

Talk & Radio TR-446
Public Mobile Radio
+ FM Radio

Operation Instruction





Talk & Radio TR-446
PMR + FM-Radio



- 1.) Antenna
- 2.) Jack SP./MIC
- 3.) LCD Screen
- 4.) Up & Down Key
- 5.) Confirmation & On/Off Key
- 6.) Speaker
- 7.) Mic: Microphone
- 8.) Switch PMR/Radio
- 9.) PTT Key
- 10.) Call Tone Key

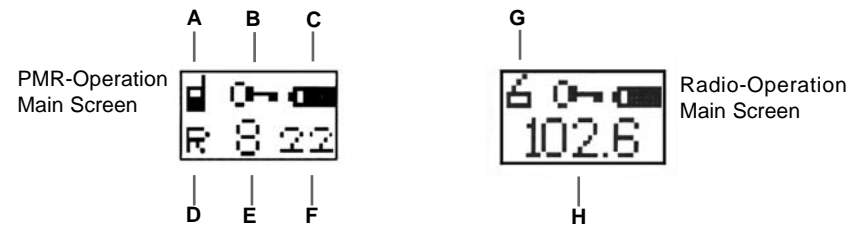
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Specifications are subject to change without any prior notice or obligation.

LC-Display

English



- A** Appears if normal PMR status is activated or if Vox is switched on.
- B** Appears if key lock function is activated
- C** Indicates the actual condition of the batteries.
- D** **R** Indicates receiving signals or **T** for transmitting mode.
- E** Indicates the selected PMR channel 1 - 8.
- F** Indicates the selected CTCSS Code 1 - 38.
- G** Appears if FM-Radio switched on.
- H** Indicates the selected frequency of the FM broadcasting station.

English

Setting up the TEAM Talk & Radio TR-446

1) Inserting the batteries:

Turn the unit in that way that the rear panel lies in front of you. Rotate the belt clip a quarter turn counter-clockwise, so that the battery compartment lid is accessible now. The locking of the battery compartment lid is located at the bottom side of the unit. Push the locking aside and turn it down. Then you can take the lid off.

Now insert 4 alkaline or rechargeable AAA (= Micro) cells into the battery compartment according to the polarity signs inside. If you use rechargeable cells we recommend the NiMH type.

To close the battery compartment put the lid onto the compartment in that way that the two guide bolts at the top of the lid grip into the two corresponding guide holes at the top of the battery compartment. Then secure the lid by pushing the locking on it until it snaps in. Finally rotate the belt clip back into its original position

2) Switching On/Off:

Depress the confirmation CONFIRM and On/Off key ① (5) for about 1 or 2 seconds to switch the transceiver on. A short receipt tone sounds from the loudspeaker (6) and the display illumination lights up in red and green. For a short period the graphic display (3) shows all points. Now the unit is either in PMR reception mode or in FM radio mode. The display will show the corresponding main screen of the actual mode.

To switch the unit off depress the confirmation and On/Off key ① (5) again for about 1 or 2 seconds. The loudspeaker gives a short tone and all symbols disappear from the display. The last settings remain memorised, even if the batteries are removed.

Note: The On/Off operation of the confirmation and On/Off key ① (5) is disabled after the last activation. This factory setting has been made to avoid an unwanted On/Off switching of the unit. The disabling of the On/Off function will be cancelled after the key (5) is not pressed for at least 2 seconds.

3) LCD illumination:

The LC display illumination is switched on at every pressure on any key, and it will be automatically shut off after 15 seconds.


There are three different colours available for the display illumination. The setting can be performed from the PMR main screen as well as from the FM radio main screen. In radio operation depress out of the keys (4) Down ▼ once or Up ▲ 4 times.

In PMR operation depress out of the keys (4) Down ▼ once or Up ▲ 9 times. The display shows the writing LED . Depress briefly the confirmation and On/Off key ① (5). Then the display shows the writing LED C0 , LED C1 or LED C2 . By the help of the Up/Down keys (4) these writings can be changed in a ring like system in the corresponding direction. The display illumination colour changes accordingly to the setting. "LED C0" means green, "LED C1" means red and "LED C2" means red and green. By the help of the confirmation key (5) the desired colour will be selected, and the display returns to the main screen of the original mode.

