



## **RADIO MANUAL**

**TEV75B BATTERY ELECTRIC VEHICLE**

**ISSUE 01 – JANUARY 2023**



## Controls on mid panel

1. **On/off button:** long press to turn the Radio on if it was previously off or turn the Radio off if it was previously on. When setting some options, a short press confirms the chosen setting.

2. **BAND:** with FM source, a short press lets you switch between memory banks and choose the MW frequency range. A long press opens the Bluetooth (BT) menu with which it possible to PAIR a phone, select or delete a phone from the list. If a phone is connected to the ra-dio via BT , a long press allows you to view the phone book and the call history of the connected device. If a phone is connected to the Radio via BT and a call is received, a short press allows you to answer the phone call.

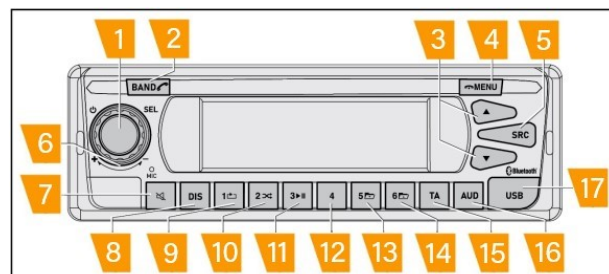
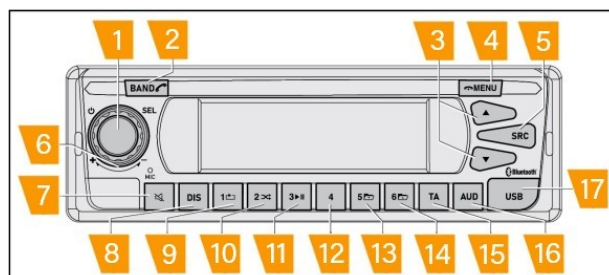
3. **Selection switch:** in FM source, a short press allows you to switch to the following frequency, a long press enables the manual seek function whereby the Radio automatically moves to the next station. In DAB source, a short press allows you to move to the follow-ing station. In USB / BT source, a short press allows you to move to the next track a long pressing enables the fast forward/fast rewind function.

4. **MENU:** in FM and DAB source, a short press allows you to access the automatic scan frequency function. In USB source, a short press allows you to enter a folder browser menu. When a phone is connected via BT to the radio and a phone call is received, a short press allows you to reject the phone call. A long pressing allows to enter in the main settings.

5. **Source (SRC):** Switches between the radio source (both FM and DAB ) and USB / iPod and Bluetooth® (if inserted, connected or activated).

6. **Selector:** rotate the selector to adjust the volume level. When entering in some menu, rotate the selector to scroll all the items.

7. **Mute:** a short press enables the complete mute of the audio source. If mute is activated, a short press clears the complete mute.





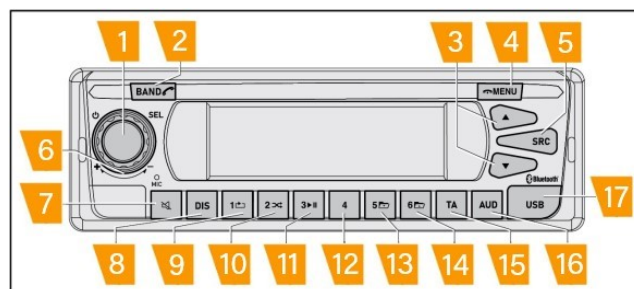
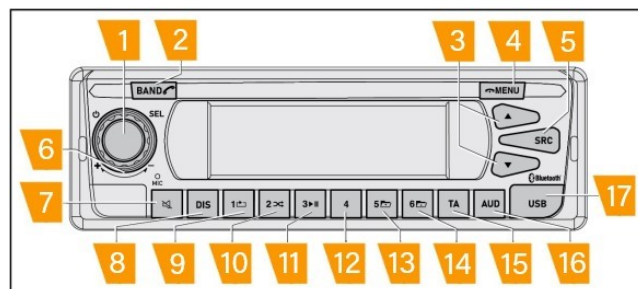
8. **Display:** a short press allows display of the current information of the current source (such as PTY for Radio source, tag IDR3 for USB / BT source and current timing).

9. **Pre-set 1/RPT:** in Radio source, a short press of the button selects the radio frequency stored in position 1 of the memory level set. A long press stores the currently tuned frequency in position 1. In USB source a short press allows the repeat setting (repeat the current one, repeat all, repeat off) using consecutive short presses.

10. **Pre-set 2/RDM:** in Radio source, a short press of the button selects the radio frequency stored in position 2 of the memory level set. A long press stores the currently tuned frequency in position 2. In USB source a short press allows the shuffle function to be set (shuffle all, shuffle only the content of the current folder, shuffle off) using consecutive short presses.

11. **Pre-set 3/Play and pause:** in Radio source, a short press of the button selects the radio frequency stored in position 3 of the memory level set. A long press stores the currently tuned frequency in position 3. In U SB / BT source a short press allows you to pause the current track. A short press then allows the current track to be played.

12. **Pre-set 4:** in Radio source, a short press of the button selects the radio frequency stored in position 4 of the memory level set. A long press stores the currently tuned frequency in position 4.



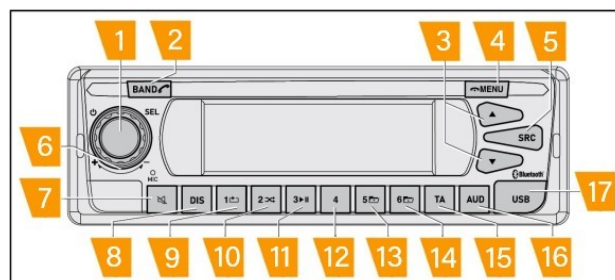
13. **Pre-set 5 / folder down:** in Radio source, a short press of the button selects the radio frequency stored in position 5 of the memory level set. A long press stores the currently tuned frequency in position 5. In USB source, a short press allows you to select the first track of the following folder (if present).

14. **Pre-set 6 / folder up:** in Radio source, a short press of the button selects the radio frequency stored in position 6 of the memory level set. A long press stores the currently tuned frequency in position 6. In USB source, a short press allows you to select the first track of the following folder (if present).

15. **Traffic announcement (TA):** a short press enables the transmission of the traffic announcement with higher priority than the current source. Another short press disables the transmission of the traffic announcement.

16. **Audio option (AUD):** Displays the audio menu for adjusting bass, mid, treble tones, loudness and balance.

17. **USB:** USB type-A port



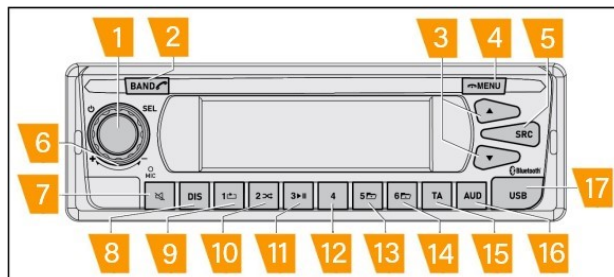
## Steering wheel controls

On vehicles with the option available, the Radio can be controlled via the steering wheel buttons.

In general, the following controls are possible using the steering wheel buttons:

- Volume adjustment as for button **(6)**.
- Deactivates / activates audio as for button **(7)**.
- Automatic seek up/down or change the track as for **(3)**.
- Change source as for button **(5)**.
- Answer a call as for button **(2)**.
- Reject a call as for button **(4)**.

**NOTE:** The detailed list of the controls supported by the vehicle is available in the vehicle user manual.



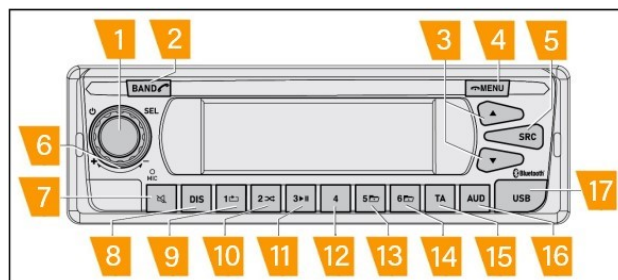
## Bed module control

In vehicles that have the option available, the Radio can be controlled via the Bed Module.

In general, using the bed module button, the following controls are available:

- Adjust the volume as for **(6)**.
- Mute/unmute the volume as for **(7)**.
- Seek up/down or change the soundtrack as for **(3)**.
- Change source as for **(5)**.
- Turn the radio on/off as for **(1)**.

**NOTE:** The detailed list of the controls supported by the vehicle is available in the vehicle user manual.



# Display

## Display description

18. **Signal strength:** when the phone is connected via BT to the radio, the icon reports the antenna signal information of the phone. The absence of the icon indicates that no phone is connected via BT .

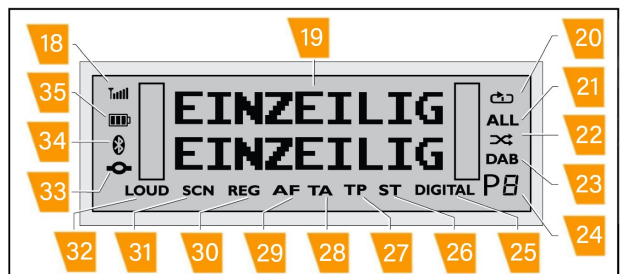
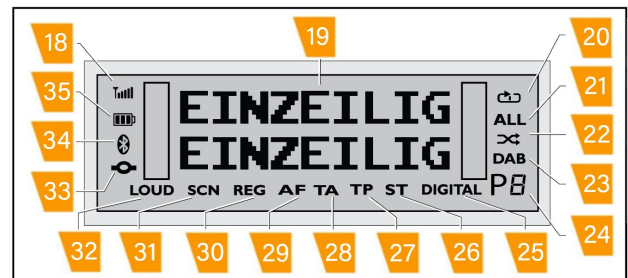
19. **Text display:** the Radio displays text in two rows. The upper row reports the main information such as RDS info, track number and so on. The lower row reports a details information such as frequency, track title and so on. The display is updated depending the current operation.

20. **Repeat one:** in USB source, the symbol indicates the selection of the 'repeat one' option. The absence of the icon indicates the selection of the 'repeat off' option.

20. **Repeat folder:** in USB source, the symbol indicates the selection of the 'repeat folder' option. The absence of the icon indicates the selection of the 'repeat off' option.

21. **Repeat all:** in USB source, the symbol indicates the selection of the 'repeat all' option. The absence of the icon indicates the selection of "repeat off" option.

22. **Random folder:** in USB source, the symbol indicates the selection of "random folder" option. The absence of the icon indicates the selection of the 'random folder off' option.



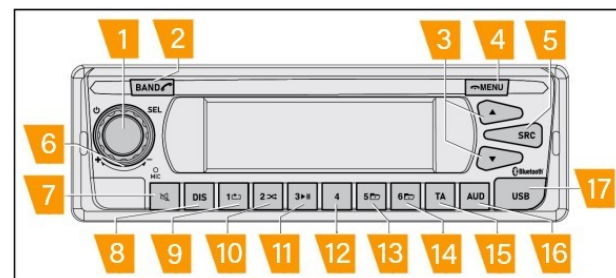
22. **Random all:** in USB source, the symbol indicates the selection of the 'random all' option. The absence of the icon indicates the selection of the 'random folder off' option.

23. **DAB:** the symbol indicates the selection of the DAB. option. The absence of the icon indicates that the current source is other DAB.

24. **Pre-set station:** in Radio mode ( FM and DAB ) the symbol indicates the selection of pre-set station. The icon is updated with the preselected number (from 1-6 as per the pre-selection buttons (9-14 in the diagram). The absence of the icon indicates the selection of a station not stored in memory.

25. **DIGITAL:** in DAB source, the symbol indicates that the current station has a digital signal. The absence of the symbol indicates that the current station does not have a digital signal.

26. **ST:** in FM source, the symbol indicates that the current station has a stable signal. The absence of the icon indicates that the current station does not have a stable signal therefore a certain level of disturbance might be emitted.



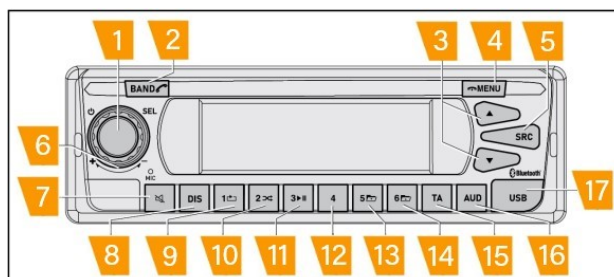
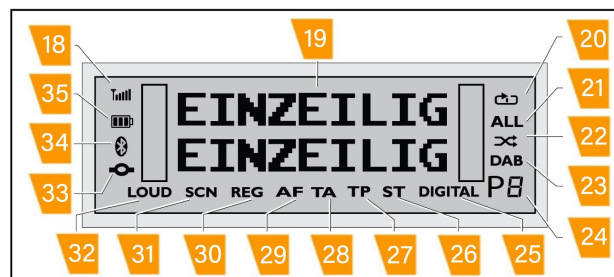


27. **TP**: in FM source, the symbol indicates that the current station carries traffic announcement.

28. **TA**: in FM source, the symbol indicates the selection of the 'traffic announcement option on the current station. The option can be set with **(15)**.

29. **AF**: in FM source, the symbol indicates the selection of the 'ALTERNATE FREQUENCY' service. The option can be selected using the main settings menu **(4)**.

30. **REG**: in FM source, the symbol indicates the selection of the 'REGIONAL' service. The option can be selected using the main settings menu **(4)**.

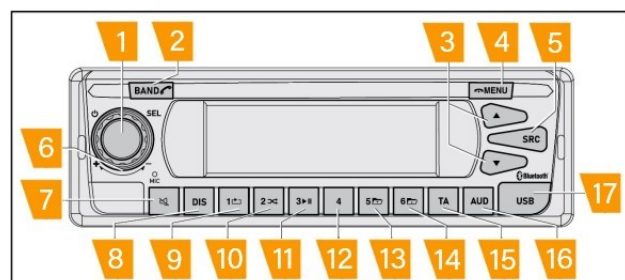


31. **SCN**: in FM source the icon indicates that the 'frequency scan' or 'PRESET SCAN' option has been selected. The option can be set with **(4)**.

32. **Link**: when a phone is connected via BT, the symbol indicates that the link has been established and the BT source is available.

33. **Bluetooth (BT)**: when a phone is connected via BT, the symbol indicates that the Bluetooth® connection is available. The icon blinks during "pairing mode" and while the phone book is being downloaded.

34. **Phone battery status**: when a phone is connected via BT, the symbol indicates the status of the battery of the phone.



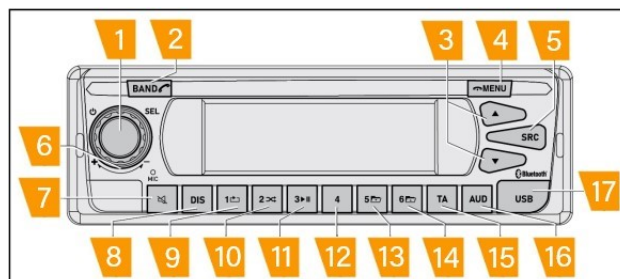
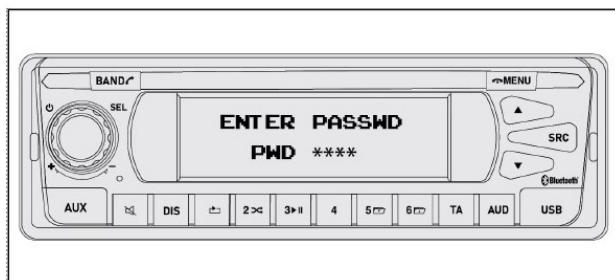
## Alarm code

This device is equipped with a four-digit code to protect against theft. This code must be inserted when prompted by the Radio. The code request function is activated in the factory.

**NOTE:** The code is indicated in the "radio pass" of your truck radio. If you lose the code, please contact Tevva Aftersales.


**NOTE:** Do not keep the radio password in the vehicle!

When Radio prompts password, the initial digits consist of four \*



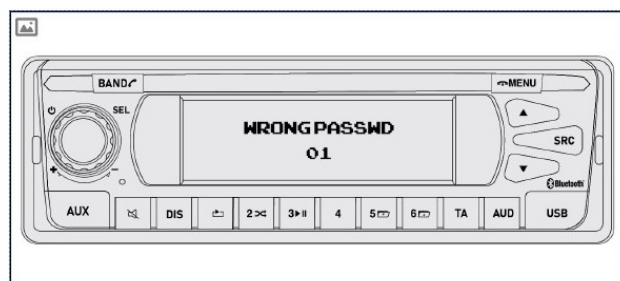
To insert your own password:

- First digit: repeatedly press the station 1 pre-selection button **(9)** until the display shows the first digit of its own numeric code.
- Second digit: repeatedly press the station 2 pre-selection button **(10)** until the display shows the second digit of its own numeric code.
- Third digit: repeatedly press the station 3 pre-selection button **(11)** until the display shows the third digit of its own numeric code.
- Fourth digit: repeatedly press the station 4 pre-selection button **(12)** until the display shows the fourth digit of its own numeric code.

Brief press  **(1)** to confirm the code.

If the password is correct, the Radio turns **(ON)** and allows normal operation.

**NOTE:** If the entered password is incorrect, the display will show the error 'Wrong psw xx' where xx is the number of failed attempts. After that, the radio automatically goes back to the "Enter passwd" window, filling the password with "\*\*\*\*"



**NOTE: the attempt failed number is not cleared with battery cut-off.**

The protection mechanism intervenes in all phases of Radio operation in order to detect anomaly situations. Although the Radio can always be used even with the vehicle stationary and key set to OFF, when the key is subsequently inserted, the Radio, switched on previously, may show the message 'VIN ERROR' and then automatically switch off after a few seconds.

In this case the Radio needs to confirm the password for the vehicle on which it is currently mounted and the following procedure must be implemented:

- Switch off the radio with a long press on the ON/OFF button (1).
- Switch off the vehicle (key OFF).
- Start the vehicle (key ON).
- The radio shows the password required screen.
- Enter the password in the 'radio pass' using the procedure described above.

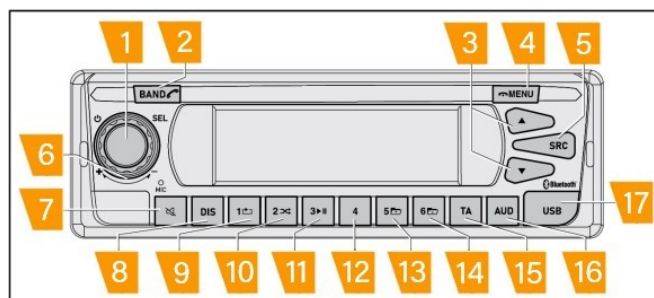
**NOTE: As protection strategy against tampering, after some failed attempts Radio waits some time before enabling the prompt of the password. The waiting time is related to the number of failed attempts and follows the below table.**

Number of incorrect passwords entered	Wait time
1	2 s
2	30 s
3	120 s
4	600 s
5	1200 s
6 - 20	3600 s
>20	Permanent

**ATTENTION: After 20 attempts, the Radio is no longer recoverable.**

**NOTE: If the vehicle is switched off during password input lock, the remaining timer is resumed the following time the Radio turns on.**

**NOTE: If battery cut off happens during password input lock, the following time that the Radio is switched on, the waiting time restarts from the beginning. For example: total waiting time is 600 s, remaining time is 300 s and the battery is then deactivated. The next time that the Radio is switched on, the waiting time is restored again to 600 s.**

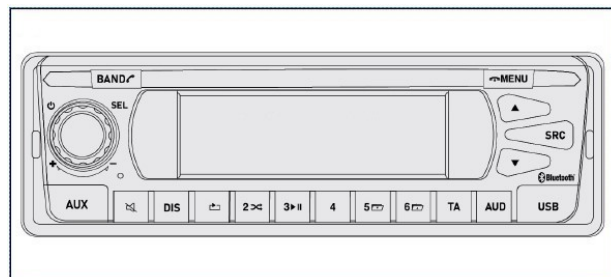


# System operation

## Turning on/switching off the device

The device could be turned on/off in several ways.

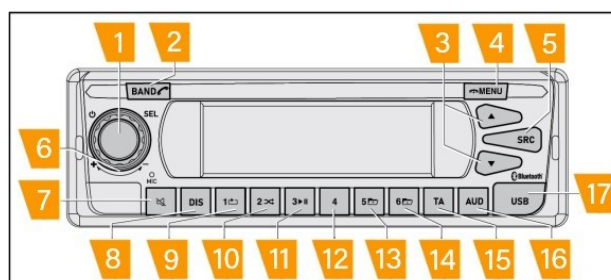
During start-up, the device shows the Tevva splash screen.



## Turning on/off using the ON/OFF button

- Long press the button (1) ON / OFF to activate the device.
- Long press the button (1) ON / OFF to deactivate the device.

**NOTE:** The device could be turned on/off even if the ignition is off.



**NOTE:** If the device is turned off when the ignition key is set to 'ON', the knob light is on.

**NOTE:** In order to save the vehicle battery, if the device is turned on when ignition key is set to 'OFF', the device only stays on for 20 min .

**NOTE:** If the phone is connected via Bluetooth® and an active call is ongoing, it is not possible to turn off the radio during the call.

## Turning on/off using ignition key

When the ignition key is set to 'ON', the device recalls the last status.

If the device was off before ignition on, when the ignition is set to 'ON' :

- The device stays off.
- The knob light is set to 'ON' .

If the device was on before ignition on, when the ignition is set to 'ON' :

- The device will turn on.
- The knob light is set to 'ON' .

When the ignition key is set to 'OFF', the device:

- Deactivates if the 'AUTO OFF' function is not activated.
- Remains active if the 'AUTO OFF' function is not activated.

## Auto off option

The 'AUTO OFF' option handles the behaviour of the device when the ignition is switched off.

Conditions for 'AUTO OFF' :

- When the ignition is switched off, the radio stays on for **20 min** .
- After **20 min**, the radio is automatically deactivated.

When 'AUTO OFF' is not set:

- When the ignition is switched off, the radio is automatically turned off.

