

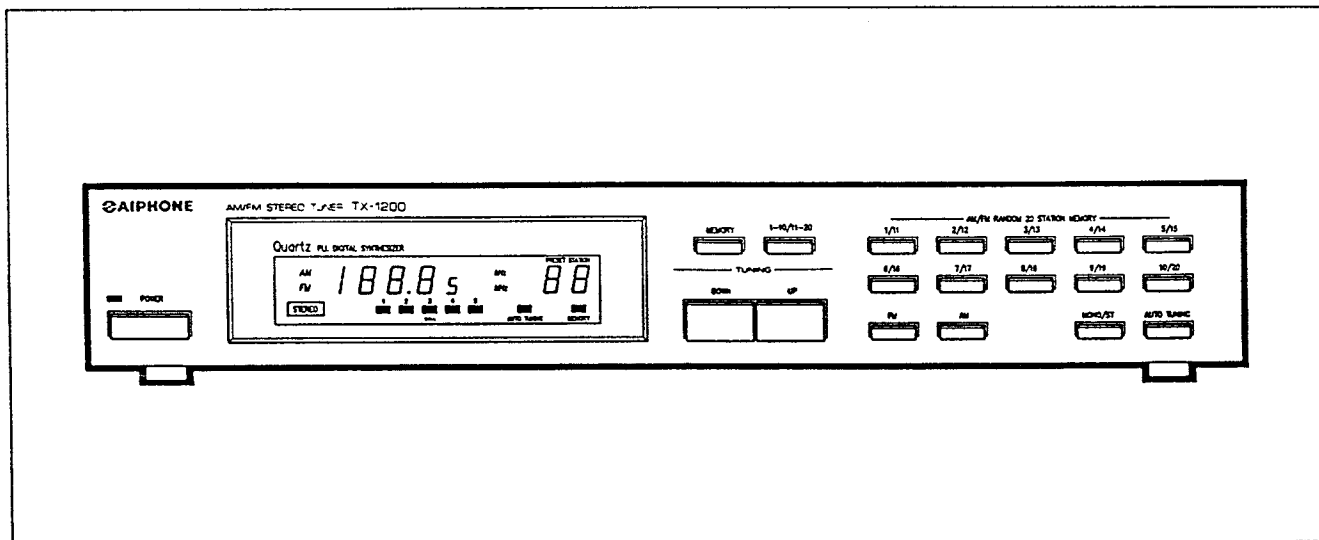
# AM/FM STEREO TUNER

## MODEL: TX-1200

### — INSTRUCTIONS —

The TX-1200 is a quartz synthesized stereo/monaural AM/FM tuner, offering stable, drift-free reception for your background music system in conjunction with the Aiphone or other playing systems.

One touch tuning allows instant recall of up to 20 preprogrammed stations. Automatic muting eliminates extraneous noise while tuning.



### FEATURES

- \* Digitally Synthesized Quartz Locked Tuning.
- \* High Sensitivity & Exceptionally Stable Reception.
- \* 20 programmable stations random.
- \* Automatic "Next Station Search" mode tuning.
- \* Stereo/Monaural output.
- \* Convenient digital frequency display for manual tuning.

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**CAUTION:** TO PREVENT ELECTRIC SHOCK. DO NOT REMOVE CABINET. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

## SPECIFICATIONS

### FM SECTION

* Frequency Range	87.5 – 108MHz
* Sensitivity	11.2dBf (2 $\mu$ V, IHF'58)
* 50 dB quieting sensitivity	
Mono	20.2dBf (5.6 $\mu$ V, IHF'58)
Stereo	40.2dBf (56 $\mu$ V, IHF'58)
* Total Harmonic Distortion	0.2% (Mono), 0.3% (Stereo)
* Signal-to-Noise Ratio	
Mono	73dB
Stereo	71dB
* Frequency Response	20Hz – 15KHz
* Alternate Channel Selectivity	65dB
* Capture Ratio	1.0dB
* Image Rejection	50dB
* Spurious Response Rejection (at 98 MHz)	70dB
* AM Supression	
1 KHz	40dB
10 KHz	35dB
* Carrier Leak	
19 KHz	– 35dB
38 KHz	– 50dB
* Antenna Terminals	300 ohms (balanced) 75 ohms (unbalanced)

