

• **T**hank you for purchasing the ONKYO M-5160/5140 Amplifier. • Please read this manual thoroughly before connecting up your new amplifier, and turning it on. • Following the instructions in this manual will enable you to obtain the utmost listening enjoyment from your new M-5160/5140. • Please keep the manual for later reference.

CONTENTS

Features	1
Important safeguards	2
Precautions	2
System connections	3
Front panel facilities	4
Protection circuits	4
Troubleshooting guide	5
Specifications	5

Features

- **M-5160: FTC Power. 150W/Channel, 8 ohms, 0.09% THD (Dynamic Power 210 watts, 8 ohms)**
M-5140: FTC Power. 105W/Channel, 8 ohms, 0.09% THD (Dynamic Power 155 watts, 8 ohms)
 The M-5160/5140's ample power supply allows you to drive a wide range of today's high quality analog and digital audio devices—the ideal base component to center your total audio visual system around.
- **Delta Power Supply**
 The Delta Power Supply dramatically reduces interference caused from modulation noise in the charging current. As the Delta configuration suppresses both low and high level signal noises, the lower-end range of the amplifier is greatly extended, to become more than 20dB wider than the range of a conventional amplifier of the same power class. The latest technology for your home.
- **Independent Speaker Selection**
 The M-5160/5140 can drive two speaker systems independently or simultaneously. This feature allows you to drive two remotely located sets of speakers together, or to drive a dual set of speakers in a single listening environment—for increased listening versatility.
- **Easy to Handle**
 The M-5160/5140 front panel provides convenient handgrips for handling with ease when installing into your audio rack.

CAUTION

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."



- The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appli-

"WARNING"

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

- For models having power cords with a polarized plug.

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.

- Sur les modèles dont la fiche est polarisée.

ATTENTION: POUR PRÉVENIR LES CHOCES ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PRO-LONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT. SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉES A FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Trouble shooting guide

If the M-5160/5140 fails to function normally, first check the following points before contacting your Onkyo dealer. If the problem is not solved after going through the following list, unplug the power cord and contact your Onkyo authorized service center.

Problem	Cause	Remedy
No power.	<ul style="list-style-type: none"> ● Power cord plug is not properly connected to AC outlet (switched) on the preamplifier. ● Preamplifier power is off. 	<ul style="list-style-type: none"> ● Insert plugs firmly in preamplifier rear panel AC outlet. ● Ensure preamplifier power is on.
No sound	<ul style="list-style-type: none"> ● Incomplete connections ● No input signal from preamplifier ● Incorrect speaker switch setting. ● Protective circuitry activated. 	<ul style="list-style-type: none"> ● Insert all plugs firmly into jacks. ● Check for input signal from preamplifier. ● Set speaker switch to correct setting. ● If protective circuitry is activated the protection indicator will light. Turn power off immediately, locate problem, and correct it.
Generation of hum, howling, and other noises.	<ul style="list-style-type: none"> ● Input connector cables located near source of induction noise such as a power cord or power transformer. 	<ul style="list-style-type: none"> ● Keep input connector cables away from power cords and power transformers.

