

# **marantz®**

**Model ST4000 User Guide**

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TUNER

## FOREWORD

Be sure to read this section before any connection to the mains supply.

### WARNINGS

- Never expose the equipment to rain or moisture.
- Never remove the equipment's cover.
- Never insert anything into the equipment's vents.
- Never handle the mains lead while your hands are wet.

## EQUIPMENT MAINS WORKING SETTING

This Marantz product is available in two different variations, depending on geographical area. One variation has a preset mains voltage (230V for General Europe model and U.K. model), while the other variation features variable voltage that can be selected using a voltage selector on rear panel (115V/230V).

The voltage selector must be set for your local mains voltage before any connection to the mains supply. If you need to change its voltage setting, consult your dealer your local Marantz service provider.

### IMPORTANT: (FOR U.K. MODEL)

This apparatus is fitted with an approved moulded 13 Amp plug.

To change a fuse in this type of plug proceed as follows:

1. Remove fuse cover and fuse.
2. Fix new fuse which should be a BS1362 5A, A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

### NOTE:

The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.

## HOW TO CONNECT A PLUG (FOR U.K. MODEL)

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

BLUE— "NEUTRAL" ("N")

BROWN—"LIVE" ("L")

1. The BLUE wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
2. The BROWN wire must be connected to the terminal which is marked with the letter "L" or coloured RED.
3. Do not connect either wires to the earth terminal in the plug which is marked by the letter "E" or by the safety earth symbol  $\perp$  or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead—not simply over the two wires.

## COPYRIGHT

Recording and playback of any material may require previous consent. Refer to the following for further information.

- Copyright Act 1956
- Dramatic and Musical Performers Act 1958
- Performers Protection Acts 1963 and 1972
- Any subsequent statutory enactments and orders

## INTRODUCTION

Thank you for selecting the Marantz ST4000 FM/AM Stereo Tuner for your system.

Please read these operating instructions carefully. We recommend that you read the entire user guide before you attempt to connect or operate the Tuner.

After you have reviewed the contents of this manual, we suggest that you make all system connections before you attempt to operate the unit.

Refer to the figures on the pages at the back of this user's guide. The callout numbers on the figures correspond to those found in the text. All references to the connections and controls that are printed in **BOLD** type are as they appear on the unit.

## INSTALLATION

Remember the following important points when installing the Tuner.

- Do not expose the component to rain or moisture, as this may cause damage to the Tuner.
- Prevent extra heat from reaching the unit. Never put the Tuner in the full glare of the sun or near a heat source.

## PRECAUTIONS

The following precautions should be taken when operating the equipment.

### GENERAL PRECAUTIONS

When installing the equipment ensure that:

- air is allowed to circulate freely around the equipment.
- it is placed on a vibration-free surface.
- it will not be exposed to excessive heat, cold, moisture or dust.
- it will not be exposed to direct sunlight.
- it will not be exposed to electrostatic discharges.

In addition, never place heavy objects on the equipment.

If a foreign object or water does enter the equipment, contact your nearest dealer or service center.

Do not pull out the plug by pulling on the mains lead; grasp the plug itself.

It is advisable when leaving the house, or during a thunderstorm, to disconnect the equipment from the AC outlet.

## ST4000 FEATURES

- 60-station (FM30, AM30) preset memory with auto preset memory function.
- Up to 120-minute sleep timer.
- Radio Data System. (Europe version only)
- Timer ON/OFF.

## CONTROLS AND THEIR FUNCTIONS (See page 50)

### ① POWER (STANDBY/ON) Button

### ② SLEEP Button

### ③ TIMER Button

Press this button with **DAILY** preset and the indicator will shown on the display.

### ④ Multi-function Display

#### ① SLEEP Indicators

#### ② RDS, FILE, SLEEP TIME mode Indicators

- **RDS: PS, PTY DATA** will be displayed, and **RDS** indicator lights.
- **FILE:** Alphabets, symbols, and numbers will be displayed when you write a broadcasting name with File Button (up to 4 letters).
- **Timer mode:** When the **DAILY** function is programmed, the daily **ON/OFF** times will be shown in the display.