4) Key lock function:

The key lock function can be activated from the PMR main screen as well as from the FM radio main screen. Depress and hold the confirmation key (5). While you hold this key, press also the Up key ▼ (4). Then two short confirmation tones sound from the

English

speaker (6), and the key symbol  appears in the display. Now all keys except the PTT key (9) are ignored. The speaker gives two short tones at every pressure on any locked key, except the confirmation key (5).

To stop the key lock function depress and hold the confirmation key (5). While you hold this key, press also the Up key ▲ (4). Then one single short confirmation tone sounds from the speaker, and the key symbol disappears in the display. Now all keys are unlocked again.

5) Automatic abortion of functions:

If you select in the main screen for PMR or FM radio operation a function, you have to insert all necessary entries within 5 seconds, otherwise the function will be aborted and not executed. Instead the display returns to the main screen from which the function has been selected before.

6) Up ▲ and Down ▼ keys:


If you depress briefly the keys Up ▲ and Down ▼ (4), the corresponding values (volume, channel) are changed for one step up or down. If you hold these keys for 1 or 2 seconds, the values change quickly into the corresponding direction. Some values run in a ring like system, others remain constantly after they have reached the highest or lowest value. In this case you will hear from the speaker a triple confirmation tone.

7) Socket for external earphone-microphone:

The socket (2) (\varnothing 2.5 mm) on the top side of the unit can be used to connect an external earphone-microphone, e.g. ORM-MS. While the socket is used the internal speaker

26 (6) and the internal microphone Mic (7) are switched off.

8) Battery indication:

In case of completely charged batteries the battery symbol  is filled-in. At 5.1 V supply voltage one third of the filling disappears, at 4.7 V one other third, and at 4.1 V there is only the frame remaining. Now it is time to change or charge the batteries or accus, otherwise errors of functions and displayed information may occur. The current consumption in transmit mode amounts to 270 mA, in PMR reception mode with closed squelch 40 mA, in FM reception mode 60 mA and in power save mode 15 mA.


9) Power save function:

The power save mode is only active in PMR mode. If the squelch is not opened by a signal for at least 20 seconds, and if there is no key entry during this time, the unit falls into the power down mode. In this condition the current consumption goes down from 40 mA to 15 mA.

10) Receipt tones:

If a signal is found on the actual channel in PMR operation or the actual frequency in FM radio operation the receipt tones are switched off. Otherwise every pressure of a key is indicated by a short tone.

PMR operation of the TEAM Talk & Radio TR-446

With the help of the toggle switch PMR/RADIO (8) you can switch the unit between two types of operation PMR operation and FM radio operation. The actual mode is indicated by the actual main screen. Switch the unit to PMR operation so that the main screen of PMR mode is visible now. If the unit receives an audible signal of a station the symbol  (D) appears in the lower left corner of the display.

English

1) Channel selection:

To select a channel depress out of the keys (4) Down ▼ 9 times or Up ▲ once. The display shows the writing **CH** . Then depress briefly the confirmation and On/Off key (5). Then the display shows the writing **CH**₈ , where the "8" stands for the actual channel number. By the help of the Up/Down keys (4) the channels 1 to 8 of the PMR band can be changed in the wanted direction in a ring like system. In France the channels 1 and 2 are not allowed for operation. Press the confirmation key (5) to select the desired channel, and the display will return to the main screen of the PMR mode. The channel number is located now at the position (E).

2) Activating of the CTCSS function and selection of the CTCSS tone:

The CTCSS function serves to suppress signals of unwanted stations on the actual channel. If this function is active the unit works as follows:

The other station is only audible in the speaker, if it adds to its modulation signal a certain tone in the frequency range from 67 Hz to 250 Hz with low level.

In transmit mode the unit adds itself to its modulation signal a tone of the same frequency so that the muting device of the counter station can open also.


If the function is inactive you can hear every station on the channel, and in transmit mode no tone is added to the modulation signal.