### AM SECTION

* Frequency range	530 – 1610KHz
* Sensitivity	20 $\mu$ V, 330 $\mu$ V/m
* Image Rejection (at 1000 KHz)	40dB
* IF Rejection (at 1000 KHz)	60dB

### GENERAL

* Power Requirements	AC 120V60Hz
* Power Consumption	14W
* Dimensions (W x H x D)	422 x 67 x 232mm 16-5/8" x 2-5/8" x 9-3/16"
* Weight	7.04lbs (3.2kg)

## INSTALLATION

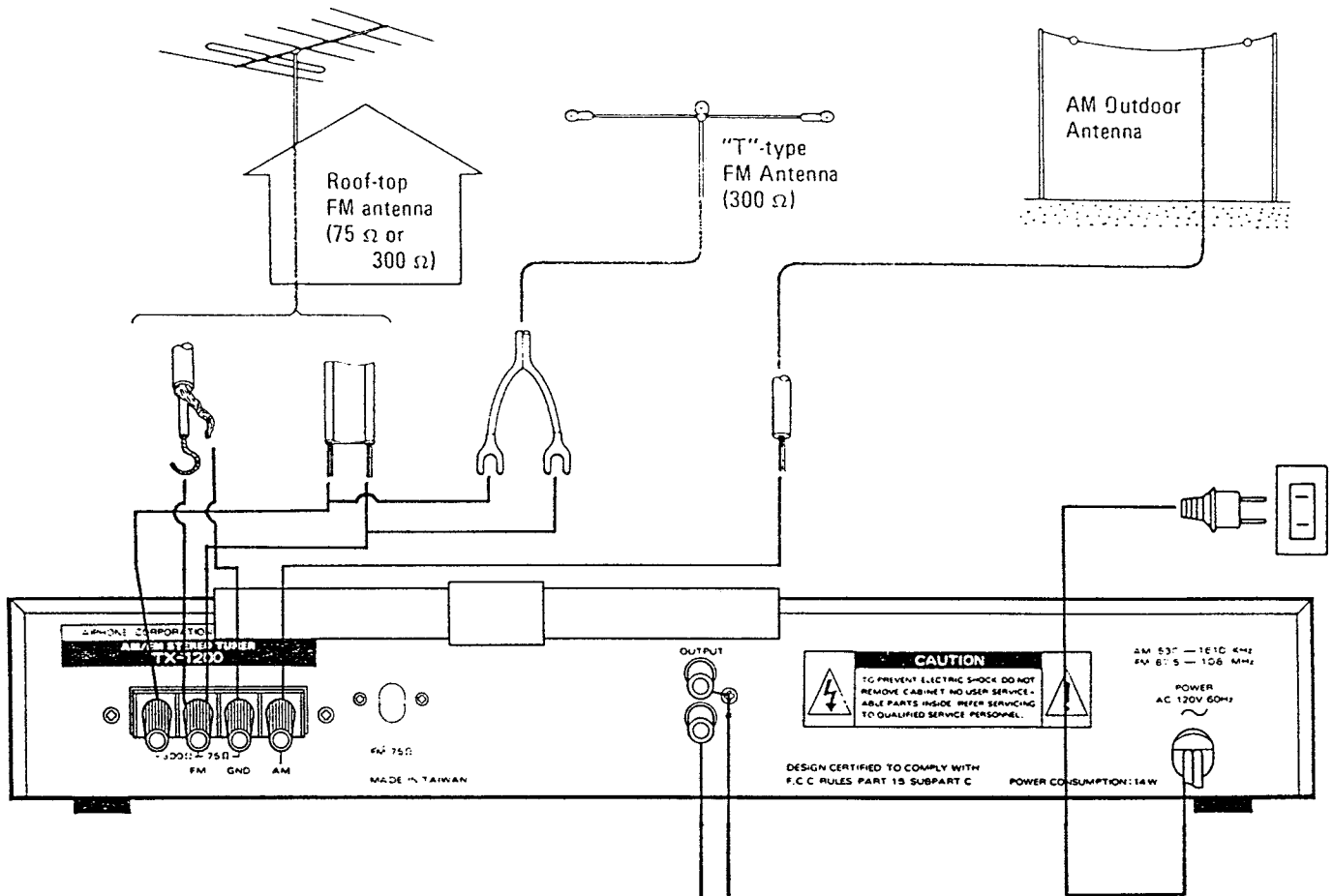
The TX-1200 should never be placed directly on top of a component that generates heat, such as a power amplifier. Make sure it is not located near a heater, radiator or a window that might be left open in the rain.

