

DAB/FM/AM Tuner

Operating Instructions



Digital Audio Broadcasting



ST-SDB900

WARNING

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.



Don't throw away batteries with general house waste; dispose of them correctly as chemical waste.

Precautions

On safety

Should any liquid or solid object fall into the unit, unplug the unit and have the unit checked by qualified personnel before operating it any further.

On power sources

- Before operating the unit, be sure that the operating voltage of your unit is identical with that of your local power supply.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- AC power cord must be changed only at the qualified service shop.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.

On placement

- Place the unit in a location with adequate ventilation to prevent heat buildup and prolong the life of its components.
- Do not place the unit near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place anything on top of the cabinet which might block the ventilation holes and cause malfunctions.
- Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

On cleaning the cabinet

Clean the cabinet, panels and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

On repacking

Do not throw away the carton and the packing material. This makes an ideal container when transporting the unit. When shipping the unit, repack it as it was packed at the factory.

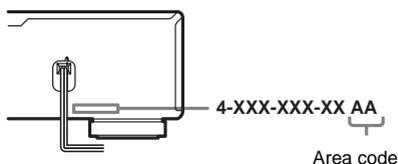
If you have any questions or problems concerning your unit that is not covered in this manual, please consult your nearest Sony dealer.

About This Manual

The instructions in this manual are described using the controls on the tuner. You may also use the controls on the remote if they are of the same or similar name as those on the tuner.

About area codes

The area code of the tuner you purchased is shown on the lower portion of the rear panel (see the illustration below).



Any differences in operation, according to the area code, are clearly indicated in the text, for example, "Models of area code AA only".

Overview of DAB

DAB (Digital Audio Broadcasting) is a new multimedia broadcasting system that replaces the current FM/AM broadcast to transmit audio programmes with a quality comparable to that of CDs*.

Each DAB multiplex radio station converts programmes (services) into an ensemble, which it then broadcasts. Each service contains one or more components. All services and components are identified by name, so you can access any of them without having to know their frequencies. Furthermore, additional information (called programme associated data) can be broadcast along with the services in the form of text.

With DAB digital radio, you can enjoy:

- CD sound quality without any hiss or crackle to spoil the sound*
- both music and data services from a single tuner (this tuner does not support data services)
- the same radio stations of the same frequency from anywhere in the country
- multiple programmes (services) from a single frequency

* Some service components may not match CD quality sound.

Notes

- The status of the DAB broadcast depends on your country or region. It may not be broadcasted or may be in test phase.
- DAB programmes are broadcast in Band-III (174 to 240 MHz) and/or L-Band (1,452 to 1,491 MHz), with each band divided into channels. Each of these channels has its own channel label. For details on the channel labels and frequencies that this tuner supports, see the Frequency Table on page 22.
- This tuner supports Band-III only.
- This tuner does not support data services.
- This tuner does not support reception in countries outside of Europe.

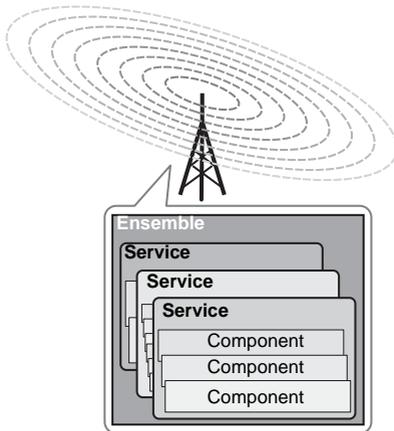


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Check that you received the following items with the tuner:

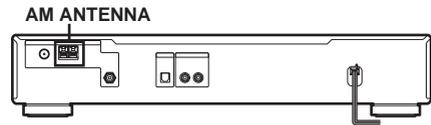
- Audio cord (1)
- AM loop aerial (1)
- FM wire aerial (1)
- DAB wire aerial (1)
- Remote commander (1)
- R6 (size AA) batteries (2)

Before you get started

- Turn off the power to all components before making any connections.
- Do not connect the AC power cord until all of the connections are completed.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio cord, be sure to match the colour-coded pins to the appropriate jacks: White (left) to White; and Red (right) to Red.

AM aerial hookups

This section describes how to connect the supplied AM loop aerial to the AM ANTENNA terminals. For the specific location of the terminals, see the illustration below.



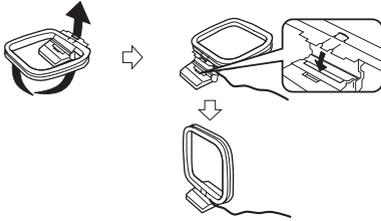
What will I need?

- AM loop aerial (supplied) (1)



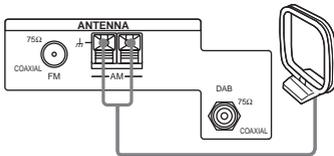
- 1** Unwrap 2 lengths of the braided lead wire from around the frame of the aerial. Be careful to unwrap only the braided section of the lead wire. Do not unwrap more than 2 lengths of the lead wire. Also, be careful not to unbraid the lead wire.

- 2 Assemble the supplied aerial as shown below.**



- 3 Connect the AM loop aerial to the AM terminals on the back of this unit.**

AM loop aerial



- 4 Adjust the aerial direction for the best reception.**

The AM loop aerial has a directivity which detects the signal from some angles more strongly than others. Set the aerial to the orientation which provides the best receiving condition.