In any case, during the 'AUTO OFF' timer, it is possible to manually deactivate the radio by pressing the ON / OFF button **(1)** .

To activate the 'AUTO OFF' option:

- Long press **(4)** .
- Scroll the main settings using **(6)** .
- When the cursor points to 'AUTO OFF' , short press **(1)** .
- To enable the option, point the cursor to ON and then short press **(1)** to confirm.
- To disable the option, point the cursor to 'OFF' and then short press **(1)** to confirm.
- After the selection, the display return to the main settings window.
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.

**NOTE: The 'AUTO OFF' function is active as the default setting;.**

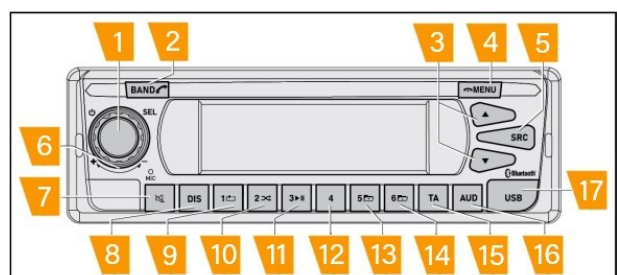
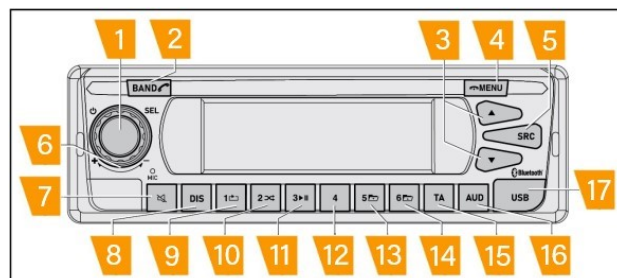
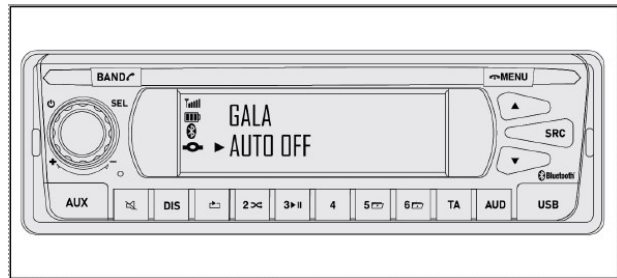
## Call management

If a phone is connected via Bluetooth® and an active call is ongoing:

- It is not possible to turn off the radio via **(1)** .
- It is not possible to turn off the radio via the Bed module (where available) .

If vehicle ignition is switched off during an active call, the radio stays on for **20 min** . After **20 min** the radio is automatically turned off even if the call has not ended: in this case the audio is transferred from the radio to the phone and the call stays on.

**NOTE: If the 'AUTO OFF' option is set to ON and the ignition is switched off: if the call ends within 20 min , la radio remains on until the timer 'AUTO OFF' expires. If the 'AUTO OFF' option is set to OFF and the ignition is switched off: If the call ends within 20 min , the radio is automatically turned off at the end of the call.**





## Turning on/off using Bed Module

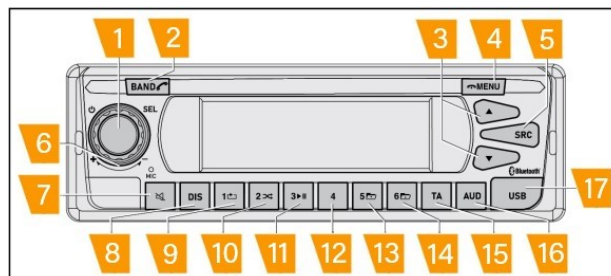
Where available, it is possible to turn on/off the radio using bed module buttons.

**NOTE:** See the vehicle user manual for further details about the bed module function

## Volume adjustment

It is possible to gradually adjust the system volume from 0 (off) to 40 (max.).

- To increase the system volume, turn the volume adjustment control **(6)** clockwise.
- To decrease the system volume, turn the volume adjustment control **(6)** anti-clockwise.

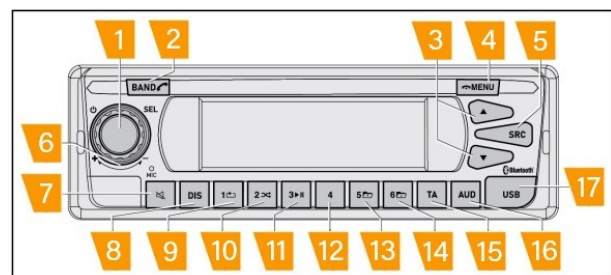
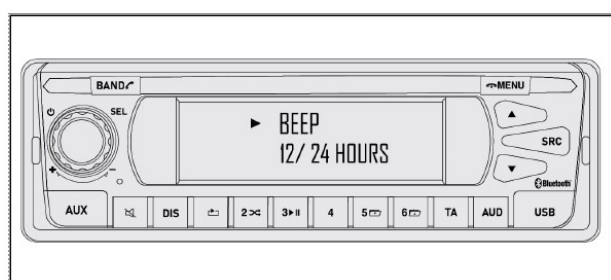


## Acoustic signal (BEEP)

In FM source a confirmation sound is emitted ( beep ) during manual forward / backward search using a long press on the button **(3)** or during manual storage of stations in the pre-set bank in radio mode with a long press one of the pre-set buttons: **(9)** **(10)** **(11)** **(12)** **(13)** **(14)** .

The confirmation acoustic signal can be deactivated:

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main settings using the selector **(6)** .
- When the cursor points to BEEP , short press **(1)** .
- To enable the option, point the cursor to ON and then short press **(1)** to confirm.
- To disable the option, point the cursor to OFF and then short press **(1)** to confirm.
- After the selection, the display return to the main settings window.
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.



## Volume when turning ON the vehicle

To protect your hearing from excessive volume, the radio applies a strategy to decide the starting volume each time it is switched on.

If at the previous power-on the last volume value was lower than the default volume, the start volume will be the same as the previous volume; if at the previous power-on the last volume value was higher than the default volume, the start volume will be the same as the default volume;

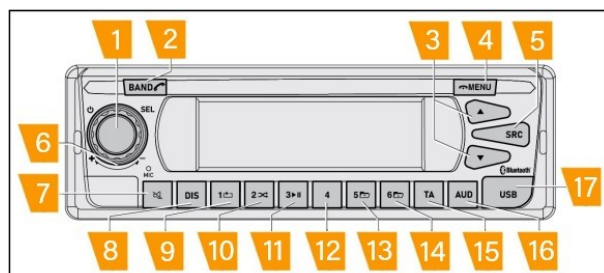
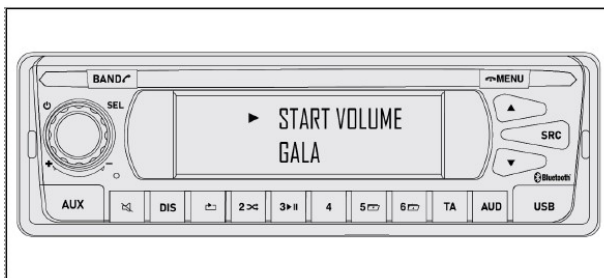
In case of battery cut off, when Radio turns on again, the volume starts to the default value.

**NOTE:** Default volume by factory setting is 15.

The default volume can be modified:

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main settings using the selector **(6)**.
- When the cursor points to START VOLUME, short press **(1)**.
- To enable the option, point the cursor to **(ON)** and then short press **(1)** to confirm.
- To disable the option, point the cursor to OFF and then short press **(1)** to confirm.
- Press **(4)** to exit the menu instantly or after 10 seconds radio automatically exits the menu.

**NOTE:** During the selection of the START VOLUME, the volume of the radio is modified according to the chosen START VOLUME value. This way the user can evaluate the START VOLUME selected. As soon as the user exits the START VOLUME menu, the previous volume is restored.



## Volume when the safety systems intervene

The device applies automatic volume setting in case the safety systems intervenes.

**NOTE:** The function is active only if the safety systems are available and activated by the driver.

### LDWS

In case of LDWS activation, the Radio volume switches automatically to 0.

When LDWS is deactivated, the Radio volume automatically switches to the previous one.

**NOTE:** See the vehicle user manual for detailed information about the LDWS system.

### AEBS

In case of AEBS activation, the Radio volume switches automatically to 0.

When AEBS is deactivated, the Radio volume automatically switches to the previous one.

**NOTE:** See the vehicle user manual for detailed information about the AEBS system.

## Volume in blackout mode

On vehicles in which the function is supported, in case of " blackout " activation, the Radio volume switches automatically to 0 and the display turns off.

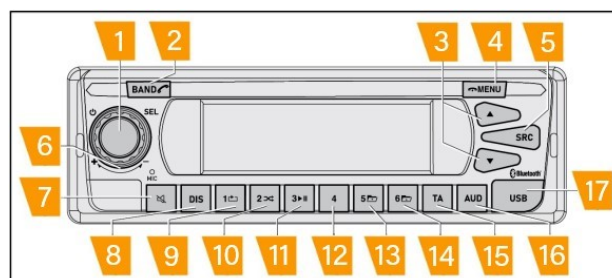
When blackout mode is deactivated, the Radio volume automatically switches to the previous one and the display turns on.

**NOTE:** See the vehicle user manual the availability of the function and for detailed information.

## Volume adjustment via Bed Module

On vehicles where the option is available, volume and mute can be adjusted using the Bed module button as for the selector (6) and the button (7).

**NOTE:** Check the vehicle user manual for further details about the Bed module controls.



## Volume adjustment via Steering wheel button

On vehicles where the option is available, volume and mute can be adjusted using the steering wheel controls as for the selector (6) and the button (7).

**NOTE:** Check the vehicle user manual for further details about the steering wheel controls.

## Volume during a call

During a call, it is applied a dynamic default volume.

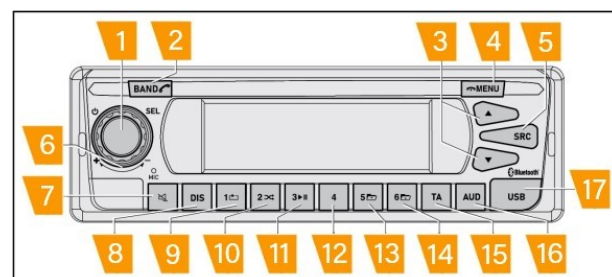
**NOTE:** At the first call, the default volume is 15

If the volume is increased/decreased during a call (rolling selector (6)), the chosen volume value will be applied for the following calls until the user increases/decreases the volume during the call once again.

The volume during active call is not related to the general volume.

At the end of the call, the volume set before the call is applied again.

**NOTE:** It is not possible to mute the volume during an active call using (7) or the external controls (steering wheel button, Bed module).

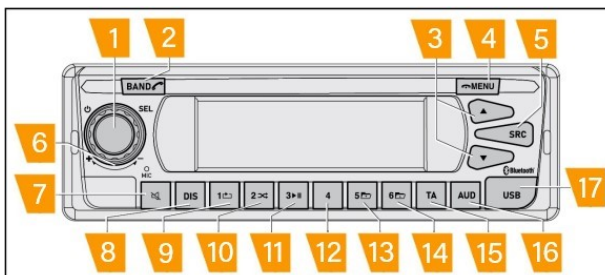
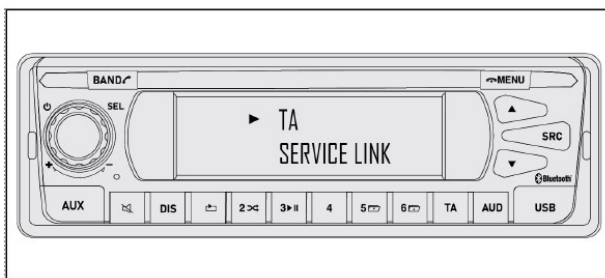


## Volume during Traffic announcement

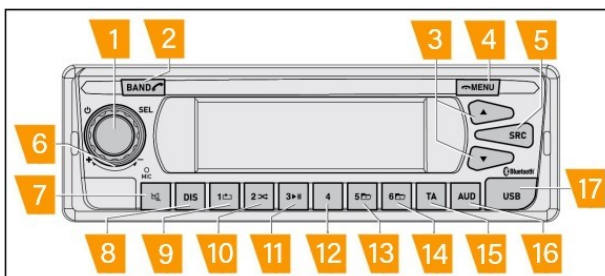
When the traffic announcement function (short press of **(15)**) is activated on a station that transmits the traffic announcement, the volume is automatically increased when there is an announcement.

The volume increase starts from the current main volume and it can be selected using the TA option in the main settings menu.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main settings using **(6)**
- When the cursor points to TA, short press **(1)**



- Scroll the list of the level (from 0 to 10) using **(6)**.
- When the cursor points to the chosen level, short press **(1)**.
- After the selection, the display return to the main settings window.
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.



At the end of the traffic announcement transmission, volume switches automatically to the previous one.

When TA function is activated, the icon **(28)** is shown on the display.

**NOTE:** The default TA value is 3.



## Volume muting (MUTE)

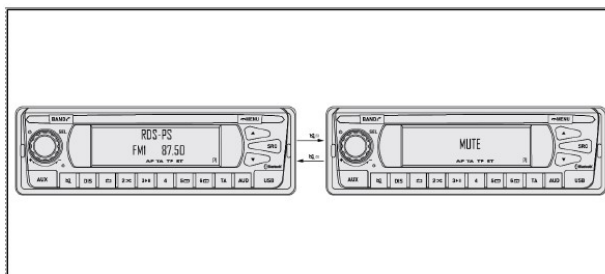
The system volume can be muted instantly:

- Short press the **(7)** button.

While the volume is muted, the display will indicate 'MUTE'.

To restore the previously set volume level:

- Short press the button **(7)** again.



## Mute priority

In case several mute conditions are applied at the same time, Radio applies a priority in order to detect if the mute could be released.

Radio follows this level of priority (from the highest to the lower):

- Blackout mode.
- AEBS .
- LDWS
- Steering wheel button and Bed module button.
- **(7)**

If the AEBS and LDWS systems are activated at the same time, the device is not muted if the LDWS system is disabled.

**NOTE: The priority is applied only if the setting is available and activated.**

## Volume adjustment based on vehicle speed (GALA)

Volume adjustment based on vehicle speed is a function used to increase the normal volume selected by the customer based on vehicle speed (GALA) .

Radio supports three different levels:

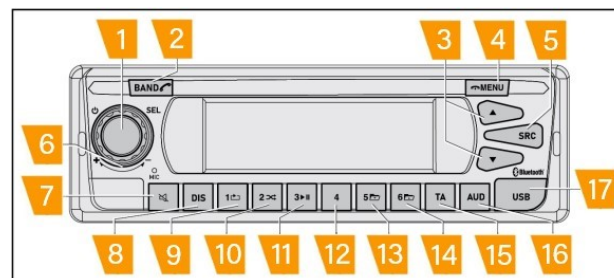
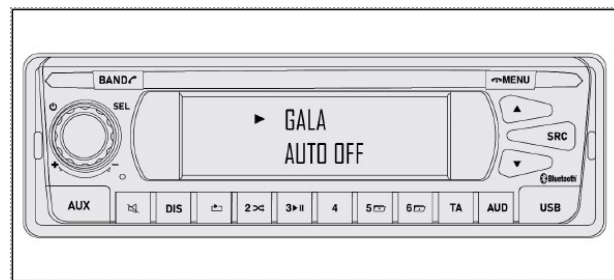
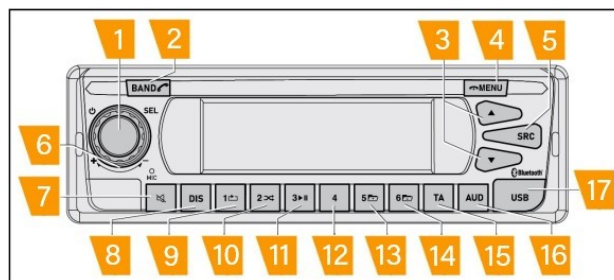
- Level 1
- Level 2
- Level 3

As the level increases, both sensitivity and the amplification applied to the specific speed range of the vehicle also increases.

The GALA options can be set using the main settings.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main settings using **(6)** .
- When the cursor points to GALA , short press **(1)** .
- Scroll the list of the levels (from OFF to LEVEL 3 ) using **(6)** .
- When the cursor points to the chosen level, short press **(1)** .
- After the selection, the display return to the main settings window
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.

**NOTE: GALA LEVEL 1 is set by default.**





## Sound option

The user could adjust the sound following his feeling in order to control:

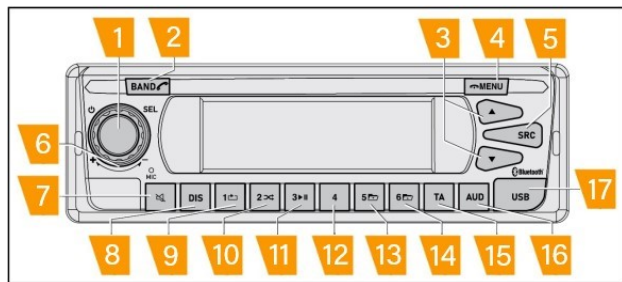
- Bass.
- Mid.
- Treble.
- Loudness.
- Balance.

**NOTE:** The settings is independent of the source, therefore a single setting is used for all audio sources.

### Adjusting Bass, Mid and Treble tones

- Short press the AUD button (16) .
- Use the volume control (6) to select the option 'Bass' , 'Mid' or 'Treble' .
- To set the level of the bass, mid, treble tones to a value between -7 to +7, turn the volume adjustment control (6) anti-clockwise or clockwise.
- To confirm the chosen level, short press (1) .
- To close the menu, press the button **AUD** (16) .

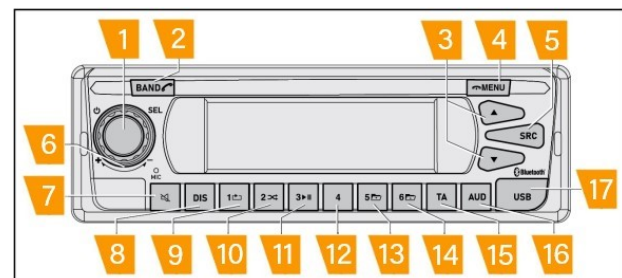
- If the button **AUD** is not pressed, the radio automatically switches to the previous main page after 10 s .



**NOTE:** The default Bass, Mid and Treble value set by factory is 0.

### Adjustment of volume distribution - balance (left/right side)

- Short press the **AUD** button (16)
- Use the volume adjust control (6) to select the BALANCE option.
- To set the volume distribution to a value between -10 to +10, turn the volume adjustment control (6) anti-clockwise or clockwise.
- To confirm the chosen level, short press (1) .
- To close the menu, press the button **AUD** (16) .
- If the button **AUD** is not pressed, the radio automatically switches to the previous main page after 10 s .



**NOTE:** The default Balance value set by factory is 0.



## Activation/deactivation of the loudness function

- Short press the **AUD** button (16) .
- Use the volume adjust control (6) to select the 'LOUDNESS' option.
- To activate or deactivate the loudness function, turn the volume adjustment control (6) anti-clockwise or clockwise.
- Brief press (1) to confirm the selection.
- To close the menu, press the button **AUD** (16) .
- If AUD is not pressed, the radio automatically switches to the previous main page after **10 s**.

When the 'LOUDNESS' option is activated, icon (32) is shown on the display.

**NOTE:** The 'LOUDNESS' function is deactivated by the default setting.

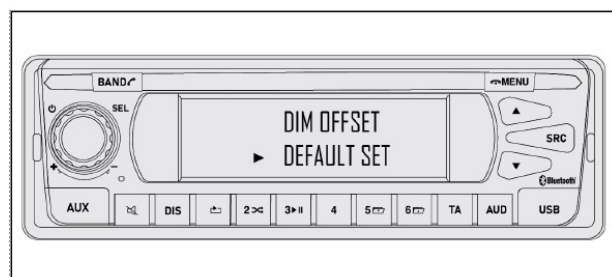
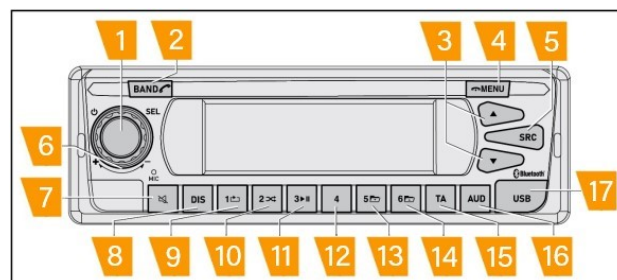
## Resetting the sound settings

All the sound settings could be reset to their respective factory setting.

- Long press the MENU button (4) to access the main settings.
- Scroll the main settings using (6) .
- When the cursor points to DEFAULT SET , short press (1) .
- Select ON using (6) .
- Confirm the selection by with a short press on (1) .

Radio turns off and then turns on automatically on.

The default setting has now applied.




## Sources

The sources supported by the radio are the following:

- FM/AM
- USB
- DAB
- BT

It is possible to switch between the sources at any time

with a short press on the  button (5).

The swap follows this order:

- FM/AM >> USB >> DAB >> BT

At ignition on radio starts from the last played source if available at the moment.

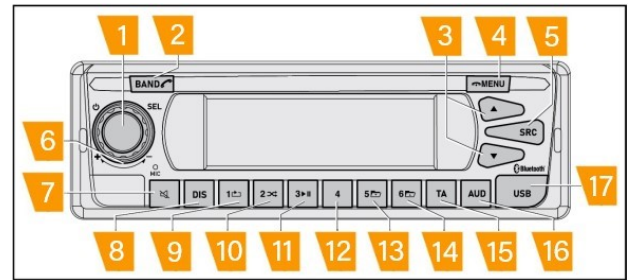
**NOTE: The swap from one source to the following one is done only if the source is available.**

**NOTE: If one source is not available, the radio skips to the next available one.**

**NOTE: The default source is FM .**

**NOTE: After battery cut off if the USB pen drive is already inserted in the port, the Radio starts from the USB source.**

**NOTE: If the USB key is removed when the radio is switched off, and if the last source played was USB, the radio will display 'USB READING...' for a few seconds before automatically returning to the default source when the radio is switched on the next time it is switched on (FM) .**



# Radio mode

## Analogue Radio signal: FM and AM

This device is equipped with an RDS radio receiver.

