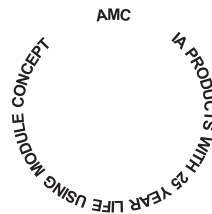


# AMC XAi

2/4 CHANNEL  
POWER AMPLIFIER



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 DEVIET UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TENTEZ 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.

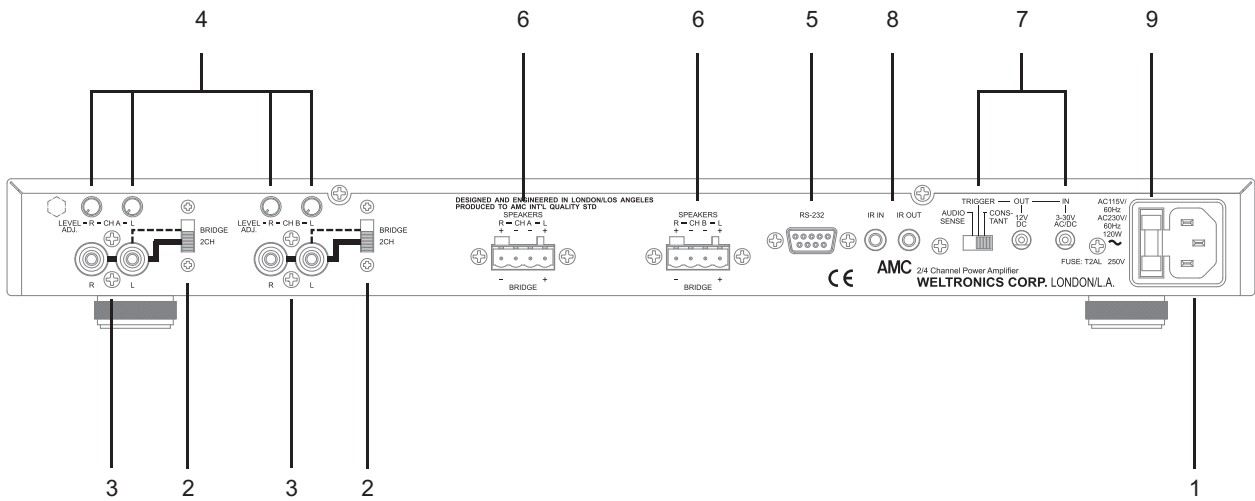
## INSTALLATION NOTES

1. Although the AMC XAi is designed with high efficiency digital amplifiers, it still generates modest amounts of heat, adequate ventilation is required. We therefore recommend users not to place the XAi amplifier on a soft surface such as a carpeted surface, etc.

2. CAUTION: To prevent the risk of fire or shock, do not allow any liquid or moisture to enter into the internal parts of this product. If any liquid accidentally enters this product, shut off the power and remove the AC power cord immediately. If the liquid is anything other than clean water or pure alcohol, have the product examined by a service technician. Servicing of this product should be referred to a qualified service technician.