If a high pitched noise (beat noise) occurs when recording AM broadcasts, adjust the position of the AM loop aerial so that the noise disappears.

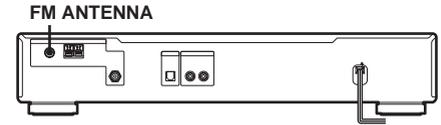
If you live in a building constructed of reinforced concrete, or with a steel frame, you may not be able to achieve good reception since the radio waves become weaker indoors. In this case, we recommend connecting an optional aerial.

Tip

If you are having difficulty receiving stations, try repositioning the loop aerial while tuning. Placing the supplied AM loop aerial near a window will help improve reception quality.

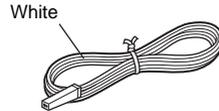
FM aerial hookups

With an FM outdoor aerial, you can obtain a higher FM broadcast sound quality. We recommend that you use the supplied FM wire aerial only temporarily until you install an FM outdoor aerial. For the specific location of the FM ANTENNA terminal, see the illustration below.

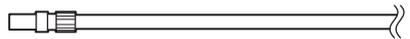


What will I need?

- FM wire aerial (supplied) (1)

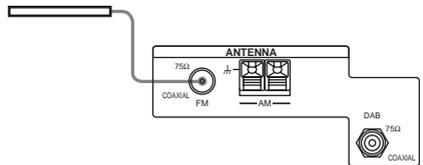


- FM outdoor aerial (not supplied) (1) and 75-ohm coaxial cable with IEC female type connector (not supplied) (1)

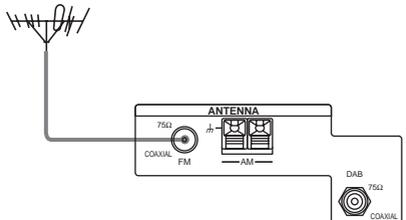


Connect the supplied FM wire aerial or an FM outdoor aerial (not supplied) to the FM terminal on the back of this unit.

FM wire aerial

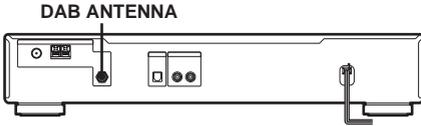


FM outdoor aerial



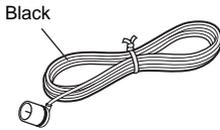
DAB aerial hookups

With a DAB outdoor aerial, you can obtain a higher DAB broadcast sound quality. We recommend that you use the supplied DAB wire aerial only temporarily until you install a DAB outdoor aerial. For the specific location of the DAB ANTENNA terminal, see the illustration below.

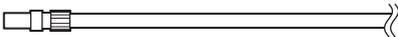


What will I need?

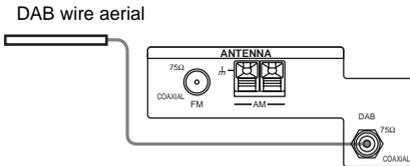
- DAB wire aerial (supplied) (1)



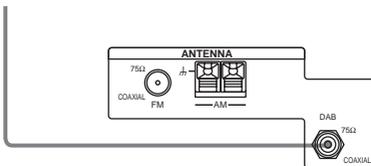
- DAB outdoor aerial (not supplied) (1) and 75-ohm coaxial cable with F male type connector (not supplied) (1)



Connect the supplied DAB wire aerial or a DAB outdoor aerial (not supplied) to the DAB terminal on the back of this unit.



to DAB outdoor aerial

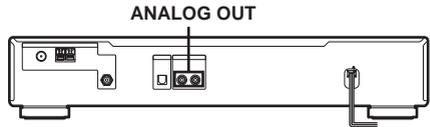


Connecting a ground wire

If you connect an outdoor aerial, be sure to connect an earth lead (not supplied) to the AM ANTENNA terminal with the "h" indication (in addition to the AM loop aerial) for lightning protection.

Amplifier hookups

Connect the tuner to an amplifier. Be sure to turn off both components before connection. For the specific location of the terminals, see the illustration below.

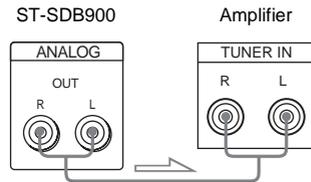


What cords will I need?

- Audio cord (supplied) (1)

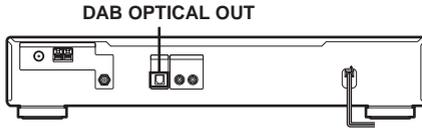


Connect the white plugs to the white (L) jacks and the red plugs to the red (R) jacks. Insert the plugs completely into the jacks; incomplete connections may cause noise.



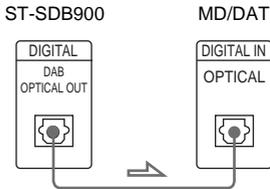
MD/DAT hookups

This section describes how to connect the tuner to a DAT deck or MD recorder for digital-to-digital recording. With this connection, you can obtain the highest possible sound quality when recording DAB digital broadcasts, even if you use the analog outputs for listening purposes. For specific locations of the jacks, see the illustration below.



What cables will I need?