#### ③ Tuned Indicator

This indicator lights when correctly tuned to a broadcast.

#### ④ STEREO Indicator

This indicator will light up when **FM** stereo broadcasting is received.

#### ⑤ TIMER Indicator

#### ⑥ Frequency mode, TIME Indicator

- The frequencies of **FM**, **AM (MW)** will be displayed.
- Hour, Minute: When you program current time, **DAILY**, the times of On/Off, and the hour and minute of **CT** among **RDS** will be displayed.

#### ⑦ Channel Display

The channel number selected by use of the **PRESET UP/DOWN** button will be shown in the display.

#### ⑧ Signal Indicator

The reception status of the broadcasting.

#### ⑨ MEMORY Indicator

### ⑤ PRESET UP/DOWN Buttons

- Broadcast Memory function: Each time you press the **PRESET UP/DOWN** button briefly (for 0.5 second or less), you can listen to broadcasts in a programmed sequence. This function is used to memorize **FM** or **AM (MW)** broadcasting, or to select memorized broadcasts.

### ⑥ TUNING UP/DOWN Buttons (▼/▲)

Used to select the broadcast you want to listen to or adjust the current time, **DAILY**, **SLEEP** presets, etc.

### ⑦ DISPLAY Buttons

- 1) The button works only when you receive **FM** broadcasting stations, and is used to set the **RDS** mode.
- 2) Press the button longer than 1 second, and **PTY** search will become operable.

### ⑧ DAILY Button

### ⑨ TIME ADJUST Button (See page 5)

### ⑩ ST. NAME Button (See page 5)

### ⑪ NEXT Step Button (See page 5)

### ⑫ FM MODE Button

Used to select stereo or mono when listening to **FM** broadcasts.

#### NOTES:

- The **AM** scan step can be changed by pressing the **FM MODE** buttons simultaneously for 5 seconds. (overseas version only)

### ⑬ MEMORY Button

- **MANUAL:** To preset **FM** or **AM (MW)** in the system, pres briefly (0.5 second or less).
- **AUTO:** When you press the button for long (more than 0.5 second), **FM** or **AM (MW)** broadcasting will automatically be preset in the system.

### ⑭ BAND selector Button

Press the button to switch between **FM** and **AM (MW)** bands.

## OPERATIONS

### HOW TO ADJUST CURRENT TIME

You can adjust the current time even if the system power is off.

Time adjustment (for example: 11:35)

1. Press the **TIME ADJUST** button. (Clock section will be shown on the display.)
2. Set hour (11) by pressing the **TUNING** (▼/▲) buttons.
3. Press the **NEXT** button. (Minutes signal blinks on the display.)
4. Set minute (35) by pressing the **TUNING** (▼/▲) buttons.
5. Pressing the **TIME ADJUST** button or **NEXT** button completes the adjustment.

### HOW TO PRESET BROADCASTS

#### <Preparation>

Press the **BAND** button to select the broadcast band.

#### Manual Memory Presetting

##### 1. TUNING

Select the broadcast frequency you want to memorize by pressing the **TUNING UP/DOWN** button.

##### 2. PRESET CALL

Press the **MEMO** button briefly (for 0.5 second or less).

Select the channel you want by pressing the **PRESET UP/DOWN** button while the "MEMORY" indicator lamp is blinking.

##### 3. MEMORY

Press the **MEMO** button to memorize the broadcast.

- You can preset up to 30 **FM** and 30 **AM (MW)** channels.

#### Automatic Memory Presetting

##### 1. MEMORY

Press the **MEMO** button for long (for more than 0.5 second).

Whenever the next highest broadcast frequency is selected, the selected broadcast is preset automatically.

##### 2. PRESET CALL

Check the preset broadcast by pressing the **PRESET UP/DOWN** button.

#### NOTES:

- In **FM** Automatic Memory Presetting, frequency is automatically memorized. The setting which has better reception will be preset first.
- If the new broadcast channel is preset to a channel, the channel which had been preset to that position earlier will be automatically erased.
- It is impossible to preset automatically in areas far away from the broadcast station or in mountain areas where received signals are weak.

