SelCom 8012
SelCom 4040

Bedienungsanleitung

Operating instructions

Mode d'emploi

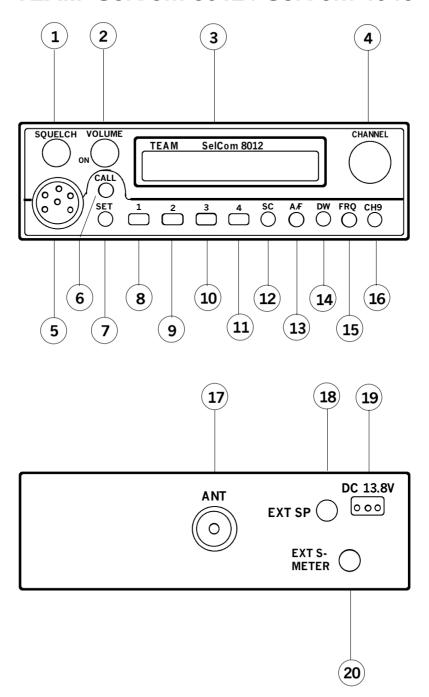**Manuale di istruzioni**

TEAM
electronic

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TEAM SelCom 8012 / SelCom 4040

① ② ③ ④

SQUELCH VOLUME

ON

TEAM   SelCom 8012

CHANNEL

CALL

SET   1   2   3   4   SC   A/F   DW   FRQ   CH9

⑥ ⑧ ⑩ ⑫ ⑭ ⑯

⑤ ⑦ ⑨ ⑪ ⑬ ⑮

⑰ ⑱ ⑲

ANT

DC 13.8V

EXT SP

EXT S-
METER

⑳

TEAM SelCom 4040

OPERATION CONTROLS, DISPLAYS AND CONNECTORS

(**1**) Squelch control **[SQUELCH]**

(**2**) Volume control / ON switch **[VOLUME / ON]**

(**3**) LCD display window for channel number, frequency, functions and S-meter

(**4**) Rotary switch for channel selection **[CHANNEL]**

(**5**) Microphone connector 6 pin for any microphone with or without UP/DOWN channel selection and amplifier

(**6**) Call and encoding button for transmitting of the DTMF selective call **[CALL]**

(**7**) Standby and encoding button for receiving of the DTMF selective call **[SET]**

(**8**) Channel memory **[1]** and encoding button for DTMF dual tone No. 1.

(**9**) Channel memory **[2]** and encoding button for DTMF dual tone No. 2.

(**10**) Channel memory **[3]** and encoding button for DTMF dual tone No. 3.

(**11**) Channel memory **[4]** and encoding button for DTMF dual tone No. 4.

(**12**) Button for occupied channel search function (SCAN) **[SC]**

(**13**) Toggle switch button for AM or FM mode **[A/F]**

(**14**) Button for dual watch function **[DW]**

(**15**) Toggle switch button for channel or frequency display **[FRQ]**

(**16**) Priority channel selector button **[CH9]**

(**17**) Antenna connector SO239 **[ANT]**

(**18**) Socket for external speaker 3.5 mm **[EXT SP]**

(**19**) Connector for DC supply cord (3 pin) **[DC 13.8V]**

(**20**) Socket for external S-meter 2.5 mm **[EXT S-METER]**

wise and adjust it to a comfortable listening level. If the transceiver is on a clear channel and not muted by the squelch function a noise should be heard from the speaker now. The back illumination of the display **(3)** and the front panel will light up. When the unit is switched on the first time or after being disconnected for a longer period the first channel will be channel **9** in **FM** mode. The display will show **[9, FM and SRF]**. If the power source is not disconnected after switching off, the settings and functions will be stored (memory backup). All correct entries will be confirmed by a receipt tone.

2. Squelch function [SQUELCH] :

Rotate the squelch control **(1) [SQUELCH]** slowly clockwise until the background noise just disappears while any incoming signal will be heard. The squelch control should only be turned up enough to stop the background noise on an unused channel. Turning the control further clockwise will increasingly suppress interfering signals as well as weak stations. The setting should be made on an unused channel.

3. Channel selection [CHANNEL] :

Select the desired channel 1 - 40 with the channel selector switch **(4) [CHANNEL]**. The display **(3)** shows the actual channel. The CH9 function must not be activated which will be indicated by a flashing **9** in the display. In parallel the channels can be controlled by the built-in **UP/DOWN** buttons of the microphone. The channel numbers step in a ring like system UP from 40 to 1 and DOWN from 1 to 40.

