

Lost Audio GmbH

&

Sumatronic AG

B-DAB-261

DAB+ / FM Tuner Modul

Upgrade for

Revox B261

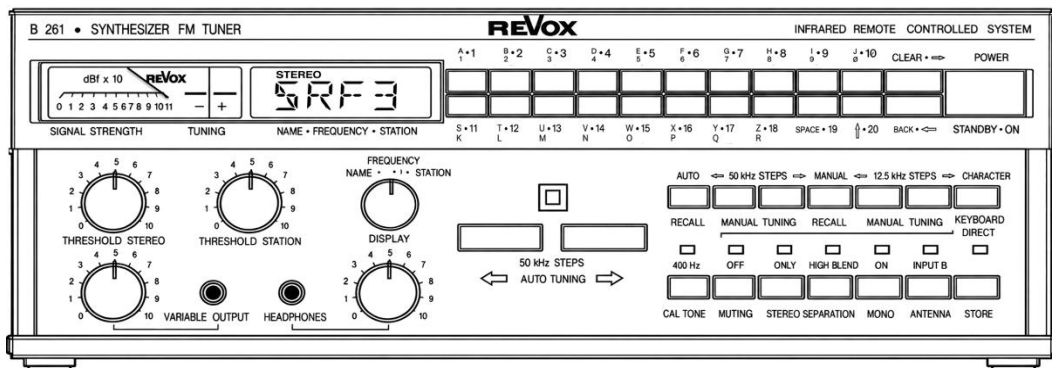


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1 DAB+/FM Tuner

DAB and DAB+ are the new generation of radio broadcasting technologies, in which the radio signal is transmitted entirely digitally. Even under difficult reception conditions, you can listen to your favorite stations without any noise.

The B-DAB-261 has been designed with sophisticated filtering technology to be largely resistant to the types of interference encountered in everyday use today. This allows you to enjoy interference-free radio even under difficult reception conditions.

The tuner receives DAB and DAB+ in Band III from 174 - 240 MHz and FM in Band II from 87.5 – 108 MHz. (Special versions for countries such as Japan or Brazil also support the frequency range 76 – 108 MHz, but only upon request (B-DAB-261-JB).) Programming is fully automatic, stations are automatically detected and stored, and for DAB+ they are assigned the correct names. For FM, no names are assigned, the RDS station name or RDS RadioText can be displayed. Up to 250 DAB/DAB+ stations and 250 FM stations can be stored.

The tuner outputs its analog audio signal as usual through the two RCA connectors and the DIN connector to your amplifier. No digital S/PDIF signal is available.

Enjoy a new way of listening to radio.

2 General Information

2.1 The Large Arrow Buttons

The large arrow buttons are used to navigate through various functions. In the menu, for example, you can use them to move forward and backward through the menu items. When selecting stations, you can use the arrow buttons to step through all stations.

2.2 Alphanumeric Display

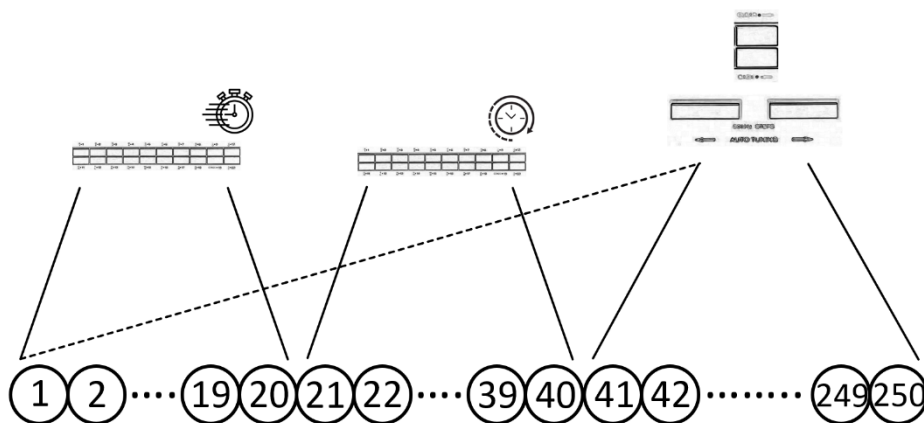
The display can show letters, numbers, and several special characters. However, it is limited to 4 characters, so some information has to be displayed in abbreviated form.

2.3 Station Memory System – String of Pearls

In principle, all stations for both DAB+ and FM are stored in the system like beads on a string. There is one chain for DAB+ and one chain for FM. This means there can never be a gap in the chain. The 20 or 40 direct-select buttons automatically point to the first 20 stations (short press) or the second 20 stations (long press) in the chain. For example, button 3 automatically points to the third station in the respective DAB+ and FM chains. The direct-select buttons cannot be assigned individually. If you want different assignments for the direct-select buttons, you must change the order of the stations in the station memory chain.

When stations are moved, gaps are automatically created for insertion or closed when a station is moved away.

