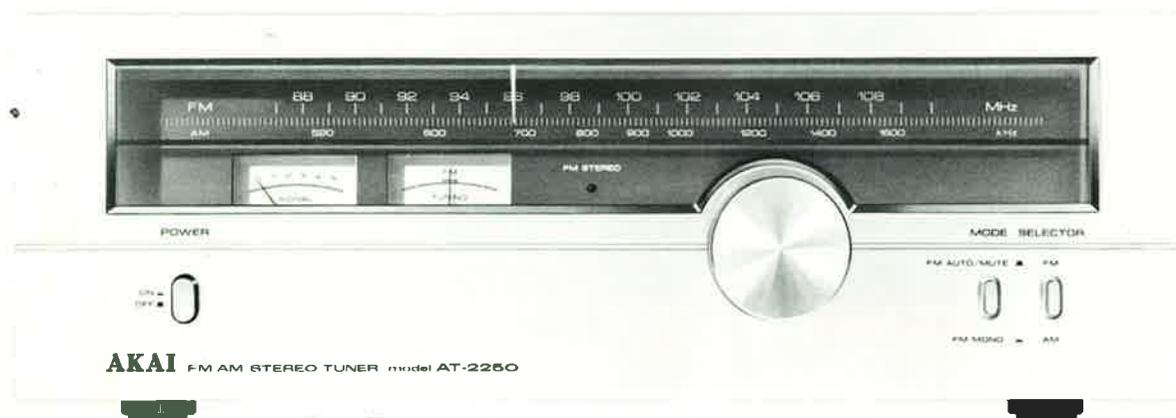


AT-2250

FM AM STEREO TUNER

240V, 50 Hz

Operator's Manual



Note: This manual is also applicable to the black panel model.

WARNING:

- * This apparatus must be earthed.
- * To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

IMPORTANT:

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow: Earth, 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 green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \equiv or coloured green or green-and-yellow. 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.