It is also possible to show the actual frequency (in MHz) in the display instead of the channel numbers by pressing the button **(15) [FRQ]**. This has no influence on the following described functions. By pressing the button **(15) [FRQ]** a second time the channel number will appear in the display again.

Radio operation is only possible with the counter station at coinciding channel numbers and modulations. By pressing the instant channel key **(16) [CH9]** channel 9 can be selected for transmit and receive immediately. A flashing **9** will appear in the display. No channel selection is possible now. Pressing **(16) [CH9]** again will cancel this function and the unit returns to the previous selected channel.

4. Modulation selection [A/F] :

By pushing the key **(13) [A/F]** the transceiver will toggle between AM and FM mode. The actual modulation type is indicated by the symbols **[FM, AM]** in the display **(3)**.

With the **TEAM SelCom 4040** all 40 channels can be selected both in AM and in FM mode. In FM mode the transmit output power is 4 W and in AM mode it is 1 W.

wise and adjust it to a comfortable listening level. If the transceiver is on a clear channel and not muted by the squelch function a noise should be heard from the speaker now. The back illumination of the display **(3)** and the front panel will light up. When the unit is switched on the first time or after being disconnected for a longer period the first channel will be channel **9** in **FM** mode. The display will show **[9, FM and SRF]**. If the power source is not disconnected after switching off, the settings and functions will be stored (memory backup). All correct entries will be confirmed by a receipt tone.

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5. Occupied channel search (SCAN) [SC] :

Before selecting the SCAN function set the squelch control **(1) [SQUELCH]** according to Para **2** of this chapter because this function does not work with un-muted receiver. Depress the key **(12) [SC]** now. In the display appears **[SC]** and the channels are stepping upwards. SCAN stops on the first occupied chan-nel, where a signal can trigger the squelch threshold. It continues 10 seconds af-ter the signal falls below the squelch threshold.

Depressing the key **(12) [SC]** again or any other, except **(15) [FRQ]**, will stop the SCAN function.

6. Dual Watch [DW] :

This function allows to watch activity on a second channel. Before selecting the DW function set the squelch control **(1) [SQUELCH]** according to Para **2**. Se-lect now the first channel which you want to survey and then depress briefly the button **(14) [DW]**. In the display appears a flashing **[DW]** sign. Start within 5 seconds selecting the second channel which you want to survey otherwise the DW function will stop automatically. After having reached the desired channel press the button **(14) [DW]** another time and the symbol **[DW]** will appear permanently. Now the DW function is completely activated.

<u>The DW function will remain on this channel if the incoming signal can open the squelch and is not longer interrupted than 10 seconds.</u> Otherwise the unit will tune to the other channel. If no signal is found there the radio will step every second to the other channel.

Depressing the key **(14) [DW]** again or any other, except **(15) [FRQ]**, will stop the DW function.

7. Transmit (Push To Talk / PTT) :

To transmit depress and hold the PTT key on the microphone. In the display ap-pears **[TX]** and together with the symbol **[SRF]** = (**S**ignal **R**adio **F**requency) the relative output power will be shown in form of a progressively increasing number of bar sections. The microphone sensitivity has been set to give good results speaking normally at a distance of 2 - 4 inches. Speaking too loudly will cause distortion and make the signal difficult to understand especially in case of amplifier or echo microphones. While the set is in the transmitting mode there is no key entry possible and the receiver is muted. On completion of the transmis-sion release the PTT key and the set will revert to receiving mode.

8. S-meter [EXT S-METER] :

Behind the letters **[SRF]** the relative transmit power and received fieldstrength will be displayed in the window **(3)**, forming progressive bar sections. The **TEAM SelCom 4040** has on its rear panel a socket **(20) EXT S-METER** for the connection of an additional S-meter with a 2.5 mm plug.

9. External speaker [EXT SP] :

The **TEAM SelCom 4040** has on its rear panel a socket **(18) [EXT SP]** for an external speaker of 4 - 8 ohm impedance with 3.5 mm plug. At 4 ohms the dissipation of the speaker can be up to 2 watts.

10. Channel memory keys [1 - 4] :

The **TEAM SelCom 4040** can store up to 4 frequently used channels and their modulations. The default settings of the memories **1 - 4** are the channels 1, 9, 19, 40. These memories can be overwritten with other channel numbers. In case of data loss the default settings will be stored in the memories again.

To save a new channel first select it with the channel selector switch **(4) [CHANNEL]**. Then depress one of the memory keys **(8 - 11) [1 - 4]** for 4 or 5 seconds until a second receipt tone indicates the overwriting of the new channel number into the corresponding memory.

To call a saved channel depress briefly the corresponding memory key. On the left side of the display the actual memory number is displayed in case of data storage or recall. The memory number disappears by selecting a new channel.