You can select stations 1 through 40 using the direct-select buttons, then continue through the station chain using the arrow buttons. The arrow buttons can also be used for stations 1 through 40. A short press on button 5 selects station 5, while a long press on button 5 selects station 25.



2.4 Switching Between DAB+, FM, and FM-Manual

The tuner has 3 modes, which can be selected using the "DISPLAY" rotary switch.

NAME	DAB+ mode
FREQUENCY	FM mode, previously stored stations
STATION	FM mode, stations can be found using the station scan or frequencies can be entered manually.

2.5 Last Used Radio Station

The most recently listened-to radio station for both DAB+ and FM is always stored and restored when the unit is switched on. This information is stored when the unit is switched off using the Power button or the remote control. It is also stored after listening to the same station for approximately 15 minutes. This allows the unit to be controlled using a timer/time switch. If the unit is disconnected directly from the power supply without being switched off first, this information is not stored.

2.6 Stereo Indication and Signal Quality / Signal Strength

For each station, the DAB+ and FM tuner indicates whether the broadcast is mono or stereo. DAB+ can also use mono transmission, not because of insufficient signal strength, but to reduce the amount of data transmitted, and this is relatively uncommon. With FM, mono reception is usually caused by insufficient signal strength. The mono/stereo indication is deliberately slow and is updated only every few seconds. The signal quality shown on the analog meter is also updated only every few seconds. If a station is stereo, the text "STEREO" appears in the LCD at the top.

Please note that with DAB+, the display indicates signal quality, not signal strength. Even a very weak DAB+ signal can provide error-free reception, while reflections can impair reception even when the signal itself is strong. With FM, signal quality cannot be measured in this way, so the display shows signal strength instead.

2.7 Remote Power-On

The "Remote Power-on" function of the B261 continues to operate with the DAB+ upgrade. Any change at the connector always overrides the unit's current ON or OFF state.

2.8 The IR Remote Control

The recommended remote control for the B261 is the B201. However, the B201CD, B205 and B208 remote controls are also compatible. All functions remain unchanged, and all buttons operate exactly as on the original B261. There is only one additional feature. The tuner can store up to 250 stations each for DAB+ and FM. To select these stations using the remote control, first press the TUNER source selection button at the top of the remote control. This switches the amplifier to the tuner input (or leaves it there if already selected) and simultaneously activates the tuner's direct entry mode. You can then enter the desired station preset number directly using the numeric buttons. For example, to select station preset 120, simply press [1] [2] [0]. No confirmation button is required. As soon as all the necessary digits have been entered, the tuner automatically recognises the complete number and selects the corresponding station. Station presets 1–20 can still be selected exactly as before.

3 Connecting the Antenna

Determine whether you are using an active or passive antenna for DAB+/FM reception. If you use an active antenna that requires a 5 V supply, it can be powered by the B-DAB-261 module with a maximum current of approximately 30 mA. This supply voltage can be switched on or off using the “ANTENNA” button under the cover. It is required only for an active antenna and must only be enabled in that case. For an active antenna, the 5 V antenna supply **MUST** be switched on before performing a station scan (DAB+ and FM), otherwise no stations will be found. When the power supply is enabled, the “INPUT B” LED lights up.

Connect the antenna to the standard antenna connector on the rear of the B261, which is designed for 50- and 75-ohm antennas. Always place your antenna on a metallic surface, for example on the B261 cabinet or on a piece of sheet metal. A metallic surface improves reception strength. The antenna only needs to be placed close to the metal surface, electrical contact with the metal is not required.

3.1 Antenna Power Supply

If you use an active antenna that requires a 5 V supply, it can be powered directly by the B261 with the required 5 V voltage at a maximum current of approximately 30 mA. This is controlled with the “ANTENNA” button under the cover.

- Supply voltage on, “INPUT B” LED lights
- Supply voltage off, “INPUT B” LED does not light

Switching the supply on and off is also indicated briefly on the display when you are in normal listening mode.

CAUTION: If the antenna draws too much current or if there is a short circuit, “+5VFAIL” is shown on the display and the power supply is automatically switched off. The supply is switched on again only when the antenna supply is re-enabled using the “ANTENNA” button or when the unit is switched on using the power switch.

4 DAB+ Stations store, listen to and organizing

When the DAB+/FM tuner is delivered, no stations are stored. To store DAB+ stations, first switch on the unit by briefly pressing the Power switch on the far right. Make sure that the unit is in DAB+ mode. The “DISPLAY” rotary switch must be set to “NAME”.

When the unit is switched on, “BDAB” is shown on the display for approximately 2 seconds, after which the last station listened to is played. If no stations have been programmed, the display goes completely blank and the unit remains silent.

4.1 Automatically Storing DAB+ Stations “SCAN”

You can now start the automatic station scan. The tuner does not provide a manual tuning function because manual tuning is not required for DAB+. DAB+ works differently from FM, where one radio station is transmitted on each frequency. With DAB+, several radio stations are grouped into one package (called an ensemble) and transmitted on a single frequency. Therefore, direct tuning and manual entry of an individual station are not possible. Because each radio station transmits a predefined name, there is no need to assign station names manually.

