YAMAHA AX-530

Natural Sound Stereo Integrated Amplifier

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

Natural Sound Vollverstärker

Natural Integrerad Stereo Förstärkare

Amplificatore Integrato Stereo a Suono Naturale

Amplificador integrado estéreo de sonido natural

OWNER'S MANUAL
MANUEL D'UTILISATION
BEDIENUNGSANLEITUNG
BRUKSANVISNING
MANUALE DELL'UTENTE
MANUAL DE INSTRUCCIONES

ENGLISH

Thank you for purchasing the YAMAHA Integrated Amplifier. In order to ensure proper operation for the best possible performance, please read this manual thoroughly before connecting up your new amplifier and turning it on.

IMPORTANT!
Please record the serial number of your unit in the space below.

Serial No:

PRECAUTIONS

OWNER'S MANUAL
Keep this manual in a safe place for future reference.

LOCATION
Avoid placing your unit in direct sunlight or close to a source of heat. Also avoid locations in which the device is likely to be subjected to excessive dust, cold or moisture.

VENTILATION
The openings on the cabinet ensure the 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 your amplifier in a place such that the flow of air through the ventilation openings could be impeded.

HANDLING
● Power cord
When removing the power plug from the wall outlet, always pull directly on the plug. Never yank the cord as this may result in damage to the cord and possibly a short-circuit.

If you do not intend to use this unit for an extended period of time, it is advisable to unplug the power cord.

● Switches and knobs
Avoid applying excessive force to the switches and knobs.

● Relocation
Before moving your amplifier, be sure to unplug the power cord and remove all other connecting cables.

IN CASE OF TROUBLE
● Troubleshooting Chart
Consult the Troubleshooting Chart for advice on the common operation errors before concluding that your amplifier is faulty.

● Servicing
Do not open the cabinet or attempt to make repairs by yourself, as this may aggravate the damage and expose you to an electrical shock.

● Object and liquid entry
See to it that foreign objects or spilled liquids do not enter inside the cabinet. Should this case arise, consult your YAMAHA dealer.

CLEANING
Wipe off dust with a dry soft cloth. To remove dirt or fingermarks, use a soft damp cloth then dry immediately with a clean cloth. Do not use alcohol, thinners or other chemical solvents since they may damage the finish or remove the panel lettering.

Do not use any aerosol sprays near this unit as these products can easily get into the unit and damage the circuitry.

