Thank you for purchasing the YAMAHA M-80 stereo power amplifier.

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IMPORTANT
Please check your unit’s serial number on the rear of the cabinet and record it in the space below.

Model: M-80
Serial No.: 

Keep this owner’s manual in a safe place for future reference.

WARNING
To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
CAUTION (PREPARED IN ACCORDANCE WITH UL STANDARD 1270)

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 its operating instructions should be adhered to.

4. Follow Instructions — All operating and other 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.

7. Wall or Ceiling Mounting — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

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 location or installation, such as a built-in installation, 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, stoves, or other appliances 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. Nonuse 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 into and liquids do not spill into the inside of the appliance.

15. Damage Requiring Service — The appliance should be serviced by qualified service personnel when:

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

16. Servicing — The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
CAUTION: READ THIS BEFORE OPERATING YOUR M-80

1. To ensure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.

2. Install your M-80 in a cool, dry, clean place—away from windows, heat sources, and too much vibration, dust, moisture or cold. Avoid sources of hum (transformers, motors). To prevent fire or electrical shock, do not expose to rain and water.

3. Do not operate the amplifier upside-down. It may overheat, possibly causing damage.

4. Never open the cabinet. If a foreign object drops into the set, contact your dealer.

5. Do not place records or other objects on top of the amplifier; this will block the ventilation holes, cause the internal temperature to rise and may result in a failure.

6. Do not use force on switches, knobs or cords. When moving the set, first turn the M-80 off. Then gently disconnect the power plug and the cords connecting to other equipment. Never yank the cords.

7. Do not attempt to clean the M-80 with chemical solvents; this might damage the finish. Use a clean, dry cloth.

8. Be sure to read the "troubleshooting" section on common operating errors before concluding that your M-80 is faulty.

9. Do not connect audio equipment to the AC outlets on the rear panel if that equipment requires more power than the outlets are rated to provide.
• Make all connections securely. Insecure connections can cause noise or loss of sound output.
• When connecting the power amplifier to a control amp, make sure that the power is turned OFF.

[Diagram showing connections between a control amplifier and speaker systems.]

This is the Ground terminal. If hum or noise occurs, try grounding the amplifier or connecting this terminal to the control amp's Ground terminal.

Power can be supplied to other components with a combined power consumption of up to 200 watts. This outlet is unswitched—it is unaffected by the position of the Power On/Off switch.

Connect to an AC power outlet. Do not plug the M-80 into the AC outlet of your control amplifier, because the peak current drawn by the M-80 can be several times the normal operating current—when it is first turned on or when the input signal is very large.
Stripping approximately 3/8" (10 mm) insulation from the speaker cord (whatever their gauge), insert exposed wire in rear panel connector terminals. For heavy-gauge wire, use the terminals' large apertures. For light, standard-gauge wire, use either the large apertures or the small apertures at top or bottom of housing, depending on convenience. Make sure that at least 1/16" (1.6 mm) of insulation is inside the housing. Rotate connector housing one half turn clockwise (or until firm). The cord will be locked into position. If these connections are faulty, no sound will be heard from the speakers.

**OPTIONS FOR SPEAKER CONNECTIONS**

Speakers connected to A will be in parallel with speakers connected to B and/or C. Speakers connected to B and C will be in series with each other. Read “Connecting Up to Three Speaker Pairs” for full information.

**CONNECTING UP TO THREE SPEAKER PAIRS—INDIVIDUALLY, IN PARALLEL OR IN SERIES**

A maximum of three sets of speakers can be connected to the M-80. You have a choice of four options:

(1) to connect one pair of speakers to terminals A, B, or C.
(2) to connect two pairs of speakers in parallel (one pair at A and another at either B or C).
(3) to connect two pairs of speakers in series (one pair at B and another at C).
(4) to connect three pairs of speakers at A, B and C.

In making any chosen hookup, observe the following minimum speaker load impedances:

(1) One speaker pair—
   A or B or C: 4 ohm minimum per speaker

(2) Two speaker pairs in parallel—
   A + B or A + C: 8 ohm minimum per speaker

(3) Two speaker pairs in series—
   B + C: 2 ohm minimum per speaker

(4) Three speaker pairs—
   A + B + C: 8 ohm minimum for A
   4 ohm minimum for B and C

In connecting the R and L speaker cords, observe the “+” and “−” markings. If the “+” and “−” wires are reversed, the sound will be unnatural and will lack bass. Speaker cords should be cut as short as possible; do not coil up excess wire on the floor. Also, do not bundle with cords from other system components.
1. **POWER SWITCH**
Before pushing this switch to turn the power On, turn the Volume control of the control amp to the lowest position.

2. **PROTECTION INDICATOR**
After the Power Switch is turned On, the Protection Indicator will light. To prevent sending a loud 'pop' noise through the speakers, the built-in protection circuitry mutes output for several seconds after power is turned on. While the Protection Indicator is lit, no signal is passed to the speakers. If the Protection Indicator lights and output ceases during normal play, disconnect the plug from the AC outlet at once. Your speaker connections may be faulty. Turn off power to all audio components and check connections. Then restart the system at low volume.

3. **AUTO CLASS A SWITCH**
Press this switch to activate the Auto Class A circuitry. The Auto Class A indicator will light. This circuitry provides pure Class A power amplification for output with low power requirements. To provide high power for transient peaks, the circuit shifts to Class AB operation while the peak lasts. When the switch is off, this unit operates as CLASS AB.

4. **RANGE SELECTION SWITCH**
When you push this button, the Range Indicator lights, and the Peak Power Indicator level output reading becomes a tenfold conversion. Then 2 watts of actual output is shown on the scale as 20 watts. Pushing the button again returns the Peak Power Indicator to the normal scale.