To select the CTCSS function depress out of the keys (4) Down ▼ 8 times or Up ▲ 2 times. The display shows **Code** .Then depress briefly the confirmation and On/Off key (5). Then the display shows the writing **Code**₂₂ , where the "22" stands for the actual CTCSS tone code. By the help of the Up/Down keys (4) the code numbers 0 to 38

can be changed in the wanted direction in a ring like system. Press the confirmation key (5) to select the desired code number, and the display will return to the main screen of the PMR mode. If the code number is different from zero, it will be visible in the PMR main screen at the position (F). That means that the CTCSS function has been activated with the CTCSS tone corresponding to the code number.

If the selected code is "00", there will be no code number visible in the lower right corner of the PMR main screen. That means that the CTCSS function is switched off now. In the table in the annex you find the corresponding CTCSS frequencies to the Code numbers.


3) Volume adjustment:

To adjust the volume level of the reproduction of incoming signals depress out of the keys (4) Down ▼ 7 times or Up ▲ 3 times. The display shows the writing **VOL**. Then depress briefly the confirmation key (5). Then the display shows a loudspeaker symbol with one or several points or bars . The number of those points or bars shows the actual setting of the volume adjustment. By the help of the Up/Down keys (4) this setting can be changed and watched in the display. The volume level of the tones depends from the actual setting of the volume adjustment. At the highest or lowest value you hear a triple confirmation tone. Press the confirmation key (5) to select the desired setting of the volume adjustment, and the display will return to the main screen of the PMR mode.

4) Squelch adjustment:



To adjust the threshold level of the noise suppression (squelch) in reception mode depress out of the keys (4) Down ▼ 6 times or Up ▲ 4 times. The display shows the writing **SQ**. Then depress briefly the confirmation key (5). Then the display shows




English






the writing  with one or several points or bars. The number of those points or bars shows the actual setting of the squelch sensitivity level. The more points or bars appear, the lower the level can be for opening the squelch. By the help of the Up/Down keys (4) this setting can be changed and watched in the display. At the highest or lowest value you hear a triple confirmation tone. Press the confirmation key (5) to select the desired setting of the squelch sensitivity level, and the display will return to the main screen of the PMR mode.





5) Activating and setting of the VOX function:

If the VOX function (= voice activated transmission) is active, the transmitter is switched on if the sound level at the microphone Mic (7) exceeds a certain intensity. After a certain time, within which the sound level at the microphone remains below this intensity value, the radio switches automatically back to receive mode. During reception of an incoming signal or in radio operation the VOX function is inhibited. Thus you can communicate without the necessity of having a hand at the unit.

To activate the VOX function depress out of the keys (4) Down ▼ 5 times or Up ▲ 5 times. The display shows the writing  . Then depress briefly the confirmation key (5). Then the display shows  . Below it is a microphone symbol. On the left side of the writing "on" you see an arrow, which can be moved with the help of the Up/Down keys (4) either on the left side of the microphone symbol or back on the left side of the writing "on". For the activation of the VOX function put the arrow on the left side of the writing "on" and then depress the confirmation key (5). After this entry the display returns to the main screen of the PMR mode. On the position of the transceiver symbol (A)

you see the microphone symbol  now. This indicates that the VOX function is active now. If you talk loud enough into the microphone Mic (7), a short tone comes from the speaker and in the display you see at the position (D) the symbol . 1 to 2 seconds after you have finished your message the unit switches back to receive mode, which is indicated by two short tones and the disappearance of the symbol .

To deactivate the VOX function depress out of the keys (4) Down  5 times or Up  5 times. The display shows the writing . Then depress briefly the confirmation key (5). Then the display shows . On the left side of the writing "off" you see an arrow, which can be moved with the help of the Up/Down keys (4) either on the left side of the microphone symbol or back on the left side of the writing "off". For the deactivation of the VOX function put the arrow on the left side of the writing "off" and then depress the confirmation key (5). After this entry the display returns to the main screen of the PMR mode. On the position of the microphone symbol (A) you see the transceiver symbol  again. This indicates that the VOX function is no longer active.

The adjustment of the threshold of the sound level at which the transmitter starts to work, can be executed at inactive or active VOX function. To this end depress out of the keys (4) Down  5 times or Up  5 times. The display shows . Then depress briefly the confirmation key (5). Now put the arrow on the left side of the microphone symbol below and then depress the confirmation key (5). Then the display shows  the microphone symbol with one or several points or bars. The number of those points or bars shows the actual setting of the VOX sound level threshold. The more points or bars appear, the louder you have to speak to start the transmission. By the help of the Up/Down keys (4) this setting can be changed and watched in the display.