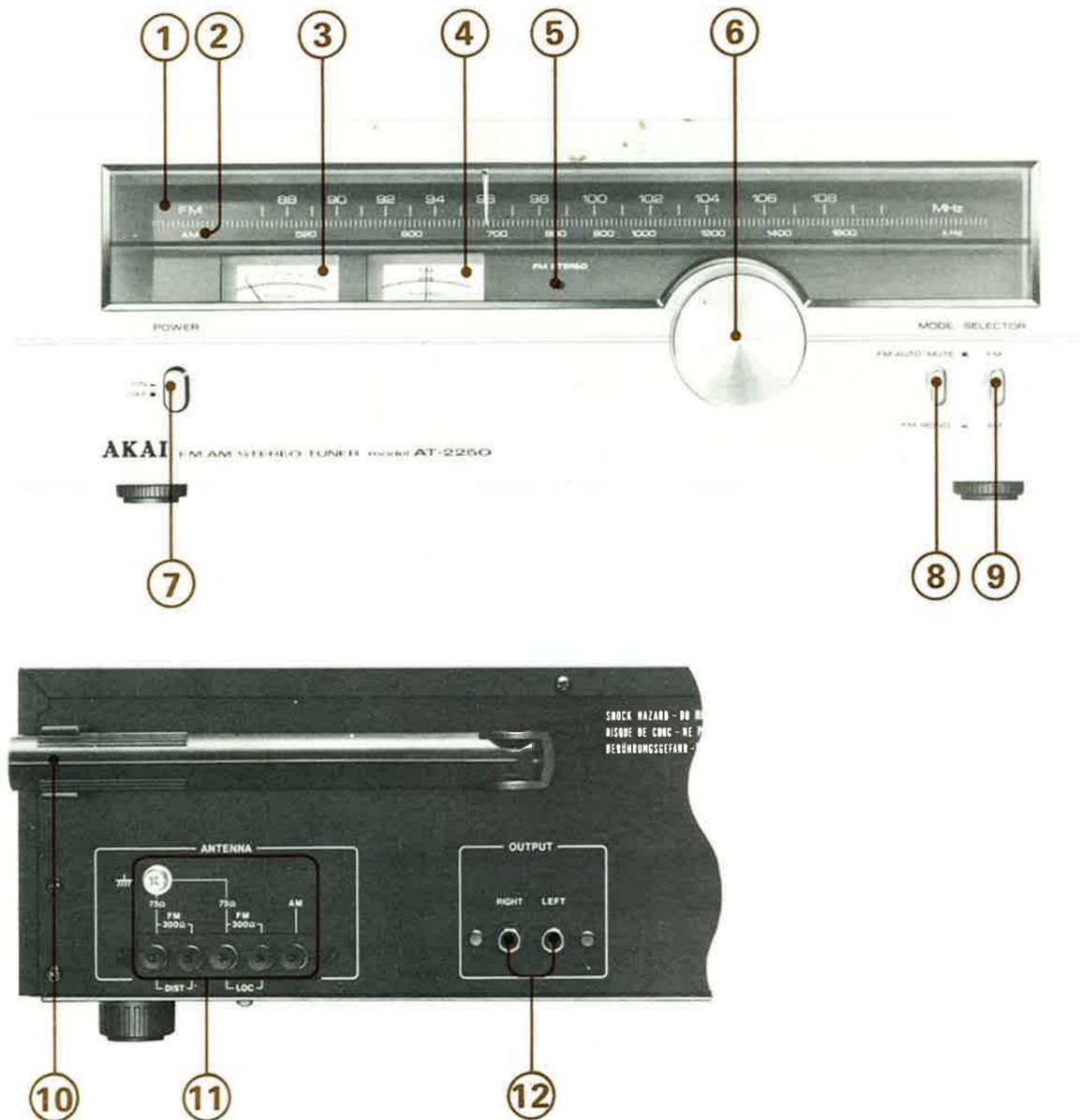
FOR YOUR SAFETY

1. Insert this plug only into effectively earthed three-pin plug-socket outlet.
2. If any doubt exists regarding the earthing, consult a qualified electrician.
3. Extension cords, if used, must be three-core correctly wired.

AKAI

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CONTROLS



1. FM DIAL SCALE
2. AM DIAL SCALE
3. SIGNAL STRENGTH METER
When tuning in FM or AM broadcasts, tune for indication as far as possible toward the right end of the scale. Movement of the needle to left or right indicates signal strength.
4. FM CENTER TUNING METER
Turn Tuning Knob to select FM station while observing this meter. Tune until the indicator needle comes to the center of the meter. The Stereo Indicator Lamp will light when FM Stereo broadcasts are being received.
5. FM STEREO LAMP
Lights when FM stereo broadcasts are being received.
6. TUNING KNOB
Rotate this knob for selection of desired broadcasts.
7. POWER SWITCH
8. FM MODE SWITCH
FM AUTO/MUTE: Will automatically receive any FM broadcasts in stereo or monaural.
* Cuts noise between FM stations and disturbances from weak inputs.
FM MONO: For listening to FM stereo broadcasts in monaural. Left and right channels are mixed and emitted from both left and right speakers. (When FM broadcast signals are too weak for stereo separation, MONO position facilitates better audibility.)
9. FM/AM SELECTOR SWITCH
Set to FM position to receive FM broadcasts, and to AM position for receiving AM broadcasts.
10. AM FERRITE BAR ANTENNA
Pull out from rear panel for AM reception. If signals are not received with sufficient clarity, use an outdoor antenna and connect to the AM antenna terminal.
11. FM and AM ANTENNA TERMINALS (See Antenna Information).
12. OUTPUT JACKS (Left and Right)
Connects to inputs of external amplifier for playback.

ANTENNA INFORMATION

When receiving broadcast signals, the antenna being used is of great importance. The position of the antenna is especially important when receiving stereo broadcasts. Incorrect antenna placement is often the cause of distortion or insufficient channel separation.

- * When an FM or AM antenna is placed high in the air, use a lightning arrestor to protect the unit.

FM ANTENNA

For FM broadcast reception, the use of a professional type FM outdoor antenna is most ideal, but when signals are strong, the standard accessory FM di-pole antenna will suffice. A variety of antennas are available on the market for use according to the specific area in which they are to be used. Typical examples are: **Indoor Antenna:** For about a 20 km (15 mile) radius from the station; **3-Element Antenna:** For about a 60 km (40 mile) radius from the station; **5-Element Antenna:** For about a 80 km (50 mile) radius from the station.

This model is equipped with both 75Ω and 300Ω impedance antenna terminals: **75Ω Terminals:** Use to connect a 75Ω coaxial cable from an outdoor FM antenna placed at a distance away from the unit; **300Ω Terminals:** The supplied 300Ω di-pole antenna is sufficient when the signals are relatively strong.

