Automatic Squelch Control

stabo

xm 5010e VOX

12/24V

Operating manual

Intended use

The **stabo xm5010e VOX** is a CB mobile radio for installation in motor vehicles. Together with a suitable power supply unit, the device can also be used as a fixed station.

You have opted for a convenient, top-of-the-range appliance with numerous functions.

Important information

⚠ Safety notes

Wearers of a pacemaker are strongly recommended to first ask a doctor whether there are any fundamental objections to the use of a radio device and what rules of behaviour should be observed.

Never touch the antenna during transmission!

Before using the device in a vehicle, familiarise yourself with its functions and operation! Never allow yourself to be distracted from the traffic situation by operating the device or by radio calls!

Never transmit without an antenna connected!

Never open the housing of the radio or its accessories and do not carry out any modifications. Only have repairs carried out by qualified persons.

Modifications or tampering with the radio will invalidate the operating licence and void your warranty!

Important information

⚠ Safety notes

Prevent children from playing with the radio, accessories or packaging material.

Do not use the radio if you discover damage to the housing or the antenna:

- Get in touch with a specialised workshop.

Protect your radio and accessories from moisture, heat, dust and strong vibrations.

Avoid operating temperatures below -10°C or above +50°C.

Legal requirements

Operation of CB radio equipment:
In Germany and Austria, this device can be used in the configurations d (only in Germany), EU and EC without registration and free of charge.
However, different regulations may apply in other countries: Find out about the current national regulations before using the device abroad! Observe the relevant regulations and any obligation to register. Otherwise you risk severe fines or even confiscation of your radio!

Installation of a transceiver in a vehicle:
For almost all motor vehicles, the manufacturer specifies installation regulations for radios and antennas: therefore, ask your car dealer about the corresponding manufacturer's regulations for your vehicle model. It is essential that you observe these specifications during installation, otherwise the operating licence for your vehicle may be invalidated!

Use of two-way radio in vehicles:
Since 1 July 2020 (StVO), the use of CB radios while driving in Germany is only permitted with a hands-free device or with the vehicle engine switched off. For operating in another country, please enquire about any possibly deviating regulations!

With the hands-free system (VOX) activated, the stabo xm5010e VOX fulfils the requirements from 01 July 2020 (StVO). However, only use your device if the traffic situation allows it.

WARNING !

*Before using, be careful never to transmit without first having connected the antenna (connection "**B**" situated on the back panel of the equipment) or without having set the SWR (Standing Wave Ratio)! Failure to do so may result in destruction of the power amplifier, which is not covered by the guarantee.*

MULTI-NORMS TRANSCEIVER!

See function 'F' and the configuration table.

The warranty of this transceiver is valid only in the country of purchase.

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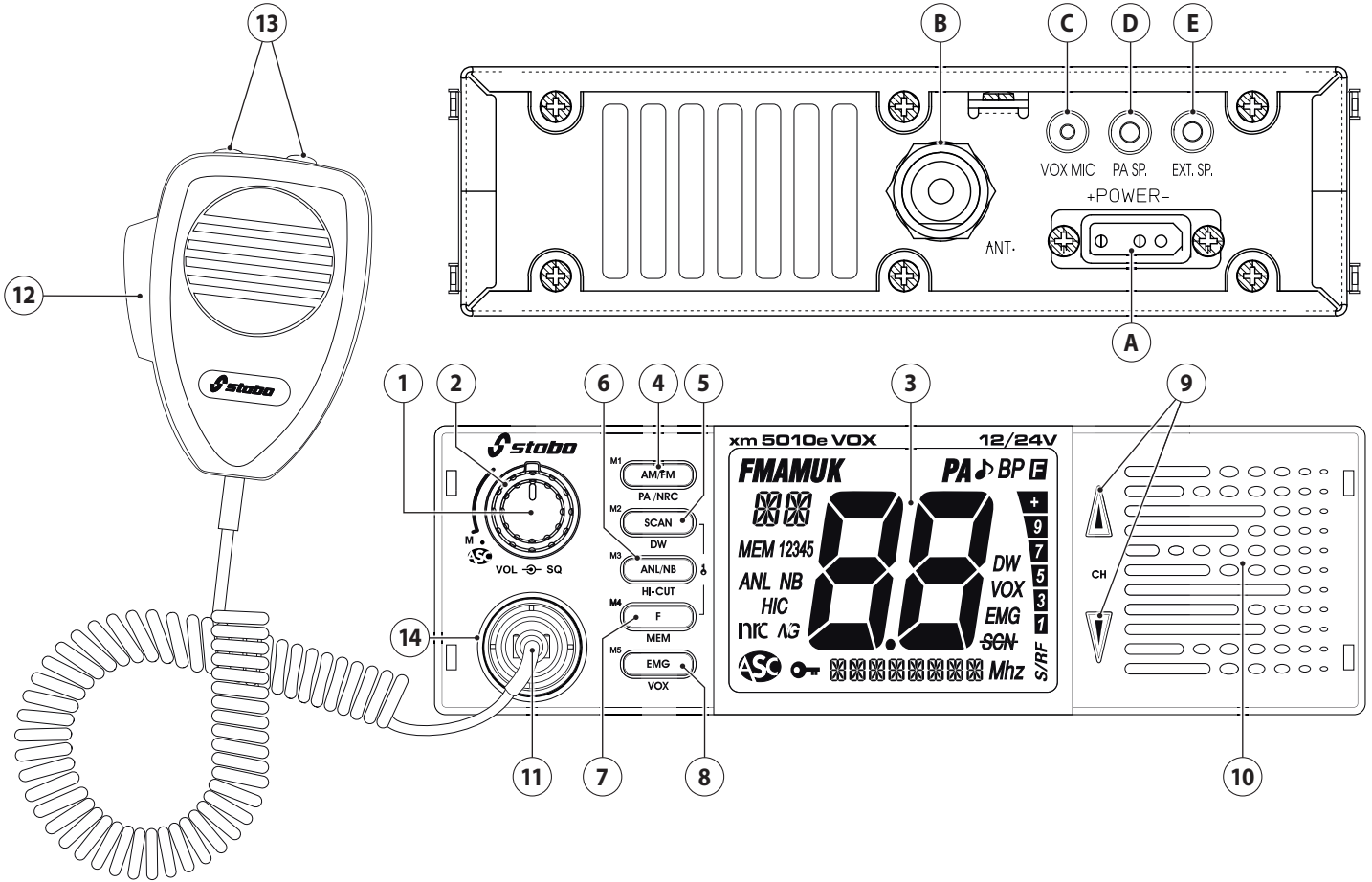
   (8 Ω / Phone plug 3.5 mm)

⑬ (long press)	[UP] Scan up [DN] Scan down

⑤+⑦	KEY LOCK ON/OFF
⑫+④	PA ON/OFF


13
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Welcome to a completely new generation of CB radios! The current stabo product line provides you with CB radios of the highest performance.
The stabo xm5010e VOX utilises the latest technology and promises the highest quality, making it a safe choice for users with professional requirements.
Please read the instructions carefully before installing and using this powerful device for the first time - thank you!

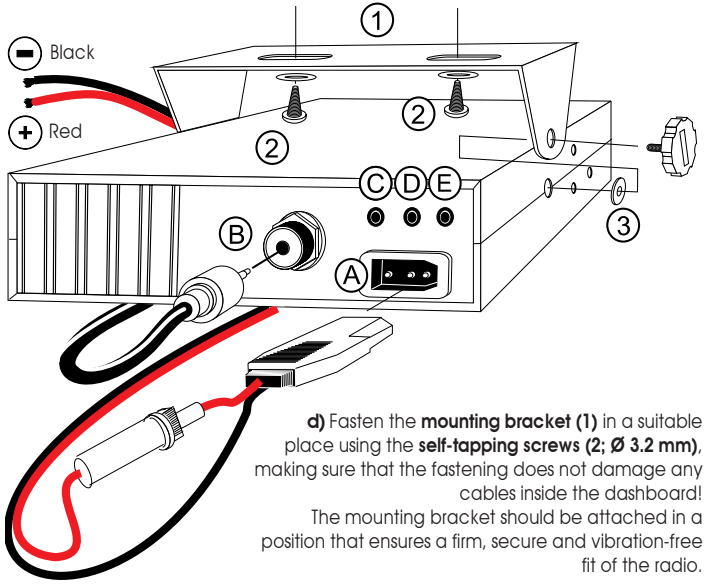
A) INSTALLATION AND CONNECTION

A.1) Installation in the vehicle with mounting bracket

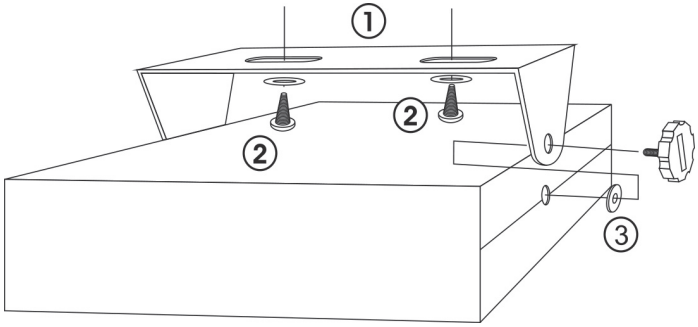
a) Choose a suitable installation location. This should allow convenient and, above all, safe operation, both when stationary and when travelling, and should not increase the risk of injury in the event of an accident.