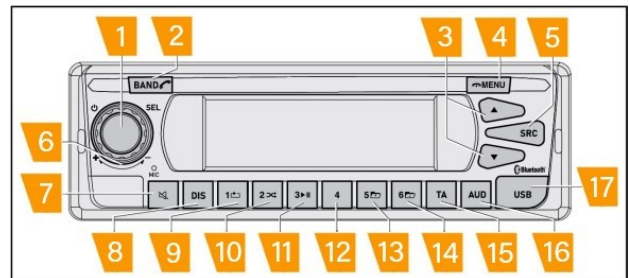
Many FM stations transmit a signal which, in addition to the radio programme, also transmits additional information such as station name or programme type.

## Activation of Analogue Radio Mode

If another source is currently selected, in order to switch to analogue radio mode:

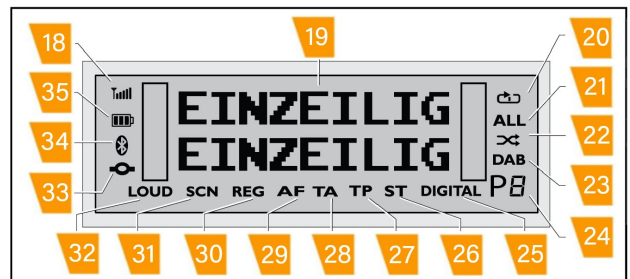
- Press **(5)** until 'Radio' is shown on the display.

The display shows the frequency or the name of the current station.



The first row **(19)** indicates 'Radio' if the RDS information is available or not; the second row reports the frequency name.

If the information is transmitted by the station, additional information could be displayed about the current station.



- Short press **(8)** : the type of program is shown.
- Short press **(8)** again: the RDS information is shown.
- Short press **(8)** again: current time is shown.
- Short press **(8)** again: go back to the main page.

**NOTE:** The quality of the signal is strictly related to the geographic area in which vehicle is located and it is strictly related to the availability of radio antennas located in the geographic area.

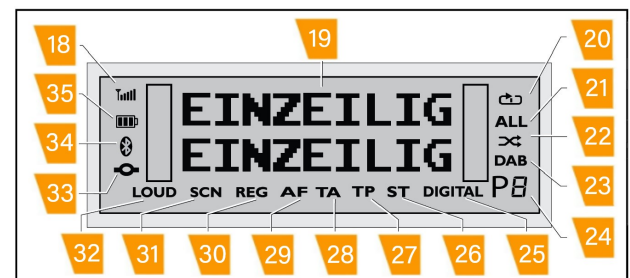
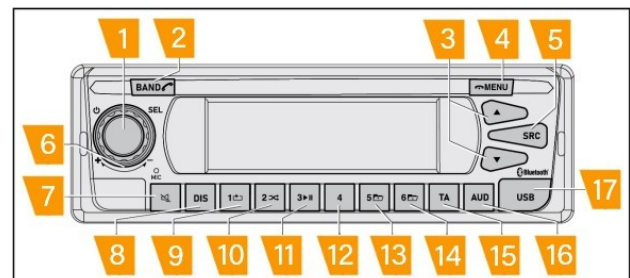
**NOTE:** The quality of the signal is also closely related to weather conditions, in fact in the case of thunderstorms, rain, snow, the quality of the signal may be poor.

**NOTE:** When the quality of the current station is good, the icon (26) appears on the display.

**NOTE:** When the quality of the signal is not good, the icon (26) is not set.

**NOTE:** Depending on the geographical area, it is possible that while driving the icon (26) continuously appears and disappears.

**NOTE:** When the signal quality is poor, you may hear some noise or interference from another nearby frequencies.



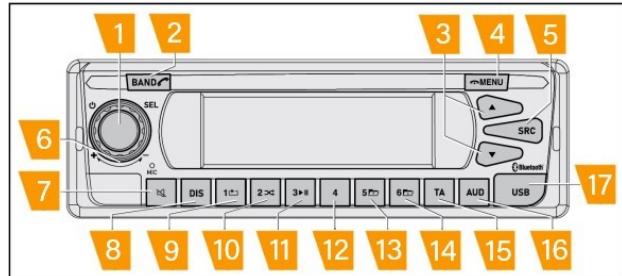
## Tune

### Manual tune

It is possible to manually tune the frequency in several ways.

#### - Short press the selection switch (3)

- The display shows a small increase/decrease of the frequency.
- If the quality of the signal is not good, press (3) repeatedly.

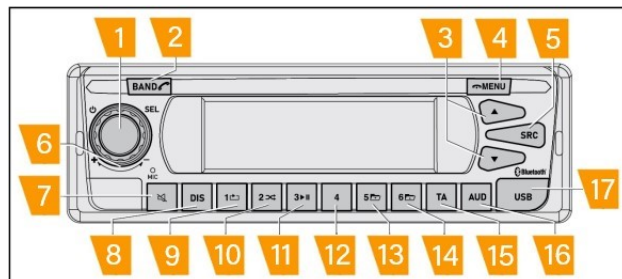


#### - Long press of selection switch (3)

- The Radio applies UP/DOWN SEARCH function and automatically searches for the nearest frequency with good quality of the signal.
- Display shows fast increase/decrease of the frequency until a station with a good signal is found.
- If no station with a good signal is available, the radio continues to search the entire available frequency range until it returns to the original one.
- If the BEEP function is set to ON, the (beep) can be heard when the SEEK UP/DOWN function starts.

#### - Via the steering wheel control (where available)

- A short press of the dedicated steering wheel button performs the same operation as a short press of the selection switch (3).
- A long press of the dedicated steering wheel button performs the same operation as a long press of the selection switch (3).



**NOTE:** The detailed list of the steering wheel buttons controls supported by the vehicle is available on the vehicle user manual.

#### - Via the Bed module button (where available)

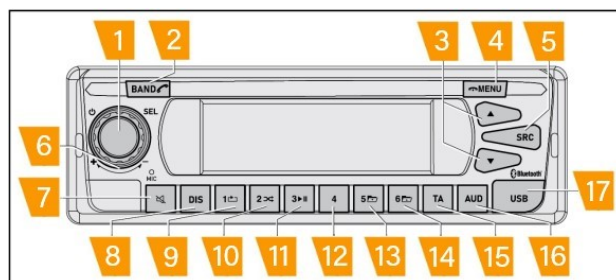
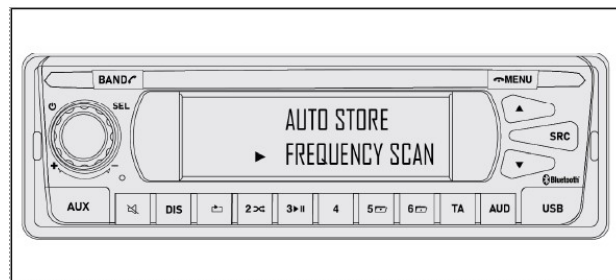
- A short press of the dedicated Bed module button performs the same operation as a short press of the selection switch (3).

**NOTE:** The detailed list of the Bed module controls supported by the vehicle is available on the vehicle user manual.

## Automatic tune

To activate the automatic tune:

- Short press the MENU button **(4)**.
- Scroll the items using **(6)**.
- When the cursor points to FREQUENCY SCAN , short press **(1)**.
- A short press of the dedicated steering wheel button performs the same operation as a short press of the selection switch **(3)**.
- The Radio automatically goes back to the main page.



When the Frequency Scan is activated, radio automatically searches for the next station with good quality of signal.

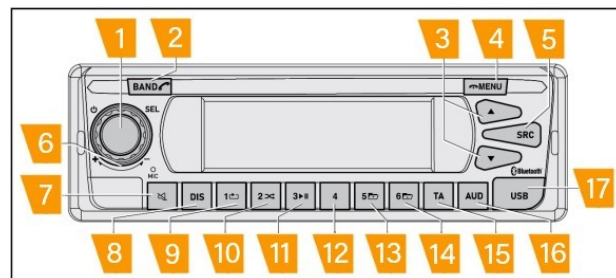
The station found is played for **5 s**, the radio then automatically scans for the next station with a good signal.

This seek and play operation continues until:

- The user stops the function by pressing any key (with the expectation of **(6)**).
- The search reaches the initial frequency.

**NOTE:** When the **FREQUENCY SCAN** function is activated, the icon **(31)** is shown on the display.

**NOTE:** The icon is automatically disabled when the function ends or it is stopped by the user.



## RDS comfort functions

The RDS comfort functions expand the range of radio functions in order to improve user experience.

The main RDS comfort functions are:

AF (ALTERNATIVE FREQUENCY):

- the device will automatically search for the frequency with the best signal for the currently tuned station.

REG (REGIONAL):

- some radio stations at certain times divide their program into regional programs with different content.
- With the REG function activated, the device is prevented from switching to alternative frequencies of the tuned station that transmit programs with different content.

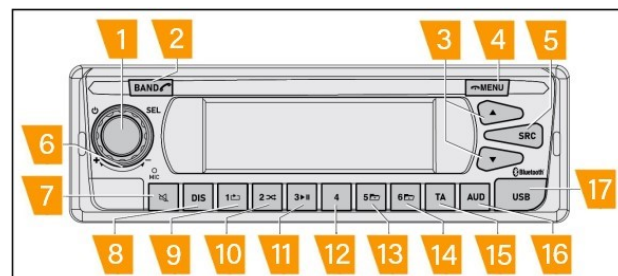
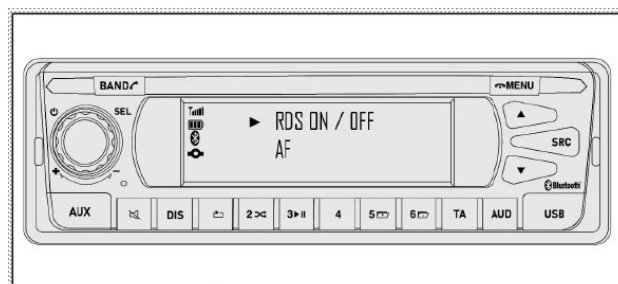
### Activation of RDS function

The RDS functions can be enabled or disabled via main settings.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main setting using **(6)**.
- When the cursor points to RDS ON/OFF, brief press.
- Select ON using **(6)**.
- Confirm the selection by briefly pressing **(1)**.

**NOTE:** If the RDS ON / OFF function is set to OFF, the radio will not display the name of the station.

**NOTE:** The RDS ON / OFF function is set to ON as the default setting.





## Activation of AF function

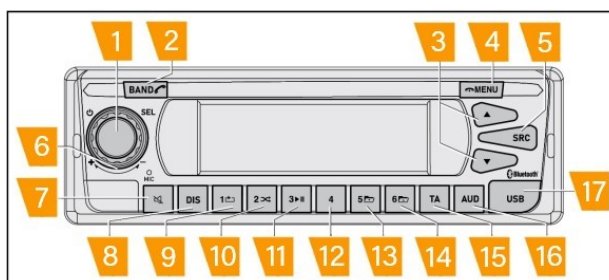
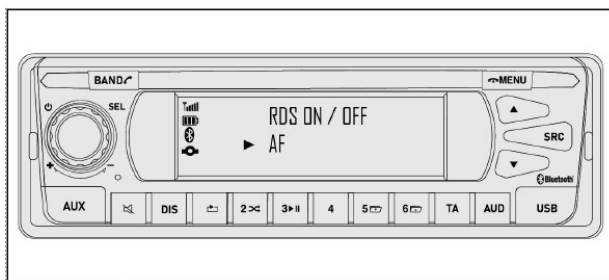
The AF function can be enabled or disabled via main settings.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main setting using **(6)**.
- When the cursor points to AF, brief press **(1)**.
- Select ON / OFF using **(6)**.
- Confirm the selection by briefly pressing **(1)**.

**NOTE:** The AF function is activated as the default setting.

**NOTE:** The AF function is only available if the RDS ON / OFF function is set to ON.

**NOTE:** When the AF function is activated, the icon **(29)** is shown on the display.



## Activation of REG function

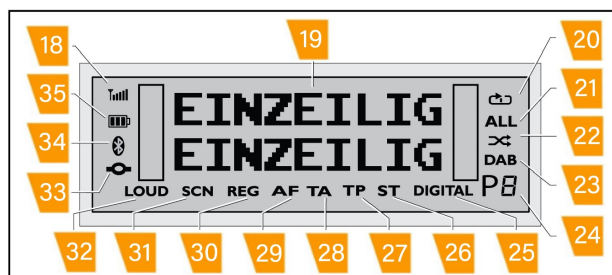
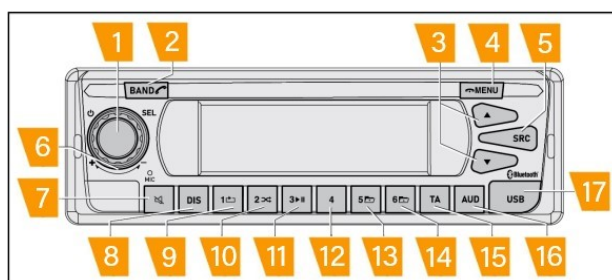
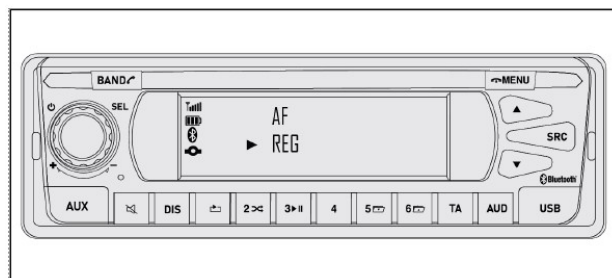
The REG function can be enabled or disabled via main settings.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main setting using **(6)**.
- When the cursor points to REG, briefly press **(1)**.
- Select ON / OFF using **(6)**.
- Confirm the selection by briefly pressing **(1)**.

**NOTE:** The REG function is activated as the default setting.

**NOTE:** The REG function is only available if the RDS ON / OFF function is set to ON .

**NOTE:** When the REG function is activated, the icon (30) is shown on the display.



## Selecting the band/memory bank

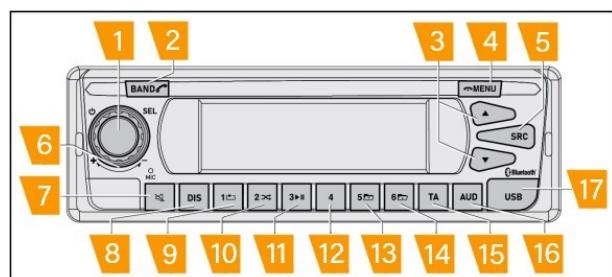
The radio is able to receive programs transmitted on the FM and AM wavebands (medium waves). For FM, there are three memory banks ( FM1, FM2 and FMT ), and for MW there are two ( MW1 and MW2 ).

To switch between the different bands and memory banks:

- Briefly press the button BAND **(2)**.

By pressing the BAND button **(2)** repeatedly, you can switch between the available banks, starting from FM1 and in the order:

- FM1 >> FM2 >> FMT >> MW1 >> MW2 >> FM1



# Storing stations

## Manual storing

In order to manually save a station:

- Select the desired memory bank or band by pressing the BAND button (2).
- Tune the station (see Tune section for further details).
- Long press one of the pre-selection buttons (9) (10) (11) (12) (13) (14).
- If the BEEP function is active, the acoustic signal confirms the selection.

The station is now matched with the selected pre-selection button.

The position where the station is stored (i.e. P3 ) is shown on display (24) for the entire time the radio is tuned to the station.

At any time it is possible to select a saved station by pressing and releasing the pre-selection button (9) (10) (11) (12) (13) (14).

It is possible to overwrite the pre-selection button repeating the previous sequence on new station.

After the overwrite operation, the new station is associated to the current pre-selection button.

**NOTE: The memorised station is kept after ignition off or battery cut off.**

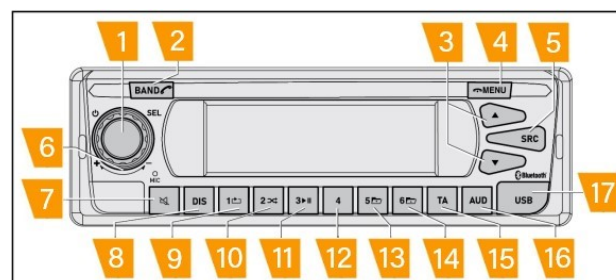
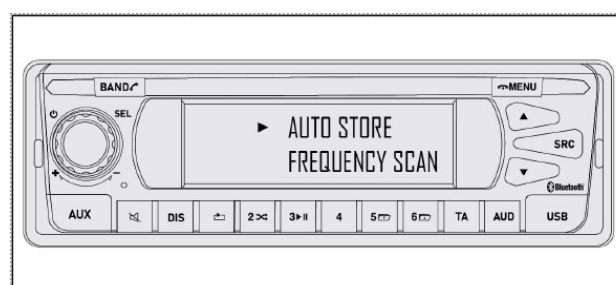
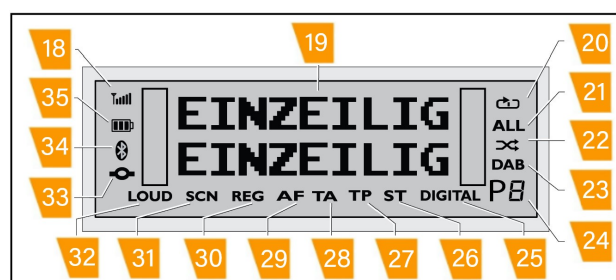
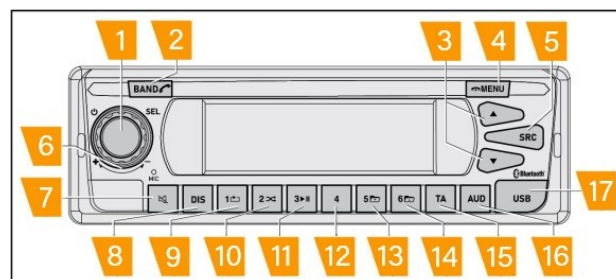
**NOTE: If the pre-selected button is pressed and released and no station has been previously associated, the radio will show EMPTY... The current selection could be used to save a new station without overwriting operation.**

## Automatic storing

The AUTO STORE function automatically searches the six stations that emit the strongest signal in the area.

To enable the function:

- Short press the MENU button (4).
- Scroll the items using (6).
- When the cursor points to AUTO STORE, short press (1).
- The Radio automatically goes back to the main page.



When Radio comes back to the main page, it starts a fast scan of all frequencies in range starting from the lowest.

When the function is completed:

- The pre-selection buttons are filled with the six strongest signals in the area.
- The radio plays the station set at position 1 **(9)**.

At any time it is possible to select a saved station by pressing and releasing the pre-selection button **(9)** **(10)** **(11)** **(12)** **(13)** **(14)**.

It is possible to overwrite the pre-selection button repeating the previous sequence on new station.

After the overwrite operation, the new station is associated to the current pre-selection button.

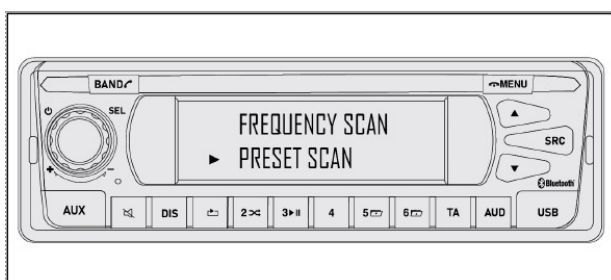
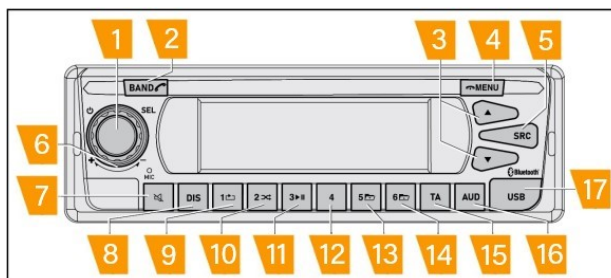
**NOTE: The memorised station is kept after ignition off or battery cut off.**

**NOTE: The memorised stations are saved in the FMT BAND.**

## Pre-set scan

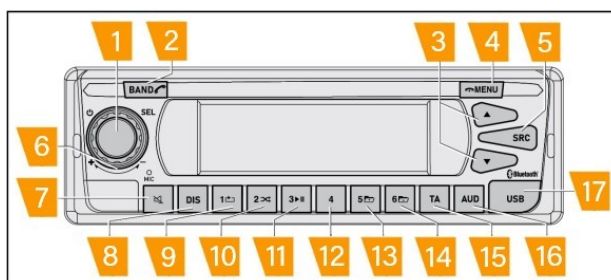
The PRESET SCAN function is used to perform a dedicated scan on the station previously saved on the pre-selection buttons.

In this way radio could find for a strong frequency for each memorised station.



To enable the function:

- Short press the MENU button **(4)**.
- Scroll the items using **(6)**.
- When the cursor points to PRESET SCAN, short press **(1)**.
- The Radio automatically goes back to the main page.




When PRESET SCAN is activated, the radio automatically sets the preselected stations from the first to the last one in order to find the frequency with the best signal.

The pre-selected station is played for **5 s** and then the radio switches to the next one.

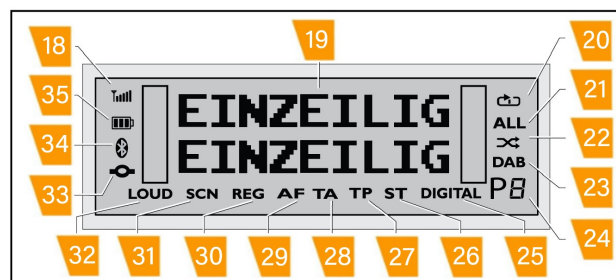
This seek and play operation continues until:

- The user stops the function by pressing any key (with the expectation of **(6)**).
- The seek reaches the last preselected station.

