YAMAHA MX-50

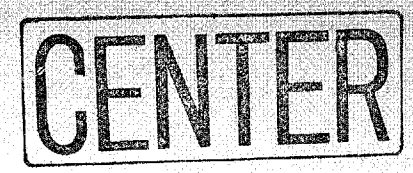
Natural Sound Stereo Power Amplifie

Amplificateur stéréophonique de puissance de la série "Natural Sound

Natural Sound Stereo-Endverstärke

Stereoeffektförstärkare med naturligt lju

Amplificatore di potenza stereo a suono natural



OWNER'S MANUAL **MODE D'EMPLOI** **BEDIENUNGSANLEITUNG** **BRUKSANVISNING** **MANUALE DELL'UTEN**

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Thank you for purchasing the YAMAHA MX-50 stereo power amplifier.

ABOUT THIS MANUAL

To obtain the finest performance from your new power amplifier, please read this manual carefully, keeping it handy for future reference. After you know which PRECAUTIONS to take, the section CONNECTIONS will show you how to hook up the MX-50 to your control amplifier and speakers. Operation of this power amplifier is explained under FRONT PANEL CONTROLS AND THEIR FUNCTIONS. If you have any trouble, the final section on TROUBLESHOOTING tells you what to do before contacting your YAMAHA dealer.

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IMPORTANT:
Please record the serial number of your unit in the space below.
Model: MX-50
Serial No.:

FEATURES

- ***Hyperbolic Conversion Class A Circuit***
- ***High Dynamic Power***
- ***Two-Pair Speaker Support***
- ***LED Power Level Meters***
- ***Overload Protection Circuitry***

Hyperbolic Conversion Class A Circuit

This new kind of circuitry, developed by Yamaha, eliminates the only serious drawback of previous Class A operation amplifiers. These had to switch to non-linear class AB operation above a certain load current, causing a slight deterioration in the otherwise excellent sound quality. The new Hyperbolic Conversion Class A circuit does away with this problem, allowing your Yamaha MX-50 to deliver pure class A operation constantly, without switching or cut-off, over its entire power range.

PRECAUTIONS

OWNER'S MANUAL

Keep this manual in a safe place for future reference.

LOCATION

Avoid placing your MX-50 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 U.K.

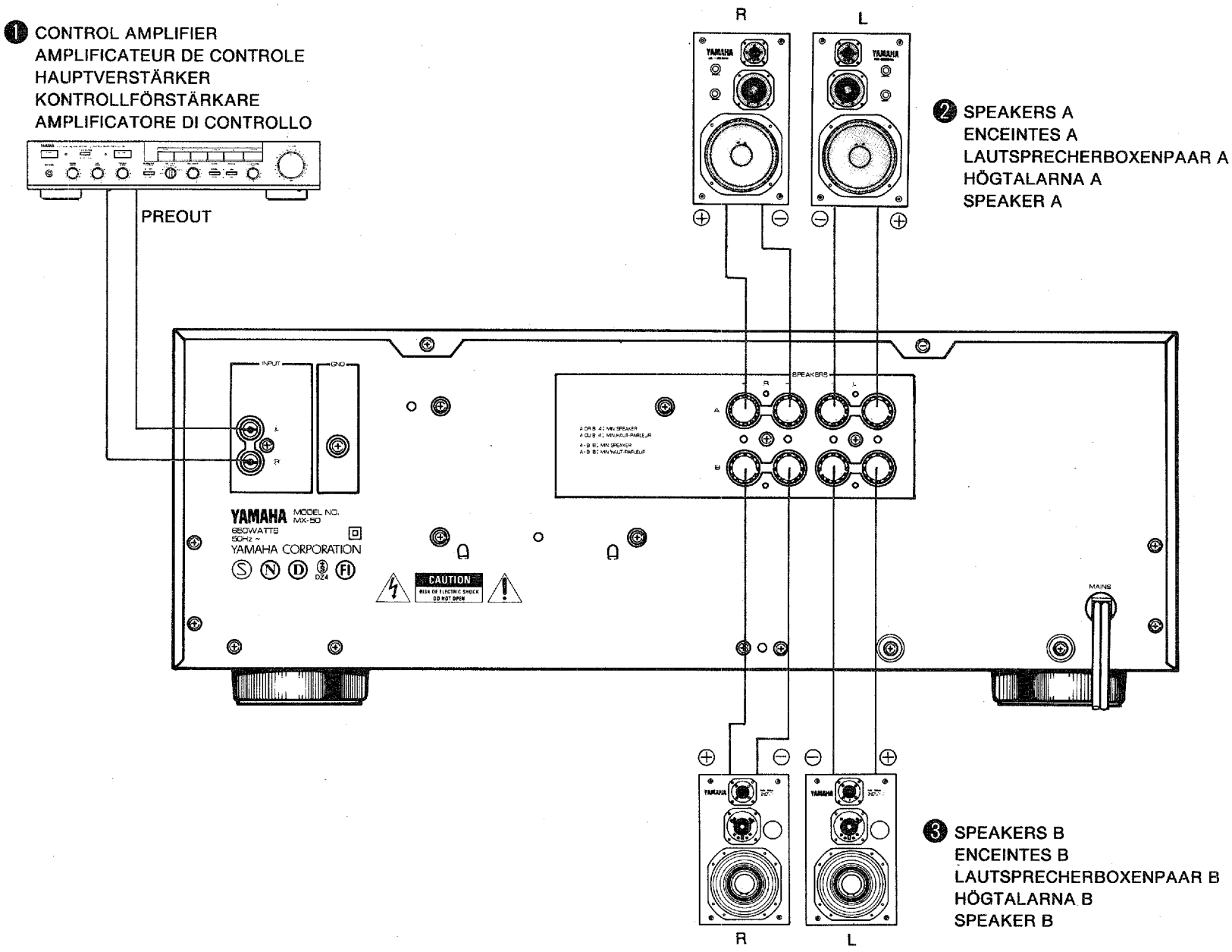
THE WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL

