

# YAMAHA AX-350

*Natural Sound Stereo Integrated Amplifier*

*Préampli/ampli de puissance stéréo de la série "Natural Sound"*

*Natural Sound Vollverstärker*

*Natural Sound Integrerad Stereo Förstärkare*

*Amplificatore Integrato Stereo a Suono Naturale*

*Amplificador integrado estéreo de sonido natural*

OWNER'S MANUAL  
MODE D'EMPLOI  
BEDIENUNGSANLEITUNG  
BRUKSANVISNING  
MANUALE DELL'UTENTE  
MANUAL DE INSTRUCCIONES

Thank you for selecting this YAMAHA Stereo Amplifier.

## FEATURES

- Natural Sound Stereo Integrated Amplifier
- 30W + 30W (8Ω) RMS Output Power, 0.05% THD, 20–20,000 Hz
- MAIN DIRECT for High Quality Sound
- Increased Low Impedance Drivability

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## CAUTION: READ THIS BEFORE OPERATING YOUR UNIT.

1. To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
2. Install this unit in a cool, dry, clean place – away from windows, heat sources, sources of excessive vibration, dust, moisture and cold. Avoid sources of humming (transformers, motors). To prevent fire or electrical shock, do not expose the unit to rain or water.
3. Never open the cabinet. If something drops into the set, contact your dealer.
4. Do not use force on switches, controls or connection wires. When moving the unit, first disconnect the power plug and the wires connected to other equipment. Never pull the wire itself.
5. The openings on the cabinet assure proper ventilation of the amplifier. If these openings are obstructed, the temperature inside the cabinet will rise rapidly and eventually damage the circuits. Therefore, avoid placing objects against these openings and do not install the amplifier where the flow of air through the ventilation openings could be impeded.
6. Always set the VOLUME control to “-∞” before starting the audio source play: increase the volume gradually to an appropriate level after the play has been started.
7. Do not attempt to clean the unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.
8. Be sure to read the “TROUBLESHOOTING” section regarding common operating errors before concluding that the unit is faulty.
9. When not planning to use this unit for long periods of time (ie., vacation, etc.), disconnect the AC power plug from the wall outlet.
10. To prevent lightning damage, disconnect the AC power plug and disconnect the antenna cable when there is an electrical storm.
11. Grounding or polarization – Precautions should be taken so that the grounding or polarization of an appliance is not defeated.
12. AC outlet (Canada and General models)  
Do not connect audio equipment to the AC outlet on the rear panel if that equipment requires more power than the outlet is rated to provide.

### 13. Voltage Selector (General Model only)

The voltage selector on the rear panel of this unit must be set for your local main voltage BEFORE plugging into the AC main supply.

Voltages are 110/120/220/240 V AC, 50/60 Hz.

#### IMPORTANT

Please record the serial number of this unit in the space below.

Serial No.:

The serial number is located on the rear of the unit. Retain this Owner's Manual in a safe place for future reference.

#### WARNING

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

#### CAUTION (FOR CANADA MODEL)

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.

### Special Instructions for U.K. Model

#### IMPORTANT

THE WIRES IN THE MAIN LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL

Brown: LIVE

As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:  
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.  
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.  
Making sure that neither core is connected to the earth terminal of the three pin plug.

### Instruction on AC OUTLET

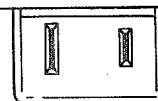
<Canada and General Models>

Use AC OUTLET to connect the power cord from another component to this unit.

The power to the SWITCHED outlet is controlled by this unit's POWER switch. The outlet will supply power to any component whenever this unit is turned on.

The maximum power (total power consumption of the component) that can be connected to the SWITCHED AC OUTLET is 100 watts.

AC OUTLET  
SWITCHED  
100W MAX.