**NOTE:** When the PRESET SCAN function is active, the

icon  (31) appears on the display. This icon is automatically deactivated at the end of the function, or if interrupted by the user.

**NOTE:** The PRESET SCAN is executed only for the station previously stored in the pre-selection buttons.




## Digital Radio signal: DAB

This device is equipped with an DAB radio receiver.

### Activation of Digital Radio Mode

If another source is currently selected, in order to switch to analogue radio mode:

- Press (5) until the display shows the icon  (23).

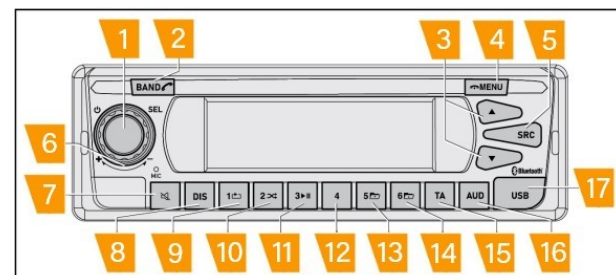
The display shows the frequency or the name of the current station.

The first row (19) shows the name of the station; the second row reports the provider of the service.

**NOTE:** If no DAB station is available, the radio displays **NO SERVICE** or **NO SIGNAL**. When the DAB signal is available again, the Radio will automatically play the first available station.

If the information is transmitted by the station, additional information could be displayed about the current station.

- Short press (8) : the type of program is shown.
- Short press (8) again: the RDS information is shown.
- Short press (8) again: current time is shown.
- Short press (8) again: go back to the main page.





**NOTE:** The quality and the availability of the signal is strictly related to the geographic area in which vehicle is located and it is strictly related to the availability of radio antennas located in the geographic area.

**NOTE:** The quality and availability of the signal is strictly related to the weather. In case of storm, rain, snow, the quality of the signal could be poor.

**NOTE:** When the quality of the current station is good,

the icon  (25) appears on the display. When the

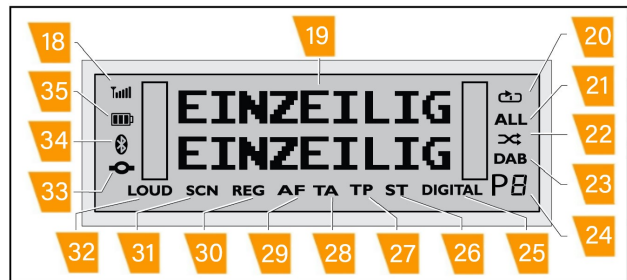


quality of the signal is not good, the icon (25) does not appear and if available, the Hard Linking function is activated (Real connection) (see the following chapters for further details). Depending on the geographical area,



it is possible that while driving, the (25) icon continuously appears and disappears.

**NOTE:** If the radio continuously displays NO SERVICE or NO SIGNAL, the AUTO SCAN procedure is carried out to search for the available station.



## Tune

### Manual tune

It is possible to manual tune the frequency in several ways.

Short press of selection switch (3) :

- The display shows the next available station.

Via the steering wheel button (where available):

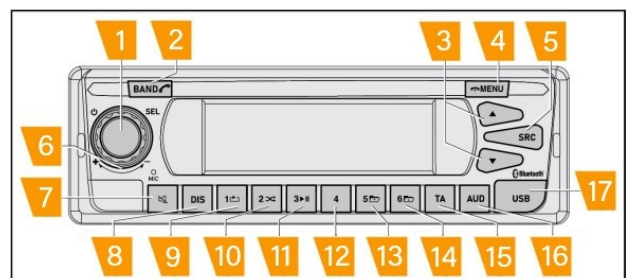
- A short press of the dedicated steering wheel button performs the same operation as a short press of the selection switch (3) .

**NOTE:** The detailed list of the steering wheel buttons controls supported by the vehicle is available on the vehicle user manual.

Via the Bed module button (where available):

- A short press of the dedicated Bed module button performs the same operation as a short press of the selection switch (3) .

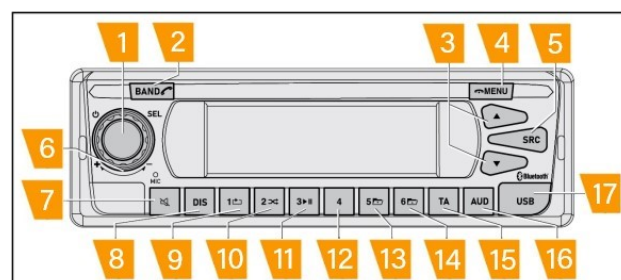
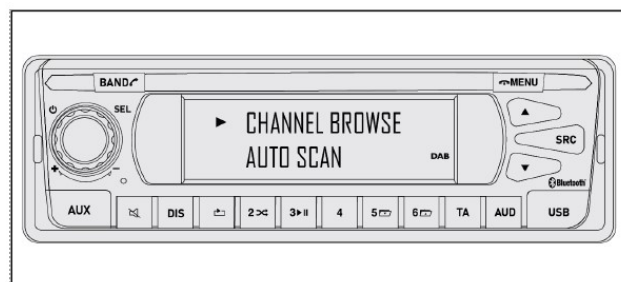
**NOTE:** The detailed list of the Bed module controls supported by the vehicle is available on the vehicle user manual.



Using the CHANNEL BROWSE function.

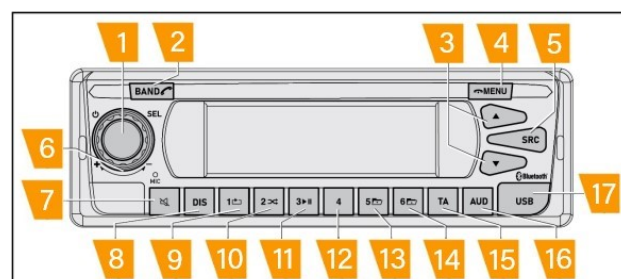
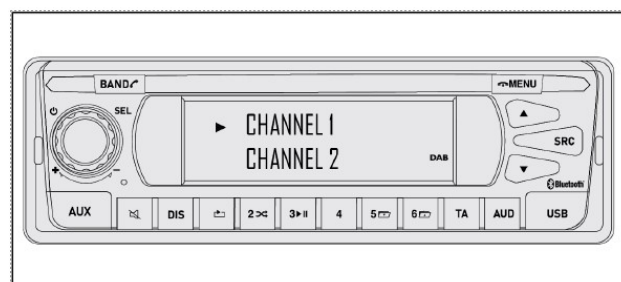
To enable the function:

- In DAB source, short press the MENU button **(4)**.
- The cursor points to CHANNEL BROWSE ; Short press **(1)** to confirm the selection.



- All the available stations are listed in alphabetic order.
- Use **(6)** to scroll the list.
- When the cursor points to the required station, short press **(1)** to confirm the selection.
- The Radio automatically goes back to the main page, and plays the requested station.

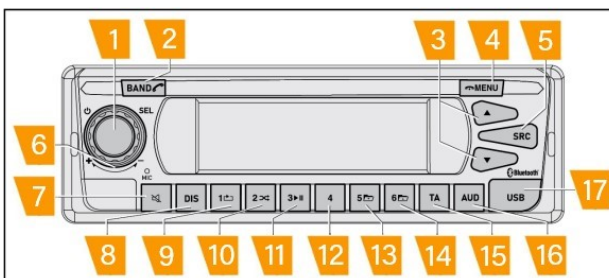
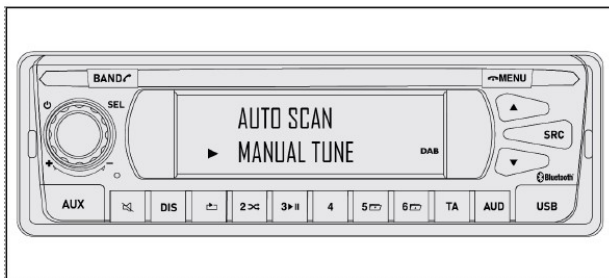
**NOTE:** If no DAB stations are available, the radio shows **NO SERVICE** or **NO SIGNAL** and automatically goes back to the main page.



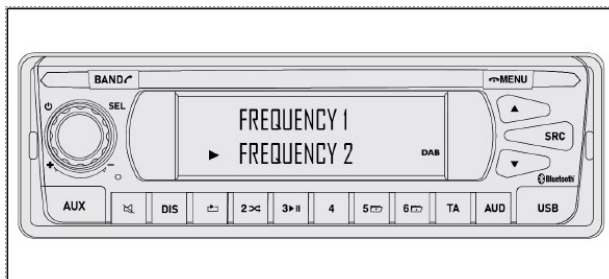
Using the MANUAL TUNE function.

To enable the function:

- In DAB source, short press the MENU button **(4)**.
- Scroll the items using **(1)**.
- When the cursor points to MANUAL TUNE, short press **(1)** to confirm the selection.

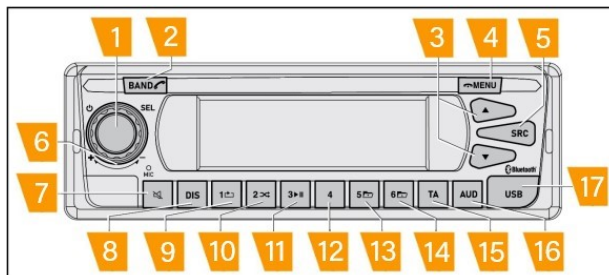


- All the available frequencies are listed in numeric order.
- Use **(6)** to scroll the list.
- When the cursor points to the required frequency, short press **(1)** to confirm the selection.
- The Radio automatically goes back to the main page, and plays the requested frequency.



**NOTE:** The code of the frequencies is not unequivocal, so one code could be associated to several stations.

**NOTE:** Switching from the previous station to one selected using the MANUAL TUNE option only takes place if the frequency selected is available. If it is not available, the swap does not happen, and radio plays the previous station.



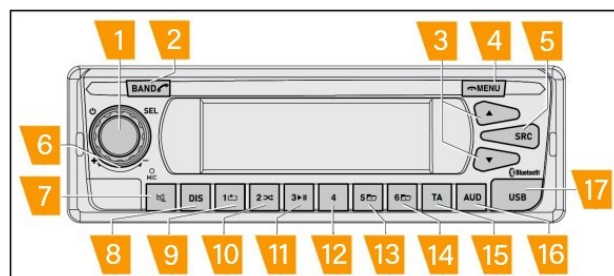
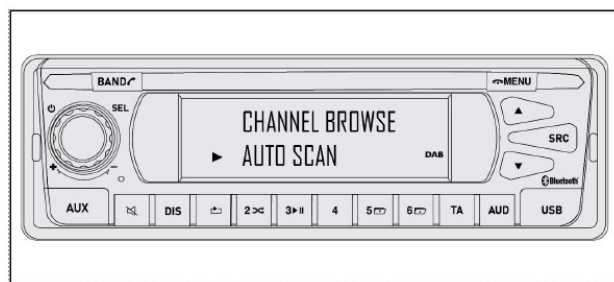


## Automatic tune

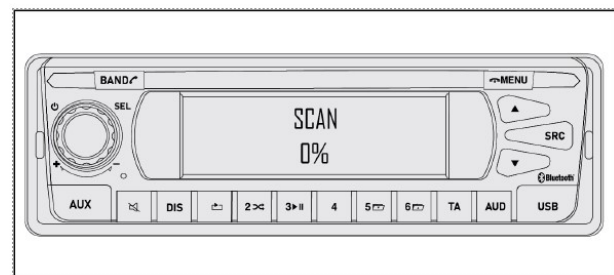
The function performs a scan of all the available digital stations.

To enable the function:

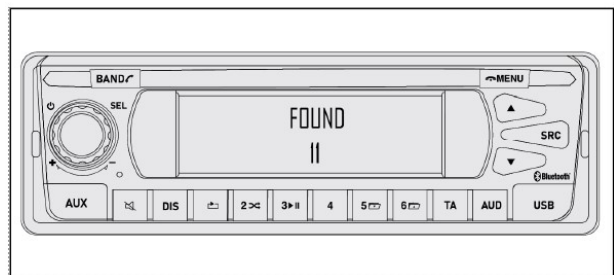
- Short press the MENU button **(4)**.
- Scroll the items using **(6)**.
- When the cursor points to AUTO SCAN, short press **(1)**.



- The Radio automatically searches all the available frequencies and shows the progress starting from **0 %**.



- At the end of the scan, the Radio displays the number of available stations.
- After **2 s**, the Radio automatically goes back to the main page.



## Selecting the band/memory bank

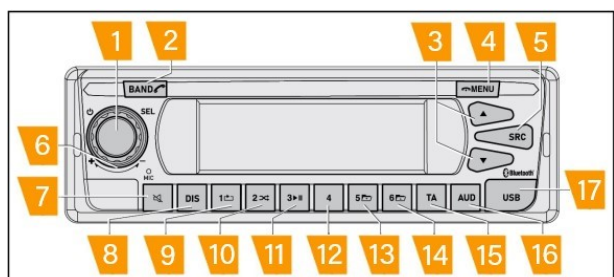
For DAB there are two memory banks, known as DAB1 and DAB2.

To switch between the different band end memory banks:

- Short press the BAND button **(2)**.

By pressing the BAND button **(2)** repeatedly, switching between the available banks is possible, starting from DAB1 in the order:

- DAB1 >> DAB2 >> DAB1



## Storing stations

In order to memorize a station:

- Select the desired memory bank or band by pressing the BAND button (2) .
- Tune the station (see the "Tune" section for further details).
- Long press one of the pre-selection buttons (9) (10) (11) (12) (13) (14) .
- If the BEEP function is active, the acoustic signal confirms the selection.

The station is now matched with the selected pre-selection button.

The position where the station is stored (i.e. P3 ) is shown on the display in position (24) for the entire time the radio is tuned to the station.

At any time it is possible to select a saved station by pressing and releasing the pre-selection button (9) (10) (11) (12) (13) (14) .

It is possible to overwrite the pre-selection button repeating the previous sequence on new station.

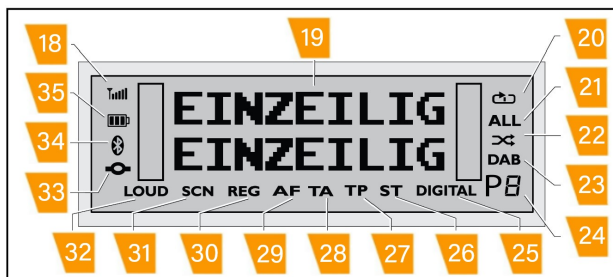
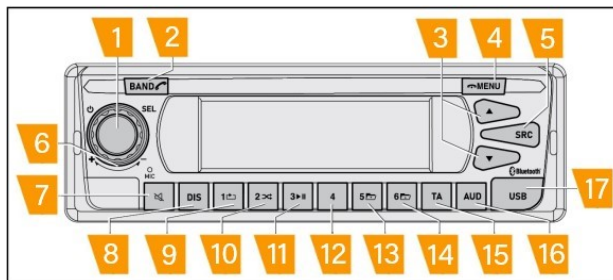
After the overwrite operation, the new station is associated to the current pre-selection button.

**NOTE: The memorized station is kept after ignition off or battery cut off.**


**NOTE: The stored stations are valid for the chosen bank.**

**NOTE: If the preselected button is pressed and released and no station has been previously associated, the radio will show EMPTY ...**

**NOTE: The current selection could be used to save a new station without overwriting operation.**



## Hard Linking

When the digital station has good quality, the icon  (25) appears on the display.


It could happen during driving that the signal for the current station has poor quality or no signal at all.


In this case, the radio automatically activates the Hard Linking function.

When the Hard Linking function is activated:

- The radio automatically checks if the digital station is available in FM band.

if available:

- Without changing the current source, the radio plays the FM station instead of the digital station;.
- Icon  (DIGITAL) (25) is not shown on the display.


- Icon  (29) is shown on the display.

if not available:

- The radio displays NO SIGNAL and no sound is emitted.

When the digital station will be available again, the digital streaming is recovered:

- The icon  (DIGITAL) (25) is shown on the display.

- The icon  (29) is not shown on the display.



**NOTE:** When Hard Linking is activated/deactivated it should be possible to hear some latency of the sound between analogue and digital transmission.

**NOTE:** When Hard Linking is activated/deactivated it should be possible to hear a difference in the volume due to data transmitted by the current station.

## Traffic announcement

Some DAB and FM stations transmit traffic news at certain times.

It is possible to enable the Traffic Announcement function in order to give priority to the traffic news in relation to the current source.

## FM source

If the station supports traffic news transmission, the icon



(27) is activated.


To enable the Traffic Announcement function:

- Short press the button TA (15) .



- When the function is enabled the icon activated.



**NOTE:** Even if the icon  is shown and the function is activated, traffic announcements might not be activated because it is strictly related to the information that the current station transmits. Further details for the traffic announcement transmission for each station may be available online.

When traffic announcement time happens, and the traffic announcement option is available:

- Regardless of the current source, the radio switches to the FM station for which TA is available.
- The radio shows " TRAFFIC ".
- The volume is increased by a certain value.


At the end of the traffic announcement transmission, radio automatically swaps to the previous source and the previous volume is set.

At the time of the traffic announcements, it is possible to disable the traffic announcement by short pressing the




key (28).

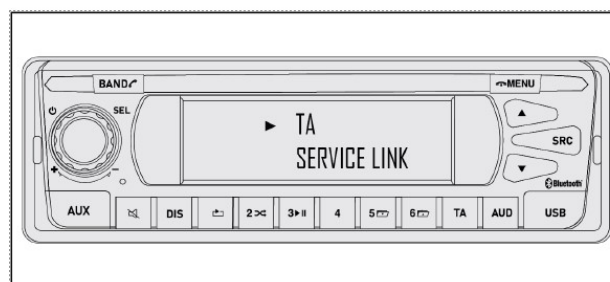
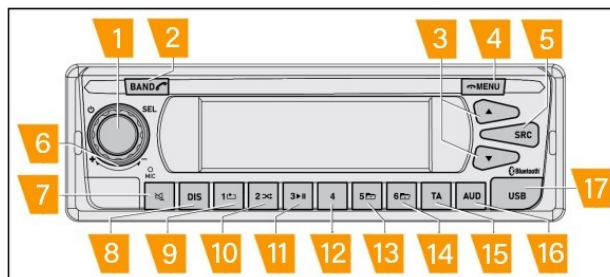
The volume increase starts from the current main vol-

ume and can be adjusted with the option  in the main settings menu.

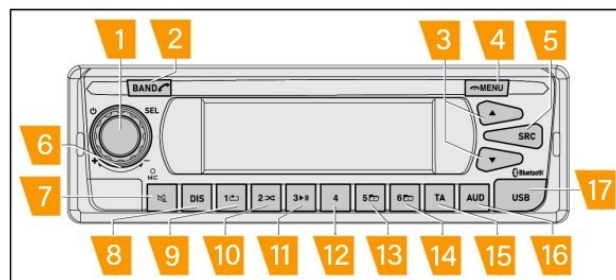
- Long press the MENU button (4) to access the main settings.
- Scroll the main settings using (6) .



- When the cursor points to  , short press (1) .



- Scroll the list of the level (from 0 to 10) using **(6)**.
- When the cursor points to the chosen level, short press **(1)**.
- After the selection, the display return to the main settings window.
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.



**NOTE:** The default TA value is 3.

**NOTE:** If the TA has been selected for an FM station, the

icon  (28) is maintained regardless of the source.

**NOTE:** If the current source is other than DAB and FM, it is possible to activate the TA function by pressing (15).

**NOTE:** The function is activated on the last FM source.




## DAB source

The TA function is activated on the DAB source with some limits relating to the FM source.

To activate the TA Traffic Announcement function:

- Short press the button TA **(15)**.

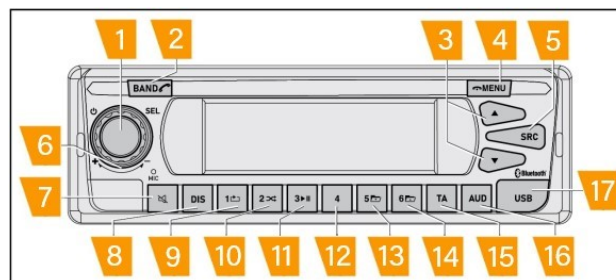
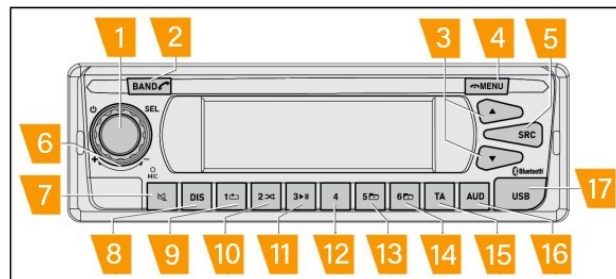
When the function is enabled the icon  (28) is icon activated.

When traffic announcement time happens, and the traffic announcement option is available:

- Regardless of the current source, the radio switches to the FM station for which TA is available.
- The radio shows " TRAFFIC ".
- The volume is increased by a certain value.

At the end of the traffic announcement transmission, radio automatically swaps to the previous source and the previous volume is set.

At the time of the traffic announcements, it is possible to disable them by short pressing the TA key **(15)**.

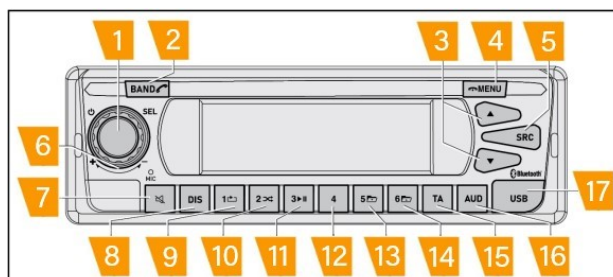
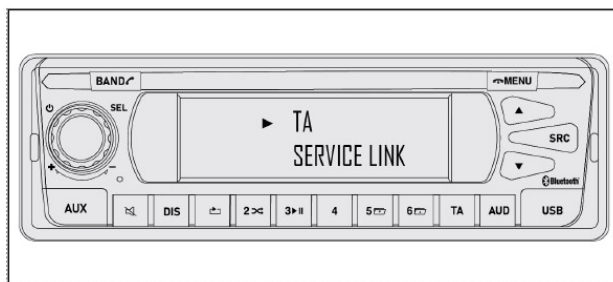


The volume increase starts from the current main volume and can be adjusted with the option TA in the main settings menu.