- Digital optical cable (not supplied) (1)

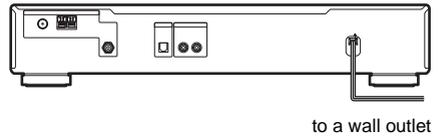


Notes

- When you use a recorder which does not support the 48kHz sampling frequency mode, you cannot play or record the digital signals from the DIGITAL DAB OPTICAL OUT jack.
- The DIGITAL DAB OPTICAL OUT jack has a retractable cover. Insert the plug into the jack.
- FM/AM broadcast signals are not output from the DIGITAL DAB OPTICAL OUT jack.

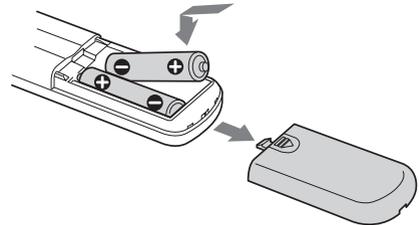
Connecting the AC power cord

Connect the AC power cord to a wall outlet after completing all of the previous connections.



Inserting batteries into the remote

You can control this unit using the supplied remote. Insert two R6 (size AA) batteries by matching the + and - on the batteries. When using the remote, point it at the remote sensor  on this unit.



Tip

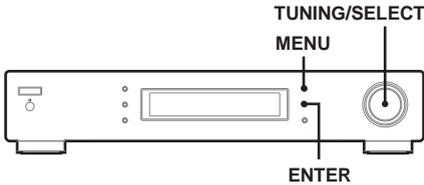
With normal use, the batteries should last for about six months. When the remote no longer operates the tuner, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not drop foreign objects into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatus. Doing so may cause a malfunction.
- If you will not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Basic menu operation

This tuner uses a menu entry system which allows you to operate various functions by following messages on the display. Use the following controls for basic menu operation.

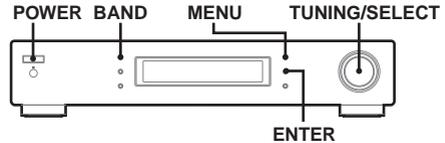


Use the	To
MENU button	Enter/Exit menu mode.
TUNING/SELECT control	Display different items or settings.
ENTER button	Select the currently displayed item or setting.

Before you can receive DAB stations

— DAB INIT SCAN

Before you can receive DAB, you must register the contents of broadcasts (service components) so that they can be received by the DAB tuner using the DAB Initialization Scan procedure.



- 1** Press **POWER** to turn on the tuner.
- 2** Press **BAND** repeatedly to select DAB. “DAB Tuning” will appear in the display while the tuner is collecting DAB data. Please wait until this message disappears.
- 3** Press **MENU**.
- 4** Turn **TUNING/SELECT** to display “DAB INIT SCAN”.
- 5** Press **ENTER**.
- 6** Turn **TUNING/SELECT** to display “Yes”.
- 7** Press **ENTER**.
Scanning begins. Depending on the DAB services available in your area, this may take a few minutes.
- 8** When scanning is complete, “End” appears in the display momentarily and the tuner returns to normal operation.

Turn **TUNING/SELECT** to select a service.

Notes

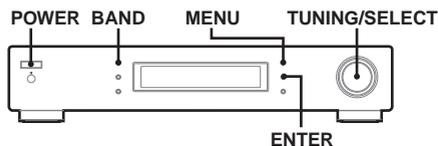
- Do not press any button on the tuner or supplied remote during DAB INIT SCAN, except **POWER**.
- If you move to another area, repeat this procedure to store the stations for your new area.
- This procedure does not create any presets.
- This procedure clears all previously stored presets.
- For details on presets, see “Storing stations manually” on page 12.

Storing FM stations automatically

— AUTOBETICAL

This function lets you store up to 30 FM and FM RDS stations in alphabetical order without redundancy. Additionally, it only stores the stations with the clearest signals.

If you want to store FM or AM stations one by one, see “Storing stations manually” on page 12.



- 1** Press **POWER** to turn on the tuner.
- 2** Press **BAND** repeatedly to select **FM**.
- 3** Press **MENU**.
- 4** Turn **TUNING/SELECT** to display “**AUTO-BETICAL**”.
- 5** Press **ENTER**.
- 6** Turn **TUNING/SELECT** to display “**Yes**”.
- 7** Press **ENTER**.

Depending on the number of stations in your area, it may take longer than 5 minutes until storing is complete.

“**AUTO-BETICAL**” appears in the display and the tuner scans and stores all the FM and FM RDS stations in the broadcast area.

For RDS stations, the tuner first checks for stations broadcasting the same program, then stores only the one with the clearest signal. The selected RDS stations are sorted alphabetically by their Program Service name, then assigned a 2-character preset code. For more details on RDS, see “Using the Radio Data System (RDS)” on page 14. Regular FM stations are assigned 2-character preset codes and stored after the RDS stations.

- 8** When done, “**End**” appears in the display momentarily and the tuner returns to normal operation.

Turn **TUNING/SELECT** to select a service.

Notes

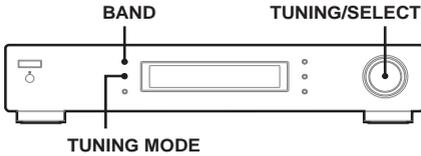
- Do not press any button on the tuner or supplied remote during autobetical operation, except **POWER**.
- If you move to another area, repeat this procedure to store the stations for your new area.
- For details on tuning in stored stations, see “Receiving preset stations” on page 13.
- If you move the aerial after storing stations with this procedure, the stored settings may no longer be valid. If this happens, repeat this procedure to store the stations again.