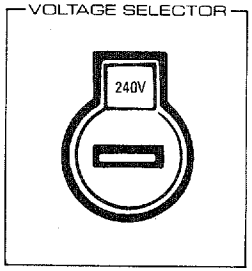
SPECIAL INSTRUCTIONS FOR THE BRITISH MODEL

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

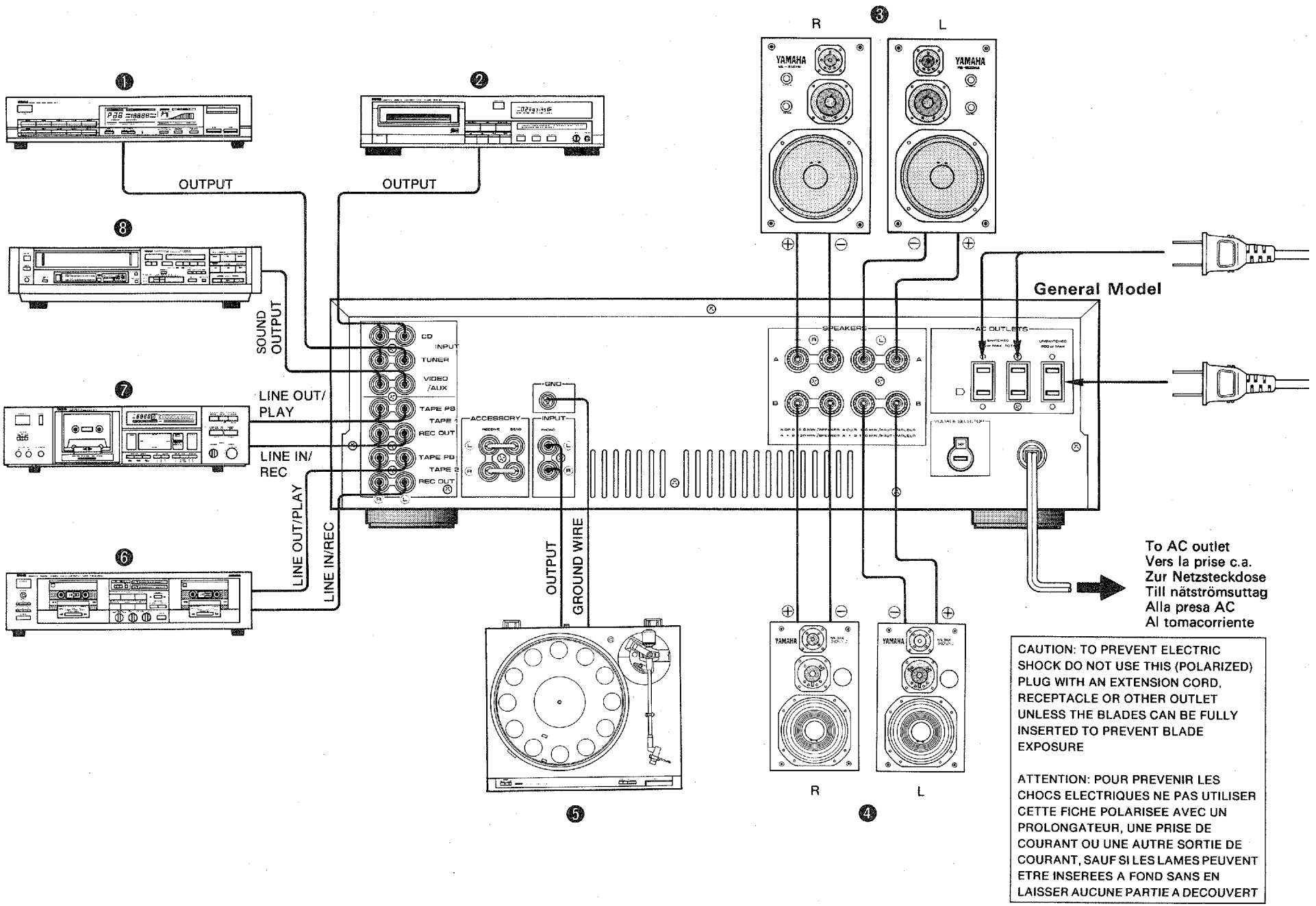
Blue: NEUTRAL
Brown: LIVE

As the colours of the wires in the mains 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.

VOLTAGE SELECTOR (General Model)
The voltage selector switch on the rear panel of this unit must be set for your local voltage BEFORE plugging in the AC mains supply. Voltages are 110/120/220/240 V AC, 50/60 Hz.



CONNECTION DIAGRAM



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

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 SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT

CONNECTIONS

The connection diagram is provided on page 3.

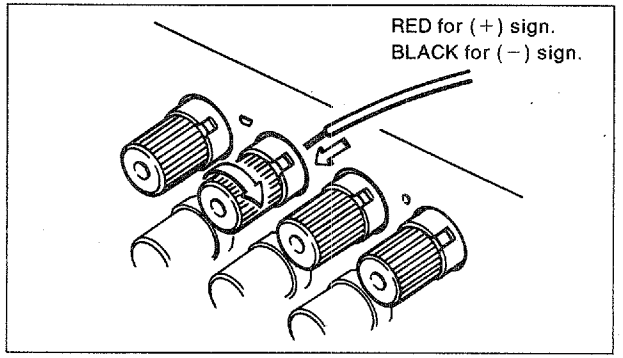
1. Tuner
2. Compact disc player
3. Speaker A
4. Speaker B
5. Turntable
6. Tape deck 2
7. Tape deck 1
8. Video player

Before making any connections turn off all equipment.
Be sure to connect the left (L) and right (R) channels consistently between components.

● CONNECTING THE SPEAKERS

Connect the cords for the left speakers to the L terminals and the right speaker cords to the R terminals, ensuring that the polarity (+ and −) markings are observed. Be sure to do this consistently from component to component. If the polarity is reversed at either speaker, the sound will be unnatural and lack bass. Speaker cords should be cut as short as possible. Avoid coiling the wire on the floor or bundling it up with cords from other system components.

★ Strip about 1cm (0,39in) of insulating material from the ends of the speaker wires and twist the strands of each end. Loosen the speaker terminal knobs, insert the exposed wire into the hole and then tighten the speaker terminal knobs.



