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# **PERFORMANCE**

## *Audi's*

### **D1200**

#### **OWNER'S MANUAL**

## SAFETY INSTRUCTIONS

① Read Instructions- All the safety and operation instructions should be read before the unit is operated.

② Retain Instructions- The safety and operating instructions should be retained for future use.

③ Heed Warnings- All warnings on the unit 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 unit should not be used near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, etc.

⑥ Ventilation- The unit should be placed so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be placed on a bed, sofa, rug, or similar surface that may block the vents; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the vents.

⑦ Heat- The unit should be placed away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

⑧ Power Sources- The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.

⑨ Grounding or Polarization- Precautions should be taken so that the grounding or polarization means of this unit is not defeated.

⑩ 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 connect to the appliance.

⑪ Cleaning- The unit should be cleaned only as recommended by the manufacturer.

⑫ Power Lines- An outdoor antenna should be located away from power lines.

⑬ Nonuse Periods- The power cord of the unit 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 openings in the enclosure.

⑮ Damage Requiring Service- The unit should be serviced by qualified service personnel when:

- A) The power-supply cord or the plug has been damaged; or
- B) Objects have fallen, or liquid has been spilled into the unit; or
- C) The unit has been exposed to rain; or
- D) Does not appear to operate normally or exhibits a marked change in performance; or
- E) Has been dropped, or the enclosure damaged.

⑯ Servicing- The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

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## INTRODUCTION

Your Proton D1200 high current amplifier has been carefully developed with complete emphasis on the quality of sound. Whether adding to an existing audio or video system or as

part of an all new system, you are certain to notice the clarity, detail and depth of performance which make Proton products among the best in the world -- regardless of price.

## PROTECTION FROM DAMAGE OR THEFT

The best way to transport your Proton D1200 is in its original shipping carton. Once you have unpacked the unit, set aside and save the carton and packing materials in case the unit ever requires shipping.

The serial number of your Proton D1200 is located on the unit's rear panel. Record it below for your permanent records. This will aid in the unit's recovery if it is ever lost or stolen.