# REAR PANEL CONNECTIONS/FRONT PANEL CONTROLS

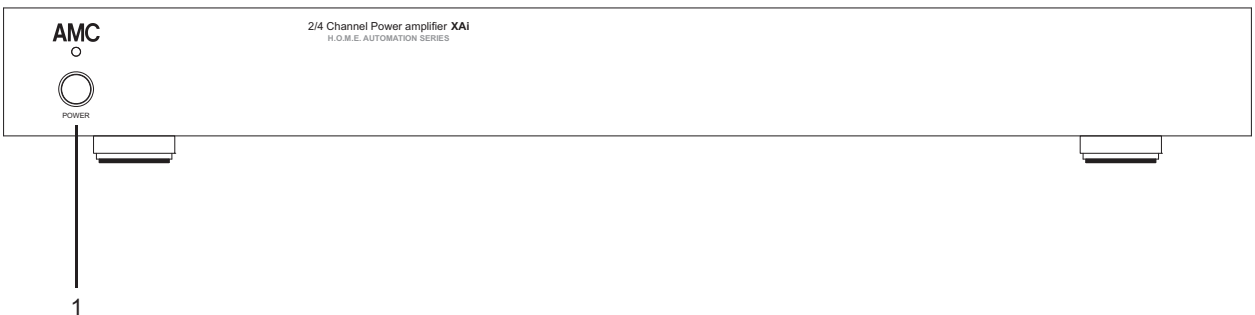
## REAR PANEL



- 1. AC INLET
- 2. 2CH/BRIDGE SWITCHES
- 3. INPUTS
- 4. INPUT LEVEL CONTROLS
- 5. RS232 CONNECTOR

- 6. LOUDSPEAKER TERMINALS
- 7. AUDIO SENSE/ TRIGGER/  
CONSTANT SWITCH
- 8. IR IN & IR OUT
- 9. FUSE

## FRONT PANEL



- 1. POWER SWITCH AND POWER INDICATOR

# REAR PANEL CONNECTIONS

## 1. AC INLET

Plug one end of the AC line cord into the AC INLET and the other end into a nearby wall outlet that provides the correct AC power line voltage, or into a convenience outlet on any other AMC product.

## 2. 2CH/ BRIDGE SWITCHES.

There are two slide switches on the back panel labelled "2CH/BRIDGE". These switches allow the XAi to operate in several modes depending on the number of loudspeakers to be connected. These modes of operation are defined as follows;-

2 CHANNEL MODE. With both switches in the BRIDGE position, the XAi becomes a two channel (stereo) amplifier capable of driving two 8 ohm loudspeakers at 90 watts per channel. In this mode, the XAi can be used as a high power, audiophile quality, stereo power amplifier.

***CAUTION: In the BRIDGE mode, the speaker terminals should be directly wired to the loudspeaker and not to any accessory device like sub-woofer amplifier network or headphones adaptors etc that may share a common ground with other channels.***

4 CHANNEL MODE. With both switches in the 2CH. position, the XAi becomes a four channel amplifier capable of driving four 4 ohm loudspeakers at greater than 45 watts per channel. In this mode, the XAi can be used for Dolby surround sound systems, multi-room type and bi-amp applications.

## 3. INPUTS.

There are four RCA phono connectors on the back panel that connect to the inputs of each of the four power amplifiers. Connections to these inputs are made with reference to the MODE SWITCH settings described above;-

BRIDGE MODE. Connections for the CH A can be made via L RCA input connector of CH A and for the CH B input, use the L RCA input connector of CH B.

NOTE: In this mode, the input phono connectors of R RCA input connectors are disconnected.

2 CH MODE. In this mode, the XAi operates as a 4 channel amplifier. Connections to the inputs of these amplifiers are made through the RCA phono connectors of L & R RCA connectors of CH A & CH B.

## 4. INPUT LEVEL CONTROLS.

Each channel of the XAi has its own, independent level control. Before turning on the XAi for the first time, make sure that all level controls are set to their fully clockwise position. These controls can be used for various functions. For example, they can be used to match the levels of loudspeakers in a multi-room installation, or to lower the sensitivity of the power amplifier, so that the volume control on the pre-amplifier is at a more convenient and usable position. They can also be used to optimise the balance in a stereo system.

NOTE: In the Bridge mode, only the input level controls of L of CH A & CH B are operative.

## 5. RS232 Connector.

XAi can be hooked to a control system through the RS232 connector. The XAi can be hooked up to USB Hub or Ethernet Switch through RS232 to USB or RS232 to Ethernet adaptor. Through the RS232 connector the control system can turn XAi ON or OFF. For details of commands, please refer to appendix I.