● CONNECTING A TURNTABLE

Connect the output cords of the turntable to the Phono jacks and connect the ground wire to the GND terminal. Normally, connecting the ground wire produces minimum hum but in some cases better results are obtained with the ground wire disconnected. The turntable component and its output cords should be positioned well away from sources of hum such as power cords or power transformers of other system components.

● CONNECTING A TUNER

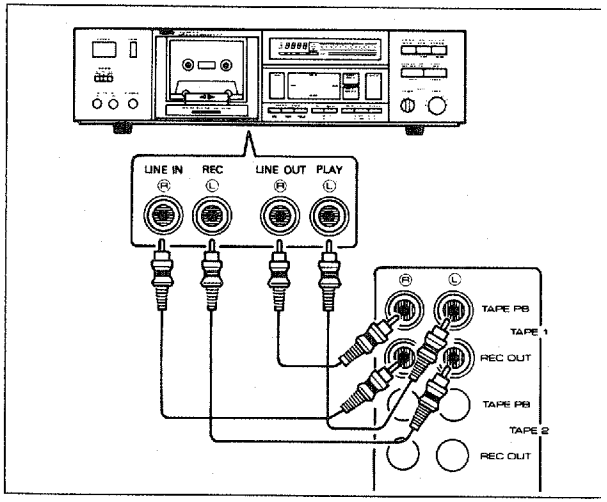
Connect the cords from the tuner's output jacks to the TUNER jacks of the amplifier. Position the tuner so that its AM antena is well away from the amplifier for the best possible reception.

● CONNECTING TO THE CD AND VIDEO/AUX JACKS

Connect your CD component to the CD terminals and video sound output leads to the VIDEO/AUX terminals. Please note that a turntable cannot be connected to the these jacks as they do not provide the necessary RIAA equalization.

● CONNECTING TAPE DECKS

TAPE DECK 1.
Connect the cords from the tape deck's Line In jacks to the REC OUT jacks of TAPE 1, ensuring that left and right are not reversed. Then connect the cords from the tape deck's Line Out jacks to the Tape 1 PB jacks.
TAPE DECK 2 can be connected in similar fashion to the Tape 2 terminals.



● AC OUTLETS (General models)

For added convenience this unit provides 3 AC outlets. Two "switched" outlets (the power to these receptacles is turned on and off by this unit's power switch) and one "unswitched" outlet (the power to this receptacle is independent of this unit's power switch). Be sure not to connect appliances totaling more than 200 watts to the unswitched outlet or more than 150 watts to the two switched outlets.

● ACCESSORY

The Accessory option allows you to connect a signal processing system, such as an equalizer, in the signal path prior to the Tone control.
Connect the Accessory send jacks to the inputs of the equalizer and the Accessory Receive jacks to the outputs of the equalizer.

FRONT PANEL DESCRIPTIONS

The Front Panel illustration is provided on page 40.

❶ POWER SWITCH (POWER)
Press once to turn the power ON and once again to turn the power OFF. Before turning the power ON set the volume to its lowest position (extreme counterclockwise), to protect the speakers from any sudden high level sound.

❷ POWER ON INDICATOR
Illuminated when the power is ON.

❸ SPEAKERS SWITCHES (SPEAKERS)
As one or two speaker systems can be connected to this unit, these switches allow you to select speaker system A, B or both at once. When listening to the headphones only, press both the A and B switches to the OFF position.

❹ TONE BYPASSS CONTROL SWITCH (TONE BYPASS)
Depress this switch to channel the input signal directly to the output stage of your amplifier, bypassing the Bass, and Treble controls therefore avoiding any "muddying" caused by the switch and circuit routing to provide a pure sound.

❺ INPUT SELECTOR PANEL
Selects the program source you wish to listen to. The indicator LED above the selected source will light up.

❻ CD DIRECT SWITCH (CD DIRECT)
This switch allows you to route the CD input signal directly to the output stage bypassing the Input Selectors, the Mode, Loudness, and Balance controls therefore avoiding any "muddying" caused by the switch and circuit routing to provide a pure sound.

❼ VOLUME CONTROL KNOB (VOLUME)
This controls the sound level. Turning clockwise increases the sound volume and turning counterclockwise decreases it. Set this knob to the minimum level before turning the power ON or using the Input Selector Panel to select a different sound source, therefore, protecting the speakers from any sudden high level sound.