5. **PEAK POWER INDICATORS**
When the Power Switch is turned On, the Peak Power Indicators will light. The left and right bar indicators correspond to the left and right output channels, and indicate power output on a logarithmically compressed scale from 0.06 W to 900 W. Power output level readings are accurate for the impedance load chosen with the Load Selector Switches—2, 4, or 8 ohms.
**LOAD SELECTOR**
These three switches adjust meter readout for 2, 4 or 8 ohm speaker load impedance. Select according to your preferred speaker configuration. To work out combined impedance of your speaker sets, use the following formula:

\[(X \times Y) / (X + Y) = \text{combined impedance}\]

Example: \((8 \times 8) / (8 + 8) = 4 \text{ ohms}\)

If three speaker sets A, B and C are connected, then \(A = X\) while \(B + C = Y\); now apply the formula above. Set the Load Selector switches to the position closest to the combined impedance.

**INPUT LEVEL CONTROL**
These controls give you independent L and R channel control over the input levels of the M-80. This lets you compensate for variances between different speaker pairs, or change the effect by modifying the output level between channels. It can also serve to protect speakers with lower power handling capacity.

**SPEAKER SELECTION SWITCHES**
The chart below shows the effects of the A, B, and C speaker switches on all the possible speaker configurations of the M-80.

*If the Protection indicator is lit, no signal will be passed to the speakers regardless of the Speaker Selection Switch mode.*

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**ATTACHING THE RACK MOUNTING ADAPTORS (Optional)**
1) Remove the screws on each side of the unit as shown in the diagram and take off the covers which conceal the adaptor mounting holes.
2) Verify that the resulting mounting centers of the adaptors will match the width of your rack, then attach the adaptors firmly with screws.

* Using these adaptors allows the unit to be used with EIA standard racks.

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**SPEAKER SWITCH SETTING CHART**

<table>
<thead>
<tr>
<th></th>
<th>A only</th>
<th>B only</th>
<th>C only</th>
<th>A+B</th>
<th>A+C</th>
<th>B+C</th>
<th>A+B+C</th>
</tr>
</thead>
<tbody>
<tr>
<td>A SWITCH</td>
<td>ON</td>
<td>—</td>
<td>—</td>
<td>ON</td>
<td>ON</td>
<td>—</td>
<td>ON</td>
</tr>
<tr>
<td>B SWITCH</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>C SWITCH</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

— = ON or OFF (Any position)
## Troubleshooting

Before assuming that your amplifier is faulty, 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, get in touch with your nearest Yamaha dealer.

<table>
<thead>
<tr>
<th>Fault</th>
<th>Cause</th>
<th>Cure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power is not supplied even when the Power switch is turned on.</td>
<td>The power plug is not securely plugged in.</td>
<td>Plug it in securely.</td>
</tr>
<tr>
<td>No sound is heard from one, two or various speakers.</td>
<td>The cords from the preamplifier to the M-80 are not connected securely.</td>
<td>Connect them securely.</td>
</tr>
<tr>
<td>The sound suddenly goes off. The PROTECTION indicator is lit.</td>
<td>The speaker protection circuit has activated because of DC flowing in the speaker circuit.</td>
<td>Turning the M-80 off and then on will reset the speaker protection circuit.</td>
</tr>
<tr>
<td>The control amp is leaking DC into its output.</td>
<td>Use a control amp with no DC offset.</td>
<td></td>
</tr>
<tr>
<td>The sound suddenly goes off.</td>
<td>Driving speakers outside the rated impedance range at high power for an extended period has activated the speaker protection circuit.</td>
<td>Turning the M-80 off and then on will reset the speaker protection circuit.</td>
</tr>
<tr>
<td>There is a malfunction in the amplifier.</td>
<td>Use speakers inside the rated impedance range.</td>
<td></td>
</tr>
<tr>
<td>Unnatural bass with no ambience.</td>
<td>The speaker polarities are reversed.</td>
<td>Correct the speaker polarities.</td>
</tr>
</tbody>
</table>

## Specifications

### Continuous Power Per Channel
- 20 Hz – 20 kHz: 0.005% THD 0 dB: 250 W
- 0.007% THD 6 dB: 290 W
- 0.020% THD 4 dB: 330 W

### Dynamic Power
- 1 kHz: 0.04% THD 0 dB: 330 W
- 10 kHz: 0.06% THD 0 dB: 300 W

### Total Harmonic Distortion
- MAIN IN to SP out, 80 W: 0 W: 0.002% (0.003%)
- 10 Hz – 100 kHz: 10 Hz – 100 kHz: 0.003% (0.005%)

### Damping Factor
- (Speaker A, 1 kHz, 80 W): 250
- (Speaker B, 1 kHz, 80 W): 250

### Frequency Response (20 Hz – 20 kHz)
- +4, –0.1 dB

### Input Sensitivity/Impedance
- 15 V/20 kΩ

### Signal-to-Noise Ratio (IHF-A Network)
- (MAIN IN Shorted, 5.1 kHz): 127 dB/119 dB

### Channel Separation
- Input shorted
- 40 Hz: 106 dB
- 1 kHz: 89 dB
- 10 kHz: 76 dB

### Power Supply
- AC 120 V/60 Hz

### Power Consumption
- 600 W

### Dimensions (W x H x D)
- 435 x 185 x 425 mm

### Weight
- 23 kg
  (50 lbs. 10 oz.)

Specifications subject to change without notice.

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Since 1887

Yamaha

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