SERIAL NUMBER: \_\_\_\_\_

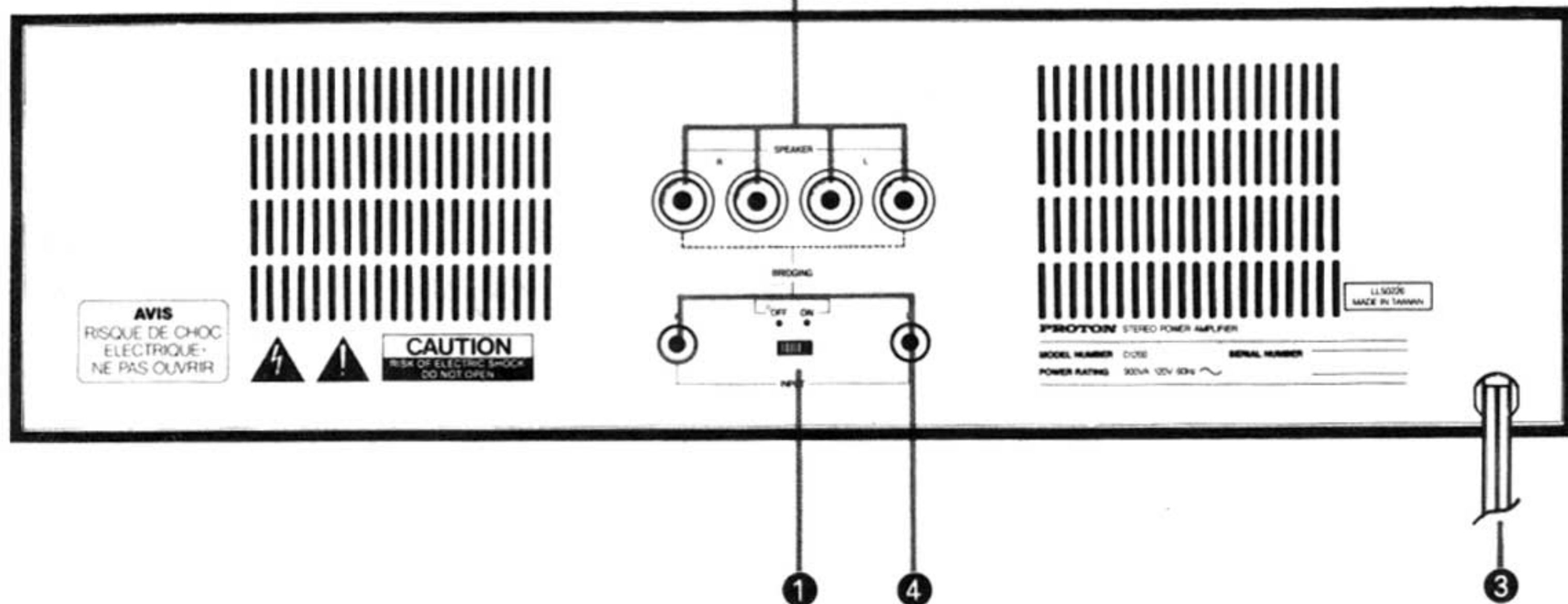
## YOUR AUDIO SYSTEM

Every circuit in your Proton D1200 is devoted to the precise reproduction of sound. As a result, it can do a remarkable job of processing complex musical signals and delivering them to your loudspeakers without adding any noise or distortion of its own. However, it cannot improve upon the signal passed to it by external program sources (tuner, turntable, tape deck, etc.); nor can it force strong bass and crisp highs from speakers of marginal quality.

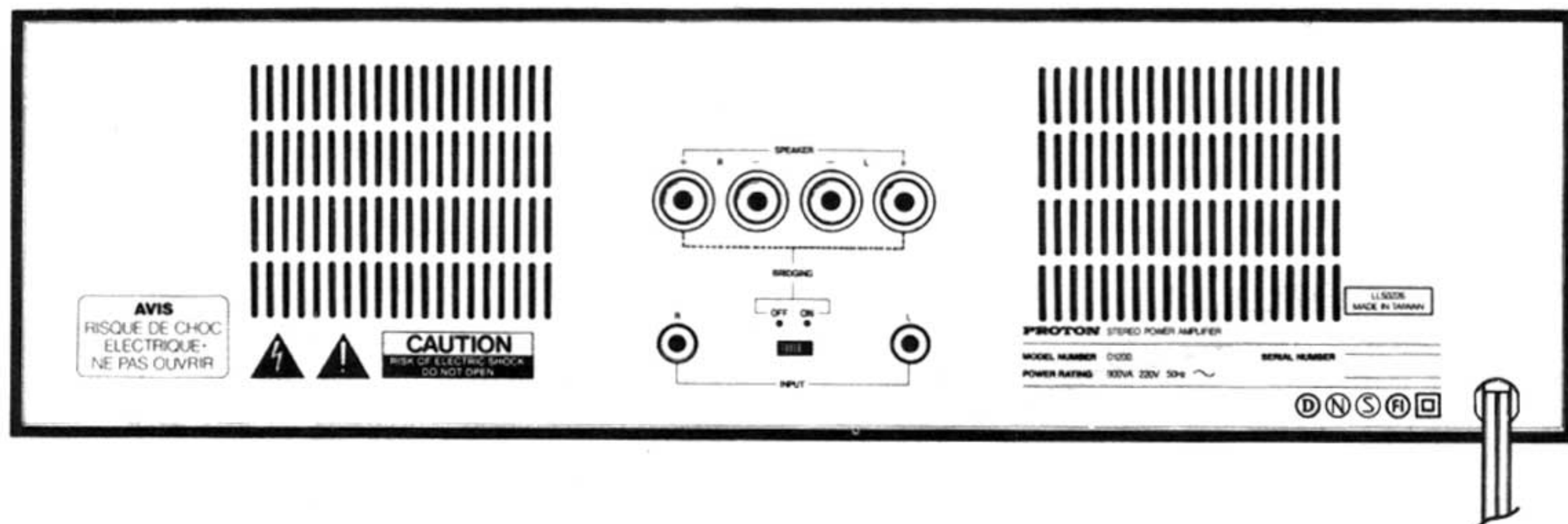
While we recommend the inclusion of other Proton audio (and video) products in your system, your D1200 is designed to work well with any of the high performance equipment available today. When selecting loudspeakers, look for those capable of reproducing a full frequency range. The Proton D1200 contains a high current power amplifier that is stable into loads as low as two ohms, and is capable of producing dynamic power peaks up to 1500 watts into two ohms.