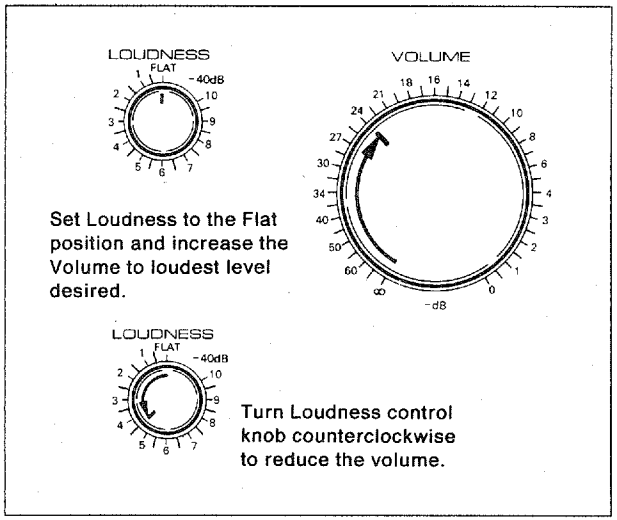
❽ REC OUT SELECTOR (REC OUT)
This switch will select a program source and feed that source directly to the rear panel REC OUT terminals independent of the INPUT SELECTORS. This function therefore allows you to listen to any input source while recording another. This control also permits you to record directly from Tape 1 to Tape 2 or vice versa.

❾ PHONO SELECTOR SWITCH (PHONO)
Selects either MM (moving magnet) or MC (moving coil) position to match your cartridge. High performance MC cartridges can be used when in the MM position.

❿ MODE SWITCH (MODE)
Permits switching between stereo and mono operation. Normally this switch should be set to the stereo position.

⓫ SUBSONIC FILTER CONTROL SWITCH (SUBSONIC)
This switch cuts out ultra low frequency signals caused by turntable rumble or warped records, yet retains sound quality.

⓬ LOUDNESS CONTROL KNOB (LOUDNESS)
This control provides compensation for the human ears loss of sensitivity to high and low frequency ranges at low volumes. As the amount of compensation required is determined by the listening level, this control provides the most accurate compensation for any listening level. Set it to the flat position while the volume control is set to your normal listening level. Turning it counterclockwise will decrease the volume while retaining the natural balance of low and high frequencies.



Set Loudness to the Flat position and increase the Volume to loudest level desired.

Turn Loudness control knob counterclockwise to reduce the volume.

⓭ BALANCE CONTROL KNOB (BALANCE)
This knob is used to adjust the relative volume of the left and right channels, enabling you to compensate for unbalance created by installation locations of the speakers.

⓮ TREBLE CONTROL KNOB (TREBLE)
This knob controls treble response.Turn it clockwise to boost or counterclockwise to attenuate treble response. When this knob is in the center defeat position, a flat response is obtained.

⓯ BASS CONTROL KNOB (BASS)
This knob controls bass response. Turn it clockwise to boost or counterclockwise to attenuate bass response. When this knob is in the center defeat position, a flat response is obtained.

⓰ HEADPHONES JACK (PHONES)
Stereo headphones with a standard plug can be connected to this jack. When listening to the headphones only, press both the A and B switches to the OFF position.

OPERATIONS

● Normal listening operation

1. Turn the volume control to the minimum level before turning the power ON. The power indicator is illuminated.
2. Using the SPEAKERS switches select the desired speaker system(s) or leave both switches in the OFF position to use the headphones.
3. Select the desired program source using the Input Selector Panel. The corresponding input indicator lights up.
4. Activate your chosen component.
5. Adjust your VOLUME, LOUDNESS, BASS, TREBLE and BALANCE to provide the desired sound quality.

● To record to tape from a sound source

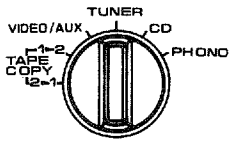
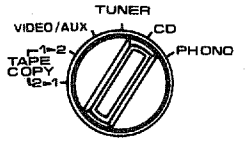
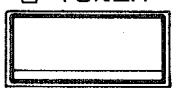
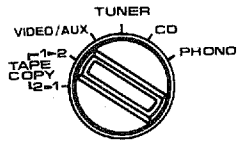
1. Turn the volume control to the minimum setting before turning the power ON. The power indicator is illuminated.
2. Using the REC OUT selector select the source to be recorded.
3. Activate the sound source to be recorded.
4. To monitor the sound being played via the speakers (or headphones) use the Input Selector Panel to select the source program.
5. To start recording activate the receiving tape deck(s). If your tape deck has three head monitoring capability, you can monitor the just recorded signal by selecting the corresponding tape deck switch.
6. To listen to an alternate sound source merely select the desired source using the Input Selector Panel, (noting the procedures outlined above in Normal listening operation). This will have no adverse effect on the recording.