b) All the supply cables and also the microphone cable must be laid in the vehicle in such a way that the driver is not impaired in any way while operating and steering the vehicle!

c) Ensure that all cables and connecting lines can be routed through the vehicle without any problems.
Do not lay any cables near the vehicle heating system!



d) Fasten the **mounting bracket (1)** in a suitable place using the **self-tapping screws (2; Ø 3.2 mm)**, making sure that the fastening does not damage any cables inside the dashboard!
The mounting bracket should be attached in a position that ensures a firm, secure and vibration-free fit of the radio.



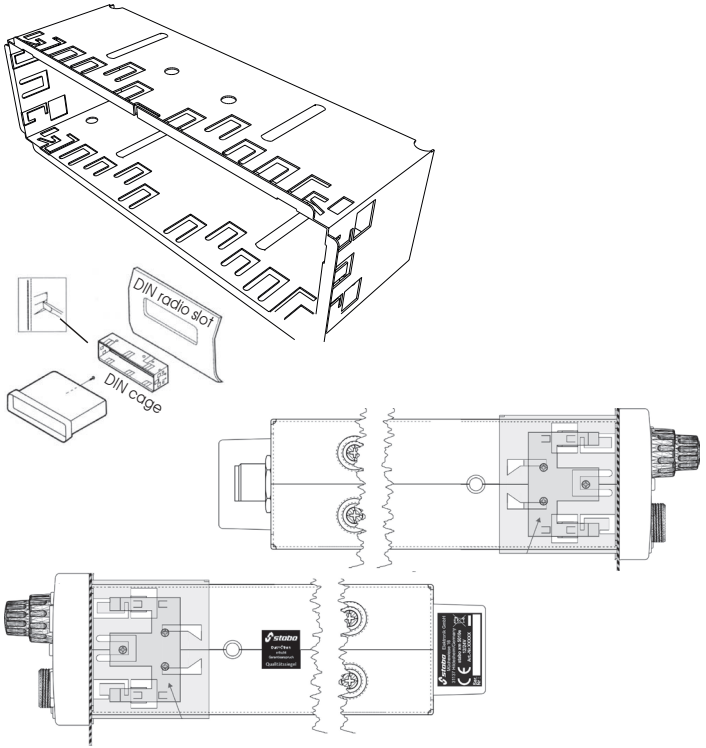
e) Insert the radio into the mobile holder so that the **plastic washers (3)** are fastened between the radio and the inside of the mounting bracket.
They ensure that the radio can be easily swivelled to the best viewing angle in the holder.

f) For the microphone holder choose a place where you always have the microphone within reach and the connection cable to the radio does not interfere.

A.2) Installation in a vehicle into a DIN radio slot

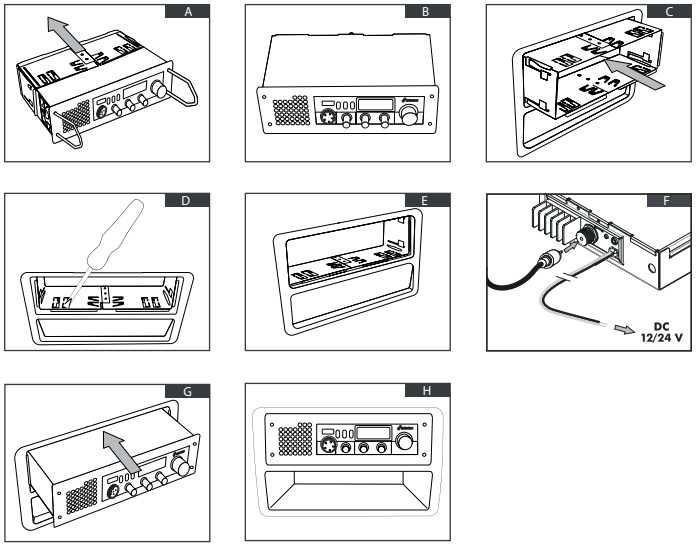
Your **stabo xm5010e VOX** with front loudspeaker and the microphone socket on the front can be installed flush in a dashboard with a DIN radio slot using the installation frame supplied and the associated accessories.

Contact your friendly dealer to find out how you can install your radio elegantly recessed into the dashboard in this way.



Installation stabo CB radio into the DIN slot

Before you start with step A, please read chapters **A.4) Power supply** and **A.3) Antenna connection**.



A.3) Antenna connection

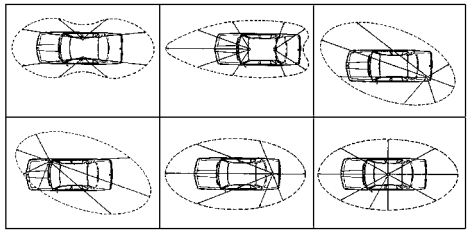
a) Choosing a antenna

The more powerful the antenna, the greater the range of the station.
Make the appropriate choice according to the following recommendations:

b) Mobile antenna

- A mobile antenna is mounted on the part of the car with the largest metal surface, as far away as possible from the windscreen and rear lights.
- If a antenna for mobile phone is already fitted, the radio antenna should be mounted above it.
- There are tuned and tunable antennas: tuned antennas should only be mounted on a large metal surface, for example on the roof of the car or on the boot lid. Tunable antennas offer a wider frequency range and can also be used on a smaller metal surface.
- The **mounting bracket (1)** allows installation to many places on the vehicle. Ensure a short connection to ground (ref. **A.5) Adjusting the antenna to the lowest SWR)**.
- If you need to drill a hole in the body for the antenna, the metal of the car body should be sanded so that the fastening nut of the antenna base has good contact to ground!
- Lay the coaxial cable to the antenna without kinks and not over sharp points (risk of short circuit!).
- Connect the antenna cable to the **antenna socket (B).**

Radiation pattern depending on the antenna mounting location on the vehicle:



c) Fixed-station antenna

By using a fixed station antenna you can achieve the maximum range. When using an outdoor antenna, it is essential that you observe the relevant VDE regulations (lightning protection!), statics and building regulations!
In this case, it is best to have the antenna system installed by a specialist! You will also find a selection of powerful fixed station antennas in the stabo selection of accessories.

A.4) Power supply

Your stabo xm5010e VOX can be operated on either 12 or 24 V and is also protected against polarity reversal. Nevertheless, make sure that the voltage and polarity are correct before connecting!

<u>If in doubt, ask your specialist workshop!</u>

In lorries or other commercial vehicles, the on-board voltage is usually 24 V. Here too, the device can be operated directly without an additional voltage converter!

Once you have checked the voltage and polarity, proceed as follows:

a) Your radio is supplied with a power supply cable into which a 5A fuse is looped.