# REAR PANEL CONNECTIONS AND CONTROLS

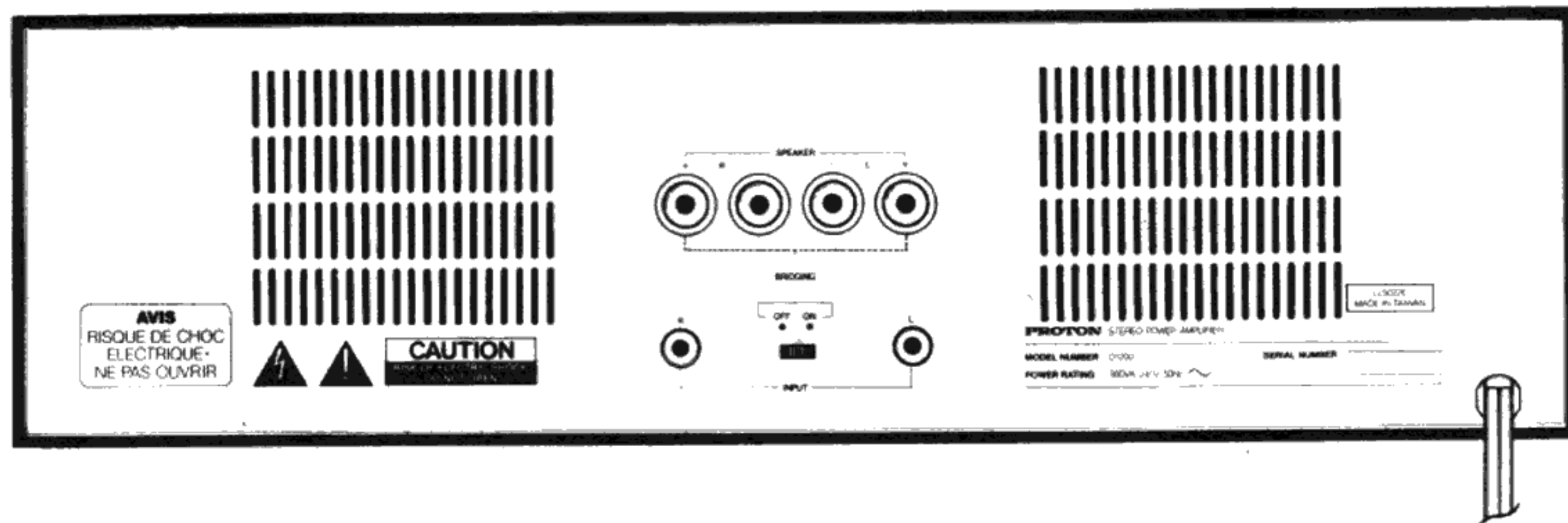
## U.S.A. and Canadian Model



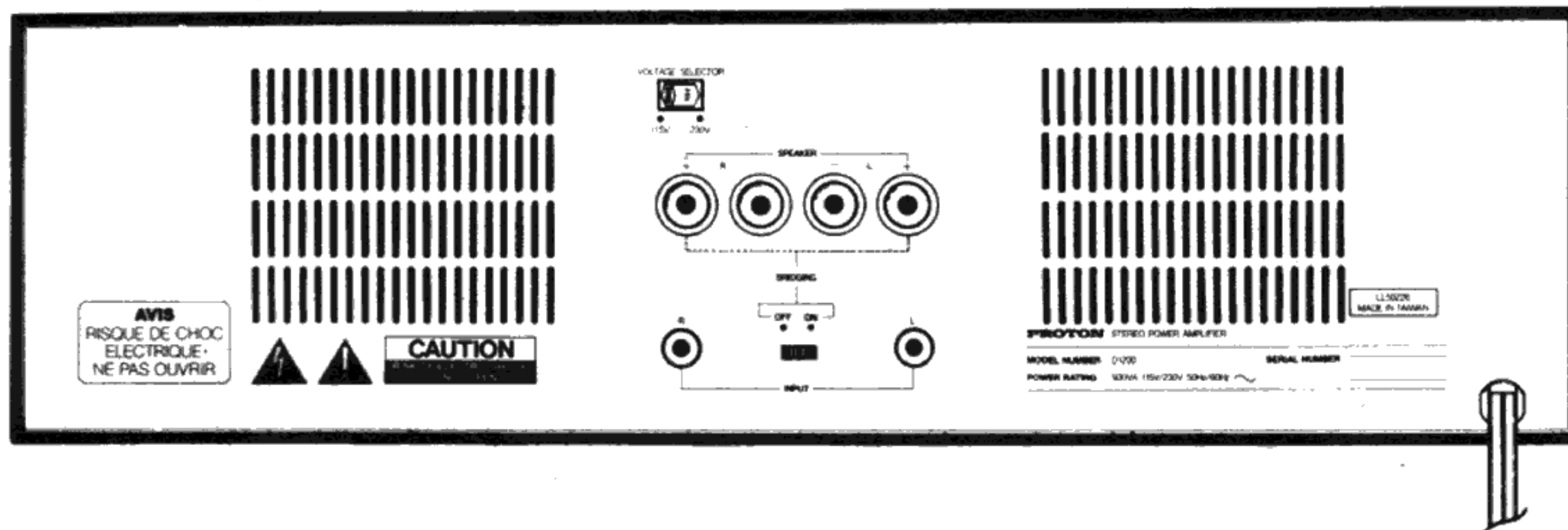
## European Model



## British and Australian Model



## General Model





## BRIDGING SWITCH ①

**BRIDGING:** The switch "bridges" the two power amplifier channels to form a monophonic amplifier with more than double the output power. To convert to bridged operation, the following procedure should be followed.

1) Switch OFF the POWER.

2) Disconnect the signal cable from the Left-channel MAIN-IN to the power amplifier section of the D1200. In the bridged mode the amplifier is driven only through its Right-channel Main input. (If you need stereophonic reproduction, the Left-channel PREAMP OUT signal can be used to drive a second, separate power amplifier. If a Proton D1200 in bridged mode is used for the second stereophonic channel, it too will be driven through its "Right-channel" Main input, regardless of whether it is used for the Left or Right speaker.)

3) Disconnect any speaker wires from SPEAKER terminals. Connect the positive lead of the speaker to be driven by the bridged D1200 to the red R+ terminal, and its negative lead to the red L+ terminal. DO NOT connect any wires to the black terminals (R- and L-).

**NOTE:** in the bridged mode the loudspeaker's impedance is effectively halved as "seen" by the amplifier. An 8-ohm load looks like 4 ohms, a 4-ohm load looks like 2 ohms, and a pair of 4-ohm speakers operated in parallel will look like a 1-ohm load. Driving a pair of such speakers to high levels may cause the amplifier to overheat and shut down. For best results the

bridging mode should be used with only a single 4-ohm or 8-ohm speaker in each channel.

