

**ONKYO®**

## **2 Channel Amplifier**

***M-282***

## **Instruction Manual**

Thank you for purchasing the Onkyo 2 Channel Amplifier.

Please read this manual thoroughly before making connections and plugging in the unit.

Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new 2 Channel Amplifier. Please retain this manual for future reference.

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# Features

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## WIDE RANGE AMPLIFIER TECHNOLOGY (WRAT)

WRAT virtually eliminates the adverse effects of counter-electromotive force by:

- 1) applying an uncommonly low amount of NFB (negative feedback),
- 2) using carefully selected, high-tolerance, wide range parts in all critical sections, and
- 3) incorporating innovative circuit topology based upon decades of high-end amplifier design experience — the final result is flat response beyond 100 kHz.

## AUTO POWER ON/OFF FUNCTION

You can turn on and off the M-282 via a signal input to the AUDIO IN jacks or 12V TRIGGER IN jack.

## AUDIO IN/OUT LINK FUNCTION

The signal inputs from the AUDIO IN jacks are output from the AUDIO OUT jacks. When used as a 2 channel amplifier in a multi room configuration, you can connect several M-282s to enjoy the same source in several rooms.

# Precautions

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## 1. Warranty Claim

You can find the serial number on the rear panel of this unit. In case of warranty claim, please report this number.

## 2. Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

## 3. AC Fuse

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

## 4. Care

From time to time you should wipe the front and rear panels and the cabinet with a 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, thinner, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

## 5. Power

### WARNING

BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., AC 120 V, 60 Hz) written on the rear panel.

### For Canadian models

For models having a power cord with a polarized plug:

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

### Modele pour les Canadien

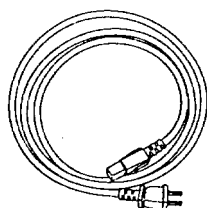
Sur les modèles dont la fiche est polarisée:

**ATTENTION:** POUR ÉVITER LES CHOCs ÉLECTRIQUES INTRODUIRE LA LAME LA PLUS LARGE DE LA FICH' DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

# Supplied accessory

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Check that the following accessory is supplied with the M-282.



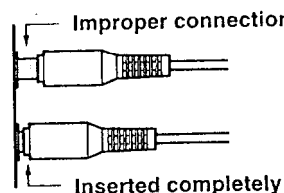
Power cord × 1

# Rear panel facilities and connections

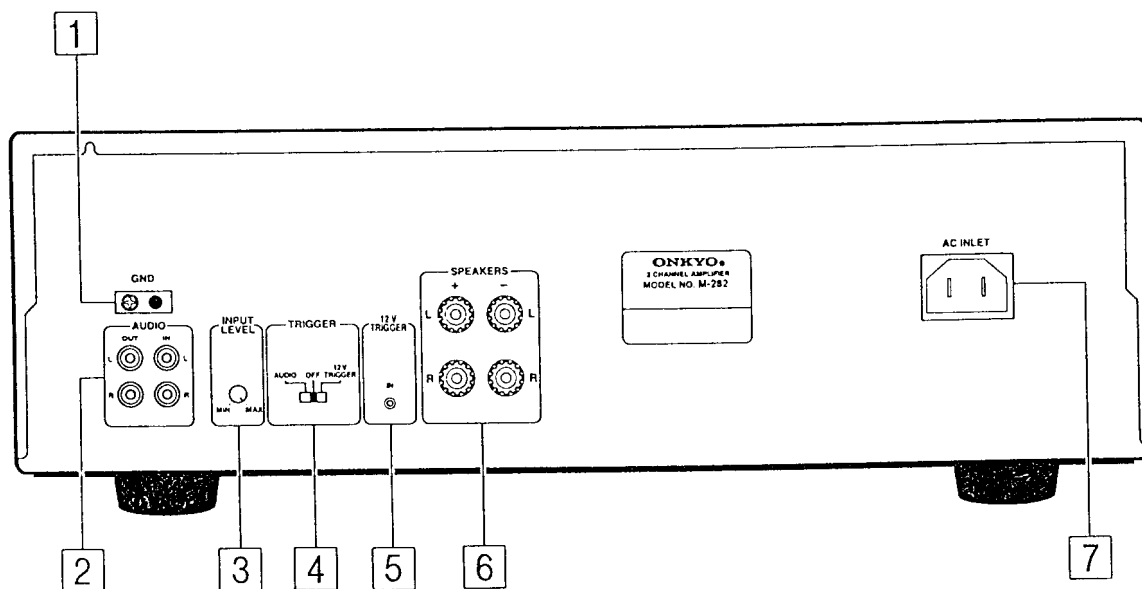
## Caution:

- Be sure to always refer to the instructions that came with the component that you are connecting.
- Do not plug in the power cord until all connections have been made.
- Do not make connections to input or output jacks while the M-282 is turned on.
- Always turn the volume of the control amplifier or preamplifier down before turning on the M-282.
- For input and output jacks, red connectors (marked R) are used for the right channel and white connectors (marked L) are used for the left channel.