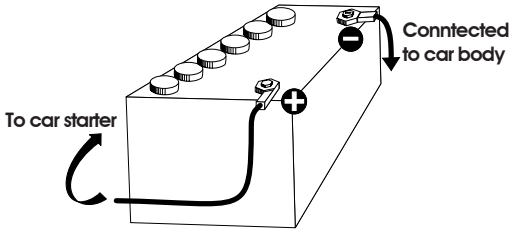
ATTENTION: If the fuse in the power supply cable blows, find and eliminate the cause! Replace the blown fuse with a fuse only of the same value!

b) The device must be permanently connected to the power supply. Connect the cable directly to the vehicle battery.
If connected e.g. to the cigarette lighter, the radio would not be supplied with the necessary buffer voltage when car ignition is switched off.
This procedure also prevents 'ground loops', which can cause interference in the device's speaker.

c) Lay the power supply cable in the car so that it can only pick up a small amount of interference from the ignition system.

d) Connect the free ends of the power supply cable directly to the battery using the appropriate terminals: Red = positive terminal, black = negative terminal (ground). If you need to extend the power supply cable, only use a cable with at least the same or better a larger wire cross-section!

e) Connect the power supply cable to the **power supply socket (A)** of the device.



A.5) PREPARATIONS FOR THE FIRST START-UP (without transmitting)

a) Connect the PTT handheld microphone to the **MICROPHONE SOCKET (11)** located on the front of your radio.

b) Connect a CB antenna to the **antenna socket (B)** at the back of the radio.

c) Switch on the radio:
Turn **[ON-OFF/VOLUME] (1)** clockwise until you hear a 'click' sound.

d) For maximum sensitivity turn **[ASC/SQUELCH] (2)** to the left stop (position 'M').

e) Set the volume control **[ON-OFF/VOLUME] (1)** to a comfortable level.

f) Switch to channel 20 by actuating the **[UP/DN] (13)** buttons on the microphone or **[▲/▼] (9)** at the front of the radio.

A.6) Adjusting the antenna to the lowest SWR (SWR = Standing Wave Ratio)

The setting can be made by using an external SWR measuring device. To do this, you will need a short (approx. 0.4 - max. 3.0 m) coaxial cable, which must be fitted with two PL-259 plugs.

ATTENTION: The SWR of the connected antenna must be set when the radio is first used. The performance of the CB-radio depends very much to the care with which this procedure is carried out!
This adjustment procedure must also be repeated whenever you change the position of the antenna or after installing a different antenna!

ATTENTION: Before initial operation and after changing the antenna, you must set the antenna to the lowest standing wave ratio. The antenna should already be mounted in its final position and be able to radiate as freely as possible.

a) SWR adjustment with an external SWR measuring device:

Connect the microphone to the **MICROPHONE SOCKET (11)** on the front of your radio.

An external SWR meter is looped into the antenna feed line between the radio and the antenna. Use a prefabricated coaxial cable for this purpose.

As there are different types of external SWR meters with different operating methods (see their operating instructions), here are just a few general hints:

- ► Switch to channel 20, the center of CB-radio frequency range, by actuating the **[UP/DN] (13)** buttons on the microphone or **[▲/▼] (9)** at the front of the radio.
- ► Check that the radio, SWR meter and antenna are proper connected.
- ► Calibrate the external SWR meter according to its operating instructions.
- ► Measure the SWR and adjust the antenna to the lowest SWR.
  The lower the SWR, the better the antenna matching.

An SWR value of '1' is ideal. Values between '1' and '1.8' are also acceptable.

ATTENTION: To minimise losses in the connection cables between the radio and the accessories, **stabo** recommends a cable length of less than 3 m.

Your radio is now ready to operate.

Automatic S.W.R. Meter

This function of the device can be used to measure the SWR of a connected antenna. The value is displayed numerically in the **[DISPLAY] (3)** and a measuring tone sounds at the same time:

If the SWR value moves away from 1.0, the measuring tone is interrupted continuously for a certain period of time. The interval between two signal tones becomes longer and longer the 'worse' (the greater) the value for the measured SWR is.

If the SWR value is equal to 1.0, the signal tone is no longer interrupted and therefore becomes a continuous tone.

The volume of the signal tone can be adjusted with **[VOLUME] (1)**.

Please also read the description in the user menu **E.13** '**SWR**'.

B) OPERATING

B.1) [ON-OFF/VOLUME]

► With **[ON-OFF/VOLUME] (1)** you can switch the device ON or OFF and adjust the volume.

Turn clockwise to switch on the CB radio and increase the volume. If 'KEY BEEP' is activated, a signal tone is emitted as soon as the CB radio is switched on.
The **[DISPLAY] (3)** briefly displays the **frequency band** and the **microphone type**.

► Turning **[ON-OFF/VOLUME] (1)** anti-clockwise reduces the volume and finally switches the CB radio OFF.

B.2) [ASC/SQUELCH]

You can use **[ASC/SQUELCH] (2)** to suppress the noise on a free channel:
The speaker only switches to playback when the signal on the set channel is so strong that it exceeds the threshold set by **[ASC/SQUELCH] (2)**:

a) ASC: Automatic Squelch Control

No constant readjustment of the squelch, but permanently good listening quality!

► Turn **[ASC/SQUELCH] (2)** anti-clockwise, until the **[DISPLAY] (3)** shows 'ASC'.

► This function can be switched off by turning it clockwise; 'ASC' disappears from the **[DISPLAY] (3)** and the squelch can be adjusted manually.

b) Manual squelch

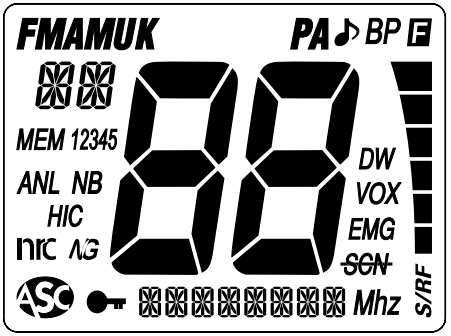
► The further you turn **[ASC/SQUELCH] (2)** to the right (clockwise), the stronger a signal must be to open the squelch.

Setting squelch to maximum response sensitivity:

► Set **[ASC/SQUELCH] (2)** to the left stop, select a free channel and turn **[ASC/SQUELCH] (2)** to the v until the noise just stops.

B.3) [DISPLAY]

Displays all functions. The six-level bar chart shows the rel. reception level resp. the rel. transmission power.



PA	Mode PA (Public Address)
AM	AM mode
FM	FM mode
UK	Modulation type 'FM UK' selected; only if configuration UK is selected
SCN	Scan function activated
~~***SCN***~~	SCAN SKIP function activated
DW	Dual Watch activated
VOX	VOX function activated
EMG	Priority channel (emergency) 19 or 9 activated
ASC	Automatic Squelch Control activated
	LOCK function activated

ANL	ANL filter activated
NB	'NOISEBLANKER' activated
HIC	'HI-CUT' activated
NG	'NOISEGATE' activated
nrc	'NRC' activated
♪	'ROGER BEEP' activated
BP	'key beep' activated
F	User menu activated
MEM 12345	Function 'MEMORY' (Memory-Channels 1-5) activated
	Selected 'CONFIGURATION'
	Shows 'CHANNEL'-number
	The six-level bar chart shows the rel. reception level (RX) resp. the rel. transmission power (TX)
Mhz	'MHz' (Frequency)
	Alphanumeric display (frequency, menu, status)

B.4) [AM/FM] / [PA] / [NRC] / [M1]

[AM/FM] (Modulation mode; short press)

► Briefly press the **[AM/FM] button (4)** (repeatedly) to select the modulation type.

The selected modulation mode (FM / AM / UK) is displayed in the **[DISPLAY] (3)**.

Please note: You and the station you are speaking to must use the same modulation mode!

- AM (Amplitude Modulation):
For communication on uneven or built-up terrain over medium distances.

- FM (Frequency Modulation):
For communication in flat or open terrain over short distances; the preferred type of modulation.

In U configuration only:

► While in FM mode, a (repeatedly) short press of the **[F] (7)** key toggles between ENG resp. CEPT frequency bands.
'UK' is displayed when ENG frequency band is selected.

[PA] (Public Address; long press)
A special PA speaker can be connected to the **PA speaker socket (D)** at the back of the device. When this function is activated, a message spoken into the **PTT handheld microphone** is played back via the connected **PA speaker**, but will not be transmitted.

► Use **[ON-OFF/VOLUME] (1)**, to adjust the volume of the PA speaker.

► Simultaneously press (repeatedly) **[PA] (4)** and **[PTT] (12)**, to toggle between **CB-** and **PA-mode**.

[NRC] (NRC; Noise Reduction Circuit)
This innovative filter enables the effective reduction of interference noise not only during reception, but also during transmission!

► Briefly press the **[F] (7)** button, **F** appears in the **[DISPLAY] (3)**.