- Long press the MENU button **(4)** to access the main settings.
- Scroll the main settings using **(6)**.
- When the cursor points to TA, short press **(1)**.
- Scroll the list of the level (from 0 to 10) using **(6)**.
- When the cursor points to the chosen level, short press **(1)**.
- After the selection, the display return to the main settings window.
- Press **(4)** to exit the menu instantly or after **10 s** the radio automatically exits the menu.

**NOTE:** The default TA value is 3.

**NOTE:** The main difference with the FM is that the traffic announcements in DAB do not trigger any change in the source.





## USB reader mode

The DAB radio is equipped with a USB 2.0 port ( Full Speed 12 Mbps ).

The USB module supports mass storage and also media playback of audio files.

The USB port is in position **(17)** .

The USB pen drive is for media use only.

**NOTE:** *Never insert anything other than a USB pen drive into the USB connector. Doing so could damage the device.*

**NOTE:** *Never remove a USB pen drive while data is being transferred to it - otherwise not only will the transfer of data to the pen drive be stopped but the content of the USB pen drive may become corrupted as well.*

**NOTE:** *Never use excessive force when removing a USB pen drive or else the USB connector or the USB pen drive itself may be damaged.*

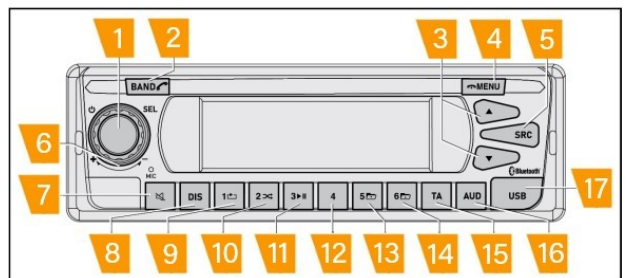
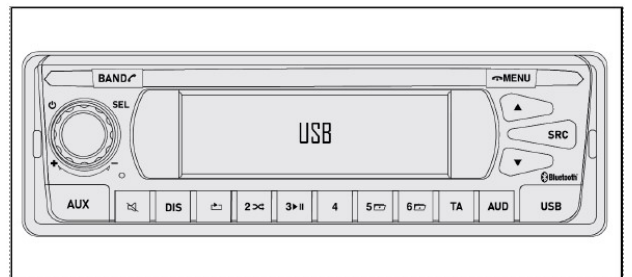
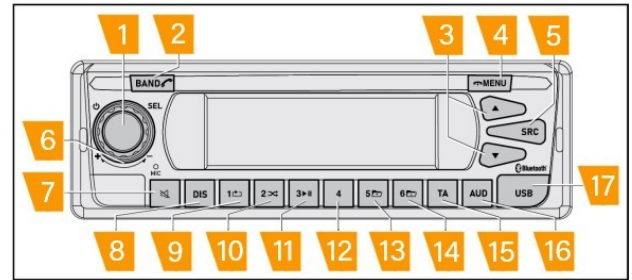
**NOTE:** *When inserting a USB pen drive into the device, make sure the pen drive is aligned and positioned correctly. If you use force to insert an incorrectly aligned and positioned USB pen drive into the connector, you may damage the pen drive and the connector.*

### Activation of USB source

The USB source is automatically selected when a pen drive is inserted into the USB **(17)** port.

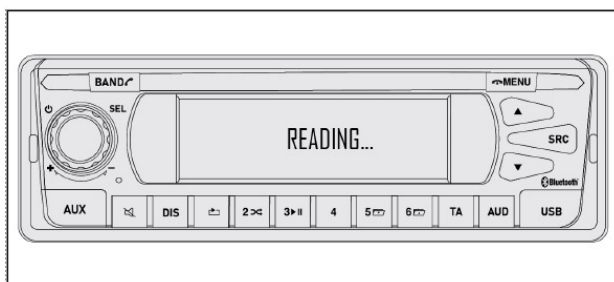
When USB pen drive is inserted:

- The radio shows USB for **2 s** .



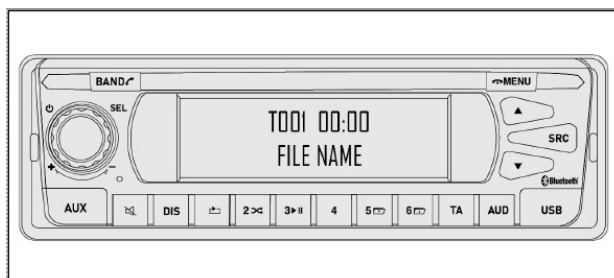


- The radio starts "READING" the pen drive.
- The operation could last several seconds depending on the size of the pen drive, the format system and the amount of data.



When the reading operation ends:

- The radio automatically plays the first track.
- The screen displays the soundtrack number, the soundtrack name and the timing.
- The soundtrack name is rolled if it is composed with more than 16 characters (spaces included).

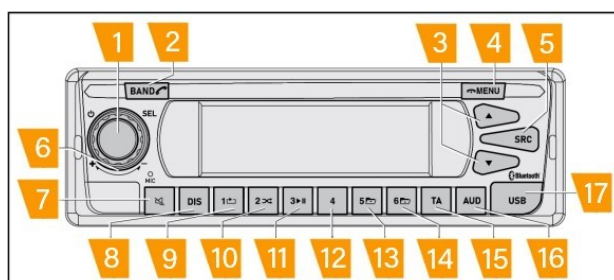


Any time during playback of a track, it is possible to change the current source by briefly pressing the SRC button **(5)**.

When returning to the USB source by pressing **(5)** several times until USB is shown, the radio will continue playing the previous track.

Depending on:

- File format.
- Pen drive corruption.
- Audio files.

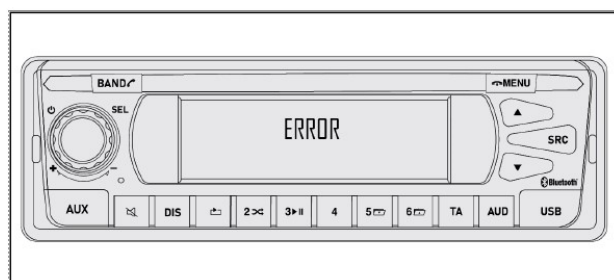


it could happen that the pen drive is not readable.

In this case, the HMI could indicate one of the following errors after READING :

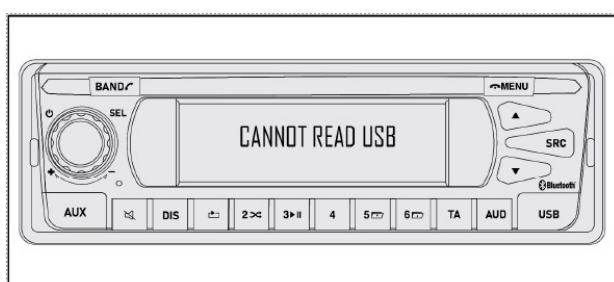
- No playable files in the current pen drive (see list of supported playable files).

In this case, add some playable files in pen drive and plug again the USB.



- Cannot read the current pen drive due to pen drive corruption.

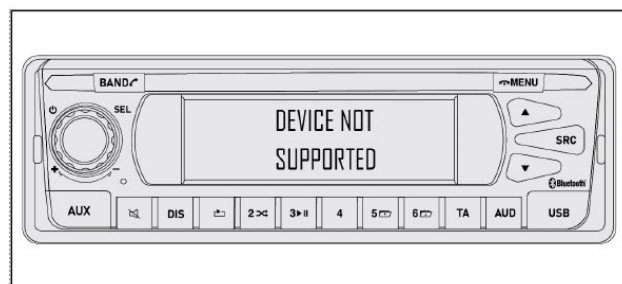
In this case, try to format if it is possible the pen drive.



- Current file system not supported.

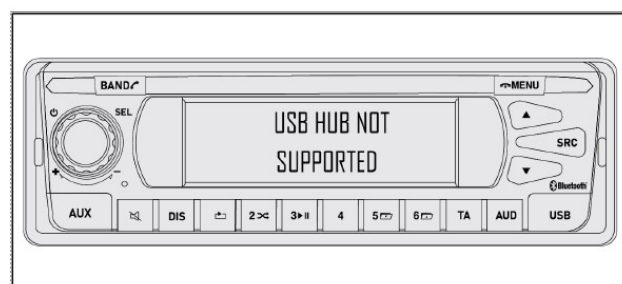
In this case, try to format the pen drive and if it is possible changes the format system of the pen drive.

In other case, need to use a different pen drive.



- Current HUB USB not supported.

In this case, try to format if it is possible the pen drive.



## Change soundtrack

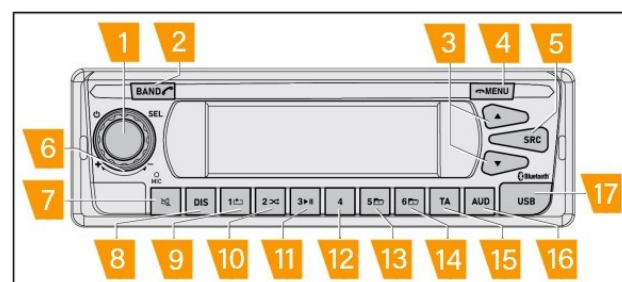
It is possible to change track:

- Short press the selection buttons **(3)** .
- Where supported via the steering wheel buttons.

**NOTE: Check the vehicle user manual for further details about the steering wheel controls.**

- Where supported via the Bed module buttons.

**NOTE: Check the vehicle user manual for further details about the Bed module controls.**



## Fast forward/rewind

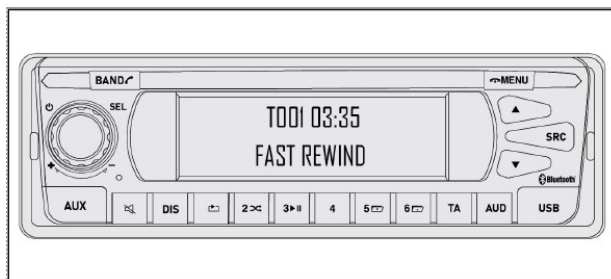
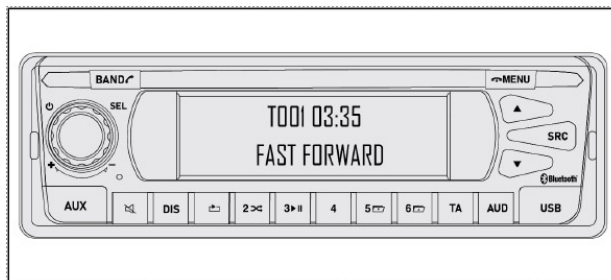
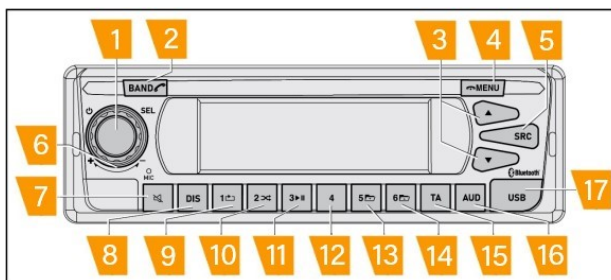
It is possible to fast forward/rewind the current track:

- By long pressing the selection buttons **(3)**.
- FAST FORWARD / REWIND will appear on the display.
- FAST FORWARD / REWIND is active until the user releases the button **(3)**.
- Where supported via the steering wheel buttons.

**NOTE: Check the vehicle user manual for further details about the steering wheel controls.**

- Where supported via the Bed module buttons.

**NOTE: Check the vehicle user manual for further details about the Bed module controls.**



## Pause

It is possible to pause the current track at any time by pressing and releasing the button **(11)**.

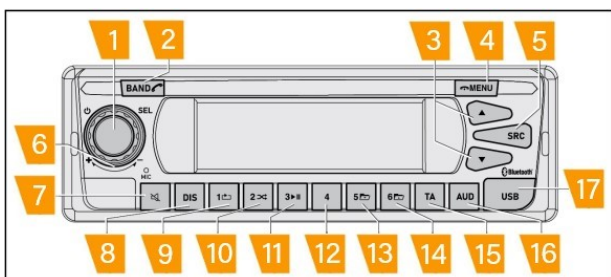
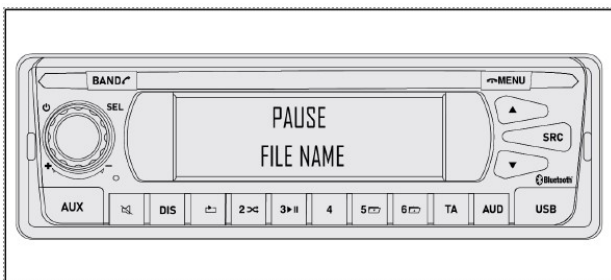
When the PAUSE function is selected:

- The PAUSE string is shown on the first row of the display.
- The file track continues scrolling.

In order to disable pause, press **(11)** again.

Soundtrack starts again from the previous timing.

**NOTE: When all the tracks on the pen drive have been played, PAUSE appears on the radio. By pressing (11) again, the radio starts to play from the first track.**



## Repeat function

The repeat function consists of choosing single song or set of them to be repeated.

Four options are available:

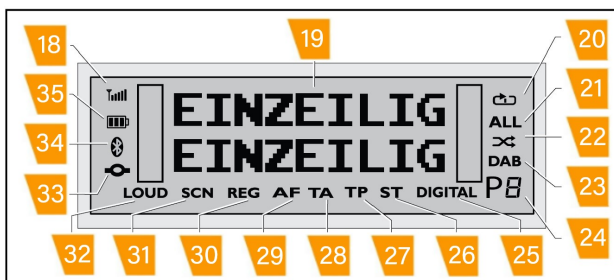
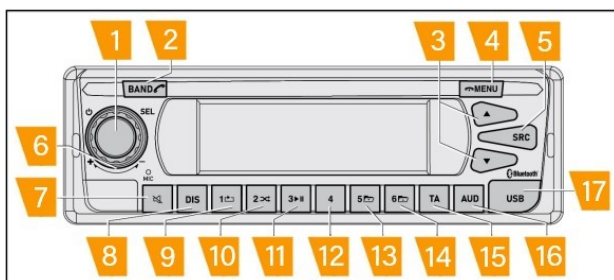
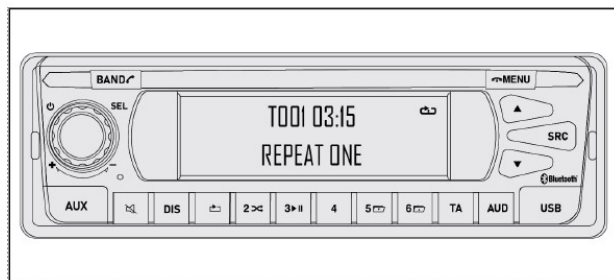
- REPEAT ONE : repeat only the current soundtrack.
- REPEAT FOLDER : repeat all the soundtracks stored in the current folder.
- REPEAT ALL : repeat all the tracks stored on the pen drive.
- REPEAT OFF : disable the repeat off.


To select the repeat function:

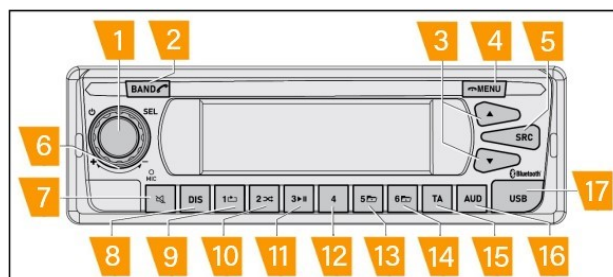
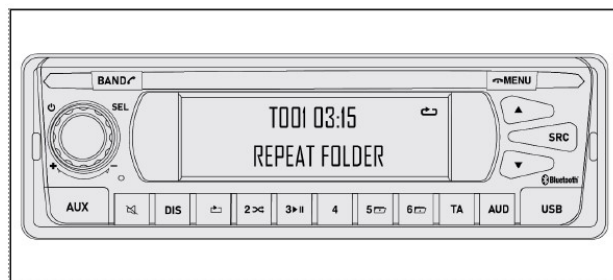
- Press button **(9)** once.
- The HMI shows REPEAT ONE .

- Icon **(20)**  is shown on display.

- After **2 s** the option is enabled and the device returns to the previous page.



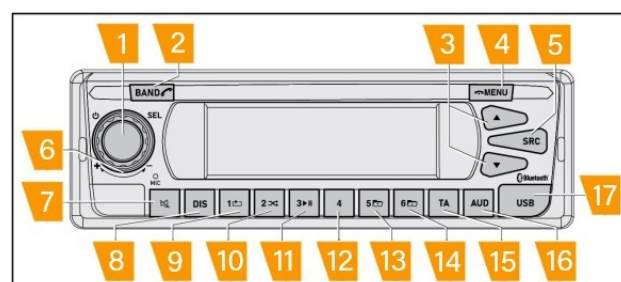
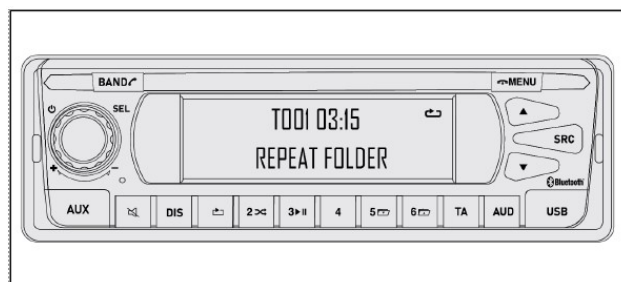
- By pressing button **(9)** again.
- The HMI shows REPEAT FOLDER.
- Icon **(20)**  is shown on display.
- After **2 s** the option is enabled and the device returns to the previous page.




- By pressing button **(9)** again.
- REPEAT ALL will appear on the display.



- Icons **(20)** and **(21)** are disabled and not shown on the display.
- After **2 s** the option is enabled and the device returns to the previous page.

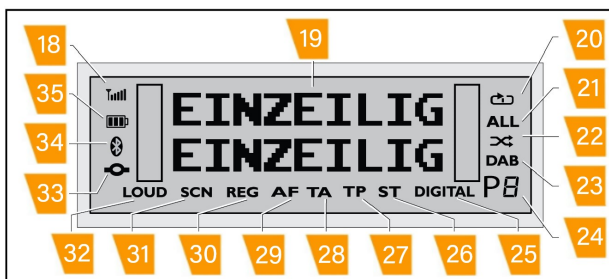
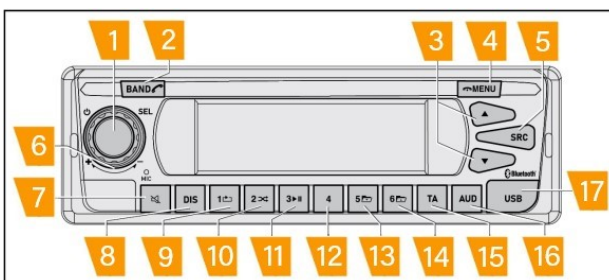
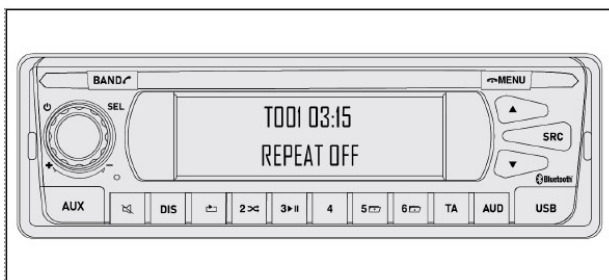


- By pressing button **(9)** again.
- REPEAT OFF appears on the display.

Icons **(20)** and **(21)**  are disabled and not shown on the display.

- After **2 s** the option is enabled and the device returns to the previous page.

**NOTE: Activation of the RANDOM/SHUFFLE option disables the repeat function.**





## Random function

The repeat function consists of choosing single song or set of them to be repeated.

Three options are available:

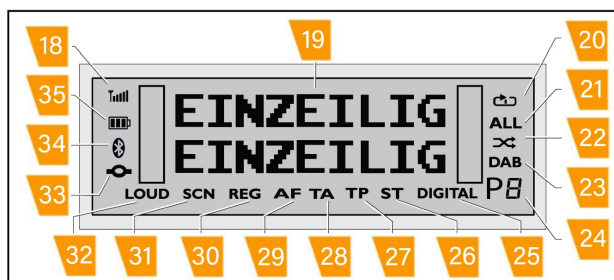
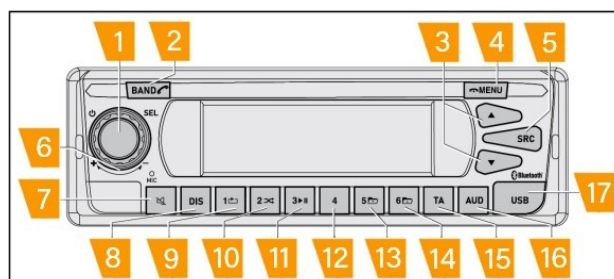
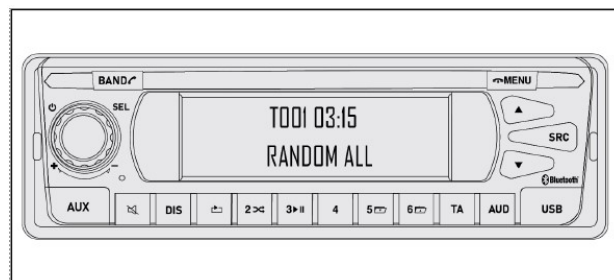
- RANDOM ALL : play all the tracks in a random order.
- RANDOM FOLDER : play all the tracks in the current folder in a random order.
- RANDOM OFF : RANDOM function deactivated.


