

Commander Zweitbesprechung O



FunkTronic
Kompetent für Elektroniksysteme

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Order Information

Ord.-Nr.	Description
412012	Commander Zweitbesprechung O, without call buttons

Technical Data

Commander Zweitbesprechung O

Supply

voltage

+12 V DC -25% +30%

current consumption

50 mA (max. 400 mA)

Input Level (RX in)

recommended for earphone AF

500 mV

input impedance

2.8 kohm, alternatively 600mV/200 ohm

Output Level (TX out)

ex factory set to

500 mV (at 200 ohm), alternatively 80 mV/600 ohm

can be switched to 5 mV / 0.8 mV using JP1

output impedance (while transmitting)

approx. 200 ohm, alternatively 7.5 kohm

output impedance (while receiving)

high-resistance (open)

Weight

handset

approx. 200 g

rest

approx. 250 g

Dimensions (incl. rest, without cable)

width x depth x height

65 x 75 x 220 mm

Control Elements Commander Zweitbesprechung O



Remark: The Commander Zweitbesprechung is available with call buttons as well.

General Remarks

The Commander Zweitbesprechung O is a hand set designed for the use as a secondary device in addition to a BOS radio on the same radio circuit. The scope of delivery includes the handset together with the corresponding rest. The AF amplifier is integrated in the rest.

A 10-pin terminal block inside the rest connects operating voltage, squelch, PTT output and AF in/output with the radio. Additionally, an external loudspeaker can be connected.

As the AF output is only open during transmission, several Commander Zweitbesprechung can be connected in parallel.

Conversation Handling

By pressing the PTT button at the inner side of the handset, the transmitter is activated and ready to speak. You can hear the radio transmissions in the earphone and via the loudspeaker. The loudspeaker volumes (internal and external) can be adjusted using the potentiometers at the side of the rest. While PTT is keyed or while the handset is taken the loudspeaker can be muted (jumpers 6 and 9). Using jumper 5 a minimum volume can be defined. The volume cannot be lower as this value even if the potentiometer is turned to very low values.

Adjusting the Microphone Level

The microphone level of the handset is adjusted correctly ex factory. If you still wish to change it, the output level can be adjusted using the potentiometer near the microphone capsule at the outer side of the handset.

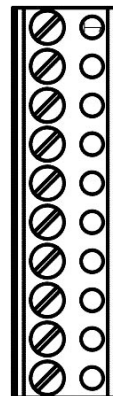
The rest includes an AF amplifier that can be configured for different operation modes. It supplies the int. and ext. loudspeaker with a maximum of 3 watt each.

The used signal is derived from the earphone AF and hence is independent from volume settings of the radio. If necessary, the basic sensitivity can be adjusted with the poti inside the rest. Ex factory, a level of 500 mV (poti R8) is set.

The integrated AF amplifier can be muted for the internal and the external loudspeaker. Muting is active on PTT if jumper JP9 is set (factory setting). While the handset is taken, muting is active if jumper JP1 is set (factory setting).

Pin Assignment Socket ST1

pin	function
1	AF input (transformer 200 or 600 ohm)
2	AF input (transformer 200 or 600 ohm)
3	PTT (semiconductor relay)
4	PTT (semiconductor relay)
5	GND
6	AF out
7	AF out
8	squelch or hook - (JP2+3)
9	squelch or hook + (JP2+3)
10	+ 12 volt operation voltage