Make sure the audio leads are pressed or attached in firmly and are not stretched taut so they could pull loose later.

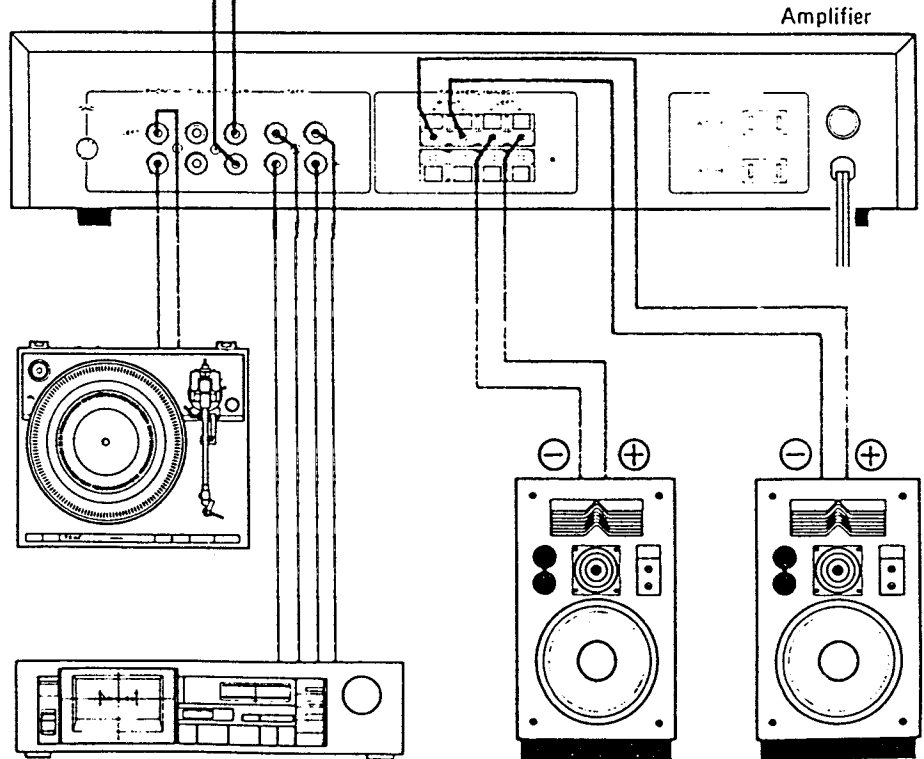
Never make or break these connections while your amplifier or preamplifier is switched on.

The audio output may be connected to the music input of any one of the Aiphone paging adaptors, ie; PD-1, PD-2, MC-A, PA-T, or BX Serie amplifiers.