● Tape dubbing

As two tape decks can be connected to this unit, tape dubbing can be performed from Tape 1 to 2 or 2 to 1.

1. Set the REC OUT selector to the Tape Copy position (1 ▶ 2 or 2 ▶ 1).
2. To start recording set the source tape deck to playback and the receiving tape deck to record.
3. To monitor the sound being played use the Input Selector Panel to select Tape 1 or Tape 2 according to the source deck. If your tape deck has three head monitoring capability you can monitor the just recorded signal by selecting the corresponding Tape switch.
4. To listen to an alternate sound source merely select the desired input source using the Input Selector Panel, (noting the procedures outlined above in Normal listening operation) This has no adverse effect on the dubbing quality.

Independent Recording and Listening Examples.

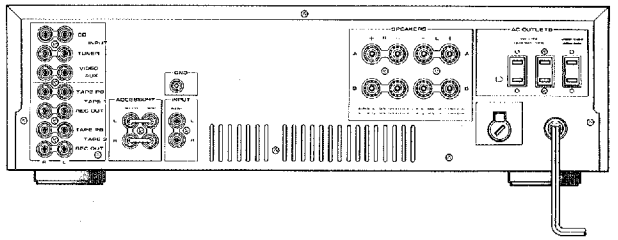
ACTION	INPUT SELECTOR	REC OUT
Listening to a record via the speakers while recording an AM/FM braodcast.	□ PHONO 	
Listening to a CD while recording it.	□ CD 	
Listening to an AM/FM broadcast while "dubbing" a tape from Tape 1 to 2.	□ TUNER 	

TROUBLESHOOTING

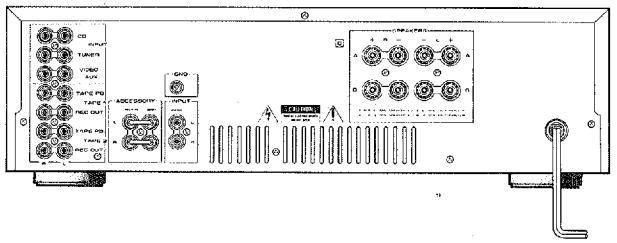
Before assuming that your unit is faulty, please check the following troubleshooting list which details the corrective action you can take yourself without having to call a service engineer. If you have any doubts or questions, contact your nearest Yamaha dealer.

PROBLEM	CAUSE	REMEDY
Power is not supplied even though the Power switch is turned on .	The power plug is not securely plugged in.	Plug it in securely.
There is no sound with any input selector switches pressed.	The Speakers switch is not set correctly.	Set the Speakers switch correctly.
	The input cords are not connected securely.	Connect them securely.
	The speaker system is not connected correctly.	Check and secure connections.
Only CD output is possible	The CD DIRECT switch is ON.	Push the CD DIRECT switch to the OFF position.
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 − cords have been reversed at the amp or speakers.	Connect the speaker wires in the correct phase (+ and −).
There is a humming sound when playing records.	The input cords are not connected securely.	Plug the input cords in 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 mounted on a firm surface.	Change the location of the turntable or the speakers.
Turning the Bass or Treble knob does not affect the tone.	The Tone Bypass switch is on.	The Tone Bypass switch must be turned off to use the controls.
The sound suddenly goes off.	Driving speakers outside the rated impedance range at high power for an extended period has activated the speaker protection circuit.	Turning this unit off and then on will reset the speaker protection circuit. Use speakers inside the rated impedance range.
	There is a malfunction in the amplifier.	Consult your Yamaha dealer.