To select the RANDOM function:

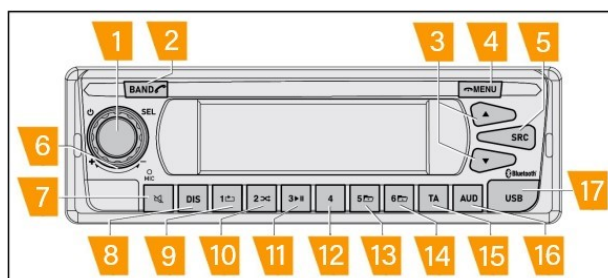
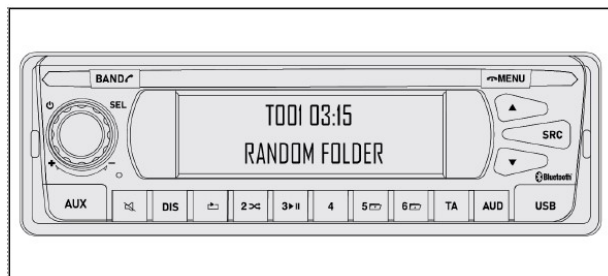
- Press button **(10)** once.
- RANDOM ALL is shown on the screen.




- Icons **(20)** and **(21)** are disabled and not shown on the display
- After **2 s** the option is enabled and the device returns to the previous page.



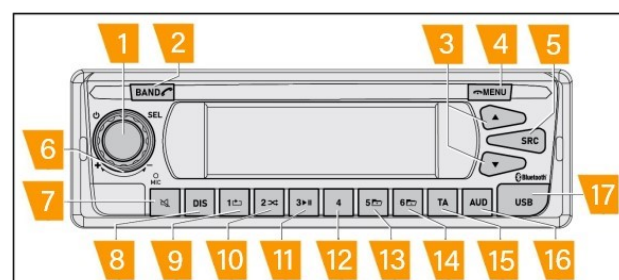
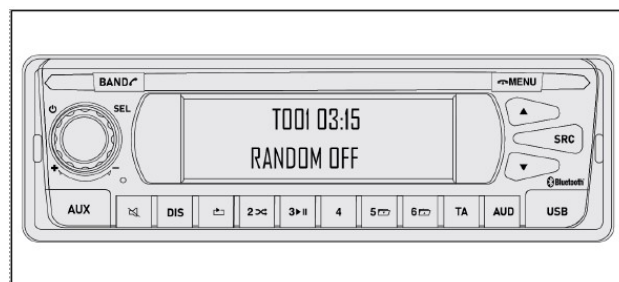
- By pressing button **(9)** again.
- RANDOM FOLDER is shown on the display.
- Icon **(22)**  is shown on display
- After **2 s** the option is enabled and the device returns to the previous page.



- By pressing button **(9)** again.
- RANDOM OFF is shown on the display.

- Icons **(21)** and **(22)**  are disabled and not shown on the display.
- After **2 s** the option is enabled and the device returns to the previous page.

**NOTE: Activation of the repeat option disables the RAN-DOM function.**

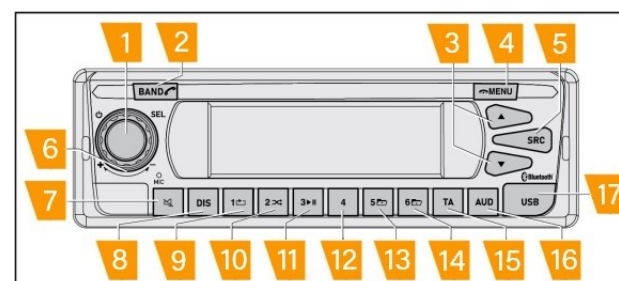
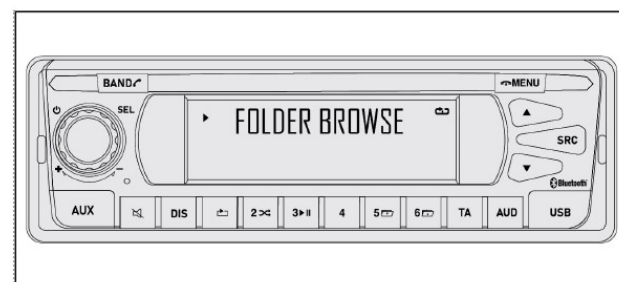


## Folder browse

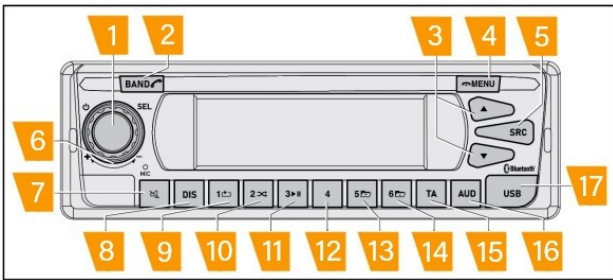
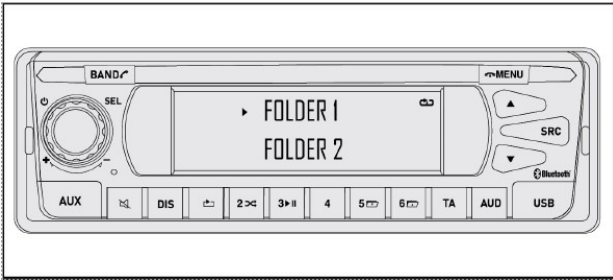
It is possible to browse the folders and the soundtracks stored in the pen drive.

To enable the function:

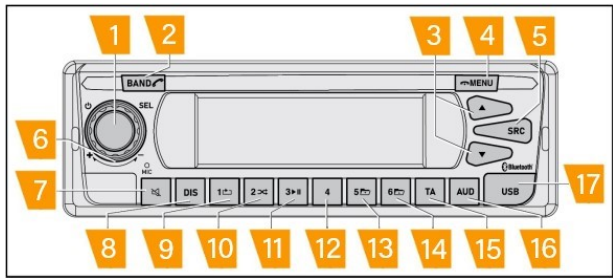
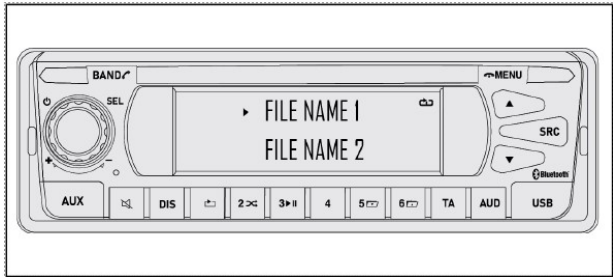
- Short press the MENU button **(4)**.
- FOLDER BROWSE is shown on the screen: Short press **(1)** to confirm the selection.



- All the folders that compose the pen drive are listed. Use **(6)** to scroll the list.
- Select the required folder by pressing **(1)**.



- All the soundtracks that belongs to the chosen folder are listed. Use **(6)** to scroll the list.
- Select the required track by pressing **(1)**.
- The radio goes back to the main page and the selected track is played.
- At any time, it is possible to exit the function by pressing MENU **(4)** or SRC **(5)**.



## USB format

Medium	USB storage device
File system	FAT 16 FAT 32 exFAT
USB Speed	2.0 Full Speed (12Mbps)
Maximum Storage	<b>32 GB</b> (FAT32) <b>128 GB</b> (EXFAT)
Maximum number of folders	2500
Max. Subfolders	8
Maximum number of files	65535

Medium	USB storage device
Playable file types	.mp3 / .wma / .aac / .flac

**NOTE:** *Maximum playback time of audio files stored on a USB storage device: 7.5 h ( 450 min ).*

## Playable file types

### MP3 compatibility

Medium	USB storage device
File extension	.mp3
Bit rate (kbps)	8 kbps to 320 kbps
Sampling frequency	8 kHz to 48 kHz
ID3 tag	Version V1.0, 1.1, 2.2, 2.3, 2.4

**NOTE:** *Ver .2.x of ID3 tag file is prioritized when both ver .1x and ver .2.x are available. This device is not compatible with the following: MP3i (MP3 interactive), mp3 PRO, m3u playlist.*

### .wma compatibility

Medium	USB storage device
File extension	.wma
Bit rate	32 kbps to 192 kbps
Sampling frequency (kHz)	8 kHz to 48 kHz

**NOTE:** *This device is not compatible with the following: Windows Media™ Audio 9 Professional , Lossless , Voice .*

### .wav compatibility

Medium	USB storage device
File extension	.wav
Bit rate	16-bit
Sampling frequency (kHz)	44.1 kHz

**NOTE:** *.tag files are not*

*supported. .aac / .m4a*

Medium	USB storage device
File extension	.aac or .m4a
Bit rate	8 kbps to 320 kbps(CBR)
Sampling frequency (kHz)	8 kHz to 48 kHz

**NOTE:** The device reproduces the .aac files encoded by iTunes .

### .flac compatibility

Voice	Setting
File format	.flac
Sampling frequency	32 kHz, 44.1 kHz, 48 kHz
Channel number	1ch, 2ch
Bit length	16 bit, 24 bit
Tag	TITLE, ARTIST, ALBUM, GENRE
Medium	USB - MSC

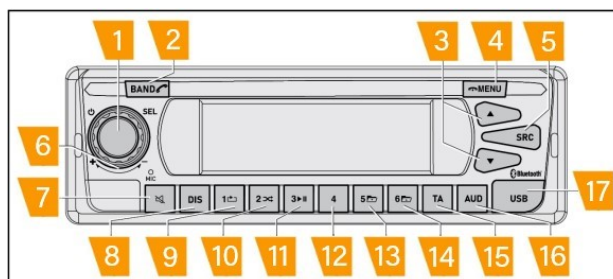
**NOTE:** If the USB pen drive has some files which are not supported such as text file, video file, these are automatically skipped.

### ID3 tag

Depending on the file and on the type, it is possible to scroll the tag ID3 if available for the current track.

In general:

- Short press **(8)** : shows the title of the track.
- Short press **(8)** again: shows the name of the artist.
- Short press **(8)** again: shows the name of the album.
- Short press **(8)** again: shows the genre.
- Short press **(8)** again: shows the current time.
- Short press **(8)** again: go back to the main page.



### Using a smartphone as mass storage USB

It is possible to use a smartphone in the same way as a USB storage device, by connecting the phone to the USB port of the radio **(17)** via a dedicated cable.

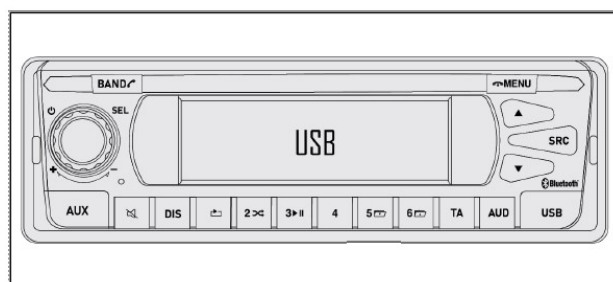
Regardless the operating system of the device, the USB port supports battery charging function for CDP ≤ **1.5 A** (with data) and DCP ≤ **2.1 A** (without data).

### Android OS

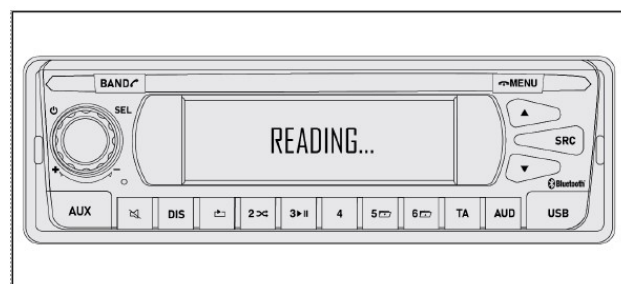
When an ANDROID phone is connected to the radio USB port, depending on the operating system and the phone readers, some additional functions could be supported.

If operative system is less than 8.0

- USB is shown on screen for few seconds.

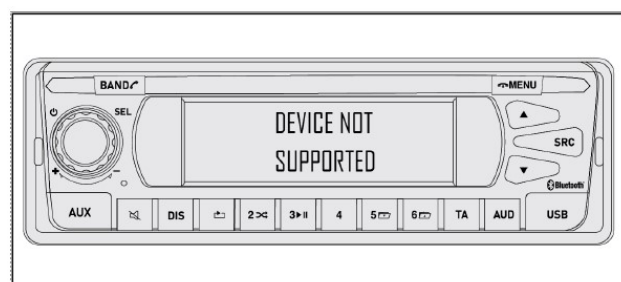


- READING is shown on the screen.
- After few seconds, the ANDROID string is shown on the screen.
- It is possible to select some audio files from the phone which will be played by the radio even if the name of the track or the timing is not shown on display.



If operative is system is beyond 8.0

- The radio could show the error " DEVICE NOT SUPPORTED ".
- No playback function is supported.



## Language

The DAB radio displays supports 28 languages:

- Arabic
- Bulgarian
- Chinese
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- Greek
- Hebrew
- Hungarian
- Latvian
- Lithuanian
- Norwegian
- Polish
- Portuguese
- Romanian
- Russian
- Slovakian
- Slovenian



- Spanish
- Swedish
- Turkish
- German
- Italian

***NOTE: The radio transmits the main information to the Instrument Panel ( Cluster Instrument ).***

***NOTE: Not all the languages listed above are supported by the Instrument Panel so it is possible that some characters, especially special characters (Hebrew, Chinese), are not correctly displayed...***

***NOTE: View the Instrument Panel User Manual to find out which languages are supported.***

## Bluetooth audio mode

### Bluetooth® activation / deactivation

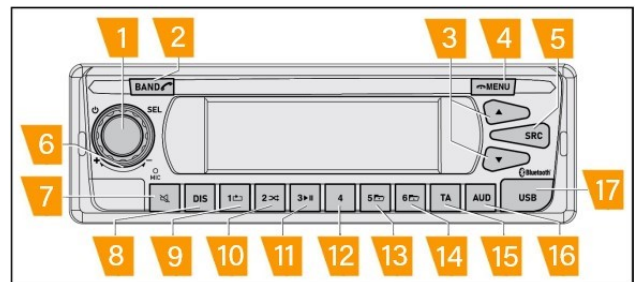
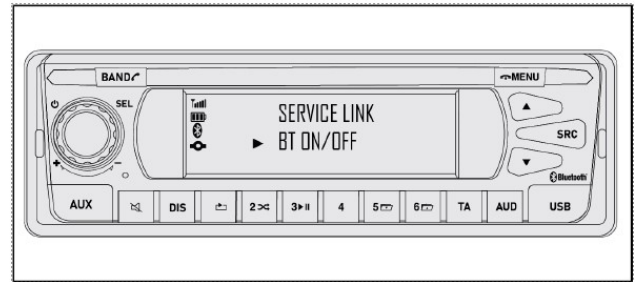
The radio is equipped with a Bluetooth® module.

To enable the module:

- Long press MENU (4) .
- Scroll the list using (6) until the cursor is on the BT ON/OFF option.
- Short press (1) to confirm the selection.
- Select ON and short press (1) to confirm the selection.

When a telephone is connected to the radio, it is possible to select the Bluetooth® source, pressing the button SRC (5) .

See SOURCES for detailed information.



### Connection of Bluetooth® devices

**NOTE:** If the connection cannot be established, the

icon  Bluetooth® will disappear from the display.

**NOTE:** If a correct connection is made with a Bluetooth® mobile telephone, up to 250 contacts will be downloaded from the phone book. At this point, the contacts can be selected from the radio and then called. For this purpose, the phone must permit its memory to be accessed.

**NOTE:** The radio stores the connection data for a maximum of 5 Bluetooth® devices. If Bluetooth® mode is active when the radio is turned on, the radio will automatically attempt to establish a connection with one of the connected Bluetooth® devices.

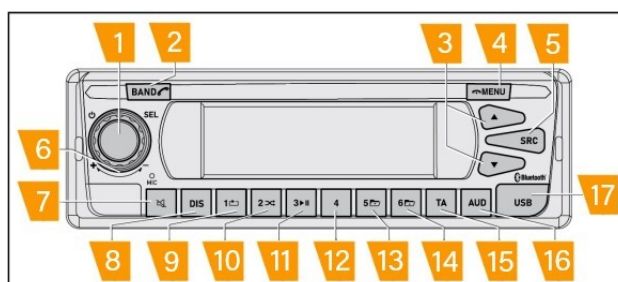
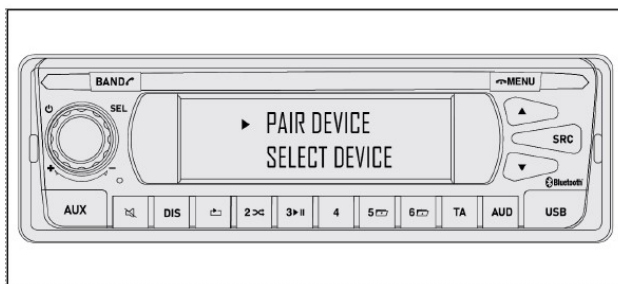
**NOTE:** If the current connection is not successful because the Bluetooth® device can no longer be reached, the radio will restore the contact as soon as the Bluetooth® device returns in its operating range.

## Pairing procedure

**NOTE:** To connect a Bluetooth® device, Bluetooth® mode must be activated.

The first time that the phone has to be paired to the radio (or if the phone has been cleared from the list of connected devices) the pairing procedure should be followed:

- Activate Bluetooth® on the phone.
- Long press BAND (2) .
- When the cursor points to PAIR DEVICE , short press (1) .

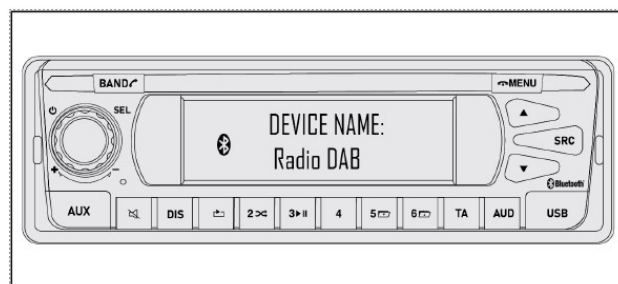


At this point:

- The display shows the name of the BT radio source ( DAB Radio).



- The icon (33) blinks.
- The DAB Radio source is visible on the phone.
- Select " DAB Radio" from the BT sources available on the phone.
- A pin of 5 digits is automatically shown on radio and phone display.
- Check that the 5 digits are identical, then confirm on the phone.
- Once the confirmed on the phone, it is not necessary to confirm on the radio.



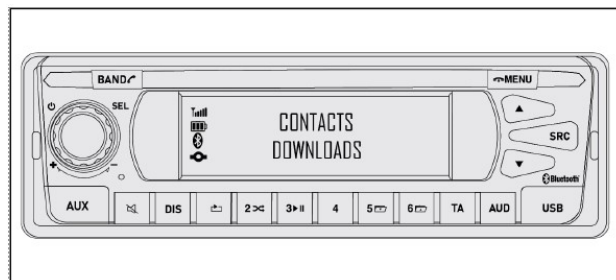
- The icons **(18)** , **(34)** and **(32)** are shown on the display.
- If the user decides to download the phone book, CON-

TACTS DOWNLOAD is shown and the icon



- When the icon **(33)** stops flashing, this means the phone book has been downloaded.

Now the device is correctly connected to the radio.

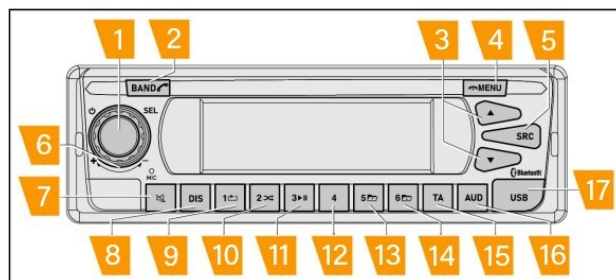


It is possible to select the BT source, pressing the button SRC **(5)** .

**NOTE:** When a phone is correctly paired, its name is saved in the device list.

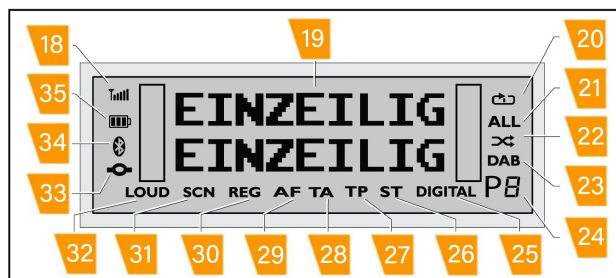
**NOTE:** A safety function prevents making the (Bluetooth®) connection while the vehicle is moving.

**NOTE:** If you want to connect your phone, park the vehicle in a safe location and start the pairing procedure.



**NOTE:** The icon of **(34)** shows the battery status the mobile phone.

**NOTE:** On some phones, due to compatibility issues, it may be possible that the battery level of the phone does not match the icon on the display.



## Automatic connection

If the AUTO CONNECT option is enabled, every time the phone – with BT enabled – is in the radio area, the phone will be automatically connected without repeating the pairing procedure.

To activate the AUTO CONNECT option:

- Long press MENU (4).
- Scroll the list using (6) until the cursor is on the AUTO CONNECT option.
- Short press (1) to confirm the selection.
- Select ON and short press (1) to confirm the selection.