# CONNECTIONS

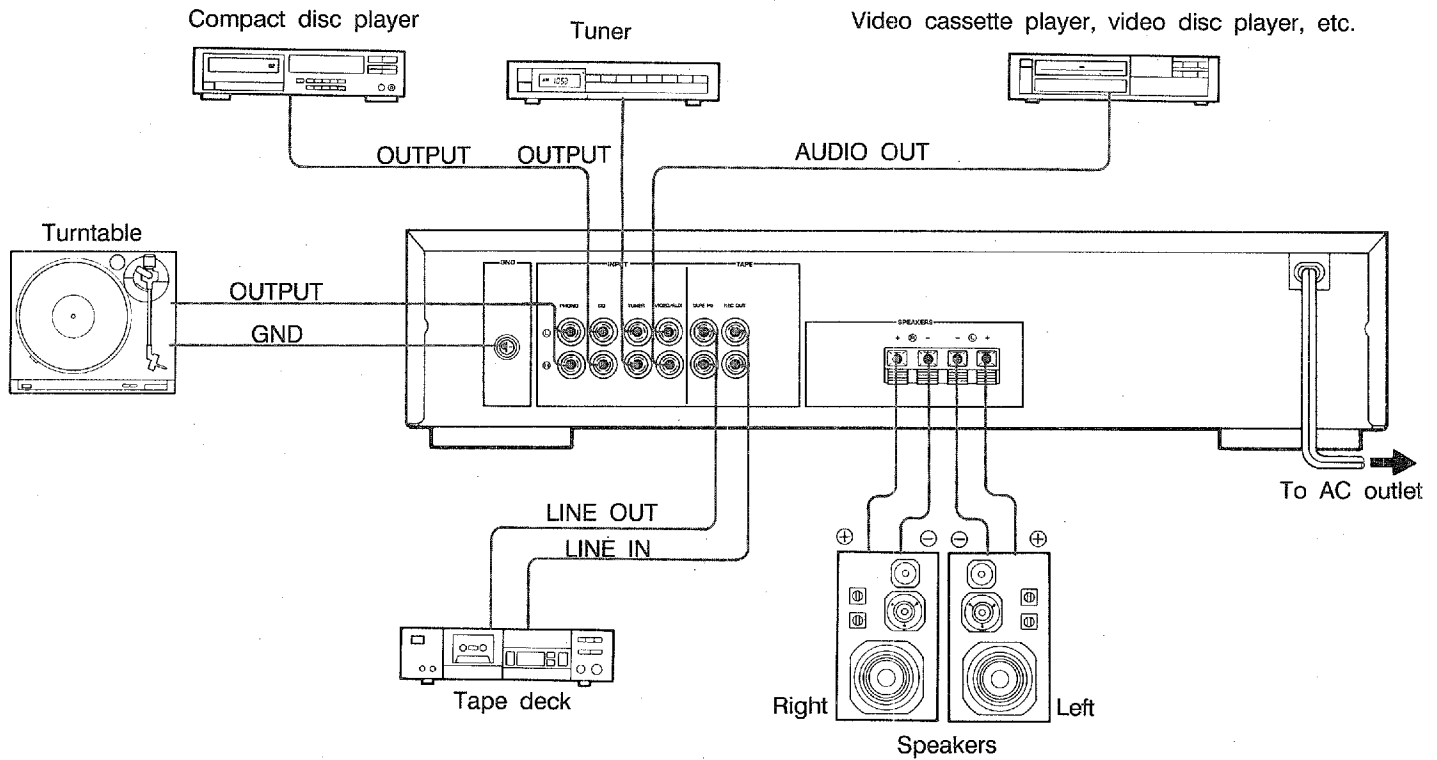
Before attempting to make any connections to or from this unit, be sure to first switch OFF the power to this unit and to any other components to which connections are being made.

## AUDIO CONNECTIONS

When making connections between this unit and other components, be sure all connections are made correctly, that is to say L (left) to L, R (right) to R, "+" to "+" and "-" to "-". Also, refer to the owner's manual for each component to be connected to this unit.

### Note

The form and connecting method of the SPEAKER terminals are different depending on model type. For details, refer to the instruction below in "Connecting speaker system".



### Connecting speaker system

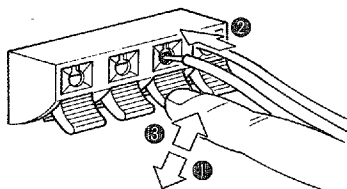
Connect the **SPEAKERS** terminals to your speakers with wire of the proper gauge, cut to be as short as possible. If the connections are faulty, no sound will be heard from the speakers. Make sure that the polarity of the speaker wires is correct, that is, + and - markings are observed. If these wires are reversed, the sound will be unnatural and will lack bass. Do not let the bare speaker wires touch each other as this could damage this unit and/or speakers.

- Use speakers with the specified impedance shown on the rear of this unit.

#### • How to Connect:

<Canada, General and Europe models>

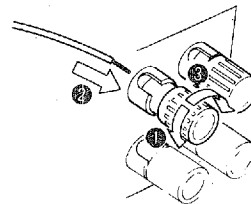
Red: positive (+)  
Black: negative (-)



- 1 Press and hold the tab.
- 2 Insert the bare wire.
- 3 Release the tab and tighten the wire.

#### <Australia and British models>

Red: positive (+)  
Black: negative (-)



- 1 Unscrew the knob.
- 2 Insert the bare wire.
- 3 Tighten the knob and secure the wire.