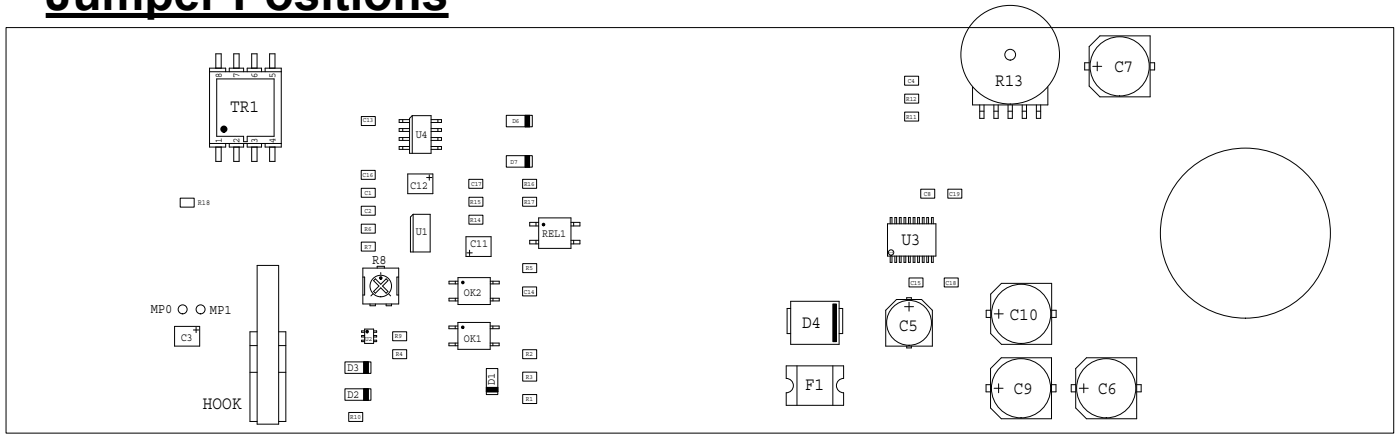
socket ST1 is realized as a terminal strip inside the rest

Function Squelch or Hook

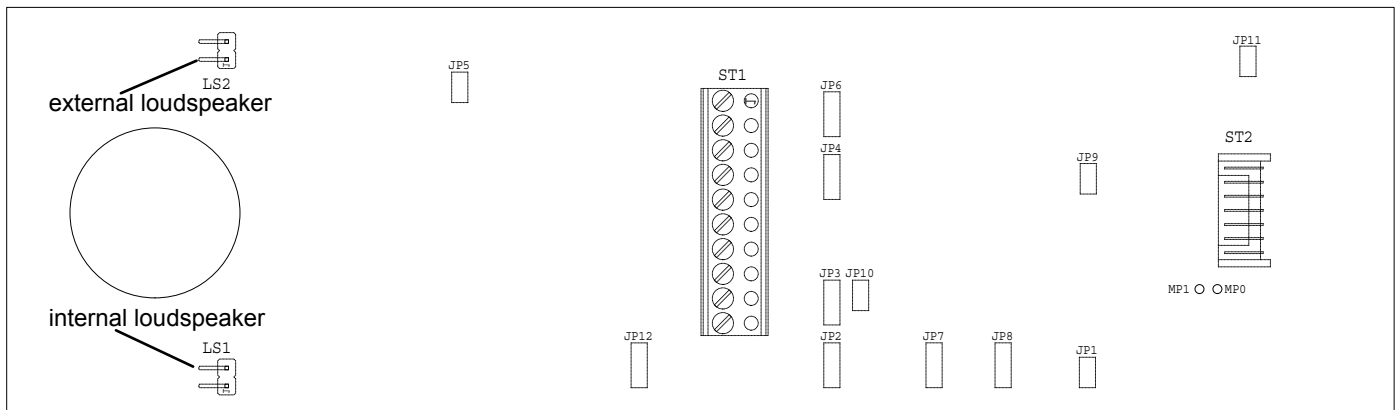
To pins 8 and 9 of ST1 a squelch signal of the radio can be applied (factory setting, JP2/JP3 closed at the bottom). The squelch function is not used at Commander Zweitbesprechung O.

Alternatively these pins can be used to indicate the status of the hook via an opto-coupler (JP2/JP3 closed at the top).

Jumper Positions



The earphone is connected to socket **ST2**.



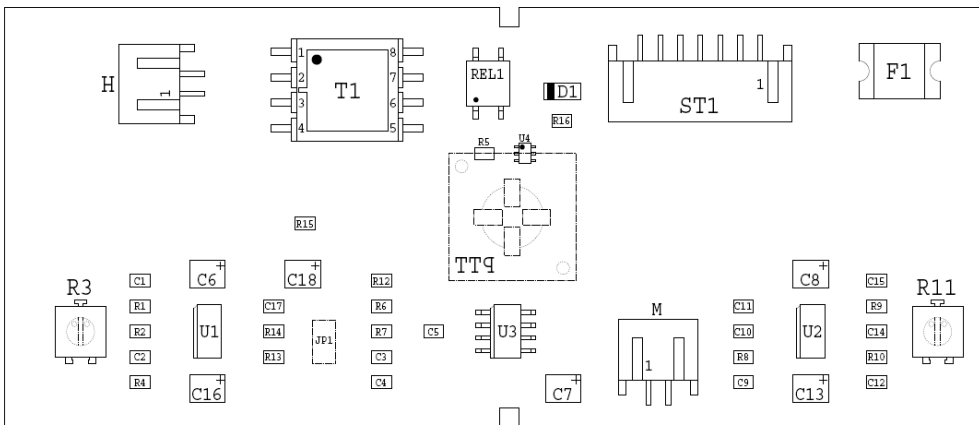
Jumper Functions (JP7 bis JP12, Seriennr. 4716)