► Next, briefly press the **[NRC] (6)** button to activate the function NRC.

'NRC ON' appears in the **[DISPLAY] (3)** as long as settings for this function have been saved in the user menu.
Otherwise, the message 'NRC SET' appears in the **[DISPLAY] (3)** and the required settings must be made in the **user menu** before using.

► To deactivate the function NRC, please repeat the two previous steps.
NRC disappears from the **[DISPLAY] (3)**.

[M1] (Memory Channel 1)

► Long press button **[MEM] (7)**. When the 'Key Beep' function is activated, a signal tone sounds and 'MEM' is displayed in the **[DISPLAY] (3)**.

► Briefly press **[M1] (4)** to recall Memory Channel 1.

B.5) [SCAN] / [DW] / [M2] / [LOCK]

[SCAN] (short press)

► Briefly press the **[SCAN] (5)** button to start a channel scan.

'SCN' appears in the **[DISPLAY] (3)**. All channels are scanned continuously.
The scan stops when there is activity on one of the channels.

► To change the scan direction, use **[▲/▼] (9)** on the device resp. **[UP/DN] (13)** on the PTT handset microphone.

► Short press button **[PTT] (12)** button to stop the scan.
'SCN' disappears from the **[DISPLAY] (3)**.

Please also read the description of the 'SCAN TYPE' setting menu.

Memory Channel Scan [SCAN] (5) + [SCAN] (5)
This function starts a search that only includes the occupied memory channels (M1, M2, M3, M4, M5) and the two EMG channels.

► Briefly press **[SCAN] (5)** button twice to start an memory channel scan.

'SCN' is indicated in the **[DISPLAY] (3)**. All programmed memory channels and the two EMG channels are scanned continuously. The memory channel scan stops when there is activity on one of the scanned channels.

► To change the scan direction, use **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Short press button **[PTT] (12)** or the button **[SCAN] (5)** to stop the scanning process.

'SCN' disappears from the **[DISPLAY] (3)**.

[DW] (Dual Watch; long press)
This function allows 'simultaneous' listening to the currently set channel and an EMG resp. priority channel stored in the 'DW' user menu. The device actually switches between the two channels in rapid succession.
If there is activity on one of the two channels, the device remains on the active channel. If there is simultaneous activity on both channels, the stored EMG resp. priority channel has priority.

► Long press button **[DW] (5)** (repeatedly) to activate/deactivate the dual watch function.

[M2] (Memory Channel 2)

► Long press button **[MEM] (7)**. When the 'Key Beep' function is activated, a signal tone sounds and 'MEM' appears in the **[DISPLAY] (3)**.

► Briefly press **[M2] (5)** to recall Memory Channel 2.

[LOCK] (Key Lock; in combination with **[LOCK] (7))**

► Press **[LOCK] (5)** and **[LOCK] (7)** simultaneously to activate the key lock function. The **[DISPLAY] (3)** shows 🔑.

► Press **[LOCK] (5)** and **[LOCK] (7)** again simultaneously to deactivate the key lock function. 🔑 disappears from the **[DISPLAY] (3)**.

B.6) [ANL/NB] / [HI-CUT] / [M3]

[ANL/NB] (Selection of the interference suppression function; short press)

► (Repeated) short button presses of **[ANL/NB] (6)** toggles between various interference suppression functions in a fixed sequence:

ANL → NB → ANL + NB → Off

- ANL: Automatic Noise Limiter activated.
- NB: Noiseblanker activated.
- ANL+NB: Automatic Noise Limiter and Noiseblanker activated
- Off: No interference suppression function

The activated filter function is indicated in the **[DISPLAY] (3)**.

ANL - Automatic Noise Limiter:
This filter reduces background noise and some reception interference.
Note: ANL is only effective in AM!

NB - Noise Blanker:
This filter reduces background noise and some reception interference.
Particularly effective in case of impulse-type interference.

[HI-CUT] (Treble reduction, long press)

► (Repeated) long button presses of **[HI-CUT] (6)** to activate/deactivate the treble reduction function.
The **[DISPLAY] (3)** shows 'HIC' when function is active.

[M3] (Memory Channel 3)

► Long press button **[MEM] (7)**. When the 'Key Beep' function is activated, a signal tone sounds and 'MEM' is displayed in the **[DISPLAY] (3)**.

► Briefly press **[M3] (6)** to recall Memory Channel 3.

B.7) [F] / [MEM] / [SCAN SKIP] / [M4] / [LOCK] / [CARRIER OFFSET 'rU']

[F]
Briefly pressing this button only works in conjunction with the subsequent pressing of another button.

[MENU] Enable user menu (short press followed by a long key press)

► Short press **[F] (7)**, **F** appears in the **[DISPLAY] (3)**.

► Now long press **[F] (7)**, the **user menu** will be activated.

Note: The various menu functions are described in detail in a separate section later in these instructions.

[MEM] (long press)
Up to 5 channels can be saved together with all settings.

To store a Channel:

► Long press **[F] (7).** 'MEM' appears in the **[DISPLAY] (3)**.

► Long press **[M1] (4)**, **[M2] (5)**, **[M3] (6)**, **[M4] (7)** or **[M5] (8)** button.

'MEM' vanishes in the **[DISPLAY] (3)** and the selected memory location **M1**, **M2**, **M3**, **M4** resp. **M5** is displayed.
If the key beep function ('KEY BEEP') is activated, a signal tone sounds.

To recall am memory channel:

► Long press **[F] (7).** 'MEM' appears in the **[DISPLAY] (3)**.

► Briefly press **[M1] (4)**, **[M2] (5)**, **[M3] (6)**, **[M4] (7)** or **[M5] (8)** to recall the selected memory channel.

The selected memory location **M1**, **M2**, **M3**, **M4** resp. **M5** appears in the **[DISPLAY] (3)**.
If the key beep function ('KEY BEEP') is activated, a signal tone sounds.

[SCAN SKIP] (long press while active scan)

► If the scan stops at a channel that you want to skip for future scans, press **[F] (7)** for about 1 second.

A signal tone sounds, the unwanted channel is saved in the 'Scan Skip' memory and the channel in question is no longer included in a scan.

[M4] (Memory Channel 4)

► Long press button **[MEM] (7)**. When the 'Key Beep' function is activated, a signal tone sounds and 'MEM' is displayed in the **[DISPLAY] (3)**.

► Briefly press **[M4] (7)** to recall Memory Channel 4.

[LOCK] (Key Lock; in combination with **[LOCK] (5))**

► Press **[LOCK] (5)** and **[LOCK] (7)** simultaneously to activate the key lock function. The **[DISPLAY] (3)** shows 🔑.

► Press **[LOCK] (5)** and **[LOCK] (7)** again simultaneously to deactivate the key lock function. 🔑 disappears from the **[DISPLAY] (3)**.

[CARRIER OFFSET 'rU']
Setting the -5 KHz carrier offset in the country standard 'rU'.

► Briefly press **[F] (7).** **F** appears in the **[DISPLAY] (3)**.

► Briefly press **[F] (7)** again. 'T5' (t5) is displayed in the **[DISPLAY] (3)**.

To return to the normal setting:

► Briefly press **[F] (7)** twice again until 'T0' (t.0) appears in the **[DISPLAY] (3)**.

The factory setting is 'T0' (t.0).

B.8) [EMG] / [VOX] / [M5]

[EMG] (Recall EMG channel; short press)

► The presetet EMG channel 1 is automatically tuned in as soon as you briefly press **[EMG] (8)**:

'EMG' is displayed. The preset EMG channel 1 is channel 9 and the mode (AM/FM) is set according to the frequency configuration used.

► Briefly pressing **[EMG] (8)** again tunes the preset EMG channel 2:

'EMG' is displayed. The preset EMG channel 2 is channel 19 and the mode (AM/FM) is set according to the frequency configuration used.

► To return to the last set channel, briefly press **[EMG] (8)** again.
'EMG' disappears from the **[DISPLAY] (3)**.

The EMG function settings are made in the user menu.

[EMG] (Store EMG channel; long press)
Any channel in AM or FM mode can be selected as EMG channel.

► Select the channel and the modulation mode (AM/FM).

► Short press **[F] (7)**, **F** appears in the **[DISPLAY] (3)**.

► Long press **[EMG] (8)**, 'EMG' flashes in the **[DISPLAY] (3)**.