11. DTMF Selective Call System [CALL / SET] :

General :

The DTMF selective call system (= **D**ual **T**one **M**odulation **F**requency) enables the radio operator to open one or more muted receiver by transmitting a specially coded tone sequence. This is only possible on condition that all partners use the same channel, modulation mode and selective call system. The transceivers must be switched on and operate normally and the selective call system has to be set into standby mode to receive the coded tone calls. This will mute the loudspeaker of the receiver until the detection of a coded tone sequence, which corresponds with the own reception code of the transceiver. This will open the receiver and it will remain unmuted even when the calling station stops transmitting. So all activities on this channel can be heard, and those stations which are not equipped with a selective call system, too. It is also possible to communicate with them. They are only unable to open a receiver muted by a selective call system.

The **TEAM SelCom 4040** selective call system uses 4 dual tones in succession. There are 4 different dual tones. So there are 256 combinations possible. The reception code and the transmission code can be programmed separately from each other. For individual call it is recommended for each participant to program his own reception code. Example : 4 Partners, consisting of head office and 3 mobile stations: Head office = 1111 / Jack mobile = 1112 / Susan mobile = 1113 / John mobile = 1114. In case of group call all members have the same reception code. This will open all receivers if the transmitted code is sent out interference-free and free of noise. In all cases the transmission code of the

calling station and the reception code of the listening station have to match. <u>In our example</u> the head office has to change its transmission code to reach every participant in case of individual call. The same applies to the mobile stations if they want to reach each other. If the communication is made with the help of the head office all mobile stations need only the transmission code 1111.

Entry of the reception code :
Depress briefly the button **(7) [SET]** so that the symbol "music note" appears in the display on the top right of the channel number. The receiver is now muted. Depress the key **(7) [SET]** again but hold it for 3 or 4 seconds until a second receipt tone indicates that the radio is ready for data input. The display shows now **[0000]** with a flashing first digit. Begin now entering within 3 - 4 seconds the reception code with the keys **(8 - 11) [1 - 4]**. With every new entry the flashing digit moves one step further to the right. After entering the last digit the inputs will be saved 3 - 4 seconds later automatically and the display will revert to the normal mode. The same procedure applies when you overwrite previous entries.

Entry of the transmission code :
Depress briefly the button **(7) [SET]** so that the symbol "music note" appears in the display. Then depress the key **(6) [CALL]** and hold it for 3 or 4 seconds until a second receipt tone indicates the readiness for data input. The display shows again **[0000]** with a flashing first digit. Begin now entering within 3 - 4 seconds the transmission code with the keys **(8 - 11) [1 - 4]**. With every new entry the flashing digit moves one step further to the right. After entering the last digit the inputs will be saved 3 - 4 seconds later automatically and the display will revert to the normal mode. The same procedure applies when you overwrite previous entries.

Radio operation with the DTMF selective call system :
To activate the DTMF selective call system depress briefly the button **(7) [SET]** so that the symbol "music note" appears in the display. This will mute the receiver and make it ready to decode received selective tone calls on the actual channel. In case of a previous sent out transmission code or recognition of a selective tone call the receiver will be opened. The symbol "music note" will remain in the display instead. If you want to make it silent again you have to cancel the DTMF function ("music note" disappears) and to reactivate it again by pressing the button **(7) [SET]** two times.

A transmission of a selective tone call is only possible with the activated DTMF function (symbol "music note") in the display. To start the transmission depress the button **(6) [CALL]** briefly. The radio will switch over to transmission mode and starts sending out the transmission code. When the tone sequence is sent out completely it will revert to not muted receiving mode. If the channel is clear

and the counter station within the range its receiver will be opened, too. The communication can begin now. DTMF operation is possible in both types of modulation. We recommend the use of FM because of the better safety against disturbance.

12. Battery backup :

As long as the **TEAM SelCom 4040** is connected without any interruption to a car battery or a switched on power supply the memory contents of selective call codes and channels will be kept stored, even when it is switched off at **(2) [VOLUME / ON]**. In addition it contains an built-in rechargeable button cell which will only be charged when the unit is in operation. According to the periods of running and the periods of not working the charging condition may be quite different. So it is recommended to keep an eye on a reasonable charging time before writing to the memories. A completely charged battery can keep the memory contents stored for up to 100 hours even when the unit is disconnected from every power source.

13. Servicing the TEAM SelCom 4040 :

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 approval regulations which will render the set illegal. In the event of a defect becoming apparent, contact a properly equipped and authorised dealer.