# CONNECTION

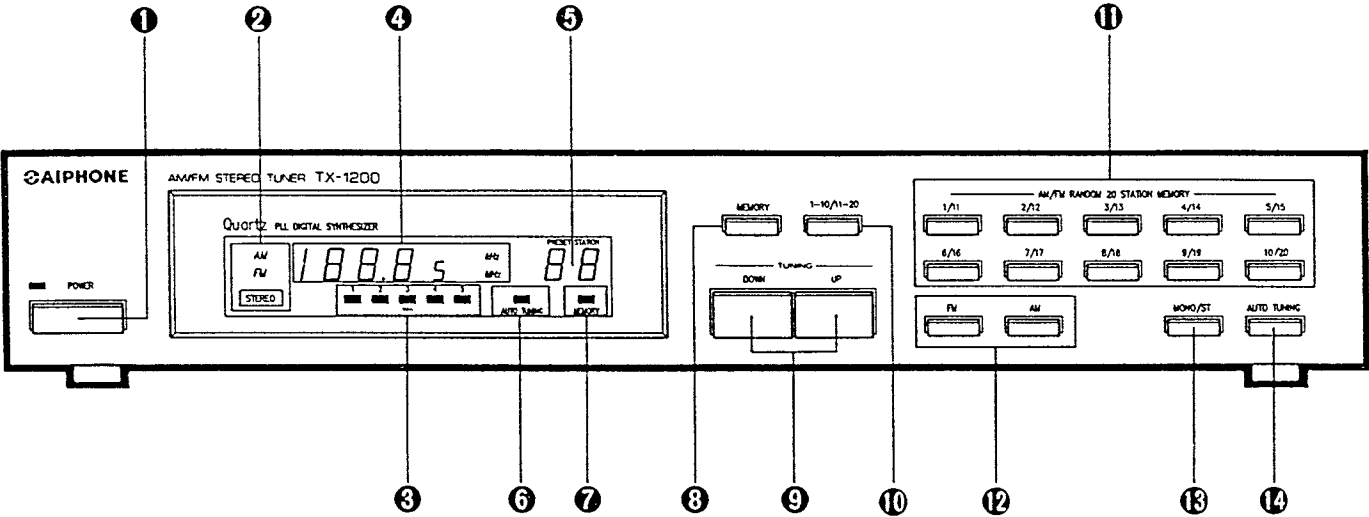


Turn off all components before making connection. For antenna settings and connections, see page 7.

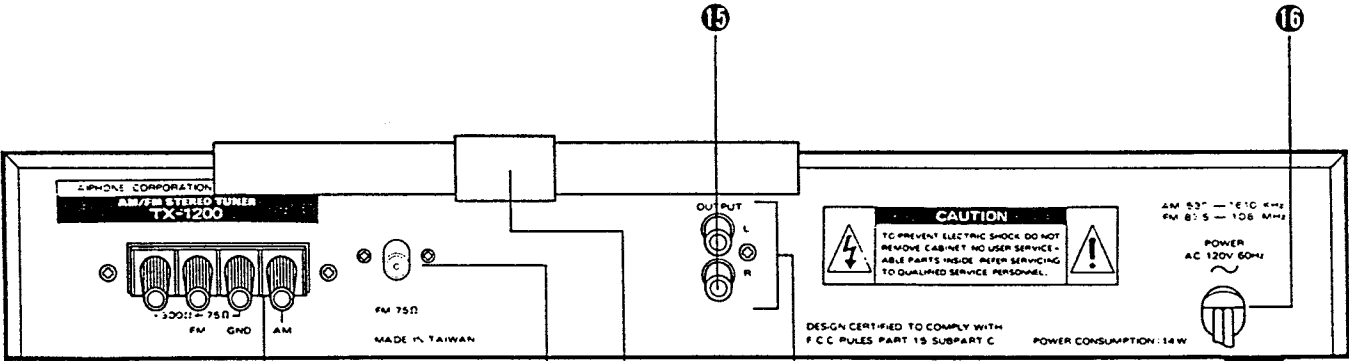


# OPERATIONS/INSTRUCTIONS

— Front Panel —



— Back Panel —



Antenna Connection Terminals  
 FM (300 ohms) Antenna Terminals  
 FM (75 ohms) Antenna Terminals  
 GND Terminal  
 AM Antenna Terminal

OUTPUT Terminals  
 Connect to the TUNER or AUX  
 terminals of the Stereo  
 Amplifier or similar  
 amplifier.

AM Bar Antenna

FM Antenna 75-ohm Socket  
 This socket is used for a coaxial  
 75-ohm antenna cable with a plug.

## LOCATION OF CONTROLS AND THEIR FUNCTIONS

### 1. POWER Switch

Press ON to apply AC power to the tuner.

Press again to release and switch power OFF.

### 2. Function Indicators

These light to indicate the selected frequency band as follows.

FM: For reception of FM broadcasts.

AM: For reception of AM broadcasts.

When the tuner receives an FM stereo broadcast with the MONO/ST switch set to ST (STEREO) position, the STEREO indicator will be displayed.

### 3. SIGNAL Strength Indicator

Indicates the signal strength at the antenna. The indication should be maximum when tuning to AM/FM stations.

### 4. Frequency Display

Digitally indicates the AM/FM station's frequency. AM frequencies are indicated in KHz and FM in MHz.

### 5. PRESET STATION Indicator

These light to indicate preset station number selected from the AM/FM RANDOM 20 STATION MEMORY.

### 6. AUTO TUNING Indicator

The indicator lights when the AUTO TUNING switch is pressed.

### 7. MEMORY Indicator

The indicator lights when the MEMORY switch is pressed. Store the frequencies of broadcast stations in the memory when this indicator is on.

### 8. MEMORY Switch

Press this switch to store the frequency of a broadcast station in memory. (See page 9 for use.)