- Insert all plugs and connectors securely. Improper connections can result in noise, poor performance, or damage to the equipment.



- Do not bind audio connection cables with power cords and speaker cables. Doing so may adversely affect the sound quality.



## 1 GND

Use this GND terminal for connecting the ground (or earth) wire of other component if humming noise is heard.

## 2 AUDIO IN/OUT

These are the analog audio inputs and outputs. Use an RCA-type audio connection cable to connect the output jacks of the device to the AUDIO IN jacks on the M-282. When connecting a control amplifier or preamplifier, connect the PRE OUT jacks to the AUDIO IN jacks.

If you connect the AUDIO OUT jacks of the M-282 to the AUDIO IN jacks of another M-282, the signal input at the AUDIO IN jacks of the M-282 is also output from the AUDIO OUT jacks (Audio In/Out Link Function).

If you set the TRIGGER switch to AUDIO, the power of the connected M-282 turns on automatically when an audio signal is supplied to the AUDIO IN jacks (Auto Power On/Off Function).

## 3 INPUT LEVEL

Turn this INPUT LEVEL control to adjust the input level of the signal from the AUDIO IN jacks. Normally, set to MAX.

## 4 TRIGGER

Set this TRIGGER switch before turning on the M-282.

To turn on the M-282 with the signal input from the 12V TRIGGER IN jack, set the TRIGGER switch to 12V TRIGGER. To turn on the M-282 with the signal input from the AUDIO IN jack, set the TRIGGER switch to AUDIO (Auto Power On/Off Function). If you do not use Auto Power Function, set the TRIGGER switch to OFF.

## 5 12V TRIGGER IN

If the connected control amplifiers or preamplifiers have a 12V TRIGGER output jack, use 1/8-inch 2P mini-jack cable to connect the 12V TRIGGER IN jack on the M-282. This jack works on between 5 to 12 volts DC. When the M-282 is in the standby state and the TRIGGER switch is set to 12V TRIGGER, you can switch the M-282 between the on and standby states with operations at the control amplifier or preamplifier.

## Note:

When a plug is connected to the 12V TRIGGER jack, be sure to connect the analog output jacks (or PRE OUT jacks) of the device to the AUDIO IN jacks of the M-282. Otherwise, no sound will be produced.

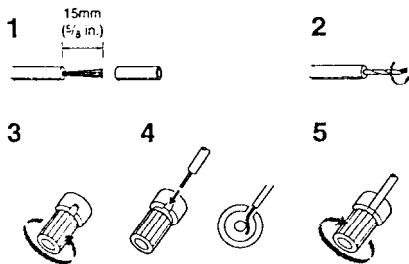
## Rear panel facilities and connections

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### SPEAKERS

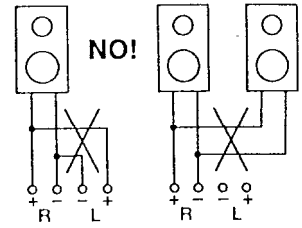
Connect the jacks on the speakers to the **SPEAKERS** terminals using the speaker cables. These terminals are compatible with banana plug connections.

- 1 Strip away 15 mm ( $\frac{3}{8}$  in.) of wire insulation.
- 2 Twist wire ends very tight.
- 3 Unscrew.
- 4 Insert wire.
- 5 Screw.



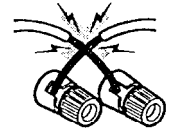
- Do not connect any devices other than speakers to these terminals.
- Be sure not to mistake the positive and negative outputs or the left and right speakers. Doing so will result in an unnatural sound space.
- Only connect speakers with an impedance of 6 ohms or higher. If a speaker with an impedance of less than 6 ohms is connected, it may damage the M-282.

- When you are using only one speaker or when you wish to listen to monaural (mono) sound, a single speaker should never be connected in parallel to both the right and left-channel terminals simultaneously.



- To prevent damage to circuitry, never short-circuit the positive (+) and negative (-) speaker wire.

NO!