## 6. SPEAKERS TERMINALS

The XAi is equipped with 4-circuit plug-able Terminal Blocks allow quick

connections of the internal amplifiers to stereo pairs of speakers in the various zone rooms. They accept wire sizes for 14 to 28 AWG. The following describes the connections for Bridge and 2 CH operations;-

**2 CH MODE.** When the MODE SWITCH of the XAi are set to 2 CH operation, simply connect the wires from L loudspeakers to the L sides of speaker terminal blocks (marked - and +) of CH A & CH B and R loudspeakers to the R sides of speaker terminal blocks (marked - and +) of CH A & CH B. Make sure that the red terminal on each loudspeaker is connected to the corresponding + terminal on each speaker terminal block and likewise for the black terminal on each loudspeaker to each - terminal on each speaker terminal block .

**BRIDGE MODE.** When the MODE SWITCHES are set to BRIDGE mode operation, only the + terminals on the speaker terminal blocks of XAi are used. For this mode of operation, connect the red terminal of the right speaker to the L+ terminal of CH A speaker terminal block and the black speaker terminal to the R+ terminal of CH A speaker terminal block. The left speaker is connected in a similar way, where the red terminal of the speaker is connected to the L+ terminal of CH B speaker terminal block and the black terminal of the speaker is connected to the R+ terminal of CH B speaker terminal block.

NOTE: The XAi amplifier is normally used in Bridge or 2 CH modes for both CH A and CH B. However, it can also can be set to operate as CH A for 2CH and CH B for bridge mode. So the XAi will be capable of driving one 8 ohm loudspeaker at 90 watts and two 4 ohm loudspeakers at greater than 45 watts per channel. Typical applications include, satellite/subwoofer systems and Dolby

surround sound decoder systems. To set the XAi in this mode of operation, please consult your AMC dealer.

## **7. AUDIO SENSE/TRIGGER/CONSTANT SWITCH**

The remote power switch is located on the back panel of the AMC XAi and provides the following functions;

**AUDIO SENSE.** When the remote power switch is set in the AUDIO SENSE position, the XAi is turned on or off automatically, depending on the audio signal level at the inputs. With an audio signal greater than 10 mV at any of the four stereo inputs of XAi, the amplifier will automatically turn on. If the signal level drops below this level, the amplifier will remain on for a period of approximately 5 minutes before it automatically reverts to standby mode.

Please note that when AC power is first applied to the XAi while the remote power switch is in the AUDIO SENSE position, the amplifier will automatically turn on, even without an audio signal being present at any of the audio inputs. However, after approximately 5 minutes, the amplifier will revert to standby mode, assuming no signals are present at any of the inputs.

**TRIGGER.** When the remote power switch is set in the TRIGGER position, the AMC XAi can be turned on automatically by an external trigger voltage. The trigger voltage is applied to the trigger input socket, located on the back panel of the XAi. This trigger voltage can originate from a system controller or from another XAi. The sensitivity of this input ranges from +3Vdc to +30Vdc and will also accept AC voltages over the same range. The current required from the trigger source is only 0.2mA.

The XAi is also provided with a trigger

output socket, also located on the back panel. When the XAi is turned on, the trigger output socket provides a +12Vdc signal that can be looped through or "daisy-chained" to the trigger input of another XAi amplifier (or other component) in a multi component installation. When the external trigger voltage is set to 0V, the XAi will be in standby mode and the voltage from the trigger output socket will likewise be 0V.

CONSTANT. When the remote power switch is set in the CONSTANT position, the power on and off states of the AMC XAi are controlled by the front panel master power on/off switch.

NOTE: The ORANGE power LED above the front panel power switch, indicates the power status of the XAi. This LED will light up RED when the XAi is in stand-by mode and BLUE when turned on.

### **8. IR IN & IR OUT**

IR signal from rooms or IR OUT of other units can be connected to the 3.5mm mini IR IN jack on the rear panel of XAi. So, XAi can be controlled by the IR remote control in each room through IR sensor. There is IR OUT as buffered output of IR IN for controlling units hooking up to XAi or operating as daisy chain for the IR signal passing through the system.

### **9. FUSE**

There is T2AL 250 fuse put inside the fuse holder besides AC Inlet. Replace always with the same type of fuse.