TECHNISCHE DATEN / TECHNICAL DATA
TEAM SelCom 8012

Kanalnummern und Frequenzen nach BAPT 222 ZV 102 / 104 (80 Kanäle)			
Kanal Nr.- Frequenz Channel Nbr. - Frequency	Kanal Nr. - Frequenz Channel Nbr.- Frequency	Kanal Nr. - Frequenz Channel Nbr. - Frequency	Kanal Nr. - Frequenz Channel Nbr. - Frequency
01 26.965 MHz FM	21 27.215 MHz FM	41 26.565 MHz FM	61 26.765 MHz FM
02 26.975 MHz FM	22 27.225 MHz FM	42 26.575 MHz FM	62 26.775 MHz FM
03 26.985 MHz FM	23 27.255 MHz FM	43 26.585 MHz FM	63 26.785 MHz FM
04 27.005 MHz FM/AM	24 27.235 MHz FM	44 26.595 MHz FM	64 26.795 MHz FM
05 27.015 MHz FM/AM	25 27.245 MHz FM	45 26.605 MHz FM	65 26.805 MHz FM
06 27.025 MHz FM/AM	26 27.265 MHz FM	46 26.615 MHz FM	66 26.815 MHz FM
07 27.035 MHz FM/AM	27 27.275 MHz FM	47 26.625 MHz FM	67 26.825 MHz FM
08 27.055 MHz FM/AM	28 27.285 MHz FM	48 26.635 MHz FM	68 26.835 MHz FM
09 27.065 MHz FM/AM	29 27.295 MHz FM	49 26.645 MHz FM	69 26.845 MHz FM
10 27.075 MHz FM/AM	30 27.305 MHz FM	50 26.655 MHz FM	70 26.855 MHz FM
11 27.085 MHz FM/AM	31 27.315 MHz FM	51 26.665 MHz FM	71 26.865 MHz FM
12 27.105 MHz FM/AM	32 27.325 MHz FM	52 26.675 MHz FM	72 26.875 MHz FM
13 27.115 MHz FM/AM	33 27.335 MHz FM	53 26.685 MHz FM	73 26.885 MHz FM
14 27.125 MHz FM/AM	34 27.345 MHz FM	54 26.695 MHz FM	74 26.895 MHz FM
15 27.135 MHz FM/AM	35 27.355 MHz FM	55 26.705 MHz FM	75 26.905 MHz FM
16 27.155 MHz FM	36 27.365 MHz FM	56 26.715 MHz FM	76 26.915 MHz FM
17 27.165 MHz FM	37 27.375 MHz FM	57 26.725 MHz FM	77 26.925 MHz FM
18 27.175 MHz FM	38 27.385 MHz FM	58 26.735 MHz FM	78 26.935 MHz FM
19 27.185 MHz FM	39 27.395 MHz FM	59 26.745 MHz FM	79 26.945 MHz FM
20 27.205 MHz FM	40 27.405 MHz FM	60 26.755 MHz FM	80 26.955 MHz FM

Allgemein / General	
Betriebsspannung / Supply Voltage	13.2 Volt nominal (11 - 15 Volt Betrieb / operating)
Stromaufnahme Current Consumption	RX = 490 mA (inklusive Nachtlicht) TX = 1370 mA (FM) inklusive Nachtlicht 820 mA (AM) " "
Gewicht, Weight	ca. 750 gr. ohne Zubehör und Verpackung
Maße, Dimensions	B 158, T 135, H 48 mm (Gehäuse / Cabinet)

RX - Empfänger / Receiver	
Empfindlichkeit / Sensitivity	1.2 µV / 1.2 KHz Hub / Deviation. 20 dB (S+N+D)/N
Zwischenfrequenz Intermediate Frequency	1. ZF 10.695 MHz 2. ZF 455 KHz
Selektivität,/ Adjacent Channel Rejection	=> 60 dB / ETS 300 135
Intermodulationsdämpfung Intermodulation Response Rejection	=> 54 dB / ETS 300 135
NF - Ausgangsleistung / Audio Output Power	2.0 Watt / 8 Ohm (10% THD)

TX - Sender / Transmitter	
Sendeleistung RF Output Power	4.0 Watt / 50 Ohm (FM) 1.0 Watt / 50 Ohm (AM)
Modulationshub (FM) Modulation Deviation Modulationsgrad (AM) Modulation Degree	2 KHz max. (begrenzt) 90% max. (begrenzt)
Betriebsart / Type of Emission	F3E (Frequenzmodulation / Frequency Modulation) A3E (Amplitudenmodulation / Amplitude Modulation)
Oberwellenunterdrückung / Harmonics Rejection	<= 4 x 10^{-9} W
Nebenwellenunterdrückung / Spurious Rejection	<= 2.5 x 10^{-7} W