► Use **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone to choose either 'EMG 1' or 'EMG 2'.

► Short press **[PTT] (12)**, 'EMG' disappears from the **[DISPLAY] (3)**.

If the key beep function ('KEY BEEP') is activated, a signal tone sounds.

[VOX] (VOX function; long press)

The VOX function enables transmission without pressing the **[PTT] (12)** button on the PTT hand-held microphone. It is therefore sufficient to speak simply into the microphone connected to the **[MICROPHONE SOCKET] (11)** or an additional VOX microphone connected to the **VOX microphone connection socket (C)**.
When using an optional VOX microphone, the connected PTT handheld microphone is deactivated.

► Long press button **[VOX] (8)** to activate the VOX function.
'VOX' appears in the **[DISPLAY] (3)**.

► Long press button **[VOX] (8)** again to deactivate the VOX function.
'VOX' disappears from the **[DISPLAY] (3)**.

The VOX function settings are made in the user menu.

Notes on VOX mode

Place the microphone at a maximum distance of 40 to 50 cm and avoid loud ambient noise to prevent unwanted transmissions.

The sensitivity setting depends on the volume of the voice, the positioning of the microphone and the ambient noise.

The correct setting of the squelch or switching on ASC is a precondition for the proper functioning of VOX function.

An open squelch or ASC blocks the VOX function during receive and the VOX indicator flashes.

After closing the squelch or ASC, VOX is reactivated after approx. one second. This prevents unwanted transmissions caused by the received signal.

An activated VOX can only transmit if squelch or ASC are activated.

[M5] (Memory Channel 5)

► Long press button **[MEM] (7)**. When the 'Key Beep' function is activated, a signal tone sounds and 'MEM' is displayed in the **[DISPLAY] (3)**.

► Briefly press **[M5] (8)** to recall Memory Channel 5.

B.9) [▲/▼] (Up/Down buttons on the device)

Short press:

► With **[▲/▼] (9)** on the device, you can select a higher **[▲]** or lower **[▼]** channel resp. set a higher **[▲]** or lower **[▼]** value.

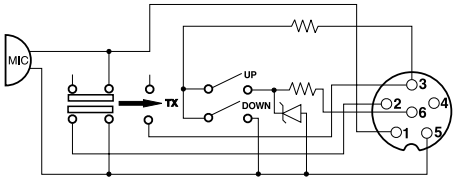
Note:
The buttons **[UP/DN] (13)** on the PTT hand-held microphone fulfil the same functions.

B.10) INTERNAL SPEAKER

If an external speaker is connected to the **external speaker socket (E)**, the internal speaker is deactivated.

B.11) [MICROPHONE SOCKET] 6 pin socket
This socket is used to connect the supplied PTT handheld microphone. It is located on the front panel so that the device can be easily installed into a dashboard.
The radio allows the connection of electret or dynamic microphones (see user menu **E.10** '**MIC TYPE**').

Pin assignment:
1 = Modulation
2 = RX
3 = TX - UP/DOWN
4 = VOL ACC
5 = Ground
6 = Supply voltage +



B.12) [PTT] (Push-To-Talk key)

► To transmit press and hold **[PTT] (12)**, '**TX**' appears in the **[DISPLAY] (3)**, the **LED Ring (14)** lights red.

► To receive release **[PTT] (12)**, '**TX**' disappears from the **[DISPLAY] (3)**.

TOT (Time-Out-Timer)
To protect the transmitter output stage from thermal overload, the device features an automatic transmission time limiter: if transmission lasts longer than 3 min. the **[DISPLAY] (3)** starts flashing, the transmission will be aborted and a signal tone sounds until you release **[PTT] (12)**.

B.13) [UP/DN] (UP/DN buttons on the PTT hand-held microphone)

Short press:

► With **[UP/DN] (13)** on the PTT hand-held microphone, you can select a higher **[UP]** or lower **[DN]** channel resp. set a higher **[UP]** or lower **[DN]** value.

Note:
The buttons **[▲/▼] (9)** on the device fulfil the same functions.

B.14) LED Ring (Status)

The **LED Ring (14)** around the **[MICROPHONE SOCKET] (11)** lights up green while receiving (squelch opened) and red while transmitting.

B.5 + B.7) [LOCK] (5) + [LOCK] (7)

► Press **[LOCK] (5)** and **[LOCK] (7)** simultaneously to activate the key lock function. The **[DISPLAY] (3)** shows 🔑.

► Again press **[LOCK] (5)** and **[LOCK] (7)** simultaneously to deactivate the key lock function. 🔑 disappears from the **[DISPLAY] (3)**.

C) ADDITIONAL FUNCTION (while switching on)

[ON-OFF/VOLUME] (1) + [F] (7) FREQUENCY CONFIGURATION
The frequency configuration must be selected strictly according to the country of use. Do not use a different configuration! Some countries require a user licence.

(Possible configurations: EU; PL; d; EC; U; rU)

- ► Switch off the device with **[ON-OFF/VOLUME] (1)**.
- ► Press and hold button **[F] (7)** switch on the device with **[ON-OFF/VOLUME] (1)**. The selected frequency configuration is displayed flashing in the **[DISPLAY] (3)**.
- ► Press **[▲/▼] (9)** (repeatedly) on the device or **[UP/DN] (13)** on the PTT handset microphone to change the frequency configuration.
- ► Press **[F] (7)** for about 1 second. The frequency configuration is displayed continuously and a key beep confirms the setting.
- ► Switch off the device with **[ON-OFF/VOLUME] (1)** again.

The next time the device is switched on, the currently selected frequency configuration is used.

D) ADDITIONAL FUNCTION together with [PTT] (8)

[PTT] (12) + [VOX] (8) NOISE GATE FUNCTION

With the function activated, signals are only passed through from the microphone to the transmitter above a certain volume. This suppresses quiet background noises during an ongoing transmission and prevents the transmission of quiet background noises during pauses in speech.

- ► Press and hold button **[PTT] (12)** and additionally press **[VOX] (8)** to activate the noise gate function.

When the noise gate function is activated, **'NG'** appears in the **[DISPLAY] (3)**.

- ► Repeat the previous operation step to deactivate the noise gate function. **'NG'** disappears from the **[DISPLAY] (3)**.

E) User menu

15 submenus can be called up within the user menu:

1)	'COLOR'	LCD color
2)	'DIMMER'	LCD brightness
3)	'CONTRAST'	LCD contrast
4)	'NRC SET'	NRC setting
5)	'RG BEEP'	Roger beep setting
6)	'KEY BEEP'	Key beep setting
7)	'SCN TYPE'	Scan type setting
8)	'SCN SKIP'	Scan Skip memory
9)	'DW SET'	Dual watch setting
10)	'MIC TYPE'	Microphone type
11)	'VOX'	VOX setting
12)	'PA SET'	PA setting
13)	'SWR'	SWR setting
14)	'VOL ACC'	Volume control effect
15)	'RESET'	Reset to factory settings

To call up the **user menu**, please proceed as follows:

- ▶ Short press **[F] (7)**. **F** appears in the **[DISPLAY] (3)**.
- ▶ Press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes.
- ▶ The desired **submenu** is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.
- ▶ Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**.
- ▶ Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.
- ▶ Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

If the **submenu** contains more than one parameter, the next parameter starts to flash:

- ▶ The desired **parameter** is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.
- ▶ Press the **[EMG] (8)** button to confirm the setting.

The selected parameter is now displayed continuously. The currently set value of the parameter flashes in the **[DISPLAY] (3)**.

- ▶ Set the desired value using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.
- ▶ Press the **[EMG] (8)** button again to confirm the set value of the selected parameter. The value is now displayed continuously.
- ▶ Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.1 COLOR (LCD color)

The colour of the display backlight can be set as follows:

Settable values: 'Or' (orange) / '9r' (green) / 'bL' (blue) / 'Cy' (cyan) / 'YE' (yellow) / 'PU' (purple) / 'CL' (light cyan)

Factory setting: 'Or' (orange)

- ▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

- ▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.
- ▶ The desired **submenu** 'COLOR' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.
- ▶ Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**.

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.2 DIMMER (LCD brightness)

The brightness of the display backlight can be adjusted:

Settable values: '0' (off) / '1' (dark) - '9' (very bright)

Factory setting: '5'

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** 'DIMMER' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.3 CONTRAST (LCD contrast)

The contrast of the display can be adjusted for optimum readability:

Settable values: '1' (low) - '9' (high)

Factory setting: '5'

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** 'CONTRAST' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.4 NRC SET (NRC setting)

The NRC filter enables the effective reduction of interference noise not only during reception ('RX'), but also during transmission ('TX').

