


BECKER
AVIONIC SYSTEMS
INSTALLATION AND OPERATION
AR 4201 - ()
OPERATION

(1) Service mode (equipment configurations)

The service mode is meant to enable the ground technicians to set the equipment configuration and must not be used in flight.

(a) The following settings can be changed or set:

SqL	Setting the switch-on threshold of the squelch
Slde	Setting the sidetone volume
aU	Setting the audio auxiliary volume
IC	Setting the IC volume
SF5	Calibrating the temperature sensor
SF6	Setting the addressable storage locations
SF7	Setting the temperature display in °C or °F
SF8	Switching on the scan function
SF9	Setting the hold time after completion of a call in the scan mode
SF10	Release the frequency setting (channel selection only)
SF11	Release the frequency storage
SF12	Erasure of stored frequencies
SF13	Setting the "channel start" of the scanning range
SF14	Setting the "channel end" of the scanning range
COdE	Entering a password to interlock the equipment configuration.
SF16	Dynamic mike input sensitivity
SF17	Inhibiting the transmit mode for one or more memory channel
SF18	Channel priority ON/OFF switch (option)
FSqL	No function
SF20	Speaker muting switch ON/OFF
SF21	Increase the audio power output
- . -	Indication the software version and change status

NOTE : The equipment configuration SqL, Slde, AU, IC and SF16 settings given in the service mode are set by the factory as basic settings using standard values. If reversion to the standard values is required, the portable VHF Transceiver must be switched off and switched on again by simultaneously pressing the STO and MDE keys. This does not overwrite the password.

If no temperature sensor is connected, the mode SF5 and SF 7 is skipped when the mode key is pressed.

If the SF8 scan function is not activated, than the function SF9, SF13 and SF14 will not be displayed.

The settings SF 17 and SF 18 are optionen. When the optionen are not activated, the mode SF17 and SF 18 is skipped when the mode key is pressed.


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(b) Calling up the service mode

Switch off the VHF transceiver. Hold the mode key (MDE) pressed and at the same time switch on the unit. The VHF transceiver switches to the service mode without a unit test. SQL appears in the top line and the switch on threshold of the squelch is shown on the bottom line.

NOTES :

- † The settings are selected in steps by briefly pressing the MDE key in the service mode. If the MDE key is pressed at the end of the setting, the setting SQL then appears. If a direct return to the SQL setting is required the MDE key must be pressed for at least one second.
- † If settings are not activated, (e.g. scan function) this mode is skipped by pressing the mode key.
- † In the service mode the VHF transceiver operates independently of the settings on the control panel, on the frequency which was last set as the active frequency. Wenn the PTT-Key is pressed in the service mode, the display indicates in the top line the active frequency
- † The user can interlock his equipment configuration settings with the aid of a password. The VHF transceiver is delivered from the factory without a password. Section COdE "Entry of password for interlocking the equipment configuration" describes how to enter a password.

1 Setting the squelch threshold

a If function SQL is called up, the following displays appear.

Top line	SQL	
Bottom line	00 to 200	Standard value 130
	(HI sensitivity LO)	

b By means of the kHz switch, the squelch threshold can be altered upwards or downwards in steps of 5. The set value is stored by pressing the STO key.



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2 Setting the sidetone level

- a Call up the SlDE function using the MDE key. The following displays appear.

Top line	SlDE	
Bottom line	00 to 63 (LO level HI)	Standard value 32

- b Using the kHz switch, The sidetone level can be altered upwards or downwards. The set value is stored by pressing the STO key.
Upwards serial No.: 1500
Press the PTT key and set the correct sidetone volume using the kHz switch. The sidetone level can be altered upwards or downwards. The set value is stored by pressing the STO key.

3 Setting the audio auxiliary level

- a Call up the AU function using the MDE key. The following displays appear.

Top line	AU	
Bottom line	00 to 63 (LO level HI)	Standard value 63

- b Using the kHz switch, alter the audio auxiliary level upwards or downwards. The set value is stored by pressing the STO key.

4 Setting the IC level

- a Call up the IC function using the MDE key. The following displays appear :

Top line	IC	
Bottom line	00 to 63 (LO level HI)	Standard value 32

- b The IC level can be changed upwards or downwards using the kHz switch. The set value is stored by pressing the STO key.



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5 Calibrating the temperature sensor

- a If no temperature sensor is connected, this mode is skipped when the mode key is pressed.
- b Calibration is only necessary if the sensor has been retrospectively fitted or replaced.
- c After calling up using the MDE key, the following display appears.

Top line	SF 5
Bottom line	Measured temperature
- d Measure the ambient air temperature of the sensor by means of a suitable thermometer and set temperature display on the LCD. To this measured value by means of the kHz frequency selector. The entry is stored by pressing the STO key and of the temperature sensor is calibrated .

6 Setting addressable storage locations 1 to 99.

- a Call up the function using the MDE key. The following display then appears.

Top line	SF 6
Bottom line	1 to 99
- b The number of the storage channel between 1 to 99 can be selected as required using the kHz switch and stored by pressing the STO key. If the number of storage channels is limited and if channels outside the limited area have already been used, these can no longer be called up. The data in the channels outside the area continues to remain stored and it can be re-used at any time by lifting the restricted area.

