

# MCS 50

Discussion  
Control Unit



## FEATURES

- One microphone line for a maximum of 32 microphone units
- Integrated power supply unit with control for up to 32 microphone units
- Can be expanded to 64 microphone units (with MCS 50-64)
- Multifunction display for indication and configuration
- Multifunction buttons for menu control and system configuration without PC
- Master reset button to load default settings
- Service RS 232 interface port on the front for PC system configuration
- Supplied with "MCS-Editor" configuration software
- Supplied with "MCS Controller" Software for Windows® operating systems
- All inputs and outputs are plug-in type
- RS 232 connection for external operation via PC or media control system
- Control unit in a 2 U-housing, suitable for 19" rack mounting

## VERSIONS

- MCS 50-32 (D) Control unit for 32 microphone units, display language German . . . . Order # 459.275
- MCS 50-32 (E) same as above, but display language English . . . . Order # 486.140
- MCS 50-32 (F) same as above, but display language French . . . . Order # 486.159
- MCS 50-64 (D) Control unit for 64 microphone units, display language German . . . . Order # 463.388
- MCS 50-64 (E) same as above, but display language English . . . . Order # 486.167
- MCS 50-64 (F) same as above, but display language French . . . . Order # 486.175

## DESCRIPTION

- System check of all adjusted parameters
- Status check for error diagnosis
- Equalisation control for adjusting system's audio response
- Audio input for balanced line-level signals such as wireless receiver, mixing consoles, telephone hybrids etc.
- Unbalanced audio input for system extension
- Record output for direct connection to a recording system
- RS 232 interface allows the operation of the discussion system via PC or other available media control systems such as AMX®, Crestron®, Cue® etc. to enable complete conference room control.
- **System configuration set-up options:**
  - Function of the microphone button  
On/Off or PTT (Push-To-Talk, as long as the microphone button is pressed, the microphone unit is switched on).
  - **Operation mode:**
    - **Request-to-Talk**  
This mode is only possible with an operator manually controlling a PC or media control system (AMX® or Crestron®). Pressing the microphone button on the delegate unit the system registers a request-to-talk. The operator has control over the next speaker using a the PC or the console button.
    - **Autonomy**  
Each participant can enable the microphone until the maximum number of open microphones (NOM) is achieved.
    - **Override**  
Each selected microphone unit switches off the previously activated microphone unit.
  - The talk time of the delegates can be pre-set. After the time has elapsed the microphone unit switches off.
- A flashing illuminated ring indicates the time when the microphone is switched off. The flashing illuminated ring can also be effected by an external control command (AMX/Panja®, Crestron®).
- **Chairman unit operational mode:**
  - **Normal**  
The chairman can switch on his microphone without any limitation.
  - **Mute**  
The priority button of the chairman's microphone unit will mute all activated delegate microphone units. When the priority button is released, all previously selected microphones are re-activated.
  - **Clear**  
The chairman can switch off all active delegate microphone units using the priority button. They remain switched off until the chairman switches off his microphone unit by pressing the priority button.
- **NOM (number of open microphones):**  
Defines the maximum number of delegate microphones that can be switched on (up to 9 microphone units).
- **Muting the speaker:**  
When the microphone unit is switched on, it's own speaker is muted automatically. It is possible to mute up to 10 other microphone units (usually the surrounding units to reduce the possibility of acoustic feedback) as soon as the speaker is activated.

## ARCHITECT'S SPECIFICATIONS

Central control unit as main item of the discussion system with conference media control. Integrated power supply unit and processor for digital control of up to 32 microphone units. 2 multi-function buttons and LC-Display with 2 lines/16 segments for menu driven system operation and configuration. RS 232 interface port on the front for system configuration with PC. System check with error message after switching on the device. Master reset to manufacturer's default settings. RS 232 interface for operator's PC or external console. Two inputs for sound signals 250 mV (balanced) and 1.55 V (unbalanced). The following three operation modes can be chosen: Request-to-Talk (after request-to-talk the chairman releases the microphone), Autonomy (each participant can switch on and off his microphone unit), Override (each switched on microphone unit switches off the previously activated microphone unit). "Next" function control (first in - first out) in the Request-to-Talk mode. In each operation mode it is possible to

pre-set the talk time and warning time for each participant and for the illuminated ring to indicate that talk time has elapsed. The following parameters can be adjusted within the system configuration: number and address of the chairman microphone units, function of the priority button, number of the open microphones, number and address of the loudspeakers to be muted in the microphone units, input level of the signals and volume and sound control of the master signal. 1 connection for microphone line. Recording output (250 mV) and a 3-pin XLR socket for transformer balanced line level output (+6 dBm). Recording output is independent from the output volume adjustment. Desktop housing: 2 rack units high, for 19" rack mounting. Ventilation louvres on top and bottom. Dimensions (W x H x D) 440 x 88 x 310 mm. Weight 4850 g.