#### About the accessory terminals

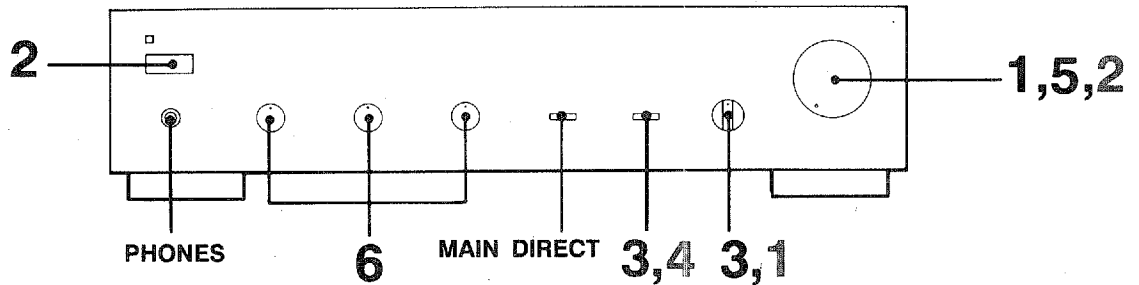
##### • AC OUTLET <Canada and General models>

For details, refer to "Instruction on AC OUTLET" on the previous page.

##### • GND terminal

Connecting the ground wire of the turntable to this terminal will produce minimum humming, but in some cases better results may be obtained with the ground wire disconnected.

# OPERATIONS



## To listen to an audio source

**1**

VOLUME

∞ -dB 0

Set to the "∞" position.

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**2**

POWER

---

**3** Select the source you want to listen to.

INPUT

VIDEO/AUX TUNER CD PHONO

\* If you want to listen to the tape deck;

TAPE MONITOR

ON OFF

(When not listening to the tape deck, always set to the "OFF" position.)

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**4** Play the source.

**5**

VOLUME

∞ -dB 0

Adjust to the desired output level.

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**6** If desired, adjust the **BALANCE**, **BASS**, and **TREBLE** controls. (Refer to the next page for details.)

## To record a source to audio tape

**1** Select the source to be recorded.

INPUT

VIDEO/AUX TUNER CD PHONO

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**2** Play the source and then turn the **VOLUME** control up to confirm the input source.

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**3** Set the tape deck in the recording mode.

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**4** If your tape deck has three head monitoring capability you can monitor the signal just recorded.

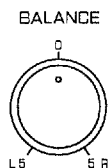
TAPE MONITOR

ON OFF

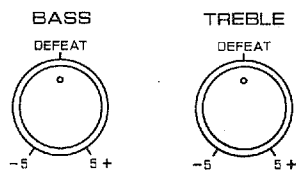
**Note**  
Adjusting the **VOLUME**, **BASS**, **TREBLE** and **BALANCE** controls during recording has no effect on the material being recorded.

## Adjusting the BALANCE control

Adjust the balance of the output volume to the left and right speakers to compensate for sound imbalance caused from the speaker settings or the listening room condition.



## Adjusting the BASS and TREBLE controls



**BASS** : Turn this clockwise to increase (or counter-clockwise to decrease) the low frequency response.

**TREBLE** : Turn this clockwise to increase (or counter-clockwise to decrease) the high frequency response.

## Using the MAIN DIRECT switch

You can enjoy purer sound by setting this switch to the "ON" position. Because, by doing so, the input signal is output directly, bypassing the **BASS**, **TREBLE**, and **BALANCE** controls, therefore avoiding any "muddying" caused by circuit routing.

MAIN DIRECT



## When you listen with headphones

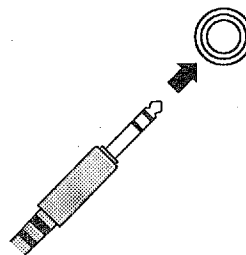
<Canada, General and Europe models>

Connect the headphones to the **PHONES** jack. The sound will be output only through the headphones.

<Australia and British models>

Connect the headphones to the **PHONES** jack. The sound will be output through both the headphones and the speakers. To listen only with the headphones, disconnect the speaker wires.

PHONES



# TROUBLESHOOTING

Before assuming that your unit is faulty, please check the following troubleshooting list, which details corrective actions you can take yourself without calling a service engineer. If you have any questions, contact your nearest Yamaha dealer.