English

At the highest or lowest value you hear a triple confirmation tone. Press the confirmation key (5) to select the desired setting of the sound level threshold, and the display will return to the main screen of the PMR mode.

6) Selection of the call melody:

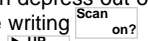
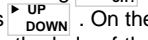
To select a call melody depress out of the keys (4) Down ▼ 4 times or Up ▲ 6 times. The display shows the writing **Tone**. Then depress briefly the confirmation and On/Off key (5). Then the display shows **🎵 8** a music note symbol and a digit. The digit stands for the number of the actual call melody. By the help of the Up/Down keys (4) the call melody numbers can be changed from 1 to 8 in the wanted direction in a ring like system. If you don't press any key for 1 or 2 seconds the call melody will be played in full length in the speaker. Then the display will return to the main screen of the PMR mode. By pressing the confirmation key (5) you select the desired call melody at once, and the display will return to the main screen of the PMR mode earlier.

7) Monitor function:

The noise suppression (squelch) in reception mode is designed to cut off the disturbing noise, which the receiver produces on free channels, and to let pass only the speech signals of a counter station to the speaker. In case of very weak signals it may occur, that the squelch remains closed. If you want to make also these signals audible, you can inhibit the squelch (monitor function). To this end depress out of the keys (4) Down ▼ 3 times or Up ▲ 7 times. The display shows the writing **MON on?**. Then depress briefly the confirmation key (5). Now the squelch is always open and you can hear on free channels a noise. In the display you can see **MON 8**, where the "8" stands for the actual channel

number. This is the main screen for PMR monitor operation. In this condition you can only adjust the volume level setting (Para 3) or the squelch sensitivity setting (Para 4). This can be done by the help of the Up/Down keys (4). To adjust the volume level of the reproduction of incoming signals depress out of the keys (4) Down ▼ 2 times or Up ▲ once. See Para 3 for the further instructions. To adjust the squelch sensitivity setting for incoming signals depress out of the keys (4) Down ▼ once or Up ▲ 2 times. See Para 4 for the further instructions. To reactivate the squelch, depress in the main screen for PMR monitor operation the confirmation key (5), and the display will return to the main screen of the PMR mode.

8) Activating of the channel scan function:

In channel scan mode the unit looks for occupied channels on which the squelch opens. At the same time it examines whether the demodulated reception signal contains also a CTCSS tone. If the unit has found one, it identifies its corresponding code number and shows it in the display at the position (F). To activate the scan function depress out of the keys (4) Down ▼ 2 times or Up ▲ 8 times. The display shows the writing . Then depress briefly the confirmation key (5). Then the display shows . On the left side of the writing "UP" you see an arrow, which can be moved with the help of the Up/Down keys (4) either on the left side of the writing "DOWN" or back on the left side of the writing "UP". For the final activation of the channel scan function put the arrow on one of both writings and then depress the confirmation key (5). The display returns to the main screen of the PMR mode but without a CTCSS code number. According to the chosen direction the channel scan starts stepping upwards or downwards. The unit stops

English

on every occupied channel, where the squelch opens, for 10 seconds. If there is in the demodulated signal also a CTCSS tone, it will show also the corresponding CTCSS code number. 10 seconds later or after the signal has dropped below the squelch threshold the channel scan function continues searching. By pressing the confirmation key (5) the channel scan function is terminated and the unit remains on the actual channel. If the unit has been on an occupied channel where a CTCSS coded station has made a transmission, the display will take over this CTCSS code. If the station had no CTCSS code or the channel was free, the unit keeps the CTCSS setting which has been active before starting the channel scan.

9) Transmitting:

For speech transmission depress and hold the transmit key PTT (9) on the left side of the unit. In the display appears the symbol **T** (D). If the channel scan function had been active, it would be terminated now. The sensitivity of the built-in microphone Mic (7) has been set to give good results speaking normally at a distance of 2 inches. Speaking too loudly will cause distortions and make the signal difficult to understand. On completion of the transmission release the transmit key PTT (9) and the unit will revert to receiving mode and in the display the **T** will disappear. For call melody transmission on the actual channel depress the call tone key CALL (10) above the PTT key. The unit transmits the actual call melody in full length, no matter how long you press the call tone key CALL (10). It is only audible at the counter station. In the display appears **T** (D). Speech transmission is impossible now. After finishing transmission the unit switches back to receiving mode with a short melody in the speaker (6) and in the display **T** will disappear.