### HOW TO MEMORIZE BROADCASTING STATION NAME

If only a frequency is preset, fill in the station name using manual or automatic memory presetting.

(Example) **FM 98.80 MHz 3ch**, Station name: **BBC 1**

1. Press the **BAND** button.

Select the **FM** band.

##### 2. TUNING

Set 98.80 MHz by pressing the **TUNING** button.

##### 3. ST. NAME

Press the **ST. NAME** button.

"---" or the station name preset last will be shown on the display.

Preset the station name, "**BBC 1**".

(1) **B** fi **B** ---: after setting "**B**" by pressing the **TUNING** button when the first signal blinks, press the **NEXT** button.

(2) Preset "**B, B, C, 1**" as in step (1) above.

##### 4. MEMORY

Press the **MEMO** button briefly (0.5 second or less).

(The "MEMORY" indicator blinks.)

##### 5. PRESET CALL

After setting "03" by pressing the **PRESET UP/DOWN** button, press the **MEMO** button briefly once more.

- **BBC1 FM 98.80 MHz 03** has been just preset.

#### NOTES:

- File content: A, B, C ... X, Y, Z (alphabet)  
0, 1, ... 8, 9 (number), blank
- Current time will not be displayed if the station name has already been preset.

### HOW TO USE SLEEP FUNCTION

Sleep programming is used to preset the time to turn off system power while listening to music.

1. Press the **SLEEP** button.

"**SLEEP 120**" is shown on the front display.

2. Each press of the button changes the time indication by 10 minutes.

(Released condition)

fi **SLEEP 120** fi **SLEEP 110** fi ... fi **SLEEP 010** fi **SLEEP** ...

If you press the **TUNING UP/DOWN** button after pressing the **SLEEP** button, you can adjust the time by one minute at a time.

3. Five seconds after presetting the sleep time, the system will return to the previous status and thereafter begin sleep timing.  
To cancel the **SLEEP** (timer), turn the power off.

#### NOTES:

- If you want to know the time remaining until the sleep time, press the **SLEEP** button once.
- To allow the sleep function to work properly, you need to connect the remote control terminal of the tuner to the corresponding remote control terminal of the amplifier.

## HOW TO PRESET DAILY

The **ON** and/or **OFF** time can be preset for daily use.

Before presetting **DAILY** make sure the power is off.

### DAILY Presetting

1. Press the **DAILY** button. ("**DAILY ON** --:--" will be displayed for you to set the **ON** time.)
2. Set the "hour (··)" you want by pressing the **TUNING** button, and then press the **NEXT** button. "Minute" signal will blink.  
After you set the "minute (--)" you want in the same way as for "hour", the display will show "**DAILY OFF** --:--" which indicates the **OFF** time. Set the **OFF** time in the same way as you set the "**ON**" time.
3. Press the **DAILY** button or **NEXT** button to complete presetting. Then, the display will return to the previous status before presetting was performed.
4. Press the **TIMER** button to turn on the timer.

### NOTE:

If you turn off the power intentionally before the "**OFF**" time, the **DAILY** presets will be cancelled.

### RDS (Radio Data System)

1. **RDS** provides such information as station names, local times, the types of program, etc. for **FM** broadcasting.
2. You can receive the following kinds of data with this system.
  - **PS** (Program Service Name): displays **FM** station name.
  - **CT** (Clock Time): displays the information about times provided from the station.
  - **PTY** (Program Type): These data on program type will be displayed while receiving **FM**.

### NOTES:

- In case the currently received station is not broadcasting **RDS**, "**NO RDS**" will be displayed continuously regardless of **RDS** mode.
- When the reception of broadcasting is rather weak (**RDS**: Off), "**NO RDS**" will also be displayed. In such a case, correct the position of the antenna.

### RDS Display

1. Press the **POWER** button to **ON**.
2. Press the **BAND** button to select **FM**.  
**RDS** can be displayed only in the **FM** band.
3. Press the **PRESET UP/DOWN** button or the **TUNING UP/DOWN** button to tune to the required broadcast station.
  - In case the received station is broadcasting **RDS**, **RDS** will light up in the Display.
  - After a while, **RDS** Data will be displayed automatically.
4. Press the **DISPLAY** button.