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### AC INLET

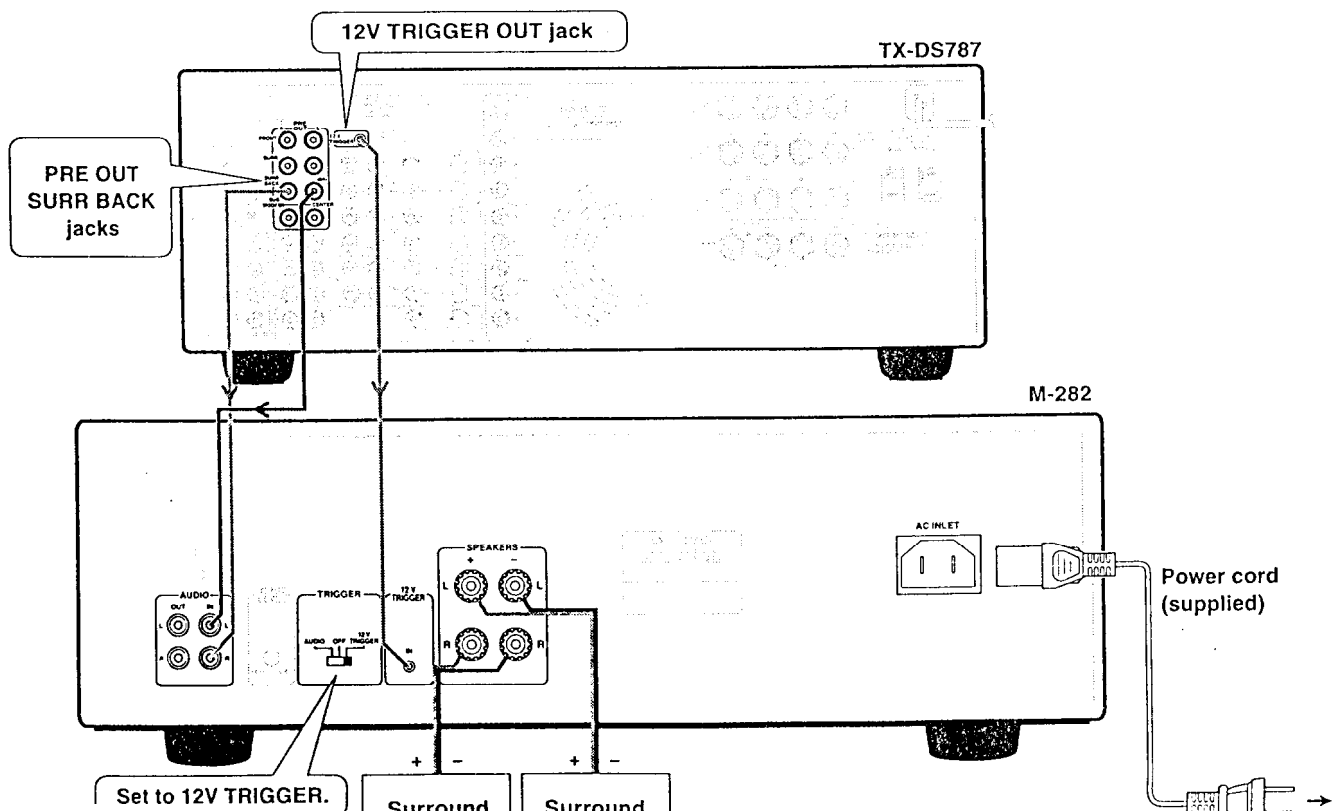
Plug the supplied power cord into this **AC INLET** and then into the power outlet on the wall.

- Do not use a power cord other than the one supplied with the M-282. The power cord supplied is designed for use with the M-282 and should not be used with any other device.
- Never disconnect the power cord from the M-282 while the other end is plugged into the wall outlet. Doing so may cause an electric shock. Always connect by plugging into the wall outlet last and disconnect by unplugging from the wall outlet first.