Jumper	Function	ex Factory
JP1	open -> loudspeaker is not muted if handset is taken closed -> loudspeaker is muted if handset is taken	----- default
JP2/JP3	closed at the top -> ST1 pin 8+9 function: hook closed at the bottom -> ST1 pin 8+9 function: squelch	----- default
JP4	open -> AF input impedance 2.8 kohm closed at the top -> AF input impedance 600 ohm closed at the bottom -> AF input impedance 200 ohm	----- default
JP5	open -> minimum volume always present closed -> no minimum volume	----- default
JP6	closed at the top -> mute if TX to GND closed at the bottom -> mute if TX to +12 volt open -> no muting	----- default
JP7/8	JP7 top, JP8 bottom -> hook active if handset is hung up JP7 bottom, JP8 top -> hook active if handset is taken open / not in use	----- default
JP9	open -> loudspeaker is on at PTT closed -> loudspeaker is off at PTT	----- default

Jumper Functions (continued)

Jumper	Function	ex Factory
JP10	closed -> hook - (pin 8) connected to GND open -> hook - (pin 8) separated from GND open / not in use -----	default
JP11	open -> microphone level 80mV at 600 ohm closed -> microphone level 500mV at 200 ohm -----	default
JP12	open -> TX_REF must be connected externally ----- top -> TX_REF (pin 4) connected to GND (pin 5) bottom -> TX_REF (pin 4) connected to +12V (pin 10)	default

Jumpers and Potentiometers in the Handset



If jumper JP1 is set the microphone output delivers 5 mV, otherwise 500 mV. The microphone level is adjusted with R11. R3 adjusts the level of the earphone.

General Safety Information

Please read the operating instructions carefully before installation and setup.

The relevant regulations must be complied to when working with 230V line voltage, two-wire-lines, four-wire-lines and ISDN-lines. It is also very important to comply to the regulations and safety instructions of working with radio installations.

Please comply to the following safety rules:

- All components may only be mounted and maintained when power is off.
- The modules may only be activated if they are built in a housing and are scoop-proof.
- Devices which are operated with external voltage - especially mains voltage - may only be opened when they have been disconnected from the voltage source or mains.
- All connecting cables of the electronic devices must be checked for damage regularly and must be exchanged if damaged.
- Absolutely comply to the regular inspections required by law according to VDE 0701 and 0702 for line-operated devices.
- Tools must not be used near or directly at concealed or visible power lines and conductor paths and also not at and in devices using external voltage – especially mains voltage - as long as the power supply voltage has not been turned off and all capacitors have been discharged. Electrolytic capacitors can be still charged for a long time after turning off.
- When using components, modules, devices or circuits and equipment the threshold values of voltage, current and power consumption specified in the technical data must absolutely be complied to. Exceeding these threshold values (even if only briefly) can lead to significant damage.
- The devices, components or circuits described in this manual are only adapted for the specified usage. If you are not sure about the purpose of the product, please ask your specialized dealer.
- The installation and setup have to be carried out by professional personnel.

Returning of Old Equipment

According to German law concerning electronic devices old devices cannot be disposed off as regular waste. Our devices are classified for commercial use only. According to § 11 of our general terms of payment and delivery, as of November 2005, the purchasers or users are obliged to return old equipment produced by us free of cost. FunkTronic GmbH will dispose of this old equipment at its own expense according to regulations.

Please send old equipment for disposal to:

**FunkTronic GmbH
Breitwiesenstraße 4
36381 Schlüchtern
GERMANY**

>>> Important hint: freight forward deliveries cannot be accepted by us.

February 2nd, 2006

Subject to change, Errors excepted