- * If in a remote area, or inside a concrete building, etc., a multi-element outdoor antenna is recommended. In this case, use 300 ohm terminals.
- * When using TV antenna feeder wire, keep in mind that the wire is susceptible to corrosion and lasts only a few years. Check wire periodically as defective lead-in wire can cause sound distortion or increased noise.
- * A TV/FM Antenna can also be used in place of an FM antenna.

AM ANTENNA

The AM ferrite bar antenna at the rear of the unit is adequate for normal AM reception. Use AM antenna terminals when signal strength is insufficient.

FM BROADCAST RECEPTION

Make connections as outlined in CONNECTIONS.

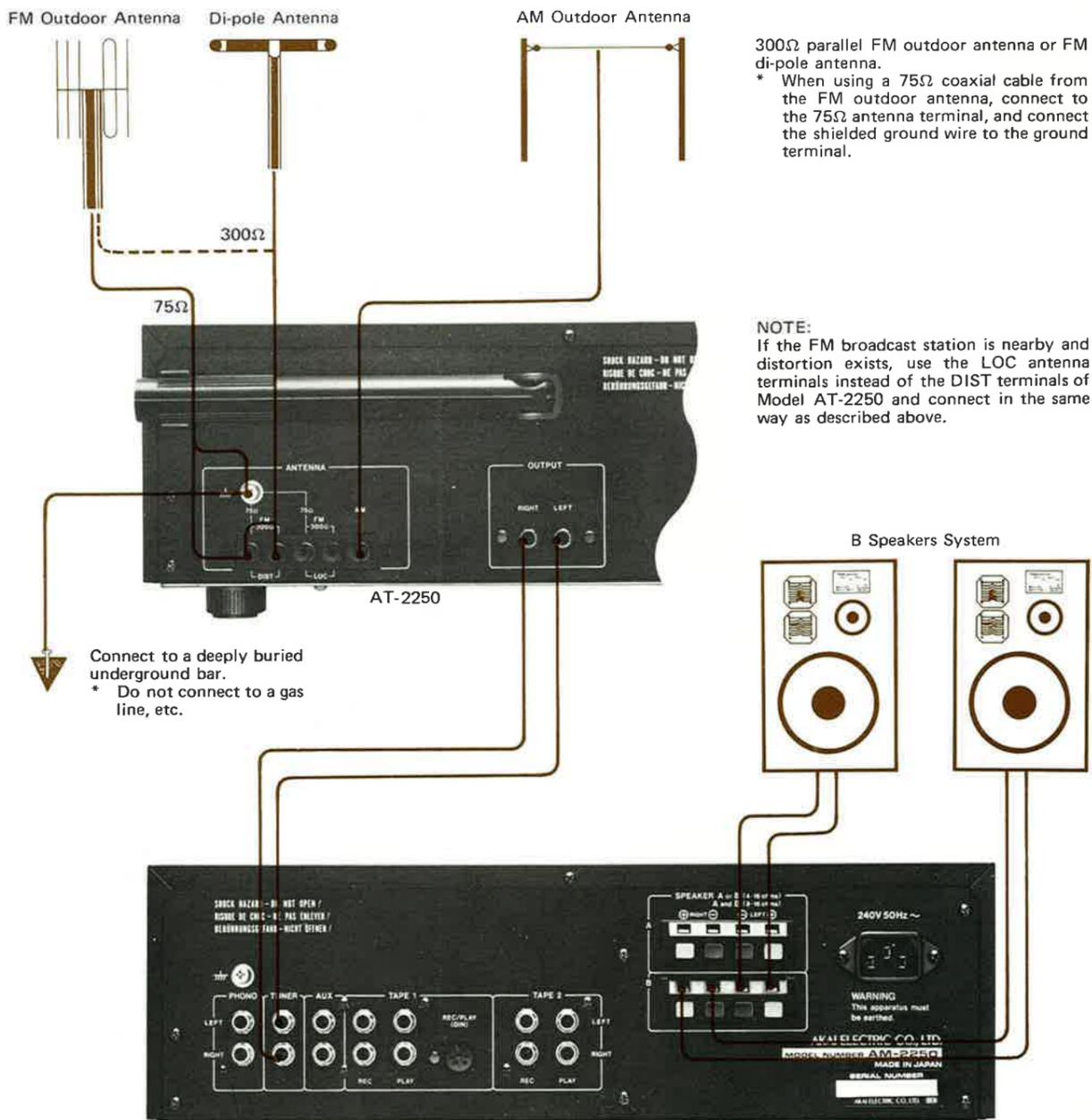
1. Turn on Power Switch.
2. Set Selector to FM position.
3. Set Mode Switch to FM AUTO/MUTE or FM MONO. If the signal strength of the desired station is weak, FM MONO position is recommended.
4. Turn Tuning Knob to select desired station (FM Stereo Lamp will light to confirm FM stereo reception).
5. Tune until the FM Tuning Meter indicator is at the center and the Signal Strength Meter registers as strongly as possible towards the right of the scale.
6. Adjust controls of the external amplifier.