Press and hold the “STORE” button under the lower-right cover for approximately 5 seconds until the automatic station scan starts. This is indicated by “AMEM” on the display. Release the button immediately. The function now scans all 40 channels in Band III and finds all available radio stations. Stations that cannot be played because reception is too weak may also be found. These can be deleted later. Manual fine tuning is therefore not necessary.

The channels are counted automatically from 0 to 40. The display is updated at fixed intervals, so not every individual channel may be shown. However, all channels are always scanned, even if some channel numbers do not appear on the display.

At the end of the scan, all stations found are stored. The tuner also checks whether a detected service is only a data service. Data services are not radio stations and do not transmit music, so they are automatically deleted during the storage process. As a result, more stations may be shown before the storage process than are ultimately stored. The storage process may take several minutes because stations that are too weak are also filtered out if they are definitely unplayable. This takes some time

because the tuner optimizes reception for each frequency and filters out reflections. Longer optimization processes are indicated by "OPTI".

4.2 Listening to and Changing DAB+ Stations

As with the original B261, the first 20 stations can be selected directly using the 20 buttons on the right. In addition, stations 21 through 40 can now also be selected directly. A short press on button 1 plays station 1 in the station chain. Press and hold button 1 to play station 21.

The preset buttons do not need to be assigned separately. They automatically point to the corresponding station in the internal chain of stored stations. For example, button 2 automatically selects the station that was stored in the second position of the station chain during the scan.

If you know the station number, you can enter it directly using the "STEREO" button. Briefly press the "STEREO" button, after which placeholders for the digits appear on the display. Enter the desired station number using numeric buttons 1 through 10. Only as many placeholders are shown as are required for the number of stations actually stored. If the station number has fewer digits than the number of placeholders shown, enter leading zeros.

You can also navigate up and down through the entire station chain using the large arrow buttons. The station name is shown immediately, but the station is selected only after approximately 1 second. This is indicated by the "AUTO" LED lighting up. The LED indicates that the tuner is waiting until you have stopped navigating for approximately 1 second. The station is then selected and the "AUTO" LED turns off again.

If you are listening to a station and want to know its position, press and hold the "STEREO" button. The position of the station currently playing is briefly shown on the display.

These three methods allow you to select any stored station.

4.3 Changing the DAB+ Station Order

During the automatic storing process, stations are generally stored in alphabetical order. (Exceptions may occur for stations whose short name is, for example, "32". Such stations are sorted using "32" even though they may be displayed as "Radio 32".) You can change this order as desired. Use the blank list on the second-to-last page to write down your preferred station order. This is very helpful because station numbers cannot be displayed while stations are being sorted.

Because the station chain already contains all stations, sorting is performed only by moving positions. Start with the station you want in first position, then the station you want in second position, then third, and so on. Each time, move the desired station to the position you have written down. This way, you build the new station order from the beginning of the chain according to your list.

When a station is moved backward in the chain (to a higher position number), it is inserted **after** the selected target position. When a station is moved forward (to a lower position number), it is inserted **before** the selected target position.

If you want to swap two stations, for example moving the station at position 30 to position 5, first move the station from position 30 to position 5. Then move the station now at position 6 (which was previously at position 5) to position 30. Position numbers are not displayed, so use the existing station names as your reference.

To sort stations, proceed as follows:

1. Briefly press the "STORE" button under the cover on the right. "M DB" appears on the display, which stands for DAB menu.
2. Use the large right arrow button to select the first option, "SORT".
3. To start the sorting process, press the "STEREO" button. The first LED, "400Hz", lights up as an orientation indicator.
4. Using the arrow buttons (or direct-select buttons 1–20), select the station you want to move. Once a station has been selected, the second LED from the left, "(MUTING) OFF", lights in addition to the station name. You can change the selected station as often as necessary until you are sure. (CAUTION: Direct-select buttons 21–40 do not work in this mode.)
5. Press the "STEREO" button to confirm this station. The display goes blank and the third LED from the left, "(STEREO) ONLY", lights up.
6. Now use the arrow buttons or direct-select buttons 1–20 to select the position to which the station should be moved. The station currently at the target position is automatically shifted back. Stations are never overwritten or deleted. Gaps are always created or closed automatically. The fourth LED, "HIGH BLEND", lights up.
7. Press the "STEREO" button again to complete the operation. You are automatically returned to the main menu at the station sorting item, and all 4 LEDs turn off again.
8. You can now repeat steps 3–7 as often as necessary until all stations are arranged in the order you want.
9. When you have finished moving stations, press the "STORE" button to complete the sorting process. The DAB menu is closed and you return to listening mode.

If you do not want to save the changes, exit the menu using the "KEYBOARD" button. The changes are still held in volatile memory, so the unit must be disconnected from

the power supply, left disconnected for 10 seconds, and then reconnected before it can be switched on again.

Meaning of the 4 LEDs in a row, overview

- . Waiting for you to select the station to be moved
- .. A station has been selected and can be moved.
- ... The station to be moved has been confirmed, the system is now waiting for the target position to be entered.
- A target position for the station has been selected.