Brown: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspon with the coloured markings identifying th terminals in your plug, proceed as follows The wire which is coloured BLUE must b connected to the terminal which is marke with the letter N or coloured BLACK. Th wire which is coloured BROWN must be connected to the terminal which is marke with the letter L or coloured RED.

CONNECTION DIAGRAM — ANSCHLUBDIAGRAMM — SCHEMA DI COLLEGAMENTO
SCHEMA DES CONNEXIONS — KOPPLINGSDIAGRAMMET



CONNECTIONS

The connection diagram is provided on page 3.

❶ CONTROL AMPLIFIER
❷ SPEAKERS A
❸ SPEAKERS B

NOTE:

Before making or altering any of the connections described below, be sure to turn off the power of the MX-50.

CONNECTING A CONTROL AMPLIFIER

Making sure that the control amplifier is also turned off, connect the output jacks of your control amplifier to the corresponding INPUT jacks on the rear panel of this unit. Always check that

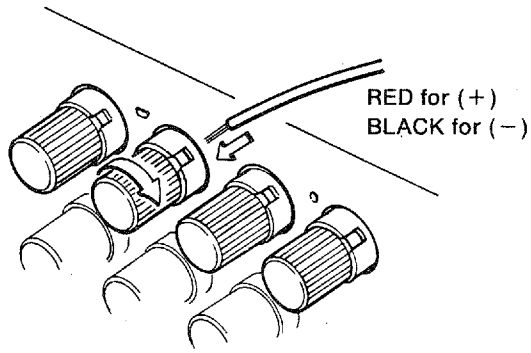
a) the RCA plugs of the connecting cord are clean,
b) the left and right channels of both units correspond,
c) connections are secure, and
d) both units are properly grounded.

CONNECTING SPEAKERS

If possible, use only speakers indicated on the rear panel next to the SPEAKERS terminals and with adequate power handling capacity. Driving speakers with extremely low impedance (or two 4 ohm pairs) at full power may cause the protection circuit to activate.
When connecting the speaker cords, observe the "+" and "−" markings on the backs of the speakers and MX-50. If the "+" and "−" polarities are reversed, the sound will be unnatural and lack bass.

Speaker cords should be cut as short as possible. Do not coil up excess cord or bundle it with cables from other components.