Receiving Broadcasts

Receiving DAB/FM/AM broadcasts

Receiving broadcasts by scanning stations (Automatic Tuning)

With automatic tuning you can quickly tune in a station without having to know its frequency.



- 1 Press BAND repeatedly to select DAB, FM or AM for the desired type of broadcast.**

When selecting DAB, “DAB Tuning” will appear in the display while the tuner is collecting DAB data. Please wait until this message disappears.

- 2 Press TUNING MODE to display AUTO.**
- 3 Turn TUNING/SELECT slightly and release it when the service component (DAB) or frequency (FM/AM) numbers start changing.**

Turn the control to the right or left to tune in a service component (DAB) or frequency (FM/AM).

When the tuner locates a station, it stops automatically. “TUNED” appears in the display.

- 4 Repeat step 3 until you tune in the appropriate station.**

To store the station, operate steps 4 to 6 in “Storing stations manually” (page 12).

Notes

- When tuning in a DAB station, it may take a few seconds before you hear any sound.

- Before you can receive DAB, you must complete the DAB INIT SCAN procedure (see “Before you can receive DAB stations” on page 9).

If you cannot tune in the station you want (Manual Tuning) (FM/AM bands only)

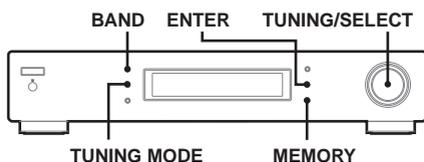
With manual tuning you can search through all stations broadcasting on each band, and tune in stations with extremely weak signals that you might not be able to receive with automatic tuning.

- 1 Press BAND repeatedly to select FM or AM for the desired type of broadcast.**
- 2 Press TUNING MODE so that “MANUAL” appears in the display.**
- 3 Turn TUNING/SELECT until you tune in the station you want.**

Turn the control to the right for a higher frequency; turn it to the left for a lower frequency.

Storing stations manually

This section shows you how to store up to 99 of your favorite DAB, 30 of FM or 30 of AM stations manually onto preset numbers.



1 Press BAND repeatedly to select DAB, FM or AM for the desired type of broadcast.

2 Press TUNING MODE repeatedly so that the tuner is set to automatic or manual tuning mode.

Manual tuning mode is only available with FM and AM band reception.

3 Turn TUNING/SELECT to tune in the station you want to store.

4 Press MEMORY.

“MEMORY” appears along with the preset number and the previously stored station.

The default station presets are as follows:
DAB: DAB01 (Empty), FM: FM01 87.50 MHz, AM: AM01 531 kHz.

5 Turn TUNING/SELECT to select the desired number.

6 Press ENTER.

The tuner stores the service/station at the preset number. Any previously stored service/station is overwritten.

7 Repeat steps 1 through 6 to store other stations.

Tips

- To label a station, see “Naming preset stations” on page 16.
- When tuning in AM stations, adjust the direction of the AM loop aerial for optimum reception.
- If the STEREO indicator remains off, switch to stereo mode (see “Tips for better FM reception” on page 17).
- If an FM stereo programme seems distorted, switch to monaural (see “Tips for better FM reception” on

page 17). You will not have the stereo effect but the distortion will be reduced.

Notes

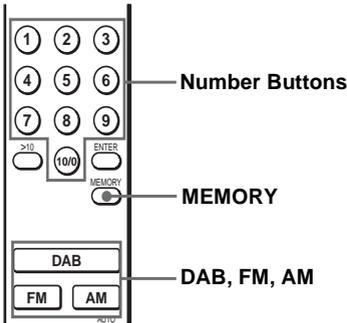
- When you preset a DAB or RDS station that is broadcasting station name information, the station name is automatically stored in the station preset.
- The DAB INIT SCAN procedure clears all DAB presets.

To store stations using the remote

Using the remote's number buttons.

- 1 Press DAB, FM or AM to select the desired broadcast type.**
- 2 Press MEMORY.**
"MEMORY" flashes in the display.
- 3 Press the number button for which you want to store the preset.**

The tuner stores the station at the preset number.



Storing presets at numbers above 10.

- 1 Perform steps 1 and 2 as described above.**
- 2 Press >10.**
The PRESET number changes to “_ _” (underbars) and the left underbar flashes.
- 3 Press the number buttons on the remote for which you want to store the preset.**

To input a “0” press 10/0.

Example: To store a station at PRESET number “30”

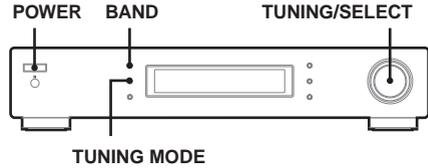
Press MEMORY first, press >10 next, then 3 and 10/0.

Tip

To input a “10” simply press 10/0.

Receiving preset stations

This section shows you how to receive preset stations.