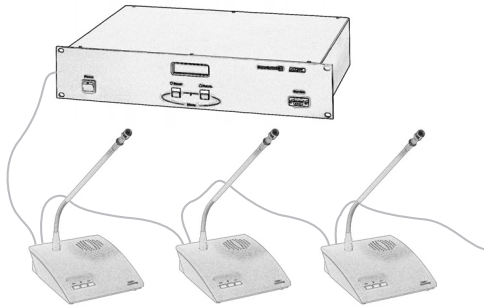
Manufacturer: beyerdynamic GmbH, Germany  
Type: MCS 50

## SYSTEM INSTALLATION

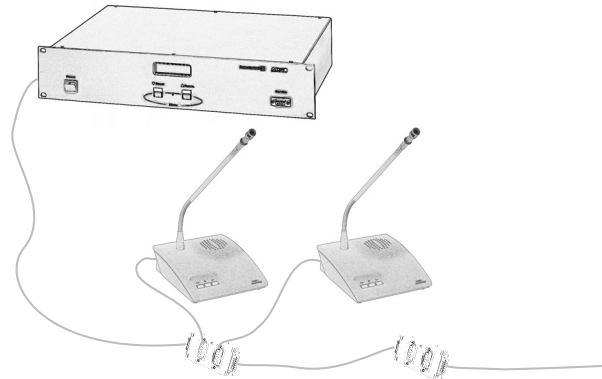
There is a system bus set up with one microphone line. Up to 32 microphone units can be connected.

The system connecting cable can be manufactured in special lengths and versions. Delivery period, price and more information available upon request.

### Single cable connection



### Branch cabling



## ARCHITECT'S SPECIFICATIONS

3-way adapters in a compact, impact-resistant metal housing with a 15-pin Sub-D plug and three 15-pin Sub-D sockets. Two connections for delegate units and one connection for loop-through wiring.

Manufacturer: beyerdynamic GmbH, Germany  
Type: CA 1513

Connecting cable with PVC outer jacket to connect the MCS components and adapters. 2.5 m long, flexible cable, in black with 15-pin Sub-D-coupling and connector. 3 x 2 x 0.08 sqmm coiled in the screen, 0.50 and 1 x 0.25 sqmm in the overall screen.

Manufacturer: beyerdynamic GmbH, Germany  
Type: CA 1502

Connecting cable with PVC outer jacket to connect the MCS components and adapters. 10 m long, flexible cable, in black with 15-pin Sub-D-coupling and connector. 3 x 2 x 0.08 sqmm coiled in the screen, 0.50 and 1 x 0.25 sqmm in the overall screen.

Manufacturer: beyerdynamic GmbH, Germany  
Type: CA 1510

Connecting cable with PVC outer jacket to connect the MCS components and adapters. Flexible cable, length upon request, in black with bare ends. 3 x 2 x 0.08 sqmm coiled in the screen, 0.50 and 1 x 0.25 sqmm in the overall screen.

Manufacturer: beyerdynamic GmbH, Germany  
Type: CA 1500

## TECHNICAL SPECIFICATIONS

### Connections

|                          |  |
|--------------------------|--|
| Mains                    | IEC connector  |
| RS 232 interface         | 9-pin Sub-D socket   |
| Service RS 232 interface | 9-pin Sub-D socket   |
| AF input and AF output   | 3-pin XLR  |
| Microphone Line          | 15-pin Sub-D socket  |
| Display                  | LC-Display 2 x 16 characters   |
| Switch - Button          | ON/OFF-switch<br>one Reset-Button for user specific adjustments<br>one N.o.m-Button<br>one Master-Reset-Button for manufacturer specific adjustments |
| Dimensions (W x H x D)   | 2 U high for desktop or 19" rack mounting;<br>440 x 88 x 310 mm<br>(17.32 x 3.46 x 12.2")  |
| Weight                   | 4850 g (10.69 lb)  |

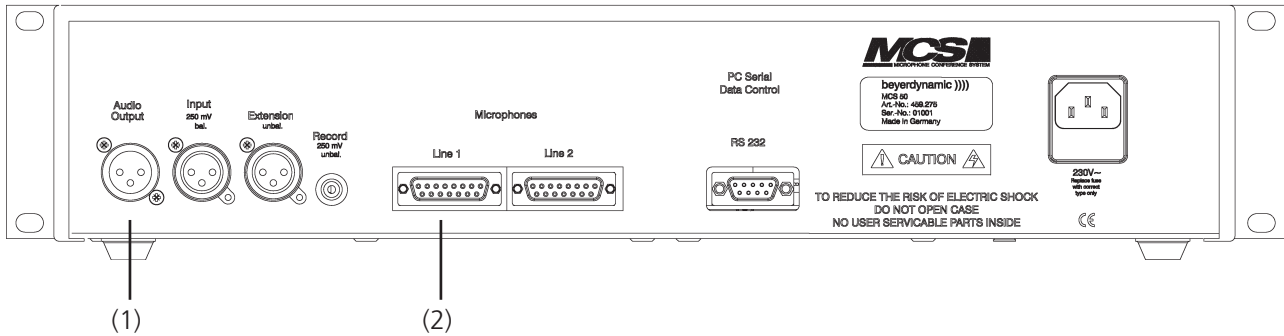
### Power supply units

|                         |  |
|-------------------------|--|
| Mains voltage           | 85 V to 264 V AC (50/60 Hz)                    |
| Output voltage          | +24 V, +5 V, +15 V and -15 V                   |
| Power consumption       | 38 W (MCS 50/32)<br>60 W (MCS 50/64)           |
| Output power at +24 V   | 6 A  |
| Residual ripple         | 150 mVpp                                       |
| Ambient temperature     | 0°C to +50°C                                   |
| Humidity                | max. 90%                                       |
| Protective measurements | overload, short circuit and open circuit proof |