4.4 Deleting Individual DAB+ Stations

You can delete any stored station individually. Proceed as follows:

1. Briefly press the “STORE” button. “M DB” appears on the display.
2. Use the large right arrow button to select the first option, “SORT”.
3. Press the “STEREO” button. The first LED, “400Hz”, lights up as an orientation indicator. This means the tuner is ready for you to select the station to be moved or deleted.
4. Using the arrow buttons or direct-select buttons, select the station you want to delete. Once a station has been selected, the second LED from the left, “(MUTING) OFF”, lights in addition to the station name. You can change the selected station as often as necessary until you are sure.
5. Press “(MANUAL) RECALL” under the cover to delete this station. “dele” is briefly shown on the display, after which you return to the main menu at the station sorting item.
6. You can now repeat steps 3–5 as often as necessary until all stations you want to remove have been deleted.
7. When you have finished deleting stations, press “STORE” to exit the menu, save everything, and return to normal listening mode.

If you do not want to save the changes, exit the menu using the “KEYBOARD” button. The changes are still held in volatile memory, so the unit must be disconnected from the power supply, left disconnected for 10 seconds, and then reconnected before it can be switched on again.

As you have probably noticed, moving and deleting stations are performed in the same menu. You may also combine these operations.

4.5 Deleting All DAB+ Stations

To delete all stored DAB+ stations, press and hold the “(MANUAL) RECALL” button in normal DAB listening mode until “DeIA” appears. Release the button, then press and hold it again until the deletion process starts. Deletion is completed immediately and “done” appears on the display. All stored DAB+ stations are now deleted, the direct-select buttons are empty, and you can start a new automatic scan.

4.6 DAB+ Dual Channel

With DAB+, station names are assigned automatically because they are transmitted by the station. However, if a station was not received well enough during the storage process, errors may occur in its name. A station may also change its DAB+ display name. In these cases, while listening to that station, press and hold the “CAL TONE” button. “Upda”, then “Stat”, then “done” appears on the display. The data for this station is stored again, including any updated station name.

4.7 Updating a DAB+ Station Name

With DAB+, station names are assigned automatically because they are transmitted by the station. However, if a station was not received well enough during the storage process, errors may occur in its name. A station may also change its DAB+ display name. In these cases, while listening to that station, press and hold the “CAL TONE” button. “Upda”, then “Stat”, then “done” appears on the display. The data for this station is stored again, including any updated station name.

4.8 Displaying Technical Data for the Current DAB+ Station

To display technical data for the station currently playing, proceed as follows. The station should normally have been playing for 30–40 seconds so that the tuner has had time to receive all technical data and can display it. Press and hold the “(AUTO) RECALL” button under the cover. The following station data is then scrolled across the display in sequence.

CAUTION: The station may change the RadioText while this information is being displayed. This can interrupt the technical-data display and show the RadioText instead. If this happens, simply repeat the procedure.

- Station bitrate – BR in kilobits per second
- Signal quality – QTY 0–100
- Audio channels: Mono, Stereo, Joint Stereo, Dual Channel

- Channel name – e.g. 5D
- Broadcast frequency – e.g. 180.064 MHz

4.9 Displaying DAB+ RadioText

The DAB RadioText setting can be configured so that RadioText is not displayed at all, is displayed once after each change, or is displayed continuously. You can display the text again at any time, provided such text has been received. Briefly press the “(AUTO) RECALL” button under the cover. The RadioText is then scrolled across the display once.

To change this setting, see Sections **Fehler! Verweisquelle konnte nicht gefunden werden.** and 5.1.

5 Settings Menu “MENU DAB”

You are already familiar with the first setting, sorting and deleting stations. The remaining settings are explained individually below. While these settings are being adjusted, the signal quality shown on the analog meter and the stereo indication are not updated. Depending on the setting, the analog meter may also drop to 0 because the display can be calibrated. This is normal behavior.

To open the Settings menu, briefly press the “STORE” button. To edit an individual menu item, use the large AUTO TUNING arrow buttons to navigate to that item.

For all settings except sorting and deleting in the first menu item, the following button functions apply:

Arrow buttons at 50 kHz STEPS

- LEFT: decrease the value or move to the left
- RIGHT: increase the value or move to the right
- (AUTO) RECALL: display the current value of this setting

“STORE” = save settings, exit menu

“CHARACTER” = do not save settings, exit menu

5.1 Turning RadioText On/Off “TEXT”

If a DAB+ station transmits RadioText, you can select one of the following display modes:

- Do not display RadioText: "DISABLED"
- Each time the text changes, it scrolls across the display once, the station name is then shown again: "ONCE oCH"
- RadioText is displayed continuously and scrolls repeatedly until new RadioText is received, the new text then scrolls continuously: "ENABLED"

5.2 DAB+ Volume "VOL"

Here you can adjust the basic output level of the DAB+ tuner so that it matches the other sources as closely as possible. Values from 0 to 16 can be selected.