**NOTE:** Each time the device is connected automatically, the phone book is downloaded automatically.

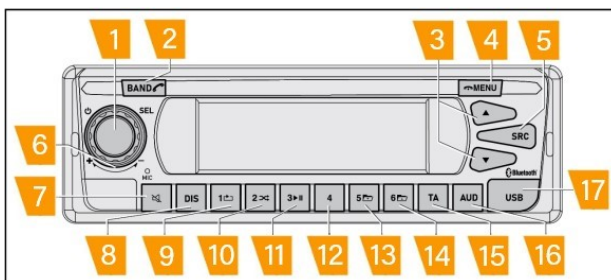
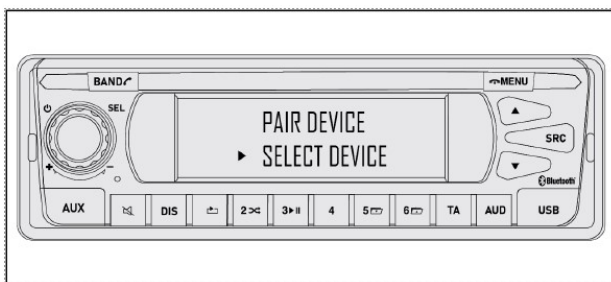
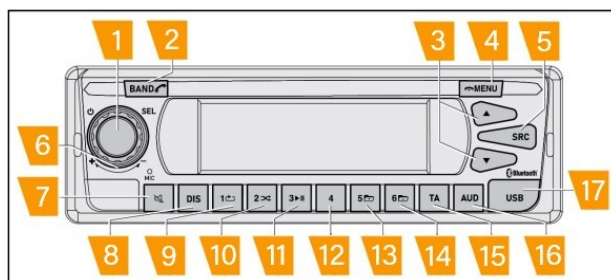
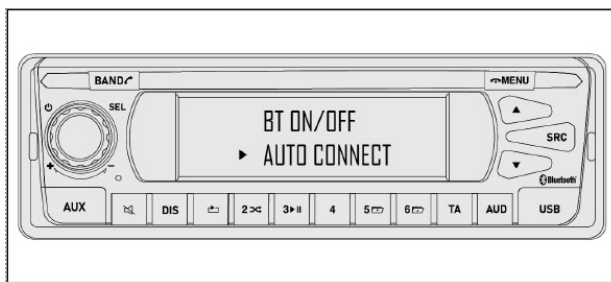
**NOTE:** If the user deletes the DAB radio source from their phone, the Radio will only attempt automatic pairing the first time that the phone returns to within a (Bluetooth®) range of the DAB Radio on the next key ON.

**NOTE:** The user can therefore repeat the connection with the Radio or reject it.

## Select device function

It is possible to select the phone to be connected if previously paired through the SELECT DEVICE function.

- Long press BAND (2).
- Scroll the list using (6) until the cursor is on the SELECT DEVICE option.
- Short press (1) to confirm the selection.

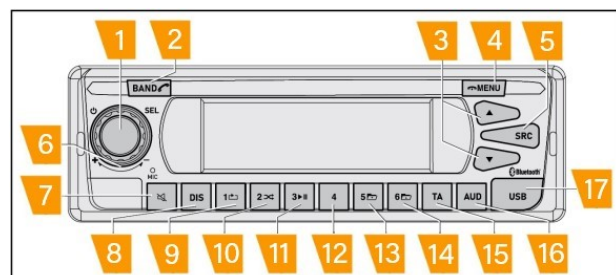


- The list of all the device previously paired is now available. Use **(6)** to scroll the list.
- Select the device by pressing and releasing **(1)**.

The Radio attempts to connect the device.

- If the device is available for connection, the connection will be completed.
- If the device is not available, the error CONNECT FAILED is shown on the screen and radio automatically goes back to the main page.

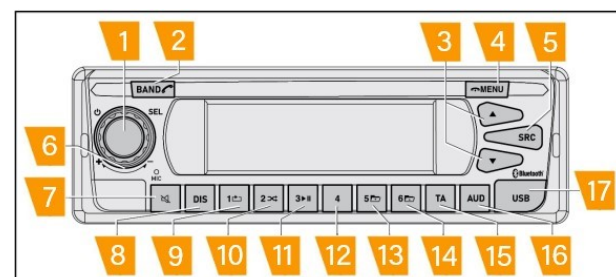
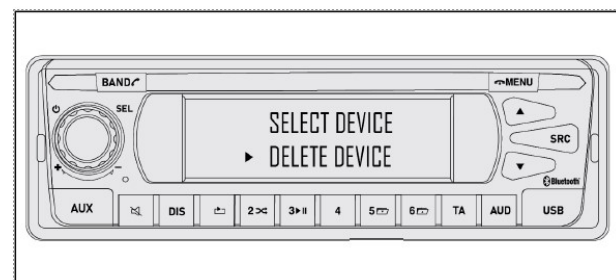
**NOTE:** Up to 5 devices can be stored in the "SELECT DEVICE" list.



## Cancel device function

It is possible to cancel devices from the list of previous connected devices.

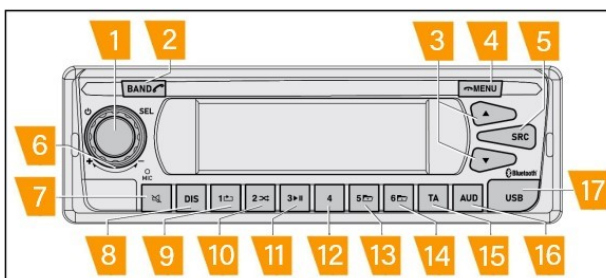
- Long press **BAND (2)**.
- Scroll the list using **(6)** until the cursor is on the DELETE DEVICE option.
- Short press **(1)** to confirm the selection.



- The list of all the device previously paired is now available. Use **(6)** to scroll the list.
- Select the device by pressing and releasing **(1)**.

Two options are available:

- DELETE : select the option using **(6)**. If the selection is confirmed by pressing **(1)**, the selected device will be removed from the list.
- CANCEL : by pressing **(1)**, the deleting operation is cancelled.



## Certified Bluetooth® devices

The following phones have been certified to support all the BT functionalities:

- iPhone7
- Samsung Galaxy J7
- iPhone 6
- Samsung C5
- iPhone 6S
- iPhone X
- Samsung Galaxy S7
- iPhone 8
- Huawei P9 Lite
- iPhone SE (2016 version)
- Huawei P8 Lite
- Huawei Mate 20

**NOTE:** The complete list of supported devices is available on supplier's website.



## Calls with Bluetooth®

In general, when a call is received regardless the current source, the call has higher priority.

The user could answer or reject the phone. At the end of the call, the previous source is resumed.

It is possible to adjust the volume during a call using **(6)**.

See the section "Volume during a call" for further details.

During active call is not possible to turn off the radio; some rules is also applied in relation to ignition off.

For further details, see the section "Call Management".

**NOTE: Calls received from other applications (such as Whatsapp, Facebook, Telegram ) are not supported by the radio.**

## Accepting and rejecting received calls

If a call is received on the connected phone:

- The name or the number of the contact is shown on screen together with CALL IN .

**NOTE: The name of the contact can only be shown if the user accepts to download the phone book on the radio.**

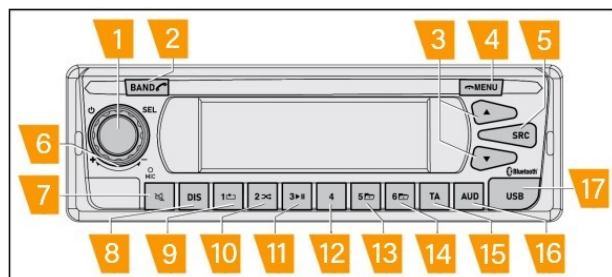
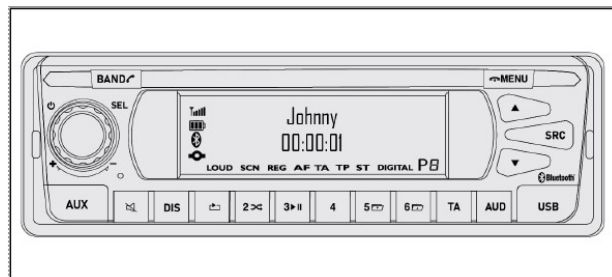
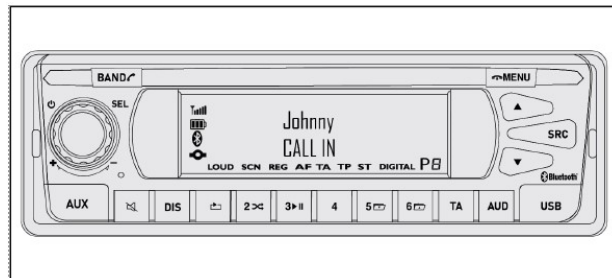
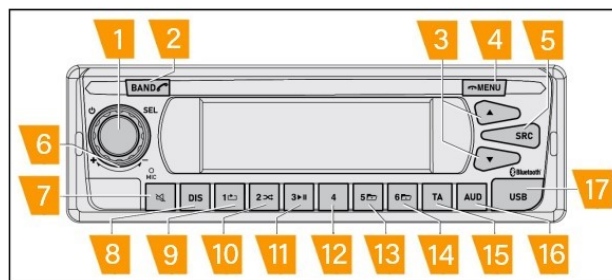
**NOTE: If on the other hand the name or the number appears as "unknown", this means that the incoming call is anonymous.**

In order to answer the call:

- Short press BAND **(2)** .
- Short press the dedicated steering wheel control (where available).

**NOTE: Check the vehicle user manual for further details about the steering wheel controls.**

- The call starts, the screen shows the time progressing together with the name.

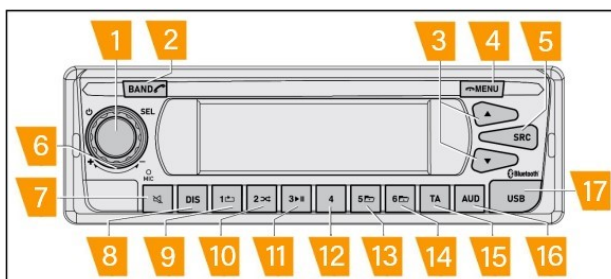
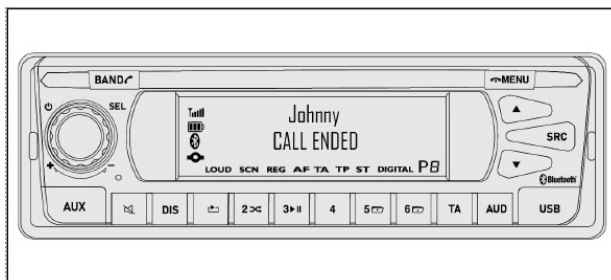


In order to reject the call:

- Short press MENU **(4)** .
- Short press the dedicated steering wheel control (where available).

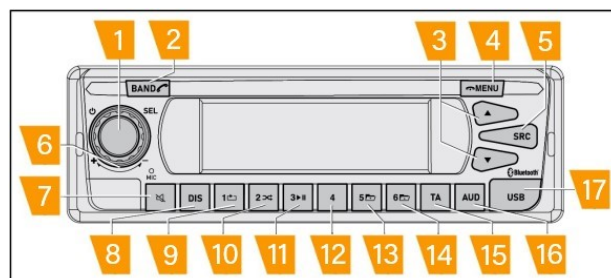
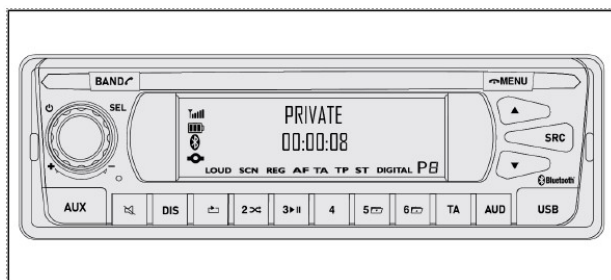
**NOTE: Check the vehicle user manual for further details about the steering wheel controls.**

- When the call has come to an end, the screen shows CALL ENDED and goes back to the previous page.
- In general, to end a call, short press MENU **(4)** .



During active call it's possible to transfer the audio of the call to the device.

- Short press the BAND button **(2)** .
- The display shows PRIVATE and the audio switches to the phone.
- The volume of the radio is muted.
- It is possible to transfer the audio to the radio once again by pressing BAND button **(2)** .

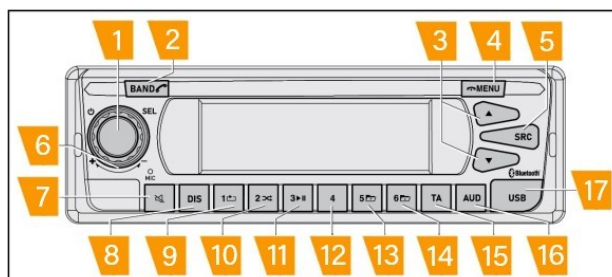
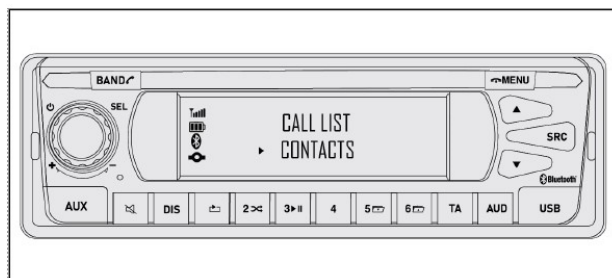


## Calling a contact from the phone book

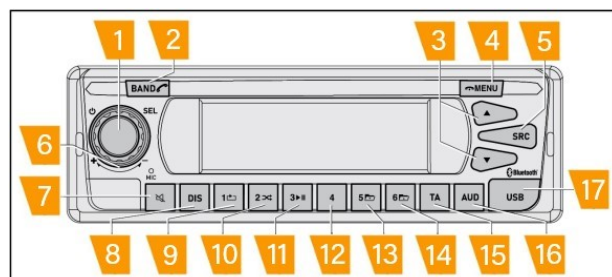
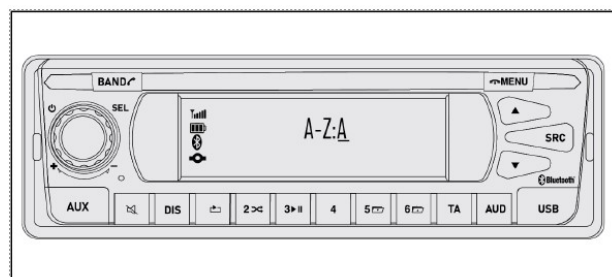
It is possible to make a call by selecting the contacts from the phone book.

**NOTE:** This function is available if the user allows the phone book to be downloaded.

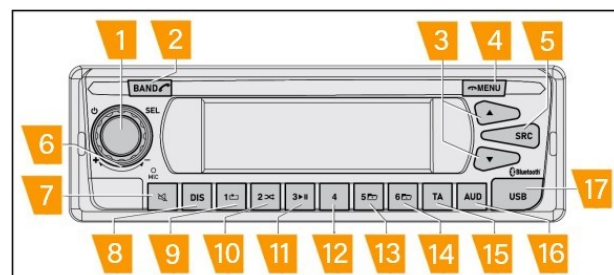
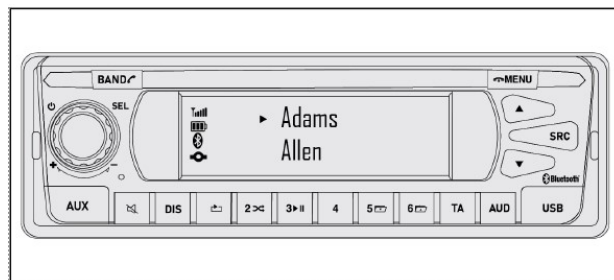
- Press and hold the button BAND (2).
- Use (6) to scroll the items.
- When the cursor points to CONTACTS, short press (1) to confirm the selection.
- Use (6) to select the first letter of the contact and then short press (1) to confirm the selection.



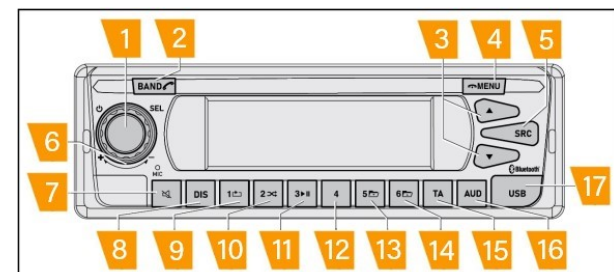
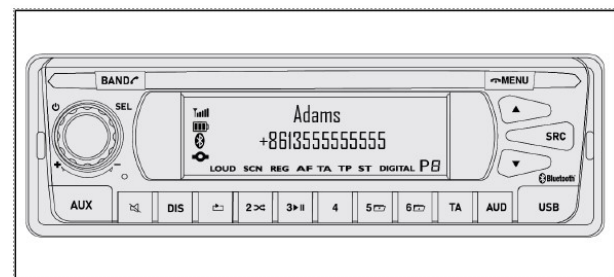
- Use (6) to select the first letter of the contact and then short press (1) to confirm the selection.



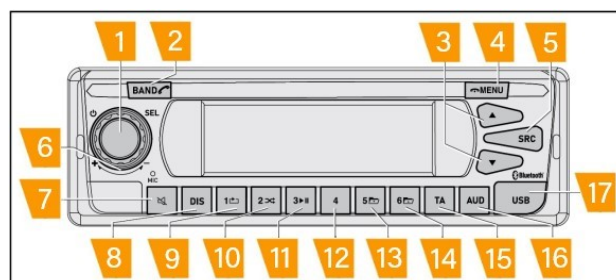
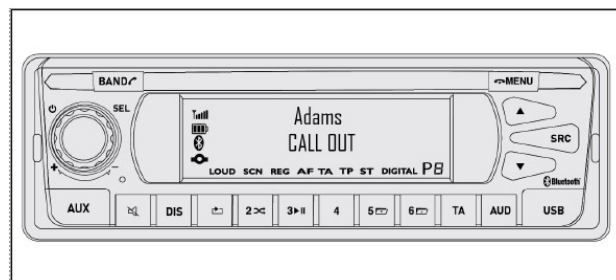
- Use **(6)** to scroll the list of the contacts until the required one is found.



- Short press **(1)** to confirm the selection.
- The name and the number of the contact is shown.

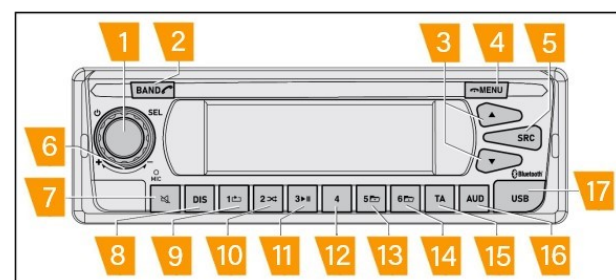
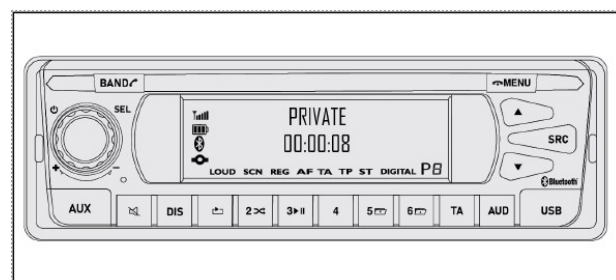


- Short press **(1)** again to start the call.
- In general, to end a call, short press MENU **(4)**.



During active call it's possible to transfer the audio of the call to the device.

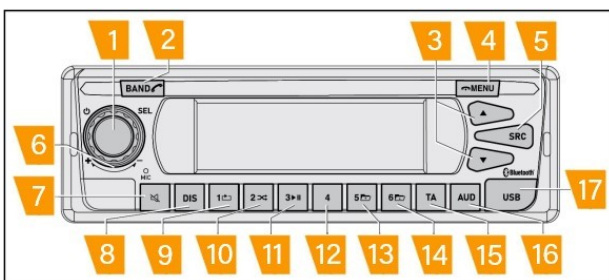
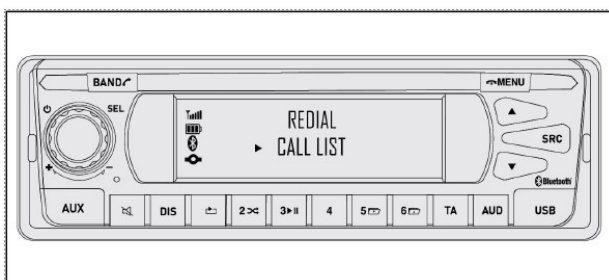
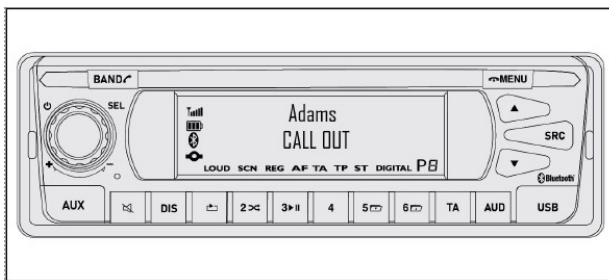
- Short press the BAND button **(2)**.
- The display shows PRIVATE and the audio switches to the phone.
- The volume of the radio is muted.
- It is possible to transfer the audio to the radio again by pressing the BAND button **(2)**.



## Redialling

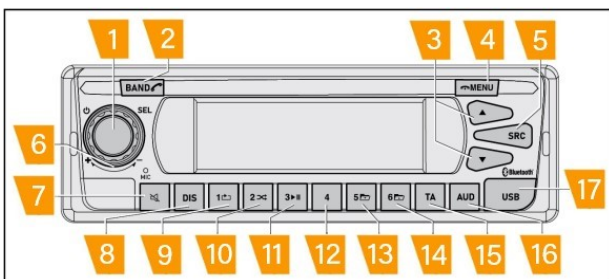
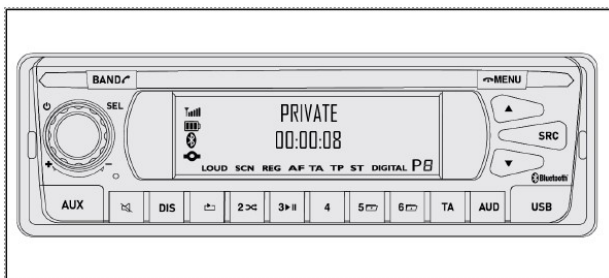
The redial function allows the user to easily call again the last dialled call.

- Long press BAND **(2)**.
- Use **(6)** to select the REDIAL option.
- Short press **(1)** to confirm the selection.
- The call is started: the last contact/number is called.
- If the contact is not saved in the phone book, the number is shown.
- In general, to end a call, short press MENU **(4)**.



During active call it's possible to transfer the audio of the call to the device.

- Short press the BAND button **(2)**.
- The display shows PRIVATE and the audio switches to the phone.
- The volume of the radio is muted.
- It is possible to transfer the audio to the radio again by pressing the BAND button **(2)**.