**CAUTION:** In the bridged mode the speaker wires must be "floating" with respect to the circuit ground. Do NOT connect the speaker wires to anything which shares a common ground between stereo channels (such as a speaker switch, an adapter for electrostatic headphones, or subwoofer), not to anything which shares a common ground with the amplifier's inputs (such as a switching comparator or a distortion analyzer).

4) After the preceding conditions have been satisfied, re-set the bridging switch to the on mode. Finally, turn the amplifier's power on.

5) To return the amplifier to normal stereo operation at a later date, first turn off the power. Re-set the BRIDGING switch to OFF, restore the connection from PREAMP OUT to MAIN IN in the Left channel, and connect loudspeaker wires to the appropriate terminals as described below under SPEAKER TERMINALS.

## SPEAKER TERMINALS ②

For best possible sound quality, Proton always recommends the use of heavy gauge speaker wire. The absolute minimum size recommended is 18 gauge (common lamp cord), and this is acceptable only when the wire will not be run longer than 12 feet. Smaller gauge wire (higher number) will almost



always result in some degradation of sound. A heavier 16 gauge or 14 gauge wire is preferable, especially if you will be running speaker wire longer than 12 feet and/or using two pairs of speakers.

To connect your speakers, strip approximately 1/2" of insulation from the two conductors on each end of the cord and twist the small internal wires together. (If possible, "tin" these wires with solder.) Rotate the knob anticlock wise on the appropriate speaker terminal, insert the wire into the hole which is now exposed in the terminal, and rotate the knob clockwise until tight. The hole will close around the wire and hold it in place. Tug gently to be sure a good connection has been made. Repeat this procedure with the remaining speaker leads.

**NOTE:** You may want to connect your speakers to the D1200 output by using banana type connectors. The D1200's binding posts were designed for low contact resistance by using banana jacks and plugs, to assure maximum current transfer (ESPECIALLY IMPORTANT WITH OUR D.P.D. DESIGN).

Extra care should be taken to maintain proper left and right channel connections as well as proper phase (positive and negative connections). The speaker terminals on your D1200 are color coded -- red tabs indicate positive ("+") terminals and black posts indicate negative ("-") terminals. Positive output terminals on your D1200 should be connected to the positive input terminals on your speakers.

Usually, speaker cord is coded in some manner to help you make proper connections. In some cords, one wire is copper and the other is silver. Or a stripe will appear along the insulator on one side. Or one side of the insulator will be rounded while the other is squared. Whatever the case, it is very important to the sound quality (especially bass response) that your speakers be connected "in phase".

### AC CORD ③

Once you have made all of the connections as described above, plug the AC CORD (3) into a live wall outlet.