Each time you press the button (within 0.5 second), the modes will change as follows regardless of the current mode:

fi PS fi CT fi PTY

- (1) **PS** mode: "**PS**" will blink for about 4 seconds in the display.
  - If you do not receive **PS** Data even after switching the mode to call it up, "**NO PS**" will be displayed until the data is received.
  - When the data is received, the corresponding **PS** will be displayed.
- (2) **CT** mode: "**CT**" will blink for about 4 seconds in the display.
  - If you do not receive **CT** Data even after switching the mode to call it up, "**NO CT**" will be displayed until the data is received.
  - When the data is received, the corresponding **CT** will be displayed.
- (3) **PTY** mode: "**PTY**" will blink for about 4 seconds in the display. The **PTY** indicator lights.

The data is displayed in **PTY** mode as follows:

There are 29 programme categories:

|          |   |
|----------|---|
| NEWS     | = News service  |
| AFFAIR   | = Politics and current events                                 |
| INFO     | = Special informative reports                                 |
| SPORT    | = Sports  |
| EDUCATE  | = Learning and continuation of education                      |
| DRAMA    | = Radio plays, literature                                     |
| CULTURE  | = Culture and society   |
| SCIENCE  | = Programmes about sciences and technology                    |
| OTHERS   | = Variety   |
| POP      | = Pop music   |
| ROCK     | = Rock music  |
| MOR      | = Middle of the road music, 'easy-listening'                  |
| LIGHT    | = Light classical music                                       |
| CLASSIC  | = Serious classical music                                     |
| OTHER    | = Other music   |
| WEATHER  | = Weather reports, forecasts                                  |
| FINANCE  | = Financial reports, commerce, trading                        |
| CHILDREN | = Children's programmes                                       |
| SOCIAL A | = Social affairs  |
| RELIGION | = Religious programmes  |
| PHONE IN | = Programmes in which the public expresses its view by phone. |
| TRAVEL   | = Travel reports  |
| HOBBIES  | = Programmes concerning recreational activities               |
| JAZZ     | = Jazz music  |
| COUNTRY  | = Country music   |
| NATION M | = National music  |
| OLDIES   | = Music from the so-called 'golden age' of popular music      |
| FOLK M   | = Folk music  |
| DOCUMENT | = Documentaries   |

- If you do not receive **PTY** Data, "**NO PTY**" will be displayed.

## How to Search for Your Desired Program Using PTY Search

1. Press the **POWER** button to **ON**.
2. Press the **BAND** button to select **FM**.
3. Press the **DISPLAY** button for longer than 1 second. "Search" will blink in the display.
  - Be sure to press the button for more than 1 second regardless of whether **RDS** mode is on or off.
4. Press the **PRESET UP/DOWN** button.
 

Select your desired one from among 29 kinds of **PTY** programs. (The program will blink.)
5. Press the **TUNING UP (▲)** or **DOWN (▼)** button.
 

When you press the **TUNING** button after your desired program is searched, you can continue to search for another program type by increasing or decreasing the frequency from the current one.

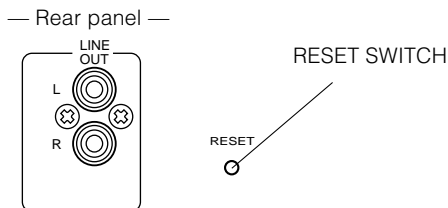
### NOTES:

- When the same program type is not found in **PTY** Search mode, searching will stop and search mode will be released automatically.
- If the same program type is not found during **PTY** Search, it will stop at the beginning frequency.

## WHEN TO USE RESET SWITCH

- When this system is subjected to an electrical shock.
- When the power is irregular.
 

In the above cases, function buttons may not often operate or the display may operate wrongly. In these cases, try the following:



Press the **RESET** switch lightly once or twice with a pencil or a ballpoint pen.