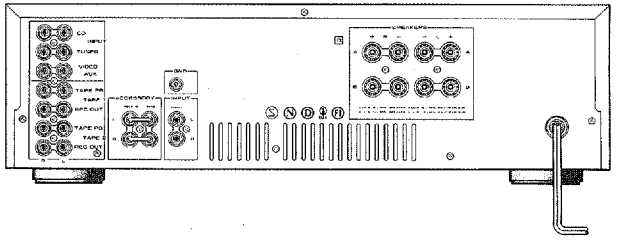
General Model



British and Australian Model



European Model

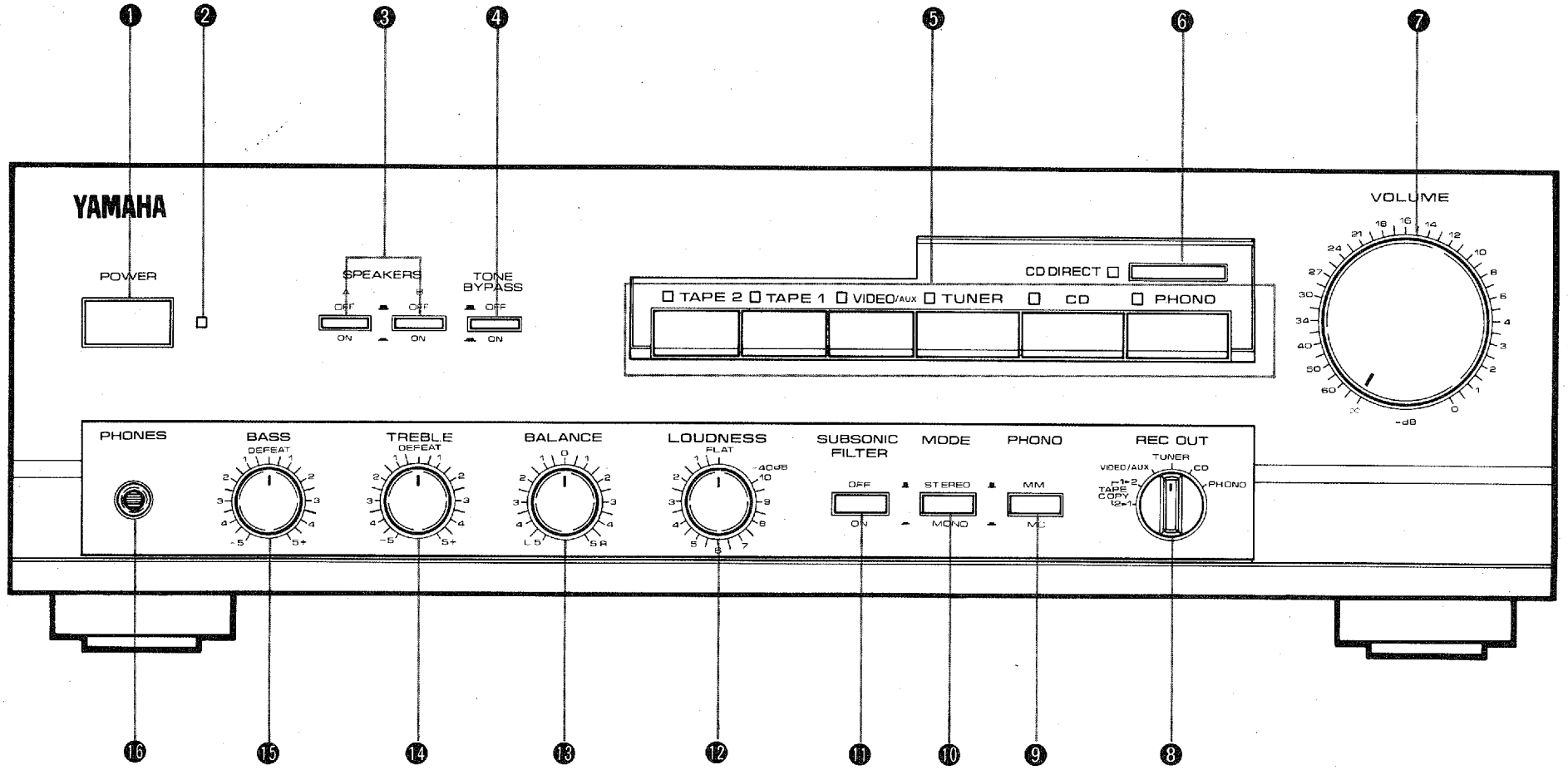


SPECIFICATIONS

Minimum RMS Output Power Per Channel
20Hz～20kHz 0.01% THD 8Ω 85W
0.015% THD 6Ω (General models) 100W
Dynamic Power Per Channel
(by IHF Dynamic Headroom Measuring Method)
8Ω/6Ω/4Ω/2Ω
General models 160W/200W/230W/250W
European, British and Australian models 140W/170W/200W/220W
DIN Standard Output Power Per Channel (European model)
1kHz 1% THD 4Ω 110W
Dynamic Headroom
8Ω 2.75dB
6Ω 3.01dB
IEC Power (European model)
1kHz 0.01% THD 8Ω 100W
Power Bandwidth
0.03% THD 42.5W 8Ω ..... 10Hz～50kHz
Damping Factor
1kHz 8Ω ..... ≥80
Input Sensitivity/Impedance
Phono MC 160μV/220Ω
MM 2.5mV/47kΩ
CD/TUNER/VIDEO·AUX/TAPE 150mV/47kΩ
Input Sensitivity (New IHF) (General model)
Phono MC 19μV
MM 0.27mV
CD/VIDEO·AUX/TUNER/TAPE 15.5mV
Maximum Input Signal 1kHz
0.01% THD Phono MC 10mV
MM 150mV
Output Level/Impedance
REC OUT 150mV/220Ω
Headphone Jack Rated Output/Impedance
0.01% THD RL＝8Ω 0.5V/120Ω
Frequency Response
CD/TUNER/VIDEO·AUX/TAPE ..... 20Hz～20kHz, ±0.5dB
RIAA Equalization Deviation
Phono MC ..... ±0.5dB
MM ..... 20Hz～20kHz, ±0.3dB
Total Harmonic Distortion 20Hz～20kHz
Phono MC to REC OUT, 3V 0.007%
MM to REC OUT, 3V 0.003%
Intermodulation Distortion
CD/TUNER/VIDEO·AUX/TAPE Rated Output/8Ω 0.01%
Signal to Noise Ratio (IHF-A-Network)
Phono MC (500μV Input Shorted) 76c
MM (5mV Input Shorted) 92c
CD/TUNER/VIDEO·AUX/TAPE (Shorted) 102c