- 1 Make sure you have hooked up the tuner and stored preset stations. (See “Hooking up the system” on page 5, “Storing FM stations automatically” on page 10 and “Storing stations manually” on page 12.)**
- 2 Turn down the volume on the amplifier, then turn on the amplifier and select the TUNER mode.**
- 3 Press POWER to turn on the tuner.**
- 4 Press BAND repeatedly to select DAB, FM or AM for the desired type of broadcast.**
- 5 Press TUNING MODE repeatedly so that “PRESET” appears in the display.**

- 6 Turn TUNING/SELECT.**

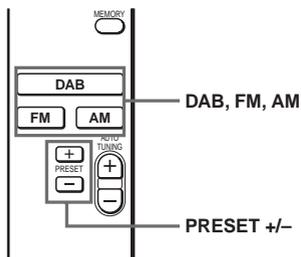
Each time you turn TUNING/SELECT, a preset station is received and the settings (Preset ID, frequency, and station name, etc.) appear in the display.

- 7 Adjust the volume of the amplifier.**

To receive a preset station by using the remote

Select the desired broadcast band by pressing the corresponding buttons on the remote, then specify the desired preset number using the number button on the remote.

You can also switch to the next/previous preset number by pressing PRESET +/- instead of specifying the preset number directly.



Tips

- To tune in a non-preset station, see “Receiving DAB/FM/AM broadcasts” on page 11.
- When you directly specify a preset station numbered over 10, press >10 first, then the corresponding number buttons. To enter “0”, use the button 10/0. Example: To tune the preset number 30
Press >10 first, then 3 and 10/0.

Notes

- When you tune in a DAB broadcast, do not turn up the volume on the amplifier too loud. Since DAB broadcasts have a wide dynamic range, a loud sound may affect your ears or cause the amplifier or speakers to be damaged.
- When tuning in a DAB station, it may take a few seconds before you hear any sound.

Using the Radio Data System (RDS)

(FM band only)

This tuner allows you to receive and display RDS (Radio Data System) information. RDS enables radio stations to send information along with the regular program signal.

Receiving RDS broadcasts

Simply select a station on the FM band using automatic or manual tuning (page 11).

When you tune in a station that provides RDS services, the RDS indicator lights and the program service name appears in the display.

Note

RDS may not work properly if the station you tuned to is not transmitting the RDS signal properly or if the signal strength is weak.

Displaying RDS information

While receiving an RDS station, press **DISPLAY**.

Each time you press the button, RDS information on the display changes cyclically. (See “When tuning in an FM RDS station” on page 19.)

Notes

- If there is an emergency announcement by government authorities, “ALARM” flashes in the display.
- If a station does not provide a particular RDS service, “No XX” (such as “No Time Data”) appears in the display.
- When a station broadcasts radio text data, it is displayed at the rate at which it is sent from the station. Any change in this rate is reflected in the display rate of the data.

Description of program types for DAB and FM RDS

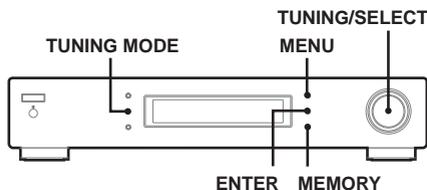
Program type indication	Description
News	News programs
Current Affairs	Topical programs that expand on current news
Information	Programs offering information on a wide spectrum of subjects, including consumer affairs and medical advice
Sport	Sports programs
Education	Educational programs, such as “how-to” and advice programs
Drama	Radio plays and serials
Cultures	Programs about national or regional culture, such as language and social concerns
Science	Programs about the natural sciences and technology
Varied Speech	Other types of programs such as celebrity interviews, panel games, and comedy
Pop Music	Popular music programs
Rock Music	Rock music programs
Easy Listening	Easy Listening
Light Classics M	Instrumental, vocal, and choral music
Serious Classics	Performances of major orchestras, chamber music, opera, etc.
Other Music	Music that does not fit into any categories above, such as Rhythm & Blues and Reggae
Weather & Metr	Weather information
Finance	Stock market reports and trading, etc.
Children’s Progs	Programs for children
Social Affairs	Programs about people and the things that affect them
Religion	Programs of religious content
Phone In	Programs where members of the public express their views by phone or in a public forum
Travel & Touring	Programs about travel. Not for announcements that are located by TP/TA.

Program type indication	Description
Leisure & Hobby	Programs on recreational activities such as gardening, fishing, cooking, etc.
Jazz Music	Jazz programs
Country Music	Country music programs
National Music	Programs featuring the popular music of the country or region
Oldies Music	Programs featuring oldies music
Folk Music	Folk music programs
Documentary	Investigative features
(No PTY Data)	Other programs not defined above

Advanced Tuner Operations

Naming preset stations

You can assign a name of up to 16 characters long to each preset station except DAB and FM RDS stations. When the station is tuned in, the station name will appear.



- 1 Press TUNING MODE to display "PRESET".**
- 2 Tune in the preset station you want to name.**
- 3 Press MENU.**
- 4 Turn TUNING/SELECT to display NAME.**
- 5 Press ENTER.**
- 6 Turn TUNING/SELECT to select a character.**
- 7 When the character you want appears, press ENTER to move the cursor into position for the next character.**

If you make a mistake

Press ENTER repeatedly until the character you want to change flashes (every time you press ENTER, the next character flashes). Then turn TUNING/SELECT to select a new character.

- 8 Press MEMORY.**
The tuner stores the preset name.
- 9 Repeat steps 1 to 8 to name other preset stations.**

Notes

- You can only name stations that are stored under PRESET.
- If you name a station which has a preset name already, the previous preset name is deleted.