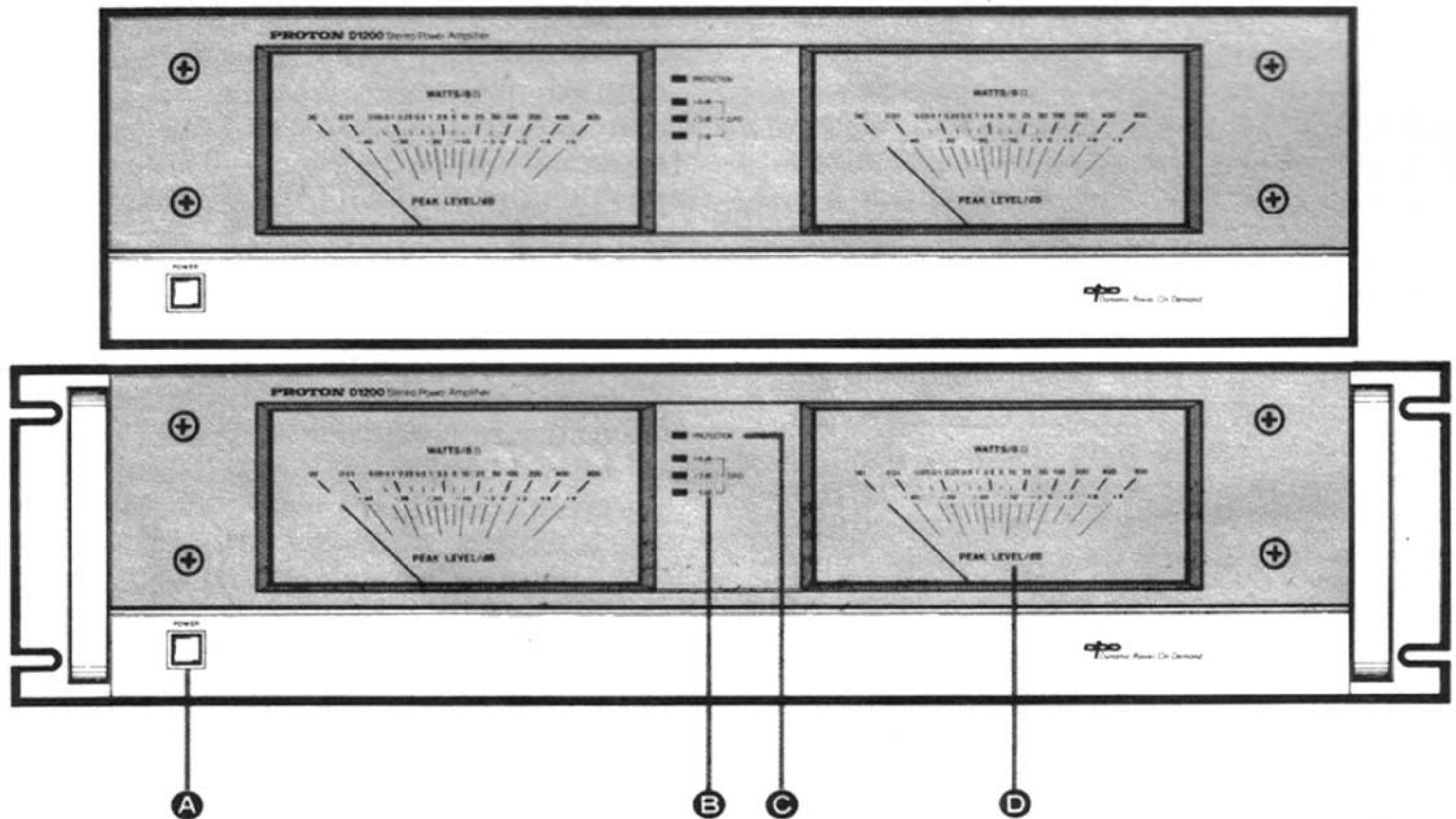
#### NOTE:

(Only for the United Kingdom)  
AC CORD should be wired to 13 amp. plug as per instructions attached to cord. Once connections have been made, plug into a live 240V/50 cycle outlet.

### MAIN IN ④

Use high quality audio cables with RCA-type connectors to connect the PRE-OUT terminals of your Preamplifier to the MAIN-IN input terminals on D1200 power amplifier. Be careful to connect left channel to left channel and right channel to right channel.

## FRONT PANEL CONTROLS



### POWER **A**

Push the green POWER button (A) "in" to turn on your Proton D1200. The green POWER BUTTON will light to indicate that your D1200 is ON.

### D.P.D. LED **B**

Your Proton D1200 is equipped with D.P.D. (Dynamic power on Demand)

circuit, and it delivers much more dynamic power than any other conventional amplifier. When you drive the Proton D1200 heavily enough, the music signal will trigger and activate the D.P.D. circuit. The D.P.D. LED (B) will light to show you that the D.P.D. circuit is working. Also the D.P.D. LED may flicker ON and OFF when the amplifier is working close to the threshold of the preset level of the D.P.D. circuit.



**PROTECTION LED**

**POWER METER**

The Proton D1200 is equipped with a protection circuit which is designed to protect the amplifier from short circuiting due to power surges or unusual transient peaks. This light will flash when this occurs.