## **FRONT PANEL.**

### **1.POWER SWITCH AND POWER.**

The press button switch marked power can be used to switched the XAi on or off. When the XAi is switched on, the led above the power switch will light up.



# SPECIFICATIONS

## SPECIFICATIONS:

### BRIDGE MODE

Power output into 8 ohms (20Hz~20KHz) .....	90W
With both channels driven	
Rated THD. ....	0.05%
Damping factor .....	>100
Input sensitivity for 1W/90W into 8 ohm .....	110mV/1000mV

### 2 CHANNEL MODE

Power output into 4 ohms (20Hz-20KHz) .....	45W
With all channels driven	
Rated THD. ....	0.05%
Damping factor .....	>100
Input sensitivity for 1W/45W into 4 ohms .....	100mV/680mV
Input impedance .....	R=10K C=200pf
Frequency response 20Hz~20KHz .....	+/-0.5dB
"A" WTD. singal to noise ratio (ref. 1W/8 ohms) .....	100dB

Dimensions (WxHxD) .....	482.6x53.3x284.7mm
Net weight .....	4.3kg
Shipping weight (4 in 1).....	27kg
Power consumption .....	120W

Specifications are subject to change without notice.

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

## APPENDIX I - SERIAL COMMUNICATION SPECIFICATIONS

### HARDWARE SPECIFICATION

\*RS232 asynchronous serial communication  
\*9600 bps, 8 bits, 1 stop bit, no parity  
\*no flow control

### SOFTWARE SPECIFICATION

Full command format:

Full command format is based on human readable ASCII characters. All codes are separated with field separators and terminated by line terminator.

field separator  
separator for fields in the command line  
one or more spaces  
line terminator  
terminator for the command line  
CR, LF, CR/LF, or LF/CR

### COMMAND REFERENCE

#### Power On/Off

Turn Power On:

POWER ON<CR>

Turn Power Off:

POWER OFF<CR>

Read Power Status:

POWER<CR>

RETURN: "ON" or "OFF"

Power Toggle:

POWER TOGGLE<CR>

## System Commands

Display unit identity:

Display the brand name of this unit:

BRAND<CR>

Display the model name of this unit:

MODEL<CR>

Display the current version of the firmware:

VERSION<CR>

Reset unit:

Reset and reboot the system by issuing the following command:

RESET<CR>

#### Restore to factory default:

To restore all "Setup" values to factory default:

FACTORY<CR>

#### Enter firmware upgrade mode:

To enter firmware upgrade mode:

FIRMWARE<CR>

After software upgrade mode is entered, the firmware upgrade software needs to be executed from a PC or supplied upgrade system in order to start the upgrade process.

#### Enter test mode:

To enter test mode:

TEST<CR>

# 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

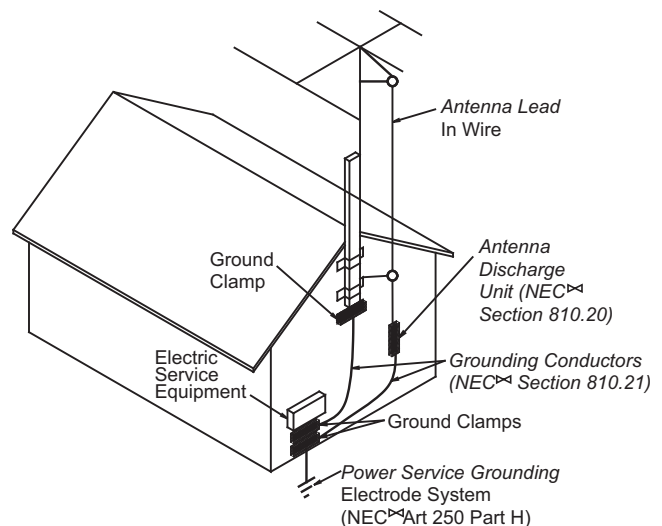
(APPLIES TO TUNER AND RECEIVERS ONLY)

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).



21R-XAi



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