Der NRC filter can be set separately for reception ('RX') and transmission ('TX').

Parameter: 'RX' (reception) / **'TX'** (transmission)

Settable values: '0' (no effect) / **'5'** (max. effect)

Factory setting: '0' (no effect)

▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

▶ The desired **submenu** 'NRC SET' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button to confirm the selection.

'RX' resp. **'TX'** now flashes at the bottom right of the **[DISPLAY] (3)**.

▶ The desired **parameter 'RX'** resp. **'TX'** is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button again to confirm the selection.

The currently set value flashes in the **[DISPLAY] (3)**.

▶ Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button again to confirm the set value of the selected **parameter**. The value is now displayed continuously.

▶ Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.5 RG BEEP (Roger Beep)

A 'Roger Beep' is emitted as soon as **[PTT] (12)** of the PTT hand microphone is released.
CB radio is a 'simplex' communication: it is not possible to speak and listen at the same time, as is the case with a telephone, for example. In the past, when you ended a call, you would say 'Roger' to signal to the other party that he or she could now speak. The word 'Roger' was replaced by a signal tone. This is where the name 'Roger Beep' comes from.

Proceed as follows to activate/deactivate the 'Roger Beep' function:

Settable values: 'ON' (Roger Beep activated) / **'OF'** (Roger Beep deactivated)

Factory setting: 'ON' (Roger Beep activated)

When the function is activated, '♪' appears in the **[DISPLAY] (3)**.

▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

▶ The desired **submenu** 'RG BEEP' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

▶ Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

▶ Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.6 KEY BEEP (Key beep)

Some operating procedures, such as changing channels, pressing buttons, etc., can be confirmed acoustically by an **Key beep**.

When the **Key beep** function is activated, '**BP**' appears in the **[DISPLAY] (3)**.

The **Key beep** can be activated or deactivated as follows:

Settable values: '**ON**' (Key beep activated) / '**OF**' (Key beep deactivated)

Factory setting: '**ON**' (Key beep activated)

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**KEY BEEP**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.7 SCN TYPE (Scan type settings)

Choose between the two **scan types** '**S9**' and '**tI**' to find the one that suits your requirements. The **scan type** can be set as follows:

Settable values:
'S9': As soon as a received signal exceeds the squelch threshold, the scan stops. If the signal falls below the squelch threshold again, the scan continues.

'tI': As soon as a received signal exceeds the squelch threshold, the scan stops. The scan continues after 5 seconds, regardless of whether the signal is still active or not.

Factory setting: 'S9'

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**SCN TYPE**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.8 SCN SKIP (Scan Skip memory)

This function can be used to add a channel to or remove it from the '**Scan skip memory**'. If a channel has been added to the '**Scan skip memory**', this channel will no longer taken into account during a scan („skipped") and '**SCN**' appears next to the channel in the **[DISPLAY] (3)**.

Settable values:

- '**ON**' (**channel** will be skipped during a scan)
- '**OF**' (**channel** is taken into account during a scan)

Factory setting: '**OF**' (**channel** is taken into account during a scan)

▶ Choose the **channel** to be skipped using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

▶ The desired **submenu** '**SCN SKIP**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**.

▶ Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

▶ Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.9 DW SET (Dual watch setting)

This function can be used to define the **Dual watch channel**.

Factory setting: Channel 9 AM

▶ Choose the **channel** you like to define as the **Dual watch channel** using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

▶ The desired **submenu** '**DW SET**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button to confirm the selection. The currently set **mode** (AM/FM/UKFM) flashes in the **[DISPLAY] (3)**.

▶ Set the desired **mode** using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button to confirm the setting. The currently set **channel** flashes in the **[DISPLAY] (3)**.

▶ Set the desired **channel** using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button again to confirm the selected **channel**. The **channel** is now displayed continuously.

▶ Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.10 MIC TYPE (Microphone type)

The device can be used with either an electret microphone or a dynamic microphone. Electret microphones require a power supply.

Note: When the device is switched on, the currently set **microphone type** is briefly displayed. The **stabo** microphone supplied is an electret microphone.

Settable values: 'EL' (electret microphone) / **'dY'** (dynamic microphone)

Factory setting: 'EL' (electret microphone)

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**MIC TYPE**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**.

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.11 VOX (VOX setting)

The **VOX function** enables transmission without pressing the **[PTT] (12)** button on the PTT handheld microphone. It is sufficient to talk to the microphone connected to the **[MICROPHONE SOCKET] (11)** or an additional **VOX microphone** connected to the **VOX microphone connection socket (C)**. When using an optional **VOX microphone**, the connected **PTT handheld microphone** is deactivated.

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**VOX**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

The VOX sensitivity can be adjusted here:

Sensitivity 'L':
Allows the **VOX function** to be optimised for different microphones (original or optional VOX microphone).
Settable values are '**L1**' (maximum sensitivity) to '**L5**' (lowest sensitivity).
Factory setting: '**L3**'.

► Press the **[EMG] (8)** button.

The currently set value flashes in the **[DISPLAY] (3)**.

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value.
The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

Note: 'VOX' does not automatically activate the **VOX function**.

E.12 PA SET (PA setting)

The announcement amplifier ('PA') of the device can be configured as follows:

PA: The modulation of the PTT hand-held microphone **and** received signals are transferred to the speaker connected to the **PA-speaker socket (D)**.

In the **[DISPLAY] (3)**, 'PA' and the selected mode flash alternately.

- **[ON-OFF/VOLUME] (1)** allows you to adjust the volume.

In: Only the modulation of the PTT hand-held microphone is transferred to the speaker connected to the **PA-speaker socket (D).**
The received signal is transferred to the internal device loudspeaker or to an optional external loudspeaker connected to the **external speaker socket (E)**.

- **[ON-OFF/VOLUME] (1)** allows you to adjust the volume.

In **[DISPLAY] (3)**, 'PA' and the selected mode flash alternately.

oF: No reception possible, only the modulation of the PTT hand-held microphone is transferred to the loudspeaker connected to the **PA speaker socket (D)**.

- **[ON-OFF/VOLUME] (1)** allows you to adjust the volume.

The **[DISPLAY] (3)** shows **'PA'** and the adjusted volume.

Settable values: 'PA' / **'In'** / **'of'**

Factory setting: 'In'

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**PA SET**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.13 SWR (SWR setting)

This function of the device can be used to measure the SWR of a connected antenna. The value is displayed numerically in the **[DISPLAY] (3)** and a measuring tone sounds at the same time:
If the SWR value differs from 1.0, the measuring tone is interrupted continuously for a certain time. The interval between two signal tones becomes longer and longer the 'worse' (the higher) the value of the measured SWR is.
The signal tone is no longer interrupted and thus becomes a continuous tone when the SWR value equals 1.0.
The volume of the signal tone can be adjusted with **[VOLUME] (1)**.

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**SWR**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection.

The device now switches to 'Transmit' without the [PTT] (12) button having to be pressed and the setting process starts.

► Adjust the antenna to the lowest possible SWR.

The setting process is limited to 5 minutes. The remaining time is displayed in the **[DISPLAY] (3)**. After this time has elapsed, the device stops transmitting and must be restarted if needed.

► Press **[PTT] (12)** to exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

E.14 VOL ACC (Separate volume control for speaker and/or optionally connectable additional devices)

This function allows you to adjust the effectiveness of the volume control, whereby it is possible to control either only the speaker, only an additional device connected to PIN 4 (VOL ACC) of the 6-pin **[MICROPHONE SOCKET] (11)** or both simultaneously (additional devices will be available shortly).

Settable values:

- **'0'** (Volume control only affects speaker)
- **'1'** (Volume control only affects connected additional device)
- **'2'** (Volume control affects device speakers and a connected additional device)

Factory setting: '0' (Volume control only affects speaker)

► Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

► Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

► The desired **submenu** '**VOL ACC**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

► Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

► Set the desired value using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

► Press the **[EMG] (8)** button again to confirm the set value of the selected **submenu**. The value is now displayed continuously.