Specifications

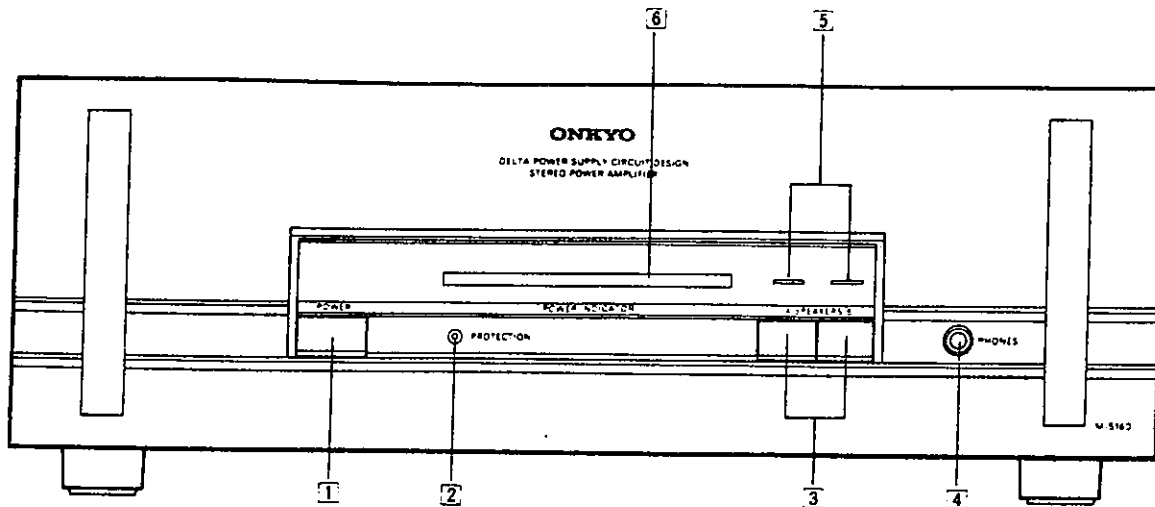
	M-5160	M-5140
Power Output:	150 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.09% THD	105 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.09% THD
Total Harmonic Distortion:	0.09% at 150 watts	0.09% at 105 watts
IM Distortion:	0.09% at 150 watts	0.09% at 105 watts
Damping Factor:	40 at 8 ohms	40 at 8 ohms
Frequency Response:	5 - 100KHz \pm 1dB	5 - 100KHz \pm 1dB
Sensitivity and Impedance:	1V/50kohms	1V/50kohms
Signal to Noise Ratio:	100dB (IHFA-202 1 watt output)	100dB (IHFA-202 1 watt output)
General		
Power Supply:	AC120V, 60Hz	AC120V, 60Hz
Dimensions (W x H x D):	435 x 158 x 286mm 17-1/8" x 6-3/16" x 11-1/4"	435 x 158 x 286mm 17-1/8" x 6-3/16" x 11-1/4"
Weight:	9.1kg, 20.1 lbs.	7.7kg, 17.0 lbs.

Specifications and features are subject to change without notice.

ONKYO CORPORATION

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Front panel facilities



1 Power Switch (POWER)

Press once to turn power on and once again to turn power off. (when power is turned on, the power indicator [6] lights.)

2 Protection Indicator (PROTECTION)

The indicator lights up for a few seconds, until the circuitry is stabilized, after the power is turned on. There will be no sound output during this warm-up period. The indicator lights again whenever the Protection circuit is activated. (See Protection Circuits on this page.)

3 Speaker Selector (SPEAKERS)

A: OFF B: OFF	All speakers off — only headphones are operating
A: ON B: OFF	Speakers A operating
A: OFF B: ON	Speakers B operating
A: ON B: ON	Both speaker systems A and B operating

NOTE:

In the "A + B" mode, the speakers are connected in series. If only one pair of speakers is connected to the M-5160/ 5140, no sound will be heard in this setting.

4 Headphone Jack (PHONES)

Stereo headphones with a standard binaural plug can be connected here.

5 Speaker Indicator

These indicators light to indicate when speaker selector switch A or B has been turned on.

6 Power Indicator (POWER INDICATOR)

Protection circuits

Protection circuits in high power amplifiers such as the M-5160/ 5140 play an important role in protecting both the speaker systems and the amplifier itself from damage. A few seconds after the power switch is turned on, a relay incorporated in the speaker output circuit produces a soft clicking sound that serves as an indication that the amplifier is ready for use.

This relay is designed to cut off the output terminals as soon as an abnormal situation (described below) occurs. If this relay is activated, the protection lamp [2] will light. If this happens, turn the power switch off immediately, locate the cause of the problem and correct it before turning the power back on.

The protective relay will be activated in the following cases:

When an excessive current reaches the speaker terminals

If an excessive current appears at the speaker terminals, the protector relay will initially switch off and on and then finally switch off altogether indicating that a problem has occurred. The problem may be due to short-circuiting of the speaker cables or it may be the result of the output power being increased when speakers of low impedance are being used. In any case, turn the power switch off immediately, locate the cause of the problem and correct it.

When DC voltage reaches the speaker terminals

If a failure occurs in the amplifier resulting in the appearance of DC voltage at the output terminals, the speakers could be damaged. Therefore, if DC voltage is detected, the relay is activated to isolate the speakers from the amplifier.

The M-5160/ 5140 is designed in such a way that both channels will be cut automatically even if trouble occurs in only one channel. Note that there is never sound from the speakers for the first few seconds after the power switch is turned on. This is not a malfunction of the unit. Some preamplifiers and tape decks generate a "pop" noise when the power is turned on. If such pop noises reach the M-5160

Important safeguards

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 in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use 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, and the like.
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 built-in installation, such as a bookcase or cabinet 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, heat registers, stoves, or other appliances (including amplifiers) 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. **Grounding and Polarization** – The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **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.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. **Damage Requiring Service** – The appliance 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 appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
17. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Precautions

1. Warranty Card

The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.

