

# Major BOS 4c



Desktop Control Panel  
with Multiwire Connection  
for up to 4 Radios



**FunkTronic**  
Radio Control Systems & more

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# 1. Order Information

FT no.	Description
620030	Major BOS 4c
	<b>Optional accessories:</b>
900011	Power supply, for Major BOS, 12V/1,0A
631112	Magnetic holder for Major BOS handset (hardware option, typical for in-vehicle installations)
904000	Installation tray for Major operating devices
001530	Foot switch with connection cable
001555	Headset without volume control, connection cable with 6-pin western plug
001556	Headset incl. volume control, connection cable with 6-pin western plug
001556N	as 001556, but for desktop feed-through with additional Neutrik plug and socket
001560	WL-DECT base - Mobile unit
001561	Air Talk XS-WL headset - for connection to WL-DECT
903020	Distribution Frame RJ45 2x3fold (1 pc. per 2 radios, for up to 3 Majors)
903021	Distribution Frame RJ45 1x7fold (1 pc. Per 1 radio, for up to 7 Majors)
903060	Interface for connection to Sepura Color Console (incl. 2 connection cables)
903070	Interface for connection to MTM5000 series (incl. 1 connection cable 903071)
903071	Additional connection cable from 903070 to MTM5000 series

If an under-counter installation (i.e. not the simple variant with built-in tray 904000) is to be carried out, the following article numbers must be ordered instead of 620030, as required:

620040 (Major BOS 4c for under-desk installation), GH.AKMBOS (handset support with latching system), MG.MH4J (handset), 691401 (gooseneck microphone), EA.LS7 (loudspeaker)

We do not sell pre-milled table top inserts. Please consult our description of the corresponding installation variants for the required dimensions.

## 2. Major BOS 4c

The **Major BOS 4c** is a desktop control unit for a dispatcher workstation. The dispatcher can operate up to four radios using the gooseneck microphone, the handset or an optional headset. The radios to be monitored can be selected conveniently and intuitively by the user at any time.

The Major BOS 4c is powered from an external +12V DC source or via our **separately available power supply unit**. It is also possible to connect up to four speech circuits (radios, PA/intercom systems, etc.) and optionally a headset and/or a foot PTT.

An additional audio output is available on the RS232 connector. As with the Major BOS 4V(D), **configuration** is carried out **via a self-explanatory web interface**.

The Major BOS 4c is available in a **version with a magnetic holder for the handset** and a built-in version for under-table mounting. Simple table integration with our built-in tray is also possible as usual.

## 3. Control Elements



- 1 – LED display
- 2 – Radio select buttons
- 3 – Volume display (LED rows)
- 4 – Volume buttons - / +
- 5 – Loudspeaker **L** und special function key **S**
- 6 – Buttons **F1** and **F2**
- 7 – PTT buttons
- 8 – PTT handset (button on the inner side)
- 9 – Loudspeaker
- 10 – Gooseneck microphone

### 3.1. LED display

The LED display contains the status information for all available radio circuits:

- **Selection status** ●  
Selected radios are used for transmission if the handset, headset or foot PTT is triggered. Furthermore, all selected circuits can be heard in the handset and on the headset.
- **PTT** ▲  
PTT was triggered for the respective radio.
- **SQL / Carrier detection** ▼  
The carrier criterion on the relevant circuit is active (i.e. a radio call is incoming).

Please note that the description applies to the factory settings. Functionality can be changed to serve customer-specific needs.

### 3.2. Loudspeaker Control

The loudspeaker display on the Major BOS 4c is shown as a horizontal LED bar. If the LED display lights up brightly, the loudspeaker is active. The loudspeaker is activated or deactivated using the loudspeaker button **L**, volume changes are made using the **- / +** buttons located under the LED bar.

The general behavior of the loudspeaker can be adjusted via the web interface if required. Please also read 5.2 Loudspeaker status during PTT.

## 4. Rear Connections

### 4.1. Overview



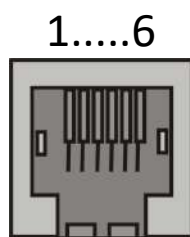
#### **Power supply socket**

+12V DC, max. 1,0 A

positive pole inside, ground outside

#### **RS232 Socket**

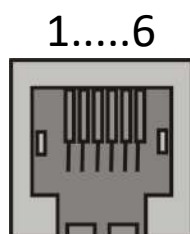
RS232, connection for audio recorder, 2x I/Os



1	LS out
2	I/O 1
3	TXD out
4	RXD in
5	GND
6	I/O 2

#### **PTT Socket**

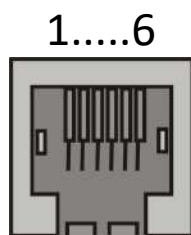
Connection of an external PTT button (e.g. footswitch) or headset adapter



1	PTT HS1 in
2	+BATT out (for headset adapter switch)
3	HS on (Control pin headset adapter)
4	Opto-coupler in (anode +)
5	Opto-coupler in (cathode -)
6	GND PTT HS1 in