Signal to Noise Ratio (New IHF)
Phono MC 75c
MM 75c
CD/VIDEO·AUX/TUNER/TAPE 85c
Residual Noise (IHF-A-Network) 140μ
Channel Separation Vol －30dB
Phono MC, MM Input shorted 1kHz/10kHz 75dB/60c
CD/TUNER/VIDEO·AUX/TAPE Input 5.1kΩ 75dB/60c
terminated 1kHz/10kHz
Tone Control Characteristics
Bass boost/cut ..... ±10dB (20H
turnover frequency 350H
Treble boost/cut ..... ±10dB (20kH
turnover frequency 3.5kH
Filter Characteristics
Subsonic ..... 15Hz －12dB/o
Continuous Loudness Control (Level Related Equalization)
Attenuation ..... －40dB (1kH
Gain Tracking Error
(0～－60dB) 2c
Power Supply
British and Australian models ..... AC 240V 50H
European model ..... AC 220V 50H
General model ..... AC 110/120/220/240V 60/50H
Power Consumption
British and Australian models 430
European model 430
General model 220
AC Outlets (General models)
Switched x 2 ..... 150W ma
Unswitched x 1 ..... 200W ma
Dimensions (W x H x D) .....435 x 141 x 332m
(17.1 x 5.5 x 13.1 i
Weight 7.8l
(17lbs. 3oz

* *Specifications subject to change without notice.*

FRONT PANEL


1
2
3
4
5
6
7
YAMAHA
POWER
SPEAKERS
OFF
OFF
ON
ON
TONE BYPASS
OFF
ON
CD DIRECT
TAPE 2
TAPE 1
VIDEO/AUX
TUNER
CD
PHONO
VOLUME
-dB
PHONES
BASS
DEFEAT
TREBLE
DEFEAT
BALANCE
LOUDNESS
FLAT
-40dB
SUBSONIC FILTER
OFF
ON
MODE
STEREO
MONO
PHONO
MM
MC
REC OUT
TUNER
VIDEO/AUX
CD
PHONO
TAPE COPY
16
15
14
13
12
11
10
9
8

YAMAHA

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10-1, Nakazawa-cho, Hamamatsu, 430 Japan
VH27070-0 BWgW,O Printed in Japan