- "No Name" appears when you display a preset station without a preset name.
- You cannot use a " " (blank space) for a preset name.

Tips for better FM reception

If the FM stereo programme you are listening to is distorted, switch to monaural mode.

The tuner stores the following adjustments, together with the frequency when you make a station preset.

The following settings do not change even if the frequency changes.

Switching to monaural mode

You will not have the stereo effect but the distortion will be reduced.

- 1** Press **MENU**.
- 2** Turn **TUNING/SELECT** to display **"FM MODE"**.
- 3** Press **ENTER**.
- 4** Turn **TUNING/SELECT** to display **"MONO"**.
- 5** Press **ENTER**.

The FM mode is set and the display returns to **MENU** mode.

Tips

- To return to stereo mode, choose **"STEREO"** in step 4 above.
- You can also switch back and forth from **"STEREO"** to **"MONO"** mode simply by pressing the **"FM MODE"** button on the remote.
- This setting does not change when you select another frequency in **MANUAL/AUTO** tuning modes.
- When in **PRESET** tuning mode, any changes you make are restored to the original settings once you switch to a different preset. In order to avoid this, make sure you store any new settings in the station preset (see **"Storing stations manually"** on page 12).

Note

This procedure is only available with FM band reception.

Listening at low volumes

— *DRC (Dynamic Range Control)*

(DAB only)

Allows you to compress the dynamic range of the programme. This may be useful when you want to listen to the tuner at low volume late at night.

Switching the setting

This feature is only available when using DAB service that carries DRC data. **"DRC"** lights in the display when it is activated.

You can automatically adjust the signal level of broadcasts which have wide dynamic ranges: i.e. programmes that have soft as well as loud sounds.

- 1** Press **BAND** repeatedly to select **DAB**.
- 2** Press **MENU**.
- 3** Turn **TUNING/SELECT** to display **"DAB DRC"**.
- 4** Press **ENTER**.
- 5** Turn **TUNING/SELECT** to select the **desired setting**.

The initial setting is **"DRC OFF"**.

DRC OFF: The dynamic range is not compressed.

DRC AUTO: The dynamic range is compressed automatically.

- 6** Press **ENTER**.

The DRC setting is registered and the display returns to **MENU** mode.

Note

The **DAB INIT SCAN** procedure resets DRC setting to **DRC OFF**.

Checking reception sensitivity

— DAB TUNE AID

(DAB only)

Allows you to check the DAB reception status. A numerical value is displayed as a guide for aerial adjustment. A higher numerical value indicates better reception. (Maximum value: 100)

- 1 Press BAND repeatedly to select DAB.**
- 2 Press MENU.**
- 3 Turn TUNING/SELECT to display “DAB TUNE AID”.**
- 4 Press ENTER.**
- 5 Turn TUNING/SELECT to change Channel label.**

Check your local radio listings and select the appropriate frequency. Use the displayed number as a guide for where to best place your aerial. Try to position the aerial so that the numerical reading is 70 or higher. (For best results, a reading of 90 or higher is recommended.)

- 6 Press ENTER.**

Notes

- No sound is output while the DAB TUNE AID function is being used.
- Depending on the broadcast stations available in your area, the numerical reading displayed may not be ideal.
- With readings below 70, DAB reception may be distorted.

Changing the display



Display Information

You can check the status of this tuner and the information about the programme using the display.

When tuning in a DAB station

Each time you press DISPLAY, the display changes as follows:

Channel label (Normal display) →
Ensemble label → PTY (Program Type) →
Dynamic label segment → Time^{a)} (in 24-hour system) → Frequency → Audio Info^{b)} →
Signal Quality^{c)} → Channel label →...

^{a)} Time information appearing in the display is sent by the DAB station. As a result, the time may not be displayed properly if the station is located in a different time zone.

“--:--” will display until time information is received.

^{b)} Audio information on bit rate (32kbps - 256kbps), signal type (stereo, dual, mono) and sampling type (F: 48kHz, H: 24kHz) is displayed.
Example: 128kbps stereo F

^{c)} “Quality _ _ _” is displayed until information is received.

Note

When “STEREO” appears in the display, the current programme is broadcasted in the stereo/joint (intensity) stereo mode.

When tuning in an FM RDS station

Each time you press DISPLAY, the display changes as follows:

Frequency^{a)} → PTY (Program Type)^{b)} →
Radio Text^{c)} → Time^{d)} (in 24-hour system)
→ Frequency → ...

- a) This information also appears for non-RDS FM stations.
- b) Type of program being broadcast (see “Description of program types for DAB and FM RDS” on page 15).
- c) Text messages sent by the RDS station.
- d) Time information appearing in the display is sent by the RDS station. As a result, the time may not be displayed properly if the station is located in a different time zone.

Note

The DISPLAY button is only available with DAB and FM RDS reception.

Customizing the display

You can select the appearance of the display from one of the following two display modes.

- 1** Press MENU.
- 2** Turn TUNING/SELECT to display DIMMER.
- 3** Press ENTER.
- 4** Turn TUNING/SELECT to select the desired mode.

DIMMER OFF: The Display is on full brightness.