5.3 DAB+ Equalizer "EQ"

Here you can select one of the predefined equalizer settings to be used for all DAB+ radio stations, according to your preference.

- Disabled "DISABLED"
- Bass boost "BASS BST"
- Jazz "JAZZ"
- Live "LIVE"
- Vocal "VOCAL"
- Acoustic "ACOUSTIC"

5.4 Cut + "CUT+"

Many stations add a + to the end of their station name, for example SRF 3+. This distinguishes stations encoded using DAB+ from those using DAB.

Because almost all stations now use the newer standard and therefore have a + at the end of the name, this information is generally more distracting than useful. This option lets you suppress the + sign at the end of the station name.

You can also enable an option that removes spaces from the station name. Since the display can show only 4 characters, this can make relatively short names easier to read. The following options are available:

- Leave the text unchanged: "NO"
- Remove the +: "CT +"
- Remove spaces: "CT _"
- Remove the + and spaces: "CT+ _"

5.5 Headroom “HDRO”

The Headroom setting allows experienced users to adjust the tuner’s output headroom. Normally, no change is required and a value of 0 should be suitable in most cases. If radio stations are broadcast at an unusually high level, an experienced user can make an adjustment here.

Values from 0 dB to -12 dB can be selected.

5.6 DRC “DRC”

DRC stands for Dynamic Range Control and is used only by some radio stations. This setting affects the dynamic range of the broadcast radio signal. If the option is enabled, the radio station can make use of DRC, if it is disabled, it cannot.

- Dynamic Range Control enabled: “ON”
- Dynamic Range Control disabled: “OFF”

5.7 Meter Factor “METF”

To ensure that the signal-quality analog meter always shows the correct value, the voltage corresponding to full-scale deflection at 11 can be adjusted here. Use the arrow buttons to adjust the value until the analog meter reads exactly 11 at full scale. Due to aging, not all analog meters have the same sensitivity. If full-scale deflection can no longer be reached, the analog meter must be checked.

Values from 0 to 254 can be selected.

5.8 Infrared Address “IR A”

The B201 remote control was developed to control the B261. It sends all commands using a single address. Later remote controls, such as the B208, had 2 buttons on the side that could be used to change the device address of the transmitted code. This made it possible to control several identical units with one remote control by assigning different addresses to the identical units.

The device address can be set in this menu. With a suitable remote control, this allows up to 3 different B261 units to be controlled.

- Standard 1000
- Upper side button B208 1111
- Lower side button B208 0110

5.9 Infrared Sensitivity “IR S”

The infrared code developed by ITT for controlling the B261 is simple and is based on 10 transmitted bits, 4 address bits and 6 command bits. The remote control is relatively imprecise and its timing can vary because it is not quartz-based. The receiver is therefore relatively tolerant and can accept timing deviations of approximately 20%. This also makes the receivers relatively susceptible to interference caused by, for example, energy-saving lamps or LEDs through their light output, as well as electromagnetic interference.

To counteract this to some extent, the tolerance can be reduced in the hope that less interference will occur. The tolerance can be changed from the normal 20% in 3 steps to 15%, 10%, or 5%. Your remote control may stop working if the tolerance is set too low and the remote control does not maintain sufficiently accurate timing. If the remote control is precise, the 5% tolerance works perfectly.

5.10 Infrared Repetition “IR R”

If IR control is disturbed by energy-saving lamps, fluorescent lamps, or LEDs and the unit therefore performs uncontrolled actions, this setting can be used to counteract the problem. The interference occurs when random interference pulses are recognized as an IR command. Because these random patterns happen to represent a valid IR command, it is relatively unlikely that exactly the same random pattern will occur two or more times in succession (except Power Off, which unfortunately consists of 6 identical characters in succession). You can therefore set how many times an IR code must be transmitted before it is recognized as a command. Normally the IR command is executed as soon as it is detected for the first time, which corresponds to setting 0. The value 0 represents the number of repetitions. If you experience malfunctions, you can adjust this setting between 0 and 5. The remote control repeats a command approximately every 150 milliseconds. Therefore, simply hold the button on the IR remote control slightly longer until the required number of repetitions has been transmitted and the command is executed.

Select a value from 0 “normal” up to 5 repetitions.

5.11 Test Tone “TONE”

Here you can navigate through the different test tones. This is not an actual setting that can be saved. It is only a temporary setting used to test the audio outputs.

- Test signals off
- Original 400 Hz test tone from the B261
- Noise on both channels
- 1 kHz sine wave, left channel
- 1 kHz sine wave, right channel
- 1 kHz sine wave, both channels

5.12 Factory Reset “RESE”

To reprogram the DAB+/FM tuner from scratch, the entire memory can be erased. All settings and all DAB+ and FM stations are deleted.

To perform this operation, while at the “RESE” menu item, press the left arrow button five times in succession. “del.” then appears on the display. As soon as “done” appears, everything has been deleted and you must switch the unit off and back on using the main power switch.