► Press the **[F] (7)** button or **[PTT] (12)** to confirm the setting and exit the **user menu**.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **submenu** is saved with the last set value and the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

E.15 RESET

Allows to reset all user parameters and user settings to factory default or, optionally, only delete the entries in the Skan-Skip memory.

Settable values:

- **'AL'** (Reset to factory default)
- **'SC'** (All entries in the Skan-Skip memory are deleted; all other settings are kept)

Factory setting: 'SC'

▶ Briefly press the **[F] (7)** button.

F appears in the **[DISPLAY] (3)**.

▶ Long press button **[F] (7)** again until the **user menu** appears and the last **submenu** called up flashes in the **[DISPLAY] (3)**.

▶ The desired **submenu** '**RESET**' is selected using the buttons **[▲/▼] (9)** on the device or **[UP/DN] (13)** on the PTT handset microphone.

▶ Press the **[EMG] (8)** button to confirm the selection. The currently set value of the **submenu** flashes in the **[DISPLAY] (3)**

▶ Set the desired value ('**AL**'/'**SC**') using the buttons **[UP/DN] (13)** on the PTT handset microphone or **[▲/▼] (9)** on the device.

▶ Press the **[EMG] (8)** button to confirm the setting.

▶ Press the **[F] (7)** button to confirm the setting and exit the **user menu**.

The device performs the reset in the desired manner. A long key beep confirms that the factory settings have been restored.

F vanishes in the **[DISPLAY] (3)**.

If no further setting is made within 10 seconds, the **user menu** is exited.

F vanishes in the **[DISPLAY] (3)**.

F) SPECIFICATION

GENERAL

- Modulation modes	AM / FM
- Channels:	40 (80)
- Frequency range:	26.565 - 27.99125 MHz
- Antenna connection:	50 Ohm PL-259 (SO 239)
- Betriebsspannung:	13.2 V / 26.4 V
- Dimensions (in mm):	178 (W) x 50 (H) x 157 (D)
- Weight:	1.066 kg
- Supplied accessories:	PTT hand-held microphone (electret) with cable, mounting bracket, screws, DC cable with fuse.

TRANSMITTER

- Frequency stability:	+/- 200 Hz
- RF power:	AM / FM: 4W
- Transmission interference:	Better than -54 dBm (4 nW)
- AF frequency response:	300 - 3000 Hz
- Adjacent channel interference:	> 20 µW
- Microphone sensitivity:	3.0 mV
- Harmonic distortion:	2 %
- Current consumption:	< 2.5 A (13.2 V) / < 1.3 A (26.4 V)

RECEIVER

- Sensitivity (at 20 dB SINAD)	AM: 0.79 µV (-109 dBm) FM: 0.39 µV (-115 dBm)
- AF output power:	ca. 2.5 W
- AF frequency response:	300 - 3000 Hz (AM/FM)
- Adjacent channel rejection:	60 dB
- Squelch:	Min. 0.2 µV (-120 dBm) Max. 1.0 mV (-47 dBm)
- Image rejection:	60 dB
- IF Rejection:	70 dB
- External speaker:	8 Ω / Phone plug 3.5 mm
- Current consumption:	160 - 500 mA (13.2 V) / 90 - 300 mA (26.4 V)

G) TROUBLESHOOTING

G.1) YOU CANNOT SEND OR CAN ONLY SEND IN POOR QUALITY

- ► Check the standing wave ratio of your antenna and the feed line for any interruptions or loose contacts!
- ► Check that the PTT handheld microphone is connected correctly and that there is no loose connection!
- ► Check whether the correct frequency band has been selected.

G.2) YOU DO NOT RECEIVE A REPLY TO YOUR TRANSMISSION OR GENERALLY HAVE POOR RECEPTION

- ► Set **[ASC/SQUELCH] (2)** correctly!
- ► Check whether the correct frequency band has been selected.
- ► Set the playback volume with **[ON-OFF/VOLUME] (1)** to a suitable level.
- ► Check that the PTT handheld microphone is connected correctly and that there is no loose connection!
- ► Check the standing wave ratio of your antenna and the feed line for any interruptions or loose contacts!
- ► Make sure that you are using the same operating mode (AM / FM) as the other party!

G.3) THE INDICATORS DO NOT LIGHT UP

- ► Check your power source: Is the power supply switched on?
- ► Check whether you may have swapped the connections for plus (= red) and minus (= black)! If this is the case, swap the connections!
- ► Check the fuses!

H) HINTS FOR RADIO COMMUNICATIONS

For almost untroubled radio communication, you should take the following six tips to heart:

- ► After switching on the device, always listen first to check whether the set channel is actually occupied.
- ► To do this, open the squelch so that even weaker stations are not overheard.
- ► Start your own call only if the channel is actually free!
- ► Make short calls!
- ► After each call, listen carefully to hear whether a station answers. Only then repeat the call.
- ► Always allow a pause of a few seconds after a over from the other station before transmitting by yourself, so that other stations can also answer (‘switchover break’).

The following calling channels are recommended:

- CHANNEL 9 (AM) Trucker channel / EMG channel
- CHANNEL 19 (FM) Trucker channel / EMG channel

Deviations from this are possible.

Evaluation of reception quality
To clearly tell the other party how strongly and clearly they are being received the digits of the R/S code are used. The R value stands for ‘readability’ and the S value for ‘signal strength’.

R/S-Code:

R = Readybility

1 Unreadable
2 Barely readable, occasional words distinguishable
3 Readable with considerable difficulty
4 Readable with practically no difficulty
5 Perfectly readable

S = Signal strength

1 Faint—signals barely perceptible
2 Very weak signals
3 Weak signals
4 Fair signals
5 Fairly good signals
6 Good signals
7 Moderately strong signals
8 Strong signals
9 Extremely strong signals

With poor connections or heavy interference, it is often difficult to transmit words which are hard to understand without errors, such as proper names and city names. This is where the use of the International Spelling Alphabet, which is also used in air traffic (ICAO) and by NATO, can help:

I) GLOSSARY

INTERNATIONAL PHONETIC ALPHABET

A Alpha	***H*** Hotel	***O*** Oscar	***V*** Victor
B Bravo	***I*** India	***P*** Papa	***W*** Whiskey
C Charlie	***J*** Juliett	***Q*** Quebec	***X*** X-ray
D Delta	***K*** Kilo	***R*** Romeo	***Y*** Yankee
E Echo	***L*** Lima	***S*** Sierra	***Z*** Zulu
F Foxtrot	***M*** Mike	***T*** Tango	
G Golf	***N*** November	***U*** Uniform	

TECHNICAL VOCABULARY

AM : Amplitude Modulation
CB : Citizen's Band
CH : Channel
CW : Continuous Wave
DX : Long Distance Liaison
DW : Dual Watch
FM : Frequency Modulation
GMT : Greenwich Meantime
HF : High Frequency
LF : Low Frequency
LSB : Lower Side Band
RX : Receiver
SSB : Single Side Band
SWR : Standing Wave Ratio
SWL : Short Wave Listening
SW : Short Wave
TX : CB Transceiver
UHF : Ultra High Frequency
USB : Upper Side Band
VHF : Very High Frequency

FÜR GUTE VERBINDUNG

VEREINFACHTE EU-KONFORMITÄTSERKLÄRUNG
Hiermit erklärt stabo Elektronik GmbH, dass die Funkanlage Typ

stabo xm 5010e VOX 12/24

der Richtlinie 2014/53/EU entspricht.
Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar:
https://stabo.de/fileadmin/DoC/DoC_stabo_xm5010e VOX.pdf

SIMPLIFIED EU DECLARATION OF CONFORMITY
Hereby, stabo Elektronik GmbH declares that the radio equipment type

stabo xm 5010e VOX 12/24

is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
https://stabo.de/fileadmin/DoC/DoC_stabo_xm5010e VOX.pdf

MANUFACTURER WARRANTY

As the manufacturer of this **stabo xm 5010e VOX 12/24** device, we, the company

stabo Elektronik GmbH · Münchewiese 16 · 31137 Hildesheim/Germany

offer an independent guarantee to the consumer on all items purchased from us in accordance with the following guarantee conditions. We expressly point out that your statutory rights to rectification of material defects are not restricted by this.

I. The warranty period is two years from the date of purchase. The warranty is extended by 3 years to 5 years if a President antenna is used. The warranty is only valid in the European Union.