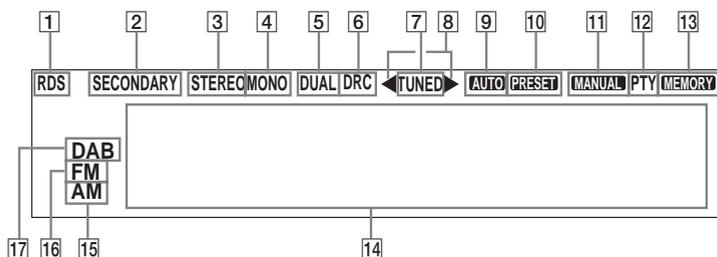
DIMMER ON: The Display is 50% dimmed.

- 5** Press ENTER.

The display returns to MENU mode.

To exit MENU mode, press MENU.

About the indications in the display



- 1 **RDS:** Lights when receiving RDS information. This is only available with FM reception (page 14).
- 2 **SECONDARY:** Lights when a secondary service component is being received. This is only available with DAB reception.
- 3 **STEREO:** Lights during stereo broadcast reception. However, this indicator does not light when FM MODE is set to “MONO” and an FM band is being received.
- 4 **MONO:** Lights when FM MODE is set to “MONO” and an FM band is being received (page 17).
- 5 **DUAL:** Lights during DUAL audio reception. This is when two separate audio tracks are transmitted through the left and right channels. For example, bilingual broadcast reception (page 18).
- 6 **DRC:** Lights when Dynamic Range Control is activated (page 17).
- 7 **TUNED:** Lights when a station is being received (page 11).
- 8 **◀/▶:** Lights when TUNING/SELECT is turned to the left/right or when Automatic Tuning towards a lesser/higher frequency is performed (page 11).
- 9 **AUTO:** Lights during Auto Tuning mode (page 11).
- 10 **PRESET:** Lights during Preset Tuning mode (page 13).
- 11 **MANUAL:** Lights during Manual Tuning mode (page 11).
- 12 **PTY:** Lights when the Program Type is displayed (pages 15 and 18).
- 13 **MEMORY:** Lights while stations are being preset (page 12).
- 14 **Display window:** Displays the following messages to operate various functions.
 - DAB INIT SCAN**
Registering service components of DAB broadcasting (page 9).
 - AUTO-BETICAL**
Storing FM and FM RDS stations automatically (page 10).
 - DAB TUNE AID**
Checking DAB signal sensitivity (page 18).
 - DAB DRC**
Switching the DRC (Dynamic Range Control) function of DAB (page 17).
 - FM MODE**
Switching the FM programme stereo or monaural (page 17).
 - NAME**
Setting the preset station name (page 16).
 - DIMMER**
Setting the brightness of the display (page 18).
- 15 **AM:** Lights during AM band reception (page 11).
- 16 **FM:** Lights during FM band reception (page 11).
- 17 **DAB:** Lights during DAB band reception (page 11).

Additional Information

Troubleshooting

If you experience any of the following difficulties while using the tuner, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer.

There's no sound.

- Connect the aerials.
- Set the source setting on the amplifier to TUNER.
- Connect the tuner to the amplifier using an audio cord (page 7) or digital optical cable (page 8).
- The specified station has temporarily stopped broadcast.
- Perform the DAB Initialization Scan procedure (page 9).
- FM/AM broadcast signals are not output from the DIGITAL DAB OPTICAL OUT jack.

You cannot tune in a frequency.

- Adjust the position of the aerial.
- Connect an external aerial for DAB/FM broadcasts.
- Preset the stations again if you have moved.

There is severe hum and/or background noise.

- Adjust the position or direction of the aerial.
- Tune to a correct frequency.
- Connect an external aerial for DAB/FM broadcasts.
- Move the tuner away from the source of the noise.

RDS isn't working.

- Make sure that you tune in an FM station.
- Select a stronger FM station.

The appropriate display or information does not appear.

- Contact the radio station and find out whether or not they actually provide the service in question. The service may be temporarily out of order.

You cannot name the preset station.

- You cannot name DAB/FM RDS stations.

The tuner malfunctions.

- The microprocessor in the tuner has malfunctioned. Turn off the tuner, then turn it on again.

(No Service Now) is displayed. (DAB reception only)

- Check all aerial connections, then turn TUNING/SELECT to select a service.
- The current DAB service is not available. Turn TUNING/SELECT to select a different service.
- If you have moved to another area, some services/frequencies may have changed and you may not be able to tune into your usual broadcast. Perform the DAB INIT SCAN procedure to re-register the contents of broadcasts. (Performing this procedure clears all previously stored presets.)

There's no sound from the DIGITAL DAB OPTICAL OUT jack, or you cannot record a programme.

- Make sure that the digital optical cable is properly connected.
- The connected recorder does not support the 48kHz sampling frequency mode. Use a recorder that supports this mode.
- The sound of the FM and AM programme does not output from the DIGITAL DAB OPTICAL OUT jack of the tuner. Connect the recorder to the ANALOG OUT jack of the tuner.

Remote control

The remote does not function.

- Point the remote at the remote sensor () on the tuner.
- Remove any obstacles in the path between the remote and the tuner.
- Replace both batteries in the remote with new ones if they are weak (page 8).