### 9. TUNING UP/DOWN Buttons

These buttons are used to select the desired frequency in the band selected. Press the UP button to tune upscale and the DOWN button to tune downscale.

### 10. 1-10/11-20 Shift Button

When selection or storing 11-20 of the AM/FM RANDOM 20 STATION MEMORY, press this button while pressing any of the AM/FM RANDOM 20 STATION MEMORY buttons.

When 1-10/11-20 and 1/11 are pressed at the same time, 11 will be selected. (Otherwise 1 will be selected.)

### 11. AM/FM RANDOM 20 STATION MEMORY

Press these buttons to preset or call up stations.

## 12. FM/AM Function Selector Buttons

Selects the frequency band as follows.

FM: For reception of FM broadcasts.

AM: For reception of AM broadcasts.

## 13. MONO/ST Button

Pressing this button alternates the receiving mode between monaural and stereo.

MONO: For reception of monaural or weak FM stations.

ST: For reception of FM stereo. When tuned to a stereo signal, the tuner will automatically select and demodulate FM stereophonic broadcasts.

The STEREO indicator will light when tuned to a stereo broadcast.

## 14. AUTO TUNING Button

Pressing this button alternates the tuning mode between automatic and manual. When the automatic tuning mode is selected, the AUTO TUNING indicator will light.

When the AUTO TUNING indicator is lit (Automatic Tuning):

By pressing the TUNING UP or DOWN button, the tuning frequency scans the frequency band up or down continuously; scanning will stop when tuned precisely to a broadcast. When this button is in the in.

When the AUTO TUNING indicator is not lit (Manual Tuning):

When the UP or DOWN button is pressed once, the tuning frequency changes to a higher or lower frequency by one step: 100 KHz for FM. 10 KHz for AM.

## REAR PANEL

### 15. OUTPUT Jacks

These output the signal received by the TX-1200. Connect to the TUNER or AUX terminals of the Stereo Amplifier or similar amplifier.

### 16. AC Power Cord

Connect to an AC socket.

# ANTENNA FOR OPTIMUM RECEPTION

## FM Antenna

If the TX-1200 is to be used in a strong signal area, a "T"-type antenna (dipole) may provide adequate reception. To connect this antenna, attach its leads to the 300-ohm terminals, fully extend the upper sections of the "T" and position them for greatest sensitivity (maximum indication of the SIGNAL indicators when tuned to a broadcast station).

In weak signal areas, a roof-top FM antenna will be required. A 3-element antenna is generally sufficient for medium distances and an antenna with 5 or more elements may be required for long distances and fringe areas.

Two types of outdoor antenna are available: 300-ohm balanced antennas and 75-ohm unbalanced antennas. 300-ohm antennas uses the same flat twin lead used by most TV antennas. 75-ohm antennas uses a coaxial cable; these antennas are recommended for use in high interference areas such as adjacent to a road where ignition noise may be present. When installing a roof-top antenna, check that it is pointing in the direction from which most stations are received. Do not connect antenna leads to both the 75-ohm and 300-ohm inputs at the same time. Use only the terminals corresponding to the antenna and cable being used.

## AM Antenna

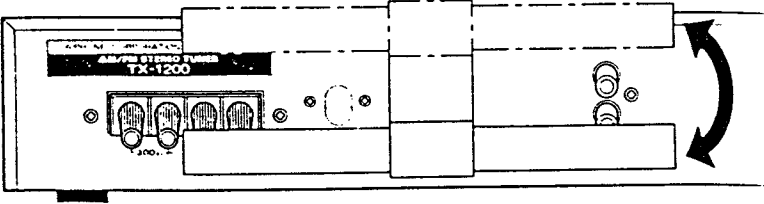
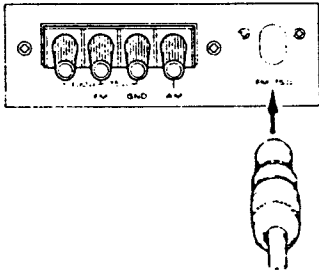
### 1. AM Bar Antenna

In an area where signals are strong, near to the broadcast stations, the AM bar antenna provided on the rear panel may be adequate. This antenna is effective in all areas except where the signal strength is very low, or in buildings made from reinforced concrete. Position this antenna so that as many SIGNAL indicators as possible light when tuned to an AM broadcast.