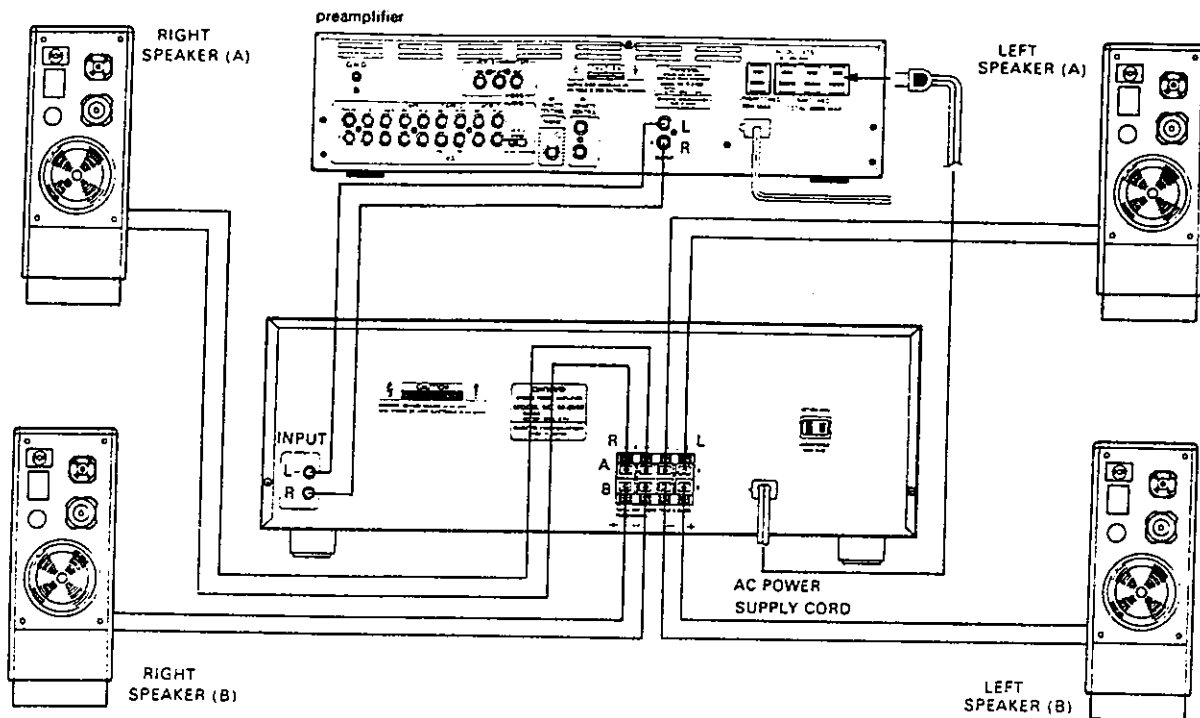
2. AC Fuse

The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your Onkyo authorized service center.

3. Care

- From time to time you should wipe off the front and rear panels and the cabinet with a mild window, ammonia cleaner or other soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.
- Handles are provided on the front panel to facilitate easy insertion and removal of the unit from your audio rack. These handles are not constructed for carrying the unit and should not be used for that purpose.

System connections



Caution: Do not plug in the power cord until all connections have been made.

Speaker Connections

When connecting speakers, proper polarity is important. Always connect the (+) terminal (red) on the amplifier to the (+) terminal on the speaker and the (-) terminal (black) on the amplifier to the (-) terminal on the speaker.

- The load impedance of each speaker system connected to this unit must be at least 8 ohms.
- When using only one speaker or when you wish to listen to monaural sound, a single speaker should never be connected in parallel to both the right and left channel terminals at once.
- Do not use unnecessarily long or extremely thin speaker leads. If the DC resistance of the speaker leads is too high, the damping factor will decrease.
- Do not bundle the input connector cables together with the speaker leads or the power cord. Doing so can produce induction hum or noise.

Connecting Speaker Leads to the Speaker Terminals

1. Strip off the insulation about 15mm back from the end of the wire.
2. When using stranded wire, twist it so that the separate wires will not come unraveled.
3. Press the speaker terminal lever, insert the wire in the hole and release the lever to attach each speaker lead.
4. Be sure to avoid short circuits in the speaker connections.