Specifications

DAB tuner section

Frequency range	174.928 (5A) – 239.200 (13F) MHz For details, see “DAB frequency table” below.
Sensitivity	–99 dBm
Signal-to-noise ratio	97 dB
THD+N	0.009% (1 kHz)
Channel separation	87 dB (1 kHz)
Selectivity	40 dB (at adjacent channel)
Frequency response	+0.5/–0.5 dB (5 Hz – 20 kHz)
Digital output	Optical Sampling frequency: 48 kHz
Aerial terminal	75 Ω, F female
Analog output level	2 Vrms

FM tuner section

Frequency range	87.5 – 108.0 MHz (50 kHz step)
IHF Sensitivity	1.0 μV
Signal-to-noise ratio	at 40 kHz deviation 70 dB (stereo)
THD+N	1 kHz, 40 kHz deviation 0.5% (stereo)
Channel separation	45 dB (1 kHz)
Selectivity	at 400 kHz 60 dB
Frequency response	+0.5/–2.0 dB (30 Hz – 15 kHz)
Aerial terminal	75 Ω, IEC male

AM tuner section

Frequency range	531 – 1,602 kHz (9 kHz step)
Sensitivity	(with AM loop aerial) 330 μV/m
Signal-to-noise ratio	54 dB
THD+N	0.5% (400 Hz)
Selectivity	at 9 kHz 35 dB
Aerial terminal	Push lever

General

Power requirements	230 V AC, 50/60 Hz
Power consumption	12 W
Dimensions	430 × 85 × 300 mm (w/h/d)
Weight	4.5 kg
Remote control capability	IR
Station preset capacity	DAB maximum of 99 FM maximum of 30 AM maximum of 30
Supplied accessories	See page 5.

Design and specifications are subject to change without notice.

DAB frequency table

Band-III (174 to 240 MHz)

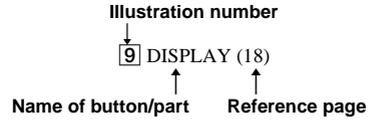
Frequency	Label	Frequency	Label
174.928MHz	5A	209.936MHz	10A
176.640MHz	5B	211.648MHz	10B
178.352MHz	5C	213.360MHz	10C
180.064MHz	5D	215.072MHz	10D
181.936MHz	6A	216.928MHz	11A
183.648MHz	6B	218.640MHz	11B
185.360MHz	6C	220.352MHz	11C
187.072MHz	6D	222.064MHz	11D
188.928MHz	7A	223.936MHz	12A
190.640MHz	7B	225.648MHz	12B
192.352MHz	7C	227.360MHz	12C
194.064MHz	7D	229.072MHz	12D
195.936MHz	8A	230.784MHz	13A
197.648MHz	8B	232.496MHz	13B
199.360MHz	8C	234.208MHz	13C
201.072MHz	8D	235.776MHz	13D
202.928MHz	9A	237.488MHz	13E
204.640MHz	9B	239.200MHz	13F
206.352MHz	9C		
208.064MHz	9D		

* This tuner does not support L-Band reception.

List of button locations and reference pages

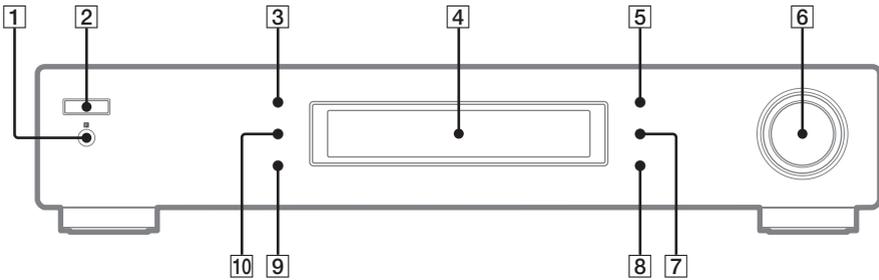
How to use this page

Use this page to find the location of buttons and other parts of the system mentioned in the main text.



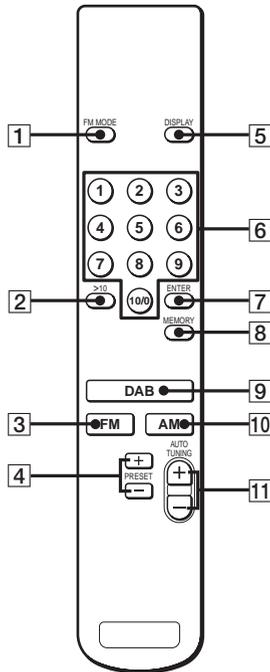
Main unit

- 1  (remote sensor) (21)
- 2 POWER switch (9, 13)
- 3 BAND (11-13)
- 4 Display window (20)
- 5 MENU (9, 10, 16)
- 6 TUNING/SELECT (9-13, 16, 17)
- 7 ENTER (9, 10, 12, 16-18)
- 8 MEMORY (12, 16)
- 9 DISPLAY (18)
- 10 TUNING MODE (11-13)



Remote

- 1 FM MODE (17)
- 2 >10 (14)
- 3 FM (11, 12, 14)
- 4 PRESET +/- (14)
- 5 DISPLAY (14, 18, 19)
- 6 Number buttons (13)
- 7 ENTER (9, 10, 12, 16-18)
- 8 MEMORY (12, 16)
- 9 DAB (11, 14)
- 10 AM (11, 12, 14)
- 11 AUTO TUNING +/- (11, 14)



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