PROBLEM	POSSIBLE CAUSES	REMEDY
Power is not supplied even though the POWER switch is ON.	The power plug is not securely connected.	Connect it securely.
There is no sound when any input source is selected.	The input wires are not connected securely.	Connect them securely.
	The speaker system is not connected correctly.	Check and-secure the connections.
There is no sound from one speaker.	The speaker connections are not secure.	Secure the connections.
	The BALANCE control is set all the way to the left or right.	Adjust the BALANCE control correctly.
There is a lack of bass, and no ambience.	The + and - wires are connected in reversed at the amplifier or speakers.	Connect the speaker wires in the correct phase (+ and -).
There is a humming sound when playing records.	The input wires are not connected securely.	Connect the input wires securely.
	The turntable's ground wire is not connected.	Connect the ground wire.
There is a howling sound when playing records at high volume.	The turntable and the speakers are too close together, or the turntable is not located on a firm surface.	Change the location of the turntable or the speakers.
The BASS, TREBLE and BALANCE controls are not effective.	The MAIN DIRECT switch is ON.	The MAIN DIRECT switch must be switched OFF to use the controls.
The sound suddenly stops.	Using outside the rated impedance range at high power for an extended period has activated the speaker protection circuit.	Switching this unit OFF and then ON will reset the speaker protection circuit. Use speakers within the rated impedance range.
	There is a malfunction in the amplifier.	Consult your Yamaha dealer.

# SPECIFICATIONS

Minimum RMS Output Power Per Channel 20 Hz - 20 kHz 0.05% THD 8Ω	30W
Dynamic Power Per Channel (by IHF Dynamic Headroom Measuring Method) 1 kHz 8Ω/4Ω/2Ω	55W/75W/80W
DIN Standard Output Power Per Channel (European model) 1 kHz 0.7% THD 4Ω	40W
IEC Power (European model) 1 kHz 0.01% THD 8Ω	35W
Power Bandwidth 0.05% THD 15W 8Ω	10 Hz - 50 kHz
Damping Factor 1 kHz 8Ω	40
Input Sensitivity/Impedance PHONO CD/TUNER/VIDEO-AUX/TAPE	2.5 mV/47 kΩ 150 mV/50 kΩ
Input Sensitivity (New IHF) (Canadian and General models) PHONO CD/TUNER/VIDEO-AUX/TAPE	0.47 mV 28 mV
Maximum Input Signal (1 kHz 0.02% THD) PHONO	150 mV
Output Level/Impedance REC OUT	150 mV/560Ω
Headphone Jack Rated Output/Impedance Output Level Impedance	0.05% THD RL=8Ω, 0.5V 220Ω

Frequency Response CD/TUNER/VIDEO-AUX/TAPE	20 Hz - 20 kHz, 0 +0 -0.5 dB
RIAA Equalization Deviation PHONO	0±0.5 dB
Total Harmonic Distortion 20 Hz - 20 kHz PHONO to REC OUT, 3V CD/TUNER/VIDEO-AUX/TAPE to SP Out, 15W/8 Ω	0.01% 0.02%
Intermodulation Distortion CD/TUNER/VIDEO-AUX/TAPE Rated Output/8Ω	0.05%
Signal-to-Noise Ratio (IHF-A Network) PHONO (5 mV Input Shorted) (Europe model: 84 dB) CD/TUNER/VIDEO-AUX/TAPE (Shorted)	88 dB 100 dB
Signal-to-Noise Ratio (New IHF) (General, Canadian, Australian and British models) PHONO CD/TUNER/VIDEO-AUX/TAPE	74 dB 85 dB
Residual Noise (IHF-A Network)	160 μV
Channel Separation Vol -30 dB PHONO, Input shorted 1 kHz/10 kHz CD/TUNER/VIDEO-AUX/TAPE Input 5.1 kΩ Terminated 1 kHz/10 kHz	60 dB/40 dB 60 dB/40 dB

Tone Control Characteristics Bass Boost / Cut Turnover frequency Treble Boost / Cut Turnover frequency	±10 dB (20 Hz) 350 Hz ±10 dB (20 kHz) 3.5 kHz
Gain Tracking Error (0 - -60 dB)	3 dB
Power Supply Canadian model European model Australian and British models General model	AC 120V/60 Hz AC 220V/50 Hz AC 240V/50 Hz AC 110/120/220/240V 60/50 Hz
Power Consumption Canadian model Australian, European and British models General model	120W 100W 100W
AC Outlet (Canadian and General models) 1 SWITCHED OUTLET	100W max. total
Dimensions (W x H x D) General, Canadian and European models Australian and British models	435 x 102 x 254 mm (17-1/8" x 4" x 10") 435 x 102 x 262 mm (17-1/8" x 4" x 10-5/16")
Weight	4.4 kg (9 lbs. 11 oz.)

\* Specifications are subject to change without notice.

\* This product complies with the radio frequency interference requirements of the Council Directive 82/499/EEC and/or 87/308/EEC.