The “Factory Reset” menu also provides the following additional functions:

- “(AUTO)RECALL”: displays the software version
- Right arrow: displays the number of stations stored in DAB and FM and technical details about the tuner

5.13 Exiting the Settings Menu

You can exit this menu at any time while working on the settings without saving. Press the “CHARACTER” button. The menu closes and the station name is displayed again. All changes made are discarded.

The same method can be used to discard all changes while sorting or deleting stations.

Pressing the “STORE” button exits the menu and saves all settings.

6 FM-Stations store, listen to and organizing

When the DAB+/FM tuner is delivered, no stations are stored. To store FM stations, first switch on the unit using the Power switch on the far right. Make sure that the unit is in FM mode. The “DISPLAY” rotary switch must be set to “FREQUENCY”.

6.1 Automatically Storing FM Stations “SCAN”

You can now start the automatic station scan. Press and hold the “STORE” button under the cover on the right for approximately 7 seconds until the automatic station scan starts. (A few clicking noises are normal here.) The start is indicated by “AMEM” followed by “Srch” on the display. Release the button immediately. The function now scans all FM frequencies and you can watch the frequencies being checked from low to high. When a station is found, it is stored. Several options in the FM settings can be adjusted to obtain the best result, so that neither too many stations that cannot be listened to nor too few stations are stored. When the automatic scan is complete, “END” is briefly shown and the first station found is selected. The stations are sorted in ascending order by frequency.

During the scan, incorrect frequency values may occasionally be shown on the display. Do not be concerned, the scan still operates normally and correctly.

You can add or delete individual stations manually at any time afterwards.

6.2 Manually Adding FM Stations

To add stations manually, proceed as follows:

1. The unit must be set to “FM manual”.
2. The “DISPLAY” rotary switch must be set to “STATION”.
3. You can now search upward or downward using the large arrow buttons. When a station is found, the scan stops and the station is played.
4. To store this station, press and hold the “STORE” button. The station is stored and added to the end of the station chain. “add” is briefly shown on the display.
5. Repeat steps 3 and 4 until you have added all desired stations.
6. When you are finished, turn the “DISPLAY” rotary switch back to “FREQUENCY” so that you return to the mode in which stored stations can be recalled using the preset buttons.

6.3 Listening to and Changing FM Stations

As with the original B261, the first 20 stations can be selected directly using the 20 buttons on the right. In addition, stations 21 through 40 can now also be selected directly. A short press on button 1 plays station 1 in the station chain. Press and hold button 1 to play station 21.

The preset buttons do not need to be assigned separately. They automatically point to the corresponding station in the internal chain of stored stations. For example, button 2 automatically selects the station that was stored in the second position of the station chain during the scan.

If you know the station number, you can enter it directly using the “STEREO” button. Briefly press the “STEREO” button, after which placeholders for the digits appear on the display. Enter the desired station number using numeric buttons 1 through 10. Only as many placeholders are shown as are required for the number of stations actually stored. If the station number has fewer digits than the number of placeholders shown, enter leading zeros.

You can also navigate up and down through the entire station chain using the large arrow buttons. The station name is shown immediately, but the station is selected only after approximately 1 second. This is indicated by the “AUTO” LED lighting up. The LED indicates that the tuner is waiting until you have stopped navigating for approximately 1 second. The station is then selected and the “AUTO” LED turns off again.

If you are listening to a station and want to know its position, press and hold the “STEREO” button. The position of the station currently playing is briefly shown on the display.

These three methods allow you to select any stored station.

6.4 Changing the FM Station Order

During the automatic storing process, FM stations are generally stored in ascending frequency order. You can change this order as desired. To reorder the stations, start with the station you want in first position, then the station you want in second position, then third, and so on. In this way, you build the new station order from the beginning of the chain.

When a station is moved backward in the chain (to a higher position number), it is inserted **after** the selected target position. When a station is moved forward (to a lower position number), it is inserted **before** the selected target position.

If you want to swap two stations, for example moving the station at position 30 to position 5, first move the station from position 30 to position 5. Then move the station

now at position 6 (which was previously at position 5) to position 30. Position numbers are not displayed, so use the station frequencies as your reference.

To sort stations, proceed as follows:

1. Briefly press the "STORE" button under the cover on the right. "M FM" appears on the display, which stands for FM menu.
2. Use the large right arrow button to select the first option, "SORT".
3. To start the sorting process, press the "STEREO" button. The first LED, "400Hz", lights up as an orientation indicator.
4. Using the arrow buttons (or direct-select buttons 1–20), select the station you want to move. Once a station has been selected, the second LED from the left, "(MUTING) OFF", lights in addition to the station name. You can change the selected station as often as necessary until you are sure. (CAUTION: Direct-select buttons 21–40 do not work in this mode.)
5. Press the "STEREO" button to confirm this station. The display goes blank and the third LED from the left, "(STEREO) ONLY", lights up.
6. Now use the arrow buttons or direct-select buttons 1–20 to select the position to which the station should be moved. The station currently at the target position is automatically shifted back. Stations are never overwritten or deleted. Gaps are always created or closed automatically. The fourth LED, "HIGH BLEND", lights up.
7. Press the "STEREO" button again to complete the operation. You are automatically returned to the main menu at the station sorting item, and all 4 LEDs turn off again.
8. You can now repeat steps 3–7 as often as necessary until all stations are arranged in the order you want.
9. When you have finished moving stations, press the "STORE" button to complete the sorting process. The FM menu is closed and you return to listening mode.