## **HS Socket**

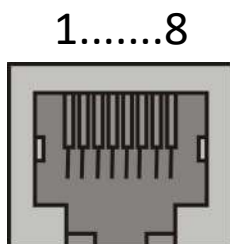
Simple connection of a headset, or connection for headset adapter



1	PTT HS2 in
2	NF HS in (mikrophone +)
3	NF HS out (earpiece +)
4	GND NF HS out (earpiece -)
5	GND NF HS in (microphone -)
6	GND PTT HS2 in

## **Sockets 1-4 (radio connections)**

Standard 8-pin interface

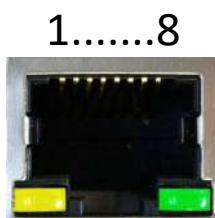


1	NF in A
2	NF in B
3	SQL in
4	GND
5	Busy pin ( <b>do not connect to the radio!</b> )
6	PTT out (in)
7	NF out A
8	NF out B

Pin 5 (Busy) is for signaling in between the Majors (e.g. to mutually block PTT or channel selection). The carrier detection from the radio needs to be connected to pin3 (SQL in).

## **ETH Socket**

Ethernet connection (for configuration via the web interface)



1	TX +
2	TX -
3	RX +
6	RX -



## 5. Configuration Using the Web Interface

A self-explanatory web interface is available for configuring the Major BOS 4c. You have 2 options for accessing the web interface via your browser (e.g. Mozilla FireFox or Google Chrome). If no DHCP server is available (e.g. if you connect directly to your laptop), the Major BOS 2c will revert to its fixed starting address after approx. 5 seconds:

**IP adress:**                   **192.168.16.181**

**User:**                       **mbosc**

**Password:**               **radio**

Please note that your PC/laptop must be in the same network segment as the Major, that is, have an IP address starting with **192.168.16.** but ending with a different last number.

This works automatically in a network with DHCP and name resolution. Make sure that the device is already connected to the network when it is switched on, otherwise it will be switched to the fixed start IP promptly. If DHCP is used, you can now access the web interface using the following name via your browser:

**Input in address line:**       **mbosc/**

**User:**                       **mbosc**

**Password:**               **radio**

If you are operating in a network without a DHCP server (e.g. with a direct connection to a laptop) and still want to use the name resolution method, a DHCP server activated directly on the PC used can be used. In the DHCP-Server\_Setup.pdf information sheet, which is also available on our website (via "Downloads"), you will find brief instructions if required.

### 5.1. Operation via default IP address

If the IP address of the Major BOS 4c is no longer known, the device can be started in default IP mode. To do this, press the PTT button on the inside of the handset and simultaneously press the PTT button on circuit 1 when starting the device. The web interface of the Major BOS 4c can now be reached again at the address 192.168.16.181 and can be reconfigured to the desired IP address.

## 5.2. Loudspeaker status during PTT

In contrast to the Major BOS 4a, the loudspeaker in the Major BOS 4c is normally open up to a certain maximum value when PTT is pressed in order to be able to hear the confirmation tone in digital radio operation. If this setting causes problems due to feedback (e.g. with analog radio operating via a relay), then it must be adjusted accordingly.

In this case, it is necessary to set the max. volume during SH microphone PTT to 0 for Loudspeaker 1. To do this, go to application page 2 of the web interface. It can be defined separately for each radio connected.

## 6. Technical Data

<b>Dimensions</b> (w/o gooseneck)	245 x 220 x 90 mm (width x depth x height)
<b>Weight</b>	ca. 1400 g
<b>Operating Voltage</b>	+12VDC / -15% +25%
<b>Current consumption</b>	approx. 200-500 mA
<b>Input Level (S/E)</b>	
Ex factory setting	500 mV (at 0 dB amplification)
Adjustment range	5mV to 1,6V (+40 dB to -10 dB ampl.)
Input impedance	approx. 600 ohm or 4700 ohm
<b>Output Level (S/E)</b>	
Ex factory setting	500 mV / 200 ohm (at 0dB ampl..)
Adjustment range	max. 1V / 200 ohm; 1,65V / 600 ohm
Output impedance	approx. 200 ohm
<b>Earpiece Output (NF HS out, to headset)</b>	
Ex factory setting	100mV / 300 ohm (at 0dB ampl.)
Adjustment range	max. 1,1V / 300 ohm; 350mV / 32 ohm
Output impedance	ca. 110 Ohm
<b>Microphone Input MIC 2 (NF HS in, from headset)</b>	
Ex factory setting	7 mV (at 0 dB ampl.)
Adjustment range	max. 90mV
Operating voltage	5V
Operating resistance	2,2 kOhm

## 7. Release Notes

- 07.04.2022 - First version
- 14.04.2022 - Notes on new firmware with possible web interface operation without DHCP
- 28.03.2024 - Small corrections (first English version)