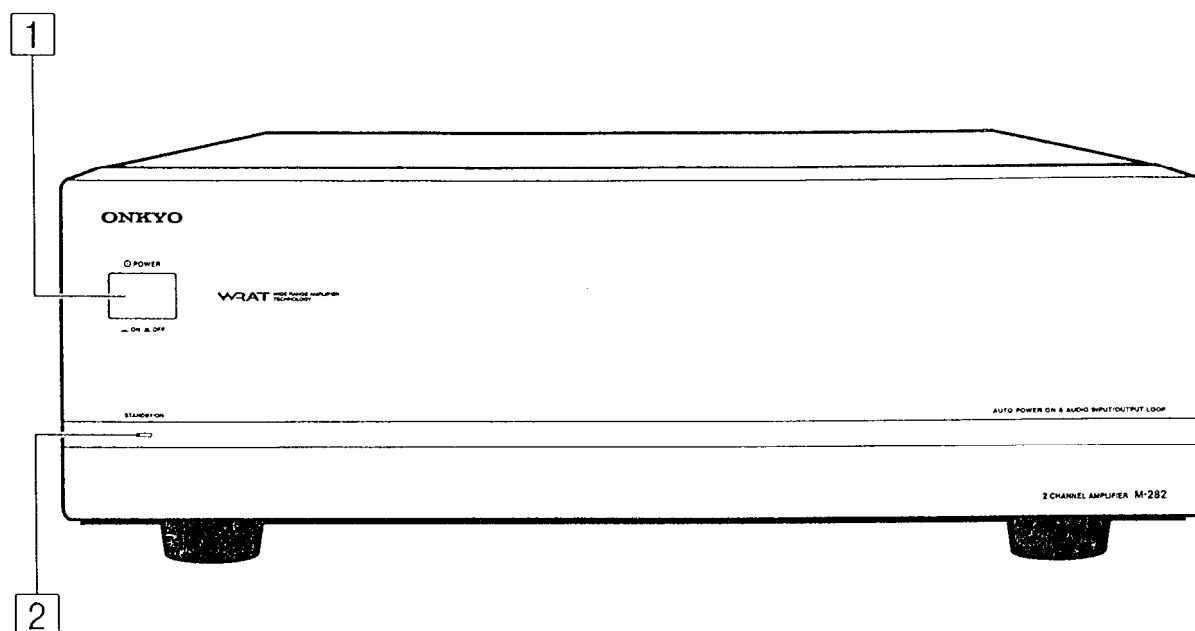
## Connection diagram

Since the many users will purchase the M-282 together with the TX-DS787, here is an explanation of how to connect the M-282 to the TX-DS787.

When connecting the M-282 to 2 channel control amplifier or preamplifier, connect the **AUDIO IN** jacks of the M-282 to the **PRE OUT FRONT** jacks of the control amplifier or preamplifier, and connect the front speakers to the **SPEAKERS** terminals of the M-282.



# Front panel facilities and connections



## 1 POWER

After plugging in the power cord into the rear panel and wall outlet, pressing this switch connects the M-282 to the AC mains. The function of this switch differs depending on the setting of the TRIGGER switch on the rear panel. Before turning on the power, be sure to set the TRIGGER switch. Besides, before turning on the power, make sure all cables are properly connected.

The TRIGGER switch is factory set to OFF.

### When the TRIGGER switch is set to OFF

Pressing the POWER switch turns on the M-282. The STANDBY/ON indicator lights orange after flashing red for 5 seconds.

Press the POWER switch again to turn off the M-282.

### When the TRIGGER switch is set to 12V TRIGGER

If no signal is supplied to the 12V TRIGGER IN jack, pressing the POWER switch enters the standby state and the STANDBY/ON indicator lights red.

If 12V DC is supplied to the 12V TRIGGER IN jack, pressing the POWER switch turns on the M-282 and the STANDBY/ON indicator lights orange after flashing red for 5 seconds.

If the M-282 is in the standby state, the M-282 turns on automatically when 12V DC is supplied to the 12V TRIGGER IN jack.

When the signal input to the 12V TRIGGER IN jack is interrupted, the indicator lights red and the M-282 enters standby state (Auto Power On/Off Function).

Press the POWER switch to turn off the M-282.

### When the TRIGGER switch is set to AUDIO

If no signal is supplied to the AUDIO IN jacks, pressing the POWER switch enters the standby state and the STANDBY/ON indicator lights red after flashing red for 5 seconds.

If an audio signal is supplied to the AUDIO IN jacks, pressing the POWER switch turns on the M-282 and the STANDBY/ON indicator lights orange after flashing red for 5 seconds.

If the M-282 is in the standby state, the M-282 turns on automatically when an audio signal is supplied to the AUDIO IN jacks.

When the signal input to the AUDIO IN jacks is not supplied for more than 4 minutes, the indicator turns to red and the M-282 enters standby state (Auto Power On/Off Function).

Press the POWER switch to turn off the M-282.

### Note:

You cannot use the Auto Power On Function when the power is turned off. To use the Auto Power On Function, leave the M-282 in the standby state once the M-282 enters the standby state.