If you do not want to save the changes, exit the menu using the "KEYBOARD" button. The changes are still held in volatile memory, so the unit must be disconnected from the power supply, left disconnected for 10 seconds, and then reconnected before it can be switched on again.

Meaning of the 4 LEDs in a row, overview

- . Waiting for you to select the station to be moved
- .. A station has been selected and can be moved.
- ... The station to be moved has been confirmed, the system is now waiting for the target position to be entered.
- A target position for the station has been selected.

6.5 Deleting Individual FM Stations

You can delete any stored station individually. Proceed as follows:

1. Briefly press the “STORE” button. “M FM” appears on the display.
2. Use the large right arrow button to select the first option, “SORT”.
3. Press the “STEREO” button. The first LED, “400Hz”, lights up as an orientation indicator. This means the tuner is ready for you to select the station to be moved or deleted.
4. Using the arrow buttons or direct-select buttons, select the station you want to delete. Once a station has been selected, the second LED from the left, “(MUTING) OFF”, lights in addition to the station name. You can change the selected station as often as necessary until you are sure.
5. Press “(MANUAL) RECALL” under the cover to delete this station. “dele” is briefly shown on the display, after which you return to the main menu at the station sorting item.
6. You can now repeat steps 3–5 as often as necessary until all stations you want to remove have been deleted.
7. When you have finished deleting stations, press “STORE” to exit the menu, save everything, and return to normal listening mode.

If you do not want to save the changes, exit the menu using the “KEYBOARD” button. The changes are still held in volatile memory, so the unit must be disconnected from the power supply, left disconnected for 10 seconds, and then reconnected before it can be switched on again.

As you have probably noticed, moving and deleting stations are performed in the same menu. You may also combine these operations.

6.6 Manual FM Operation

You are familiar with the B261 manual mode, in which you can easily search for an FM frequency using the scan function and then listen to it. This manual mode is also available here in FM mode.

Make sure the unit is in FM manual mode. The “DISPLAY” rotary switch must be set to “STATION”. You can now search upward or downward for stations using the two large arrow buttons. The scan stops automatically whenever a station is found. You can then listen to that station or continue searching. The criteria that determine when the scan stops can be adjusted using various options in the FM menu.

To exit Manual Tuning Mode, turn the “DISPLAY” rotary switch back to “FREQUENCY”. The last station listened to from the stored station list is then played.

In Manual Tuning mode, the RDS station name and RadioText are also displayed according to the selected settings.

6.7 Direct Entry of an FM Station Frequency

In manual mode, you can enter the station frequency directly. Make sure the unit is in FM manual mode. The “DISPLAY” rotary switch must be set to “STATION”.

To begin, press the “STEREO” button. A series of placeholders, _ . _ _ MHz, appears on the display. Although only 2 positions appear after the decimal point here, 3-digit frequencies can be entered. This is simply due to the B261 display, which has a 1 for the hundreds digit but no underscore for its placeholder.

Begin with the first digit. Only digits that are valid at the current position are accepted. As soon as you enter the final digit, the frequency is set automatically.

You now hear the selected frequency. RDS is also supported and is displayed according to the selected settings

6.8 Deleting All FM Stations

To delete all stored FM stations, press and hold the “(MANUAL) RECALL” button in normal FM listening mode until “DeIA” appears. Release the button, then press and hold it again until the deletion process starts. Deletion is completed immediately and “done” appears on the display. All stored FM stations are now deleted, the direct-select buttons are empty, and you can start a new automatic scan. The deletion process cannot be performed while in manual tuning mode 6.6.

6.9 Switching FM Reception to Mono

If signal strength is insufficient, stereo reception may contain noise. Use the “MONO” button to force the station currently playing to mono until the next station change. If the tuner always switches to stereo too early, you can adjust the signal-to-noise threshold for stereo in the settings, as described in Section 7.4. Stereo is automatically enabled again after selecting a new station. If you also want to listen to the next station in mono, press the button again.

6.10 Displaying FM RDS RadioText

The FM RDS RadioText setting can be configured so that RadioText is not displayed at all, is displayed once after each change, or is displayed continuously. At any time

(except when RDS name display is selected), you can restart the RadioText display by briefly pressing the “(AUTO) RECALL” button. The RadioText is then scrolled across the display once. When RDS name display is selected, the RDS name would constantly compete with the RadioText and the two would overwrite one another. Therefore, RadioText is not read in this mode and cannot be displayed using “(AUTO) RECALL”.

To change this setting, see Sections 7 und 7.1 below

7 Settings Menu “M FM”

You are already familiar with the first setting, sorting and deleting stations. The remaining settings are explained individually below. While these settings are being adjusted, the signal quality shown on the analog meter and the stereo indication are not updated.