The D1200 provides you a wide Range of Power Output Indications, a constant readout of peak power output in watts at 8 ohms speakers. Dynamic range of the meters is 49 dB so as to give a more extended view of low-power output activity.

**MAINTENANCE**

Your Proton D1200 has been carefully designed to look as good as it performs. A soft cloth is usually all that is necessary to keep the unit dust-free. Should the cabinet become soiled or fingerprinted use a soft cloth, mild soap, and water to clean it. Never use an abrasive cleaner on any part of this product.

To insure that proper connections are maintained, rotate each cable within its rear panel terminal periodically (about once a month). This practice keeps corrosion (caused by oxidation) from building up on terminals or cables and weakening the connection. For the same reason, it is a good idea to similarly rotate every connection on all of your audio and video equipment at the same time.

**PERFORMANCE SPECIFICATIONS**

Rated Power Output (20Hz-20kHz, 8 OHMS):	100W, Per Channel
Dynamic Power at 8 OHM / 4 OHM / 2 OHM	
1) I.H.F. Standard 20ms Duration:	540W / 1000W / 1500W
2) 100ms Duration:	450W / 650W / 800W
3) 200ms Duration:	380W / 500W / 520W
(Duty Cycle: 500ms)	
Dynamic Headroom at 8 OHM / 4 OHM / 2 OHM:	7.3dB
T.H.D. at Rated Power:	0.02%



# D1200

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I.M.D. at Rated Power:	0.02%
Clipping Power at 8 OHM/4 OHM/2 OHM:	110W /175W /220W
Bridge Power at 8 OHM/4 OHM:	1800W /2700W
Damping Factor:	>250
Frequency Response 20-20kHz:	±0.2dB
Power Bandwidth at T.H.D. 0.1%:	10-40kHz
Input Resistance/Capacitance:	15K OHM/220pF
Input Sensitivity:	1V
Channel Crosstalk (1kHz):	85dB
S/N Ratio (A-Weighted):	120dB
Normal Dimensions W×H×D (inch):	16.5"×4.3"×14.4"
(cm):	42×11×36.5
Handle Dimensions W×H×D (inch):	19"×4.3"×14.4"
(cm):	48.3 ×11×36.5
Net Weight:	15Kgs
Power Supply	
U.S and Canadian Models:	120V /60Hz
European Model	220V /50Hz
British and Australian Models:	240V /50Hz
Other Area Model (General Model):	115V , 230V /50 , 60Hz

# **WARNING**

THIS POWER AMPLIFIER IS OF ADVANCED DESIGN AND IS CAPABLE OF PRODUCING ENORMOUS DYNAMIC POWER OUTPUTS. UNLESS CAUTION IS EXERCISED IN ESTABLISHING A SAFE MAXIMUM OUTPUT LEVEL, SERIOUS DAMAGE TO YOUR LOUDSPEAKERS MAY RESULT.

BEFORE OPERATING THIS UNIT, CHECK THE MAXIMUM POWER RATING OF YOUR LOUDSPEAKERS AND GRADUALLY INCREASE POWER OUTPUT UNTIL A SAFE MAXIMUM LIMIT IS ESTABLISHED.

THIS SETTING SHOULD NOT THEN BE EXCEEDED. THIS APPLIES ESPECIALLY WHEN PLAYING DIGITAL/CD RECORDINGS CONTAINING HIGH-DYNAMIC PASSAGES (CANNONS ETC.). REMEMBER THAT THE VOLUME CONTROL POSITION DOES NOT REPRESENT AN INDICATION OF POWER OUTPUT ("HALF" VOLUME MAY BE ~~MAXIMUM~~ POWER!), AS IT IS DEPENDANT ON SOURCE INPUT LEVEL.

IF IN DOUBT, CONSULT YOUR PROTON DEALER FOR ADVICE.

D1200

PERFECT  
FLOORING