AM BROADCAST RECEPTION

Make connections as outlined in CONNECTIONS.

1. Turn on Power Switch.
 2. Set Selector to AM position.
 3. Turn Tuning Knob to select desired station.
 4. Adjust AM Bar Antenna as required. Pull out from rear panel and position for maximum fidelity.
 5. Tune until the Signal Strength Meter registers as strongly as possible towards the right of the scale.
 6. Adjust controls of the external amplifier.
- * As AM broadcasts are in monaural only, position of FM Mode Switch is irrelevant.

CONNECTIONS



NOTES:

1. Avoid using your tuner in extremely hot or humid places.
2. Heavy noise and poor response of the Tuning Meter during FM reception may be due to:
 - A. Antenna oriented in wrong direction; sometimes a gust of wind changes the direction of the antenna.
 - B. Broken wiring from antenna to the tuner set. Check at the output terminal of the antenna and the antenna terminals of the tuner.
- * Also check the antenna for proper size from the geographical point of view.
3. To prevent jamming in FM reception when cars are running nearby, it may be necessary to install the antenna away from the highway or high in the air. It is also advisable, for noise suppression, to use an exclusive FM multi-element antenna for strengthening the wave and to use a 75Ω coaxial cable in place of TV feeder.
4. If heavy noise exists during AM reception, re-position the Bar Antenna. Maximum sensitivity is obtained when the Signal Strength Meter indicator reaches the extreme right end of the scale. In congested areas of the city or in an area remote from the station, connect a vinyl covered wire to the AM Antenna terminals. Hanging the wire out of the window is advisable for better sensitivity. AM broadcasts are more susceptible than FM to city noise.

Be sure not to place the antenna near fluorescent lamps.
5. If humming exists during AM reception, re-locate the tuner. Move the Bar Antenna on the rear panel to find a point at which the humming is held to a minimum.

After checking for proper connections and control settings, should a problem still exist, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble and contact your nearest authorized Akai Service Station or the Service Department of Akai Company, Tokyo, Japan.

TECHNICAL DATA**FM TUNER SECTION**

Frequency Range	87.5 MHz to 108 MHz
Sensitivity (IHF)	1.9 μV
Capture Ratio	1.3 dB
Selectivity (IHF)	More than 65 dB
Image Rejection	More than 60 dB (98 MHz)
IF Rejection	More than 85 dB (98 MHz)
Spurious Rejection	More than 85 dB (98 MHz)
AM Suppression	60 dB
Signal to Noise Ratio	70 dB
Harmonic Distortion	
MONO	Less than 0.1% (100% modulation)
STEREO	Less than 0.2% (100% modulation)
Stereo Separation	More than 42 dB (1 kHz)
Sub Carrier Suppression	More than 40 dB
Output Voltage	500 mV (100 modulation)
Antenna Input Impedance	300 ohms balanced/75 ohms unbalanced

AM TUNER SECTION

Frequency Range	520 kHz to 1,605 kHz
Sensitivity (IHF)	100 μV/m (Bar Antenna), 17 μV (External Antenna)
Selectivity (IHF)	More than 30 dB
Image Rejection	More than 50 dB (1 MHz)
IF Rejection	More than 40 dB
Signal to Noise Ratio	More than 55 dB
Output Voltage	500 mV (30% modulation)
Antenna	Built-in Ferrite Bar Antenna

MISCELLANEOUS

Semiconductors	Transistors: 6, Diodes: 7, FET: 1, ICs: 3
Power Requirement	240V, 50 Hz
Dimensions	380(W) x 130(H) x 220(D) mm (15 x 5.1 x 8.7) inches
Weight	4.7 kg (10.3 lbs)

STANDARD ACCESSORIES

FM Di-pole Antenna	1
Connection Cords	1 set
Operator's Manual	1

* For improvement purposes, specifications and design are subject to change without notice.



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