## CARE AND MAINTENANCE

This section describes the care and maintenance tasks that must be performed to optimize the operation of your Marantz equipment.

### CLEANING OF EQUIPMENT EXTERNAL SURFACES

The exterior finish of your ST4000 will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders or harsh chemical agents (e.g., lye solution), alcohol, thinners, benzene, insecticide or other volatile substances as these will mar the finish of the equipment. Likewise, never use cloths containing chemical substances. If the equipment gets dirty, wipe the external surfaces with a soft, lint-free cloth.

If the equipment becomes heavily soiled:

- dilute some washing up liquid in water, in a ratio of one part detergent to six parts water;
- dip a soft, lint free cloth in the solution and wring the cloth out until it is damp;
- wipe the equipment with the damp cloth;
- dry the equipment by wiping it with a dry cloth.

### REPAIRS

Only the most competent and qualified service technicians should be allowed to service your unit. Marantz and its factory trained warranty station personnel have the knowledge and special equipment needed for the repair and calibration of this precision instrument.

In the event of difficulty, call the proper toll-free telephone number listed on the face of the warranty to obtain the name and address of the Marantz Authorized Service Center nearest you. In many cases, the dealer where you purchased your Marantz unit may be equipped to provide service. Please include the model, serial number of your unit together with a copy of your purchase receipt and a full description of what you feel is abnormal in its behaviour.

### TROUBLESHOOTING

#### GENERAL MALFUNCTION

If the equipment malfunctions, this may be because an electrostatic discharge or AC line interference has corrupted the information in the equipment memory circuits. Therefore:

- disconnect the plug from the AC line supply
- after waiting at least three minutes, reconnect the plug to the AC line supply
- re-attempt to operate the equipment

#### Memory backup

- In case a power outage occurs or the power cord is accidentally unplugged, the ST4000 is equipped with a backup function to prevent memory data such as the preset memory from being erased. The memory functions are backed up for up to about one week.

# MODEL ST4000 SPECIFICATIONS

## FM Section

|  |                               |
|--|-------------------------------|
| Tuning Range .....                                     | 87.50 MHz - 108.0 MHz         |
| Usable Sensitivity (IHF) Mono .....                    | 10 dBf                        |
| 50 dB Quieting sensitivity                             |                               |
| Mono .....   | 17 dBf                        |
| Stereo .....   | 33 dBf                        |
| Alternate Channel Selectivity (98 MHz – 400 kHz) ..... | 65 dB                         |
| Image Response Ratio .....                             | 60 dB                         |
| Frequency Response .....                               | 20 Hz - 15 kHz, +0.5 dB/-3 dB |
| Capture Ratio .....                                    | 2 (at 98 MHz)                 |
| Distortion (at 65 dBf, 98 MHz)                         |                               |
| Mono .....   | 0.2%                          |
| Stereo .....   | 0.3%                          |
| Signal-to-Noise Ratio (at 65 dBf, 1 kHz)               |                               |
| Mono .....   | 70 dB                         |
| Stereo .....   | 65 dB                         |
| AM Suppression Ratio .....                             | 80 dB                         |
| Stereo Separation (1 kHz) .....                        | 40 dB                         |
| Output (Level/Impedance) .....                         | 600 mV/2.2 k ohm              |

## AM Section

|                                |                                   |
|--------------------------------|-----------------------------------|
| Tuning Range .....             | 522 kHz - 1,620 kHz (9 kHz steps) |
| Usable Sensitivity (IHF) ..... | 55 dB/m (562 mV/m, Loop Antenna)  |
| Selectivity .....              | 30 dB (at -9 kHz)                 |
| Image Response Ratio .....     | 35 dB                             |
| IF Response Ratio .....        | 60 dB                             |
| Distortion .....               | 1% (at 85 dB/m)                   |
| Signal-to-Noise Ratio .....    | 50 dB (at 94 dB/m)                |
| Output (Level/Impedance) ..... | 170 mV/2.2 k ohm                  |