Radio operation of the TEAM Talk & Radio TR-446:

English


With the help of the toggle switch PMR/RADIO (8) you can switch the unit between two types of operation PMR operation and radio operation. The actual mode is indicated by the actual main screen. Switch the unit to FM radio operation so that the main screen of radio mode is visible now.

1) Frequency selection:


To select the frequency depress out of the keys (4) Down ▼ 4 times or Up ▲ once. The display shows the writing **Freq** . Then depress briefly the confirmation key (5). Then the display shows the actual frequency in MHz. By a short depression of the Up/Down keys (4) the FM band frequency can be changed from 87.5 MHz to 108.0 MHz in 0.1-MHz-steps in a ring like system into the wanted direction. If there is a FM station on the actual frequency, it will be audible. Otherwise the squelch mutes the audio reproduction. By depressing the confirmation key (5) the desired frequency is selected and the display returns to the main screen of the FM radio mode. If you depress and hold the keys Up/Down keys (4) for 1 or 2 seconds, you activate the frequency scan function. The frequency steps automatically in runs in 0.1-MHz-steps in a ring like system into the wanted direction, until the unit finds a FM station which can open the squelch. In this case the display switches back to the main screen of the FM radio mode. But the frequency scan function remains internally still active. 10 seconds after the station has been found or after the depression of the Up/Down keys (4) the frequency scan function continues searching in the originally selected direction. By pressing the confirmation key (5) the frequency scan function is completely terminated and the unit remains on the actual FM frequency.


English

2) Volume adjustment:

To adjust the volume level of the reproduction of incoming signals depress out of the keys (4) Down ▼ 3 times or Up ▲ 2 times. The display shows VOL . Then depress briefly the confirmation key (5). Then the display shows  . The number of those points or bars shows the actual setting of the volume adjustment. The volume level of the tones depends from the actual setting of the volume adjustment. At the highest or lowest value you hear a triple confirmation tone. By the help of the Up/Down keys (4) this setting can be changed and watched in the display. Press the confirmation key (5) to select the desired setting of the volume adjustment, and the display will return to the main screen of the FM radio mode.

3) Adjustments for the return to the PMR operation:

The unit remains also in FM radio mode ready to receive signals on the actual PMR channel. On receiving of an incoming signal the unit can either switch to PMR operation or it can request from you to choose between PMR operation and FM radio operation. To select one of these two return modes depress out of the keys (4) Down ▼ 2 times or Up ▲ 3 times. The display shows the writing PMR . Then depress briefly the confirmation key (5). Then the display shows  . On the left side of the writing "Auto" you see an arrow, which can be moved with the help of the Up/Down keys (4) either on the left side of the writing "Manu" or back on the left side of the writing "Auto". The setting "Auto" has the effect, that the unit switches itself automatically to PMR operation on reception of a signal on the actual PMR channel. The setting "Manu" has the effect, that the unit gives a short tone to inform the user about the reception of a signal on the actual PMR

channel so that he can choose between PMR operation or FM radio operation. To select the desired return mode put the arrow on one of both writings and then depress the confirmation key (5). In the case that you have selected the setting "Auto" (= automatic return), and the unit receives a signal, there will be a short tone from the speaker and the display will show the main screen of the PMR mode. It will not turn back to FM radio operation until you press the toggle switch PMR/RADIO (8). In the case that you have selected the setting "Manu" (= manual return), and the unit receives a signal, there will be a short tone from the speaker and the display will show the symbols . On the left side of the transceiver symbol you see an arrow, which can be moved with the help of the Up/Down keys (4) either on the left side of the radio symbol or back on the left side of the transceiver symbol. The display illumination flashes every second for a period of 10 seconds. On selection of the transceiver symbol the unit switches over to PMR operation (main screen) and on selection of the radio symbol to FM radio operation (main screen). To select the desired mode put the arrow on one of both symbols and then depress the confirmation key (5). Pressing on the transmit key PTT (9) or on the call tone key CALL (10) results in both return modes, automatic and manual return, a switching from FM radio mode to PMR mode and transmission. On releasing the keys the unit will revert to FM radio mode both return modes.