### 2. Outdoor Antenna

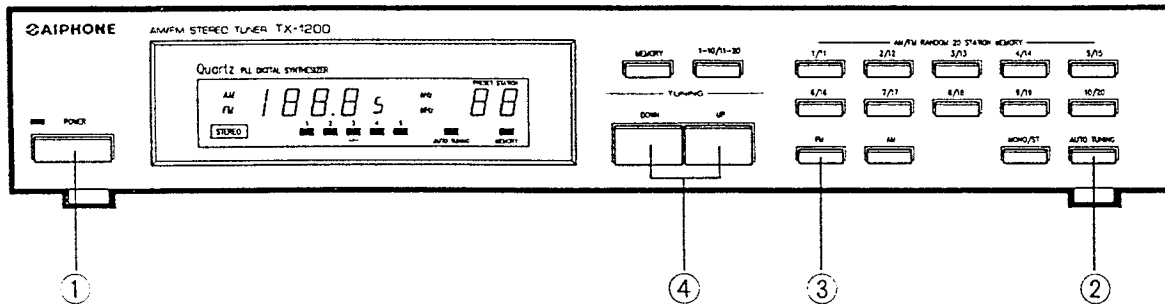
If you have difficulty in receiving clear AM broadcasts using the bar antenna, connect an external antenna to the AM terminals. Set this antenna near a window or outdoors, as high as possible; do not disconnect the provided AM bar antenna.

\* How to connect the coaxial cable to the FM 75Ω terminal.



\* Lift for AM reception.

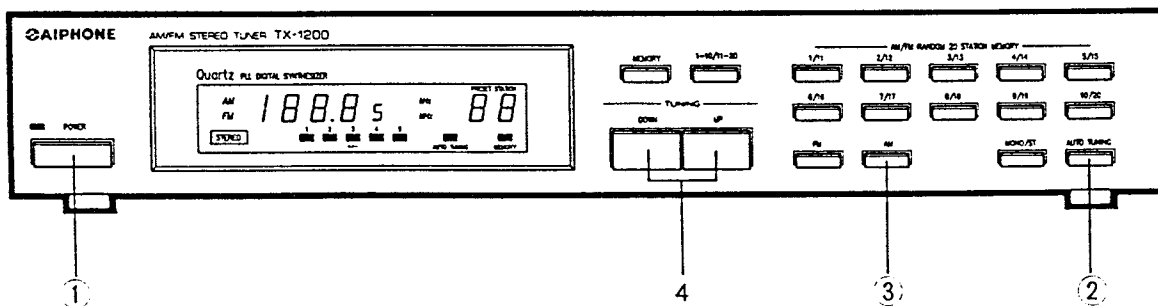
## RECEIVING BROADCASTS



### FM Broadcasts

1. Turn on the power of both the TX-1200 and the amplifier or similar stereo amplifier.
2. Press the AUTO TUNING button so that the AUTO TUNING indicator goes off.
3. Press the FM function selector for the reception of FM broadcasts.
4. Pressing either the TUNING UP or DOWN button while watching the frequency display and the SIGNAL indicator will enable correct tuning to the required station.

After tuning to the station precisely, adjust the volume and other controls of the amplifier for the desired sound (refer to your amplifier's manual). If the signal is very weak, set the MONO/ST switch to the MONO position.



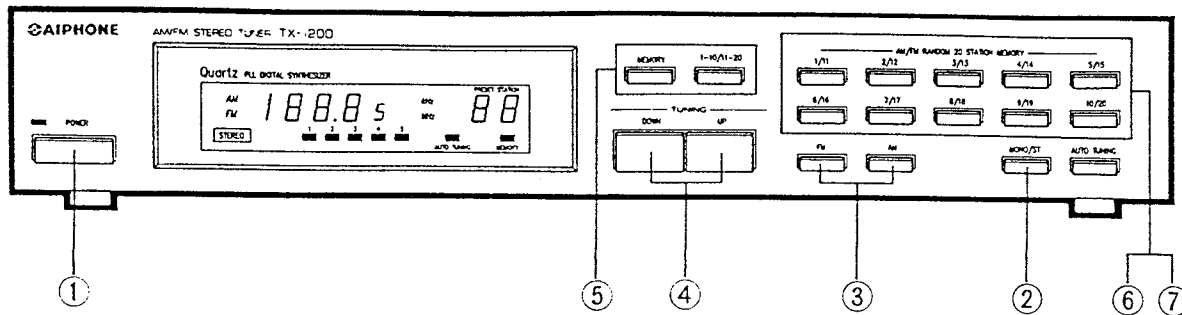
### AM Broadcasts

1. Turn on the power of both the TX-1200 and the amplifier or similar stereo amplifier.
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3. Press the AM function selector for the reception of AM broadcasts.
4. Pressing either the TUNING UP or DOWN button while watching the frequency display and the SIGNAL indicator will enable correct tuning to the desired station.