II. During the warranty period, appliances that are defective due to material or manufacturing faults will be repaired or replaced. The choice of repair or replacement is at our discretion. Replaced devices or components thereof shall become our property. Warranty services do not result in an extension of the original warranty, nor do they initiate a new warranty period.

III. Warranty claims must be asserted within the warranty period as soon as they become known, presenting the proof of purchase.

IV. Warranty claims are not accepted for damage caused by improper use, which may also take the form of misuse

- environmental influences such as overvoltage, moisture, heat, dust, etc.,
- non-observance of the applicable safety precautions,
- non-observance of the operating manual,
- use of external force,
- tampering with the device and making unauthorised attempts to repair it,
- shipping in an unsuitable manner, e.g. unsuitable packaging material, inappropriate packaging,
- consumables (battery packs, batteries)

Hildesheim/Germany, in November 2024

CHANNEL-/FREQUENCY-TABLE EU / EC / U (CEPT)

Channel	Frequency	Channel	Frequency
1	26.965 MHz	21	27.215 MHz
2	26.975 MHz	22	27.225 MHz
3	26.985 MHz	23	27.255 MHz
4	27.005 MHz	24	27.235 MHz
5	27.015 MHz	25	27.245 MHz
6	27.025 MHz	26	27.265 MHz
7	27.035 MHz	27	27.275 MHz
8	27.055 MHz	28	27.285 MHz
9	27.065 MHz	29	27.295 MHz
10	27.075 MHz	30	27.305 MHz
11	27.085 MHz	31	27.315 MHz
12	27.105 MHz	32	27.325 MHz
13	27.115 MHz	33	27.335 MHz
14	27.125 MHz	34	27.345 MHz
15	27.135 MHz	35	27.355 MHz
16	27.155 MHz	36	27.365 MHz
17	27.165 MHz	37	27.375 MHz
18	27.175 MHz	38	27.385 MHz
19	27.185 MHz	39	27.395 MHz
20	27.205 MHz	40	27.405 MHz

CHANNEL-/FREQUENCY-TABLE EU / EC / U (CEPT)

Channel	Frequency	Channel	Frequency
1	27.60125 MHz	21	27.80125 MHz
2	27.61125 MHz	22	27.81125 MHz
3	27.62125 MHz	23	27.82125 MHz
4	27.63125 MHz	24	27.83125 MHz
5	27.64125 MHz	25	27.84125 MHz
6	27.65125 MHz	26	27.85125 MHz
7	27.66125 MHz	27	27.86125 MHz
8	27.67125 MHz	28	27.87125 MHz
9	27.68125 MHz	29	27.88125 MHz
10	27.69125 MHz	30	27.89125 MHz
11	27.70125 MHz	31	27.90125 MHz
12	27.71125 MHz	32	27.91125 MHz
13	27.72125 MHz	33	27.92125 MHz
14	27.73125 MHz	34	27.93125 MHz
15	27.74125 MHz	35	27.94125 MHz
16	27.75125 MHz	36	27.95125 MHz
17	27.76125 MHz	37	27.96125 MHz
18	27.77125 MHz	38	27.97125 MHz
19	27.78125 MHz	39	27.98125 MHz
20	27.79125 MHz	40	27.99125 MHz

Channel	Frequency	Channel	Frequency
1	26.965 MHz	21	27.215 MHz
2	26.975 MHz	22	27.225 MHz
3	26.985 MHz	23	27.255 MHz
4	27.005 MHz	24	27.235 MHz
5	27.015 MHz	25	27.245 MHz
6	27.025 MHz	26	27.265 MHz
7	27.035 MHz	27	27.275 MHz
8	27.055 MHz	28	27.285 MHz
9	27.065 MHz	29	27.295 MHz
10	27.075 MHz	30	27.305 MHz
11	27.085 MHz	31	27.315 MHz
12	27.105 MHz	32	27.325 MHz
13	27.115 MHz	33	27.335 MHz
14	27.125 MHz	34	27.345 MHz
15	27.135 MHz	35	27.355 MHz
16	27.155 MHz	36	27.365 MHz
17	27.165 MHz	37	27.375 MHz
18	27.175 MHz	38	27.385 MHz
19	27.185 MHz	39	27.395 MHz
20	27.205 MHz	40	27.405 MHz

CHANNEL-/FREQUENCY-TABLE d

Channel	Frequency	Channel	Frequency
41	26.565 MHz	61	26.765 MHz
42	26.575 MHz	62	26.775 MHz
43	26.585 MHz	63	26.785 MHz
44	26.595 MHz	64	26.795 MHz
45	26.605 MHz	65	26.805 MHz
46	26.615 MHz	66	26.815 MHz
47	26.625 MHz	67	26.825 MHz
48	26.635 MHz	68	26.835 MHz
49	26.645 MHz	69	26.845 MHz
50	26.655 MHz	70	26.855 MHz
51	26.665 MHz	71	26.865 MHz
52	26.675 MHz	72	26.875 MHz
53	26.685 MHz	73	26.885 MHz
54	26.695 MHz	74	26.895 MHz
55	26.705 MHz	75	26.905 MHz
56	26.715 MHz	76	26.915 MHz
57	26.725 MHz	77	26.925 MHz
58	26.735 MHz	78	26.935 MHz
59	26.745 MHz	79	26.945 MHz
60	26.755 MHz	80	26.955 MHz

CHANNEL-/FREQUENCY-TABLE PL

Channel	Frequency	Channel	Frequency
1	26.960 MHz	21	27.210 MHz
2	26.970 MHz	22	27.220 MHz
3	26.980 MHz	23	27.250 MHz
4	27.000 MHz	24	27.230 MHz
5	27.010 MHz	25	27.240 MHz
6	27.020 MHz	26	27.260 MHz
7	27.030 MHz	27	27.270 MHz
8	27.050 MHz	28	27.280 MHz
9	27.060 MHz	29	27.290 MHz
10	27.070 MHz	30	27.300 MHz
11	27.080 MHz	31	27.310 MHz
12	27.100 MHz	32	27.320 MHz
13	27.110 MHz	33	27.330 MHz
14	27.120 MHz	34	27.340 MHz
15	27.130 MHz	35	27.350 MHz
16	27.150 MHz	36	27.360 MHz
17	27.160 MHz	37	27.370 MHz
18	27.170 MHz	38	27.380 MHz
19	27.180 MHz	39	27.390 MHz
20	27.200 MHz	40	27.400 MHz

CONFIGURATION

Nº	Code	Frequency	FM Channel	AM Channel	Country	CH 19	CH 9
1	EU	26.965 ~ 27.405	40 Ch (4W)	40 Ch (4W)	AT, BE, BG, CH, CY, DK, EE, ES, FI, FR, GR, HR, HU, IE, IS, IT, LT, LU, LV, NL, NO, PT, RO, SE, SI	AM	AM
2	PL	26.960 ~ 27.400	-5 KHz 40 Ch (4W)	-5 KHz 40 Ch (4W)	PL	AM	AM
3	d	26.565 ~ 27.405	80 Ch (4W)	40 Ch (4W)	CZ, DE, SK	FM	AM
4	EC	26.965 ~ 27.405	40 Ch (4W)	-	MT	FM	FM
5	U	26.965 ~ 27.405	40 Ch (4W)	40 Ch (4W)	UK	FM	FM
		27.60125 ~ 27.99125	ENG 40 Ch (4W)	-		FM	FM
6	rU	26.965 ~ 27.405	40 Ch (4W) 0/-5 kHz switchable	40 Ch (4W) 0/-5 kHz switchable	RU T0 = PL, T5 = EU	AM	AM

Note: In U configuration: **[AM/FM] (4)** allows to select the ENG or CEPT frequency band. "UK" is displayed when the ENG frequency band is selected. When the CEPT frequency band is selected, "UK" disappears from the display.

The frequency band and transmission power of your radio need to match the configuration authorised in the country in which it is used.

Countries with specific restrictions (Licence/Register)

	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK
Licence[1]														ⓘ					ⓘ				ⓘ								
Register[2]																											ⓘ				
AM																							ⓘ								
BLU / SSB																							ⓘ								

UK

stabo

FÜR GUTE VERBINDUNG

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Are there any difficulties in getting the new device up and running?

You can call us from monday to thursday from 09:00 to 12:00 on +49 5121 762032.

Please have the device and the operating instructions ready for the dialogue with our technician.

xm5010e · 202504VerENG05