## 2 STANDBY/ON indicator

The STANDBY/ON indicator lights red when the M-282 is in the standby state and lights orange when the M-282 is turned on.

# Operations

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To listen to music or view your favorite movies, follow the operations below.

The procedures given below assume that the other system components are already connected. (For example, that the source components are already connected to the control amplifier or the preamplifier.)

## 1. Lower the volume at the control amplifier or preamplifier.

Lower the volume of the control amplifier or preamplifier to the minimum so that when the M-282 is turned on, you do not hear loud unwanted sounds.

## 2. Select the input on the control amplifier or preamplifier.

Select the proper input on the control amplifier or preamplifier.

## 3. Slowly increase the volume of the control amplifier or preamplifier.

Now all that remains is to control the control amplifier or preamplifier and the other connected system components to enjoy your music or movies.

# Troubleshooting guide

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## No power.

- The power cord is disconnected.
  - Connect the power cord.
- The setting of the TRIGGER switch is wrong.
  - Set the TRIGGER switch to the appropriate position.
- With the TRIGGER switch set to a position other than OFF, the POWER switch is pressed again immediately after turning the power off.
  - Be sure to leave more than 3 seconds before turning the power on again.

## Power turns on but no sound.

- Bad connections or wiring.
  - Check connections, speaker cables, etc.
- Amplifier protection circuitry has been activated.
  - Contact your Onkyo Service Center.
- The INPUT LEVEL control is set to MIN.
  - Turn the INPUT LEVEL control to adjust the input level.

## The STANDBY/ON indicator does not light when the POWER switch is pressed.

- Bad connections or wiring.
  - Check if the power cord is properly connected. If the indicator still does not light, turn off the M-282, disconnect the power cord, and contact your Onkyo Service Center.

## The STANDBY/ON indicator flashes red for more than 7 seconds when the POWER switch is pressed.

- A malfunction.
  - Press the POWER switch to turn off the M-282. After 3 seconds, press the POWER switch again to turn on the M-282. If the indicator still flashes, turn off the M-282, disconnect the power cord, and contact your Onkyo Service Center.

## No sound from the speaker, or at very low volume.

- Bad connections or wiring.
  - Check connections, speaker cables, etc.
- The INPUT LEVEL control is set to MIN.
  - Turn the INPUT LEVEL control to adjust the input level.
- The settings on the control amplifier or preamplifier are wrong.
  - Check the settings on the control amplifier or preamplifier.

## The left and right sounds are unbalanced or reversed.

- Bad connections or wiring.
  - Check connections, speaker cables, etc.
- The polarity of the speaker cable is wrong.
  - Check the polarity of the speaker cable.

# Specifications

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## AMPLIFIER SECTION

|                                  |                                                                                                                                                                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Output:                    | 100 Watts per channel min. RMS at 8 ohms, both channel driven from 20 to 20,000 Hz with no more than 0.08 % total harmonic distortion.<br>125 Watts per channel min. RMS at 6 ohms, both channel driven from 1 kHz with no more than 0.1 % total harmonic distortion. |
| Dynamic Power Output:            | 2 × 140 Watts at 8 ohms                                                                                                                                                                                                                                               |
| Total Harmonic Distortion:       | 0.08 % at rated power                                                                                                                                                                                                                                                 |
| IM Distortion:                   | 0.08 % at rated power                                                                                                                                                                                                                                                 |
| Damping Factor:                  | 100 at 8 ohms                                                                                                                                                                                                                                                         |
| Input Sensitivity and Impedance: | 1 V, 50 kohms                                                                                                                                                                                                                                                         |
| Output Level and Impedance:      | 1 V, 10 kohms                                                                                                                                                                                                                                                         |
| Rated Speaker Impedance:         | 6 ohms MIN                                                                                                                                                                                                                                                            |
| Frequency Response:              | 10 Hz – 100 kHz, ±1 dB                                                                                                                                                                                                                                                |
| Signal-to-Noise Ratio:           | 110 dB (IHF A, 0.5 V input)                                                                                                                                                                                                                                           |

## GENERAL

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Power Supply:           | AC 120 V, 60 Hz                                     |
| Power Consumption:      | 2.5 A                                               |
| Dimensions (W × H × D): | 435 × 145 × 316 mm<br>17-1/8" × 5-11/16" × 12-7/16" |
| Weight:                 | 8.5 kg, 18.7 lbs.                                   |

Specifications and features are subject to change without notice.

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