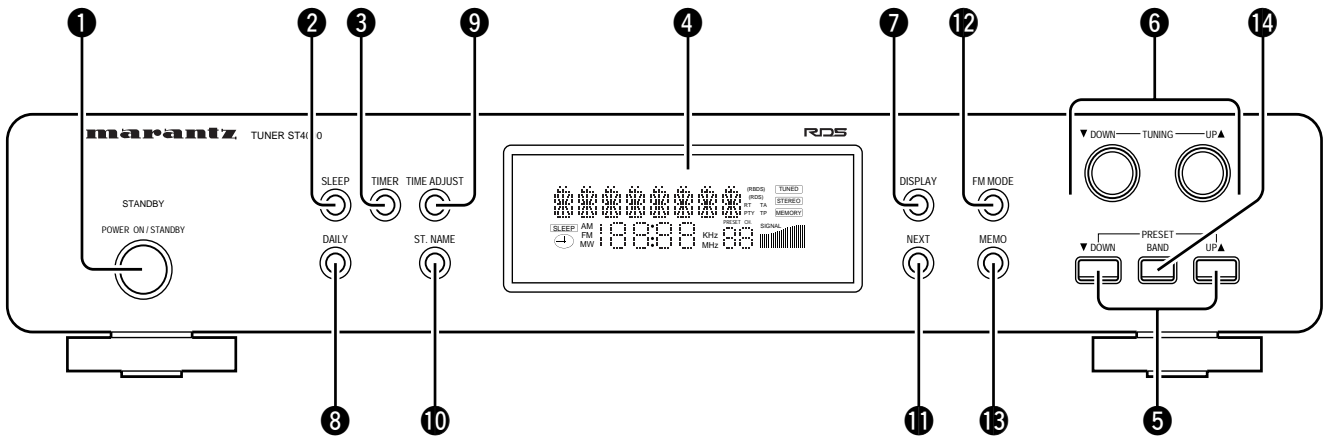
## General

|   |                   |
|---|-------------------|
| Power Requirements .....                        | 230 V AC, 50 Hz   |
| Power Consumption .....                         | 6W                |
| Dimensions (W · H · D) .....                    | 440 · 72 · 290 mm |
| MAX Dimensions (W · H · D) .....                | 440 · 87 · 300 mm |
| Weight (net) .....                              | 2.9 kg            |
| Accessories                                     |                   |
| AM Loop Antenna · 1, FM Antenna · 1,            |                   |
| RCA pin plug cord · 1, Remote control Cable · 1 |                   |

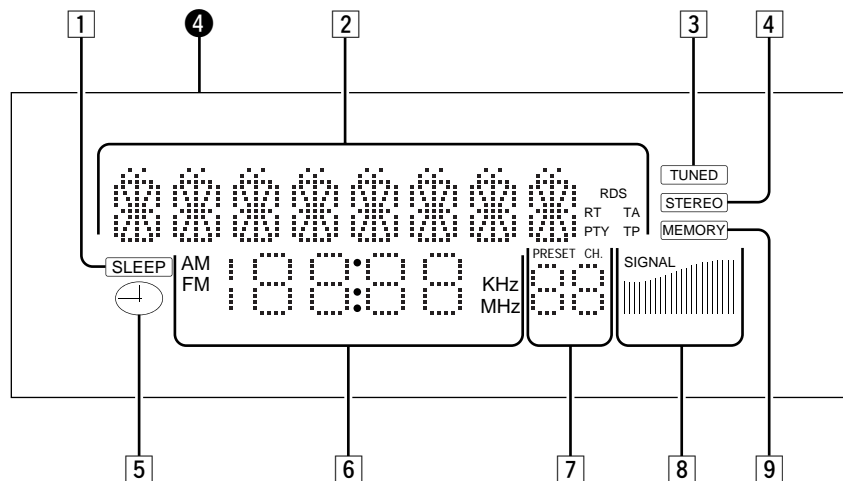
- Improvements may result in specifications and features changing without notice.

# FIGURES

## CONTROLS AND FUNCTIONS



## FL-DISPLAY





**BEFORE USE**

**CAUTION:** Do not plug the power cord of any component into AC outlets and do not turn their POWER switches on until connections have been performed.