After tuning to the station precisely, adjust the volume and other controls of the amplifier for the desired sound (refer to your amplifier's manual).



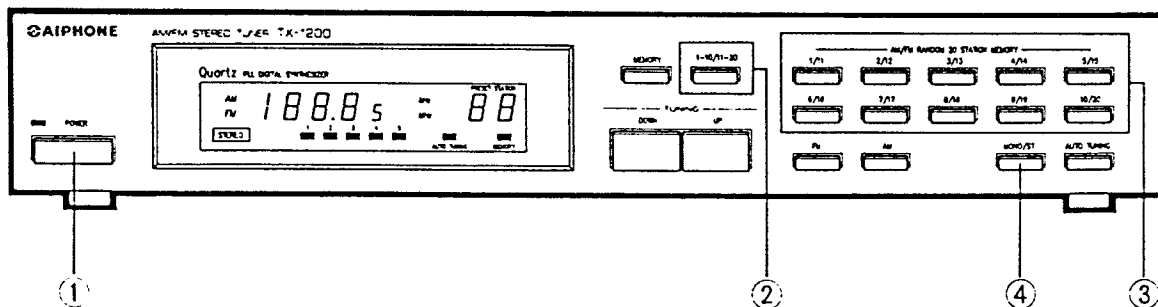
## PRESET BROADCAST RECEPTION



### How to Preset Broadcasts

1. Turn on the power of both the TX-1200 and your amplifier.
2. When tuning to FM broadcasts, set the MONO/ST switch as required.
3. Press the desired AM or FM function selector.
4. Tune to the desired AM or FM station by pressing the TUNING (UP or DOWN) button while monitoring the frequency display and the SIGNAL indicators, so that the frequency of the desired station is displayed and the maximum number of SIGNAL indicators light.
5. Press the MEMORY button. The red LED above the MEMORY will light to indicate that you should enter the required preset number. Choose either 1-10 or 11-20 using the 1-10/11-20 (shift) button.
6. While the MEMORY indicator is displayed, press any of the AM/FM RANDOM 20 STATION MEMORY buttons as desired. The PRESET STATION displays the number corresponding to the button pressed, and the MEMORY indicator will go off.
7. Now tune to the next station. Press the AM/FM RANDOM 20 STATION MEMORY selector button. Set all the stations you wish to preset in the same way.

The AM/FM RANDOM 20 STATION MEMORY selectors can be used to preset a total of 20 stations. When presetting to only FM stations, 20 stations can be preset; a maximum of 10 AM stations can be preset. Once preset, these stations can be recalled at a later time. You can overwrite a previously preset station with a new entry by following the above procedure. When this is done, the memory setting of the previously preset station will be cleared and replaced by the new entry.



### How to Recall a Preset Station

1. Turn on the power of both the TX-1200 and your amplifier.
2. Select either 1-10 or 11-20 with the 1-10/11-20 (shift) button.
3. Press the AM/FM RANDOM 20 STATION MEMORY selector button corresponding to the preset station you wish to recall.
4. If an FM station has been chosen, set the MONO/ST switch as required.

## MEMORY BACK-UP FUNCTION

The contents of the preset station memories and the channel which was received at the last are maintained as long as power is supplied to the tuner. If the power plug of the tuner is disconnected, they will be cleared about six hours after disconnection.

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## — A NOTE FOR BEST RECEPTION —

FM broadcast are prone to several forms of interference; the most disturbing is multi-path interference, which is analogous to "ghosting" on your TV set. You may find that you have to experiment quite a bit with antenna placement for some stations.

Particularly weak or distant stations can be received with the MONO switch depressed; this also defeats the interstation FM muting which might otherwise interpret the weak signal as simply noise.

THIS DESIGN HAS BEEN CERTIFIED TO COMPLY WITH PART 15, SUB PART C OF THE FCC RULES AND REGULATIONS.