To open the Settings menu, briefly press the “STORE” button. To edit an individual menu item, use the large AUTO TUNING arrow buttons to navigate to that item.

For all settings, the following button functions apply:

Arrow buttons at 50 kHz STEPS

- LEFT: decrease the value or move to the left
- RIGHT: increase the value or move to the right
- (AUTO) RECALL: display the current value of this setting

“STORE” = save settings, exit menu

“CHARACTER” = do not save settings, exit menu

7.1 RDS “RDS”

RDS is the Radio Data System, which transmits additional information along with the music. This includes the radio-station name and the somewhat longer RadioText. Here you can select which information should be displayed. When a stored FM station is selected, the frequency is shown first. Once the RDS data has been received correctly, the selected RDS information is displayed in place of the frequency.

- Do not display RDS data, the frequency remains visible: “DISABLED”
- Display the station name: “NAME”. CAUTION: Some radio stations change this text frequently to also display the current song title and artist.
- Each time the long RadioText changes, it is scrolled across the display once, after which the frequency is shown again: “TXT1”

- The long RadioText is always displayed and scrolls continuously until new RadioText is broadcast, after which the new text scrolls continuously: "XTTe"

7.2 FM Volume "VOL"

Here you can adjust the basic output level of the FM tuner so that it matches the other sources as closely as possible. Values from 0 to 16 can be selected.

7.3 FM Equalizer "EQ"

Here you can select one of the predefined equalizer settings to be used for all FM radio stations, according to your preference.

- Disabled "DISABLED"
- Bass boost "BASS BST"
- Jazz "JAZZ"
- Live "LIVE"
- Vocal "VOCAL"
- Acoustic "ACOUSTIC"

7.4 S/N Threshold for Stereo "STHD"

Sets the signal-to-noise-ratio threshold at which the tuner switches between mono and stereo. Values from 0 to 9 can be selected. The default value is 4.

7.5 Station Search – Detection Threshold "RSSI"

Sets the signal-strength threshold at which the automatic station search stops. Values from 0 to -100 dBm can be set. This setting is used only for automatic FM station programming and for station searches in Manual Tuning mode. The default value is 20.

7.6 Station Search – S/N Ratio "NTHD"

Sets the signal-to-noise-ratio threshold at which the automatic station search stops. Values from 0 to 12 can be selected. This setting is used only for automatic FM station programming and for station searches in Manual Tuning mode. The default value is 9.

7.7 Station Search – Storage Threshold “MLVL”

Sets the threshold that determines whether a station found during the automatic FM scan is actually stored.

During a station scan, the tuner stops based on the two values above, remains on the frequency, and optimizes reception. After 1–2 seconds, the value is measured again. If this threshold is exceeded, the station is actually stored automatically, otherwise the scan continues. Values from 0 to 100 can be entered, the default value is 20. This setting is used exclusively for automatic programming of FM stations.

7.8 Exiting the Settings Menu

You can exit this menu at any time while working on the settings without saving. Press the “CHARACTER” button. The menu closes and the station frequency is displayed again. All changes made are discarded.

The same method can be used to discard all changes while sorting or deleting stations.

Pressing the “STORE” button exits the menu and saves all settings.

8 Troubleshooting

8.1 Display shows “+5VFAIL”

The supply voltage for an active antenna is switched on, but either there is a short circuit in the antenna cable or the antenna requires too much current. Check the technical specifications of your antenna.

Disconnect the antenna cable from the B261, switch the unit off and back on, and check whether the error message no longer appears.

8.2 No Reception with an Active Antenna

An active antenna has a built-in signal amplifier, which requires power in order to operate. Active antennas that require 5 V and a maximum of 30 mA can be powered directly by the DAB+/FM tuner module by switching the supply on with the “ANTENNA” button. Check that your antenna is rated for 5 V, max. 30 mA, and that the supply is enabled.

9 Technical Specifications

DAB frequency range: 174–240 MHz
DAB frequency band: III
DAB channels: 5A–13F
DAB sensitivity: -99 dBm

FM frequency range (Switzerland): 87.50–108.00 MHz
FM frequency range, special version (other countries): 76.00–108.00 MHz
FM frequency band: II
FM sensitivity: -106 dBm

Broadcast types: DAB, DAB+, and FM
B261 antenna connector: Belling-Lee connector for 50 or 75 ohms
Antenna phantom power: 5 V $\pm$ 10%, max. 30 mA

10 Warranty

The warranty period is 24 months from the date of purchase.

For service, your first point of contact is your authorized dealer.

If your dealer is unable to assist you, please contact the distributor.

11 Unterstützung & Fragen

You can find many helpful answers and contact details at:
www.M-DAB.ch

Manual Version 1.10
For firmware version: 1.10++
For hardware version: 1.3.1
October 2026

12 General Info

When disposing of the circuit boards, comply with all local laws and regulations governing the disposal of electronic equipment.



Declaration of Conformity:

Diese finden Sie unter:
www.M-DAB.ch

My Personal Station List

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