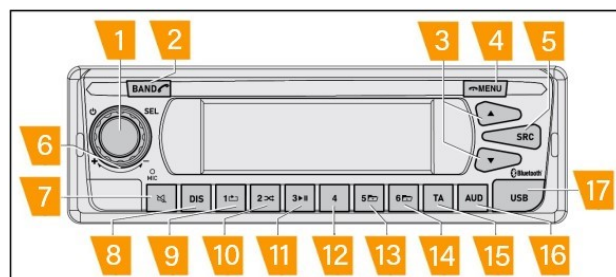
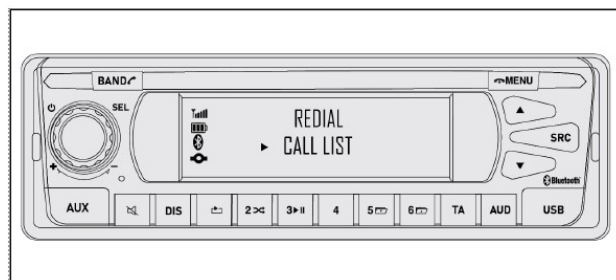




## Call history

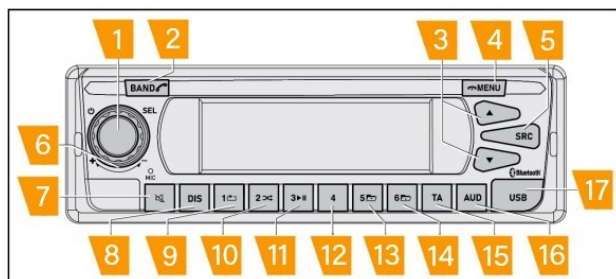
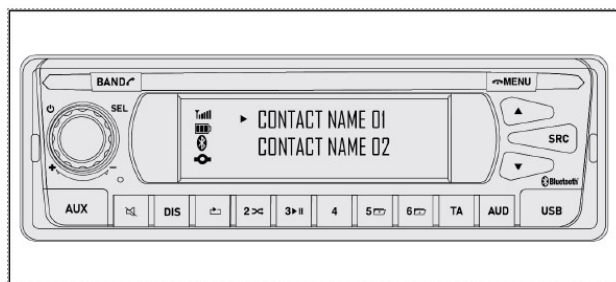
It is possible to review or to call the last missed, received and dialled call.

- Long press **BAND (2)**.
- Use **(6)** to scroll the list.
- When the cursor points to CALL LIST, short press **(1)** to confirm the selection.



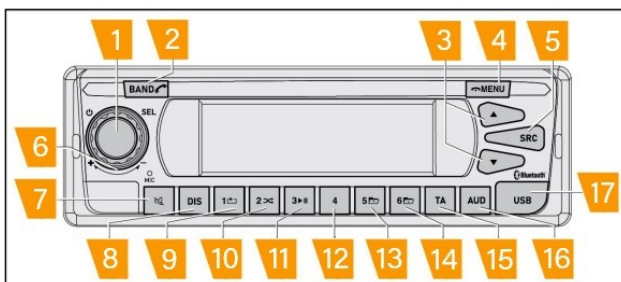
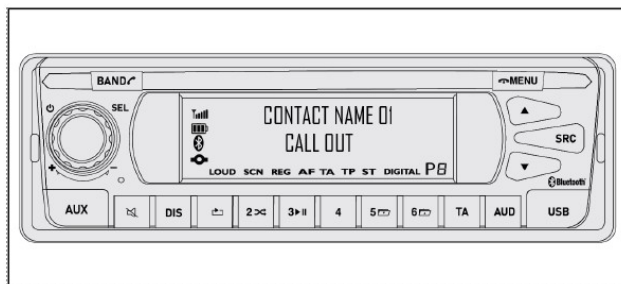
Three options are available:

- MISSED CALLS (MISSED CALLS): confirm this item to scroll through the most recent missed calls.
- DIALED CALLS (CALLS MADE): confirm this item to scroll through the last numbers called.
- RECVD CALLS (CALLS RECEIVED): confirm this item to scroll through the last calls received.
- When an option has been selected, short press **(1)** to confirm the selection.
- Scroll through the calls using **(6)**.





- If the user wants to call a contact, short press **(1)** .
- The call is started.



## Playback mode

By switching to BT source it is possible to enable the playback mode.

- It is possible to play the tracks saved on the device.
- It is possible to play the tracks played by other applications.

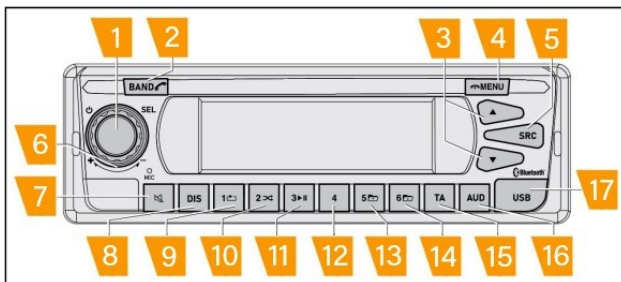
It is possible to change track:

- Short press the selection buttons **(3)** .
- Where supported via the steering wheel buttons.

**NOTE: Check the vehicle user manual for further details about the steering wheel controls.**

- Where supported via the Bed module buttons.

**NOTE: Check the vehicle user manual for further details about the Bed module controls.**



It is possible to pause the current track at any time by pressing and releasing the button **(11)**.

When the PAUSE function is selected:

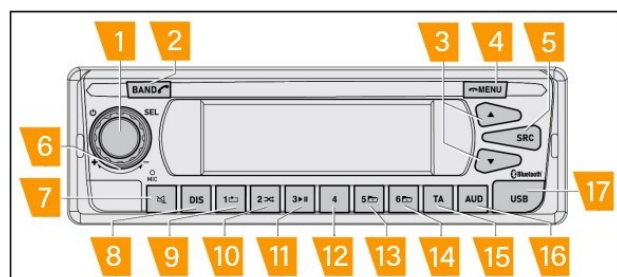
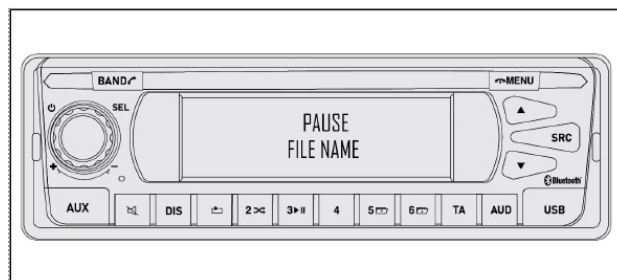
- The PAUSE string is shown on the first row of the display.
- The file track continues scrolling.

In order to disable pause, press **(11)** again.

Soundtrack starts again from the previous timing.

**NOTE:** When all the songs have been played, the radio shows PAUSE ”.

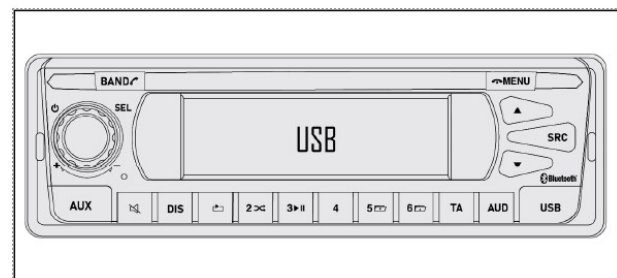
**NOTE:** By pressing **(11)** again, the radio starts to play from the first track.



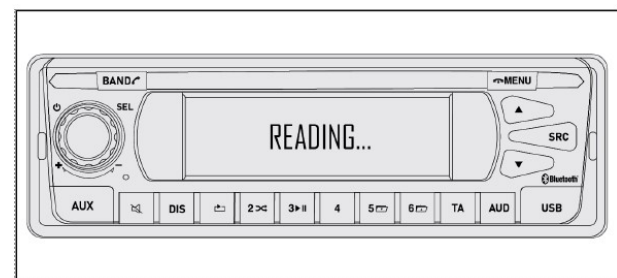
## iPhone OS

When an iPhone phone is connected to the radio USB port, depending on the operating system and the phone readers, some additional functions could be supported.

- USB is shown on screen for few seconds.



- READING is shown on the screen.
- It is possible to select some audio on the phone to be played by the radio.
- The track name and the timing are shown on the display.
- All the other functionalities are supported (change track, pause, fast forward/rewind, repeat, random).



## iPod

The USB port supports iPod connections.

As soon as the iPod connector is inserted into the USB port, the authentication procedure is initiated.

The iPod will be played only if the authentication procedure is successful.

## Settings

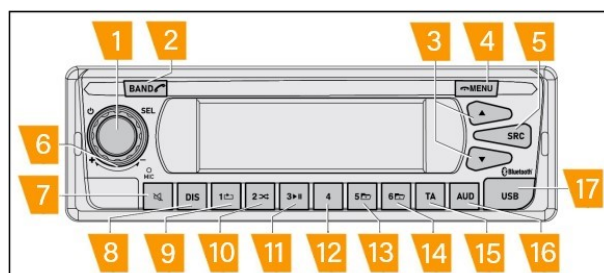
There are several useful settings to improve the user experience.

Regardless of the source, it is always possible to access to the main setting:

- Press and hold the button MENU **(4)** .
- Use **(1)** to scroll the items.
- Short press **(6)** to select the items.
- Scroll the options using **(1)** .
- Confirm the selection using **(6)** .
- To go back to the previous page, short press **(3)** .
- To exit the main settings, short press **(4)** or wait **10 s** .

Here follows the list of all the settings and a short description.

### Settings



Voice	Option	Description	Default value
RDS ON/OFF	ON/OFF	The function enables the RDS comfort functions. RDS functions improve the radio experience.	ON
AF	ON/OFF	The function belongs to the comfort RDS comfort function. If the RDS ON / OFF option is set to OFF , the AF function is not available and is not shown in the menu. When AF is ON , the device will automatically search for the frequency with the best signal for the currently tuned station.	ON
REG	ON/OFF	The function belongs to the RDS comfort function. If the RDS ON / OFF option is set to OFF , the AF function is not available and is not shown in the menu. With the REG function activated, the device is prevented from switching to alternative frequencies of the tuned station that transmit programs with different content.	OFF

Voice	Option	Description	Default value
TA	0 ~+10	The function belongs to the RDS comfort function. If the RDS ON / OFF option is set to OFF , the AF function is not available and is not shown in the menu. The option indicates the amplification to be applied to the current volume when the traffic announcement function is activated.	3
LOCAL/DX	LOCAL/DX	When LOCAL is selected, the radio only tunes into the sta-tion that emits a strong signal. When DX (distance) is selected, the radio also tunes into other stations.	Dx
SERVICE LINK	ON/OFF	This item activates or deactivates the Hard Linking function. In DAB source, when the digital signal is poor, the radio automatically searches for the same station among analogue frequencies.	ON
BT ON/OFF	ON/OFF	This item activates or deactivates the Bluetooth® module.	ON
AUTO CONNECT	ON/OFF	This item is inly available if BT ON / OFF is set to ON . The item indicates if a previous paired device should be automatically connected when in the area of the radio.	ON
BEEP	ON/OFF	The item enables or disables the acoustic signal that radio executes during some operation.	ON
12/24 HOURS	12h/24h	The item indicates the clock format.	24 hours
CLOCK UPDATE	ON/OFF	This item indicates if the time shown by the radio needs to be updated on the basis of the time displayed by the tachograph.	

Voice	Option	Description	Default value
CLOCK	00:00 ~ 23:59	The user can enter the time manually.	00:00
START VOLUME	5 ~ 35	This item indicates the default volume to be applied by the device.	15
GALA	OFF LEVEL 1 LEVEL 2 LEVEL 3	Volume adjustment based on vehicle speed is a function used to increase the normal volume selected by the customer based on vehicle speed.	LEVEL 1
AUTO OFF	OFF/ON	The AUTO OFF option handles the behaviour of the device when the ignition is switched off. When AUTO OFF is set, the radio remains on for 20 min if the vehicle ignition is switched off. After 20 min, the radio is automatically deactivated.	ON
DIM OFFSET	-3 ~ +3	The AUTO OFF option handles the behaviour of the device when the ignition is switched off. When AUTO OFF is set, the radio remains on for 20 min if the vehicle ignition is switched off. After 20 min, the radio is automatically deactivated.	0
DEFAULT SET	OFF/ON	The item allows to reset to factory values all the settings.	OFF

#### Troubleshooting FAQ

FAULT	CAUSE/INTERVENTION
<b>GENERAL</b>	
The radio requests the code.	To reactivate the radio, enter the numeric code indicated on the radio pass (refer to the section "Alarm code").
The radio automatically deactivates 20 min from activation.	If the vehicle is turned off, the radio will turn off automatically at the end of the time set for the automatic turning off (20 min). Refer to the section "AUTO OFF option".
The radio shows the message "SYSTEM FAULT".	Some general failure occurred. Try to perform battery cut off. If the issue is not solved contact customer service.
Radio locked out and the message WRONG PASSWORD appears.	The prompt will be shown at the end of the timer related to the number of failed attempts. See "alarm code" section.

FAULT	CAUSE/INTERVENTION
The radio will not switch on.	Check that block A of the ISO connector is correctly inserted. Check that the vehicle battery is connected.
The radio is on but no sound is emitted.	Check that block B of the ISO connector is correctly inserted. Check that the Radio has not been muted ( MUTE ). Check that the volume is not set to 0.
The radio is on but sound is only emitted from one speaker.	Check that block B of the ISO connector is correctly inserted. Check that the BALANCE ( BALANCE ) option has been set to 0.

### Troubleshooting FAQ

FAULT	CAUSE/INTERVENTION
<b>RADIO</b>	
The station search function finds only a few or no stations.	It could be related to the geographic area: near the mountains, hills, big buildings, the signal could be poor.
If traffic news priority is active, the radio will only tune to stations that transmit this information.	Deactivate the traffic news priority if you want the radio to tune also to other stations: Select the FM band and press the button TA <b>(15)</b> .
	If tuning sensitivity while searching stations is set to a low level (" LO "), the radio will only tune to stations that emit a strong signal.
	Set the sensitivity to high (" DX ") if you want the radio to also tune to other
The radio is not receiving any FM station.	Check that the FM aerial is connected correctly. In certain situations such as in tunnels or underground car parks, the FM signal is disturbed or missing.
The radio is not receiving any DAB station	It could be related to the geographic area: near the mountains, hills, big buildings, the signal could be poor. Check that the DAB aerial is connected correctly.

## Troubleshooting FAQ

FAULT	CAUSE/INTERVENTION
<b>USB</b>	
The USB is not working.	Check that the USB pen drive is inserted correctly into the USB port <b>(17)</b> .
	Check that the pen drive contains playable files.
	Check that the pen drive is included in the supported formats.
Some tracks are not played.	Check that the tracks are included in the list of supported formats.
The device is not read as a mass storage device.	If it is a Smartphone Android, only an Operating System prior to version 8.0 is able to support the function.
The device is not recharged.	Check if the phone is correctly connected to the radio with the correct cable.

## Troubleshooting FAQ

FAULT	CAUSE/INTERVENTION
<b>Bluetooth</b>	
This radio is not on the list of devices identified on the phone.	Check that the Bluetooth® function is activated. Follow the instructions for connecting Bluetooth® devices.
It is not possible to pair a phone.	Check that the BT Bluetooth® option in the main menu is ON. Start the pairing procedure and check that the code shown by the Radio is the same as the one on the phone.
Bluetooth® audio playback does not work.	Check that your Bluetooth® device supports the Bluetooth® audio streaming function.
	If necessary, press the button <b>(11)</b> or the "Playback" button on the Bluetooth® device.
The Bluetooth® function is active, but Bluetooth® (CONNECT Bluetooth®) is not available on the menu.	A safety function prevents the Bluetooth® connection while the vehicle is moving. If you want to connect your phone, park the vehicle in a safe location.



## Troubleshooting FAQ

FAULT	CAUSE/INTERVENTION
The phone book is not available.	Make sure that the Bluetooth® connection is established (refer to the section "Display the name of the Bluetooth® device connected").
	Long press the button <b>(14)</b> to display the contact list.
	Download the phone book completely when connecting the Bluetooth® phone to the radio. When the bluetooth icon stops flashing, this means the phone book has been downloaded.
	Check that your contacts are saved in the phone memory. The contacts stored on the SIM card will not be downloaded to the radio.
The connection of a connected Bluetooth® device is not restored	Some Bluetooth® devices do not support automatic reconnection. Manually restore the connection of the Bluetooth® device.
	Check that the AUTO CONNECT option of the main menu is set to ON.
Calls with Whatsapp are not supported by the operating system (Android).	The Android operating system does not support Whatsapp calls.
The caller's name does not appear on the screen.	If an anonymous call is received, the name of the caller is not shown. With some models and operating systems, the caller's name may appear as "unknown".

## Specifications

PARAMETER	TYPICAL	REMARKS
Operating Voltage.	12.0 - 32.0 V	---
Standby Current.	$\leq 250\mu\text{A}$	UBAT = 25.2 V Ttest = +25 deg C ~ 40 deg C
Audio Output Power.	20 W RMS Max.	Variable using the volume control encoder.
Frequency Response.	20 Hz: -1 dB $\pm$ 3 dB 1KHz: 0 dB 20 KHz: -1 dB $\pm$ 3 dB	---
Frequency Response Noise / Signal Ratio.	$\geq 80$ dB	Audio Only.
Total Harmonic Distortion.	0.20%	---
Stereo Channel Separation.	1kHz: $\geq 55$ dB 10kHz: $\geq 50$ dB	---
Dynamic Range.	Left Channel: $\geq 80$ dB Right Channel: $\geq 80$ dB	---

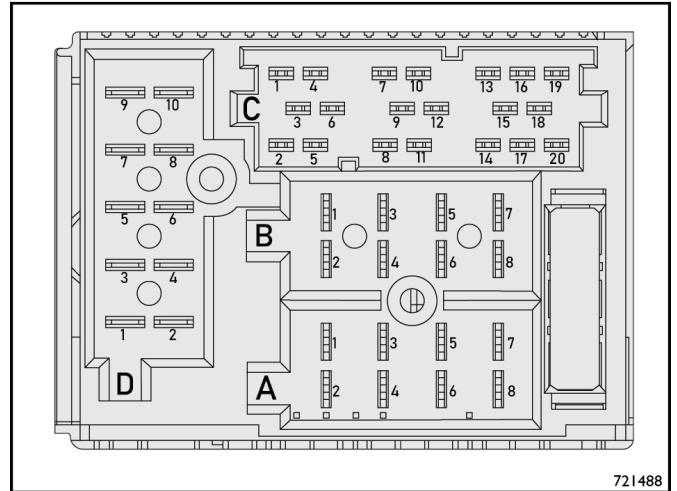
## General handling details for transport, installation position, assembly, start of operation, shut-down, storage.

To avoid damage to the front cover of the device and the display:

- Only use a dry, soft, lint-free cloth for cleaning.
- Wear cotton gloves for installation/removal.
- Do not apply any pressure to the front cover of the device or the display.
- Do not use any sharp or pointed objects.
- Do not apply liquids to the device cover or display.
- Do not sharply knock the device or bend it.

## Pinout

ISO Connector.

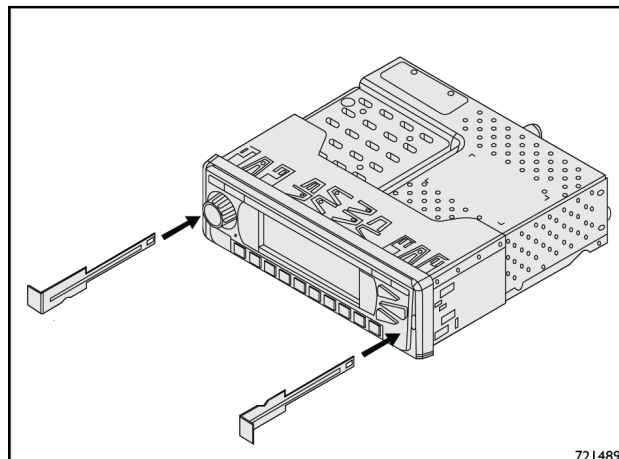


B1	Spare.	C1	Preamplified_LR output	C17	Spare.
B2	Spare.	C2	Preamplified_RR output	C18	Spare.
B3	Front R+ speaker	C3	Preamplified_GND output	C19	Spare.
B4	Front R- speaker	C4	Spare.	C20	Spare.
B5	Front L+ speaker	C5	Spare.	D1	Spare.
B6	Front L- speaker	C6	Switched 12V preamplified output.	D2	Spare.
B7	Spare.	C7	Spare.	D3	Spare.
B8	Spare.	C8	Spare.	D4	Spare.
A1	CAN_H.	C9	Spare.	D5	Spare.
A2	CAN shielded.	C10	Spare.	D6	Spare.
A3	CAN_L.	C11	Spare.	D7	Spare.
A4	Switching on.	C12	Spare.	D8	MIC_Shielded (optional).
A5	12V switched output (max 150 mA).	C13	Spare.	D9	MIC_IN- (optional)
A6	Lighting.	C14	Spare.	D10	MIC_IN + (optional)
A7	Battery (+24V)	C15	Spare.		
A8	GND (ground).	C16	Spare.		

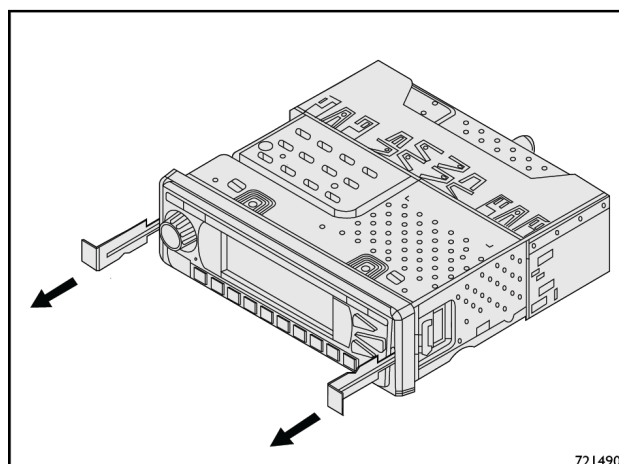
## Dismantling instruction

**ATTENTION:** *Power off the radio before dismantling.*

Insert both Dismantling Keys into front radio holes, correctly positioned as indicated in the figure below, until both keys are locked after having been fully inserted.



Pull out the radio with both keys.





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