Safety:

The unit radiates in transmit mode RF energy. To reduce the exposure at the lowest possible value, and to benefit as much as possible of the features of the unit, you should take into account the following advice:

English

In transmission mode keep the unit in a vertical position at a distance of 2 to 3 inches from your face. Keep the antenna at a distance of at least 1 inch away from your head and your body. If you carry the unit on your body and if the unit is in transmit mode, make sure that the antenna is kept at a distance of at least 1 inch away from your body.

Service:

The condition of the batteries must be tested from time to time. Worn out batteries must be removed from the unit immediately. They can leak and damage the device. The batteries should always be replaced as a complete set. Worn out batteries do not belong in the waste bin, but must be returned to a suitable collecting depot or to a special dealer, for the sake of the environment. There are no user adjustable or user serviceable parts inside the radio. The casing must not be opened. Independent repairs or adjustments must not be carried out, since each modification or unauthorised intervention will immediately cancel all and any guarantee or repair claims, they are also likely to result in nonconformity to ETS regulations which will render the set to become illegal. In the event a defect becoming apparent, contact a properly equipped and authorised TEAM dealer or TEAM directly.

Conformity:

The transceiver TEAM Talk & Radio TR-446 complies with the rules of the European Directive R&TTE and meets the European Telecommunication Standards ETS 300 296 & ETS 300 279.

This product is meant for distribution and sale in the following European countries:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Luxemburg, Netherlands, Portugal, Spain, Sweden, Great Britain, Switzerland.

Kanalnummer / Channel Nbr.	CTCSS-Code	Freq. Hz	CTCSS-Code	Freq. Hz
Numéro du canal / Numero del canale	1	67.0	20	131.8
	Freq. MHz	2	71.9	136.5
1	446.00625 MHz	3	74.4	141.3
2	446.01875 MHz	4	77.0	146.2
3	446.03125 MHz	5	79.7	151.4
4	446.04375 MHz	6	82.5	156.7
5	446.05625 MHz	7	85.4	162.2
6	446.06875 MHz	8	88.5	167.9
7	446.08125 MHz	9	91.5	173.8
8	446.09375 MHz	10	94.8	179.9
Bitte nur geeignete Original TEAM	11	97.4	30	186.2
Zubehörteile verwenden.	12	100.0	31	192.8
Please use original TEAM accessories only.	13	103.5	32	203.5
N'utilisez que des accessoires TEAM origin-	14	107.2	33	210.7
aux, s'il vous plaît!	15	110.9	34	218.1
Solamente utilizzare degli accessori TEAM	16	114.8	35	225.7
originali, per favore!	17	118.8	36	233.6
	18	123.0	37	241.8
	19	127.3	38	250.3

Als optionales Zubehör gibt es den Zubehörpaket ZP/TR-446 als Komplettsatz. Das Paket enthält ein Steckerladegerät mit Tischladeschale, ein Satz (4 Stück) Akkus und ein Ohrhörermikrofon.

We offer also as an optional accessory the complete set ZP/TR-446. The set contains a plug-in charger with desktop charging shell, a set of rechargeable batteries (4 pieces) and one ear-phone-microphone combination.

Nous offrons comme accessoires additionnelles un ensemble complète ZP/TR-446. Cet ensemble contient un chargeur avec une coupe de charge, un jeu d'accus (4 pièces) et un microphone auriculaire.

Esisto anche come accessorio il pacchettino complesso ZP/TR-446. Il pacchettino contiene un caricatore con coppella di carica, un complesso (4 pezzi) pile ricaricabili ed un microfono auricolare.



TEAM Talk & Radio TR- 446

for sale and use in :

- Austria • Belgium • Denmark • Finland
- France • Germany • Greece
- Luxembourg • Netherlands • Portugal • Spain • Sweden
- Switzerland • U.K.



Nachdruck oder Vervielfältigung auch Auszugsweise nur mit ausdrücklicher Genehmigung von TEAM Electronic GmbH.



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