- Strip approximately 10 mm (3/8") insulation from the ends of the speaker cords: Partly unscrew the plastic wire holders. Insert the stripped ends of the speaker cords as shown and retighten the holders.



FRONT PANEL CONTROLS AND THEIR FUNCTIONS

The Front Panel illustration is provided on page 32.

❶ **SPEAKERS selector switches:** Allow you to select one or, by setting both switches to ON, both of the speaker pairs connected to the A and B terminals.

❷ **METER switch:** Activates the power peak meter. This display is not illuminated when the METER switch is in the OFF position.

❸ **LEFT and RIGHT LEVEL controls:** These give you independent control over the power output levels to the L and R speakers. This allows you to preset speaker balance for optimum stereo imaging. These controls can also serve to protect speakers with power handling capacity lower than this amplifier's rated output.

❹ **POWER switch and indicator:** Pressing this switch turns power on, causing the POWER indicator to light. To turn the unit off, press again.

❺ **PROTECTION indicator:** Lights for several seconds after power is turned on, showing that the internal protection circuitry is currently activated. This mutes the output signal to the speakers, preventing the loud noise otherwise heard when switching on the amplifier.

❻ **Power peak meter:** Indicates the power output on a logarithmically compressed scale from 0.06 to 900 watts, independently for the left and right output channels. Readings are accurate for 8 ohm speakers only.

TROUBLESHOOTING

Before assuming that your amplifier is faulty, check the following list. If you still have any doubts or questions, contact your nearest YAMAH dealer.

Symptom	Possible cause	Remedy
No power even when the POWER switch is ON.	● The power cord is not plugged in securely.	● Plug in securely.
No sound is heard from the left and/or right speaker(s).	● The speaker cords are not properly connected.	● Check speaker connections and correct them.
	● Either or both LEVEL controls are set to $-\infty$dB.	● Adjust the appropriate LEVEL control(s).
	● The cords from the control amplifier are not secure.	● Connect them securely.
	● The control amp's balance is set to the extreme left or right.	● Adjust the control amp's balance control.
The sound ceases suddenly, and the PROTECTION indicator is lit.	● The speaker protection circuit has activated.	● Turn power OFF, then ON again to reset the speake protection circuit. Also see CONNECTING SPEAK ERS on p. 4.
	● There is a malfunction in the amplifier.	● Consult your YAMAHA dealer.
Unnatural sound lacking bass.	● The speaker polarities are reversed.	● Connect the speaker wires with the correct + an − polarity.

SPECIFICATIONS

Minimum RMS Output Power Per Channel		
20Hz ~ 20kHz	0.003% THD, 8 ohms	125W
	0.007% THD, 6 ohms	150W
Dynamic Power Per Channel		
(by IHF Dynamic Headroom measuring method)		
8 ohms		175W
6 ohms		220W
4 ohms		290W
2 ohms		390W
1 ohm		420W
DIN Standard Output Power Per Channel		
1kHz, 1% THD, 4 ohms		215W
Power Band Width		
0.03% THD 62.5W, 8 ohms		10Hz ~ 60kHz
Damping Factor		
1kHz, 8 ohms		70
Input Sensitivity/Impedance		
MAIN IN		1.14V/60kΩ
Frequency Response	(20Hz ~ 20kHz) +0, −0.2dB	

Total Harmonic Distortions (20Hz ~ 20kHz)	
MAIN IN to Sp Out, 62.5W/8Ω	0.003%
Intermodulation Distortion	
Rated Output/8 ohms	0.003%
Signal to Noise Ratio (IHF-A-Network)	
MAIN IN (shorted)	123dB
MAIN IN (5.1kΩ terminated)	119dB
Residual Noise (IHF-A-Network)	16μV
Channel Separation (Vo1-30dB)	
Input shorted, terminated,	
1kHz/10kHz	89dB/70dB
Power Supply	
	Europe AC220V, 50Hz
	U.K. AC240V, 50Hz
Power Consumption	650W
Dimentions (W x H x D)	435 x 165 x 420mm
	(17-1/8" x 6-1/2" x 16-47/64")
Weight	13kg

Specifications subject to change without notice.

MX-50