7 Setting the temperature display in the °C or °F.

- a If no temperature sensor is connected, this mode is skipped when the mode key is pressed.
- b Call up function SF 7 using the MDE key. The following displays appear :

Top line	SF 7
Bottom line	°C of °F
- c The required display is selected using the kHz switch and the selection is stored by pressing the STO key.



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- 8 Switching on the scan function
- a If the SF8 scan function is not activated, than the function SF9, SF13 and SF14 will not be displayed.
- b Call up function SF 8 using the MDE key. The following display appears.
- | | |
|-------------|-----------|
| Top line | SF 8 |
| Bottom line | OFF or On |
- c Select the required function using the kHz switch and store the selection by pressing the STO key.
- OFF = scan function off
- On = scan function on
-
- 9 Setting the hold time in the scan function (only displayed, if SF8 is activated).
- a Call up function SF 9 using MDE key. The following displays appear :
- | | |
|-------------|--------------|
| Top line | SF 9 |
| Bottom line | 0 .0 to 60.0 |
- b The hold time can be set as required between 0,0 ..0,9 seconds using the kHz seletor switch and between 0..60 seconds using the MHz selector switch. The set value is stored by pressing the STO key.
-
- 10 Inhibiting the frequency setting (channel selection only).
- a Call up function SF 10 using the MDE key. The following displays appear :
- | | |
|-------------|-----------|
| Top line | SF 10 |
| Bottom line | OFF or On |
- b Select the required function using the kHz key and store the function by pressing the STO key.
- OFF=Frequency setting not possible. The VHF transceiver can only work on the frequencies stored in the individual channels.
- On = Frequency setting possible (standard setting).


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11 Inhibiting the frequency storage

- a Call up function SF 11 using the MDE key. The following display appears.

Top line SF 11

Bottom line OFF or On

- b Select the required function using the kHz switch and store the selection by pressing the STO key.

OFF =The storage of frequencies in the individual channels is not possible. The VHF transceiver can only work on the set frequency.

On = Storage of frequencies in the individual channels is possible (standard setting)

12 Erase stored frequencies

- a Call up function SF 12 using the MDE key. The following display appears.

Top line SF 12

Bottom line CH channel number

- b Select the channel to be erased using the kHz (steps of 1) or MHz (steps of 10) switch. The stored frequency is erased by pressing the STO key.

13 Setting the "channel start" scanning range (only displayed, if SF8 is activated).

- a Call up function SF 13 using the MDE key. The following displays appear :

Top line SF 13

Bottom line CS channel number

- b Select the starting channel, using the kHz (steps of 1) or MHz (steps of 10) switch, at which the scan function is to begin. The starting channel is stored by pressing the STO key.

Note

When this function is set OFF, the active and preset frequencies which were set last remains are available in Mode 1



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- 14 Setting the "channel end" scanning range.(only displayed, if SF8 is activated).
- a Call up function SF 14 using the MDE key. The following displays appear :
- | | |
|-------------|-------------------|
| Top line | SF 14 |
| Bottom line | CS channel number |
- b Using the kHz (steps of 1) or MHz (steps of 10) switch, select the end channel at which the scan function is to stop. Store the end channel by pressing the STO key.
- 15 Entry of password to interlock the equipment configuration.
- a Call up the COdE function using the MDE key. The following display appears.
- | | |
|-------------|---------|
| Top line | COdE 15 |
| Bottom line | 0 |
- b Set any 4-digit numerical code using the kHz (steps of 1) or MHz (steps of 10) switch. Store the numerical code by pressing the STO key.
- NOTE : As soon as a password is given an 0 appears in the bottom line when the service mode is called up. The numerical code must then be input using the MHz or kHz switch. If the VHF transceiver detects a false numerical code, it automatically switches to the last mode. If the password is to be erased or changed, this is done by calling up the service mode using the old password. The COdE function is then chosen and either an 0 is entered everywhere or the changed numerical code is entered.
- 16 Setting the dynamic mike input sensitivity
- a Call up function SF 16 using the MDE key. The following displays appears :
- | | |
|-------------|---|
| Top line | SF 16 |
| Bottom line | 00 bis 63 Standard value 32
(LO sensitivity HI) |
- b The dynamic mike input sensitivity can be changed upwards or down-wards using the kHz switch. The set value is stored by pressing the STO key.


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- 17 Inhibiting the transmit mode for one or more memory channel (option)
- a Call up function SF 17 using the MDE key. The following displays appears :
- Top line SF 17
- Bottom line CS channel number
- b Using the kHz (steps of 1) or MHz (steps of 10) switch, select the desired channel for inhibiting the transmit mode. Store the channel by pressing the STO key. Several channels can be selected on priority channels. The letter T appears in the bottom line before CS. When the STO key is pressed again, the inhibiting transmit mode is canceled. The letter T is not appears in the bottom line before CS.
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- 18 Channel priority ON/OFF switch (Option)
- a Call up function SF 18 using the MDE key. The following displays appears :
- Top line SF 18
- Bottom line CS channel number
- b Using the kHz (steps of 1) or MHz (steps of 10) switch, select the desired channel. Store the channel by pressing the STO key. Several channels can be selected on priority channels.
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- 19 FSqL no function
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- 20 Speaker muting switch ON/OFF
- a Call up function using the MDE key. The following displays appears :
- Top line SF20
- Bottom line OFF or On
- OFF = Speaker muting on
On = Speaker always switched on
- b Select the function using the kHz switch. Store the required function by pressing the STO key. This selection becomes active after ending the service mode.

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