### Audio

|                              |                            |
|------------------------------|----------------------------|
| Frequency response           | 80 Hz to 19,000 Hz         |
| T.H.D.                       | ≤ 1%                       |
| Bass control (shelving type) | ± 12 dB at 150 Hz          |
| Treble control (bell type)   | ± 12 dB at 7 kHz           |
| Power supply                 | +24 V, +5 V, +15 V, -15 V  |
| Power consumption            | 80 mA, 60 mA, 72 mA, 33 mA |

## MCS 50 Rear View



### XLR-plug (1)

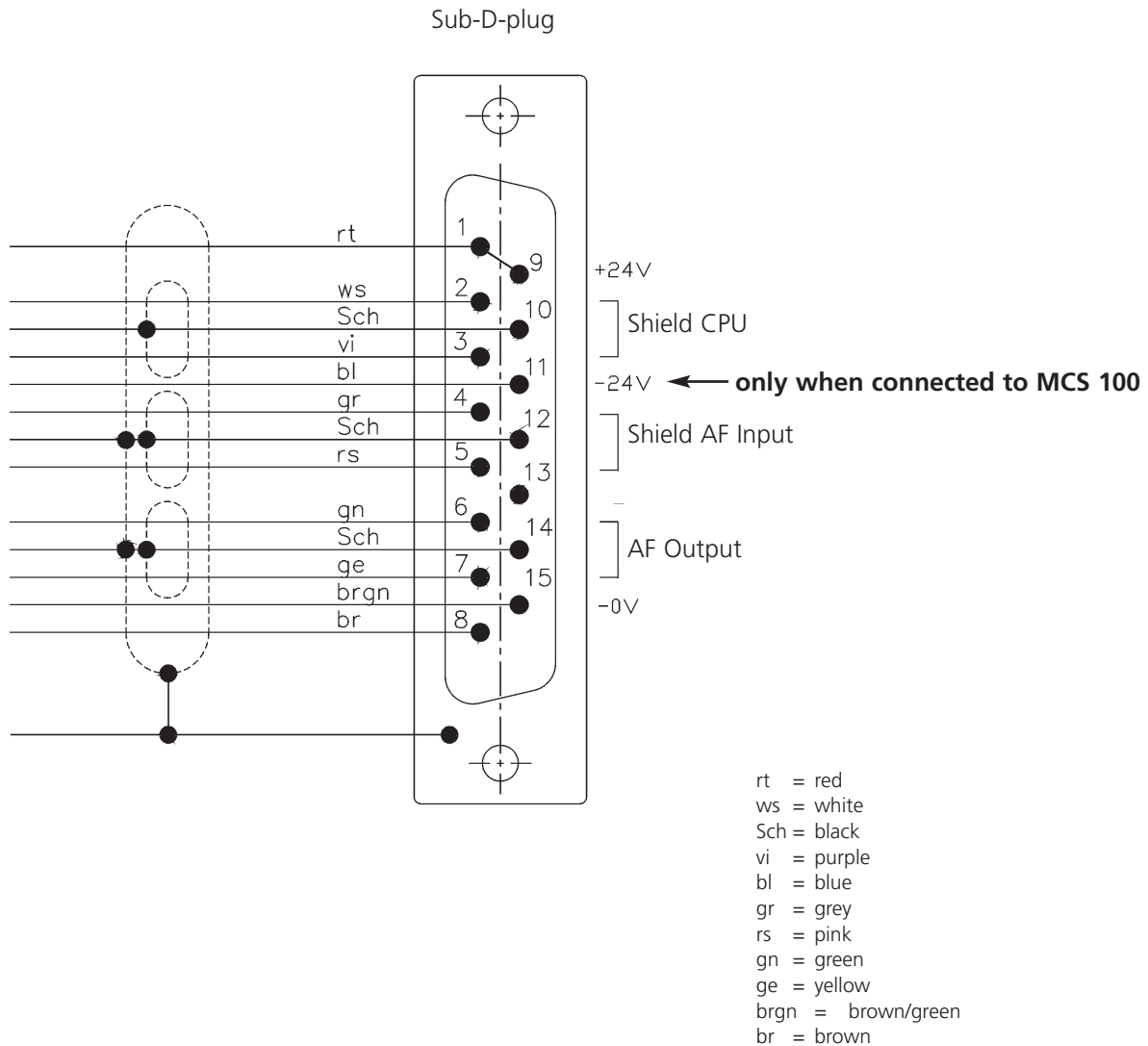
Line-output . . . . . Pin 2+, 3- and 1 screen, balanced, floating, 1.55 V (+6 dBm)

### Microphone Line 1 (2)

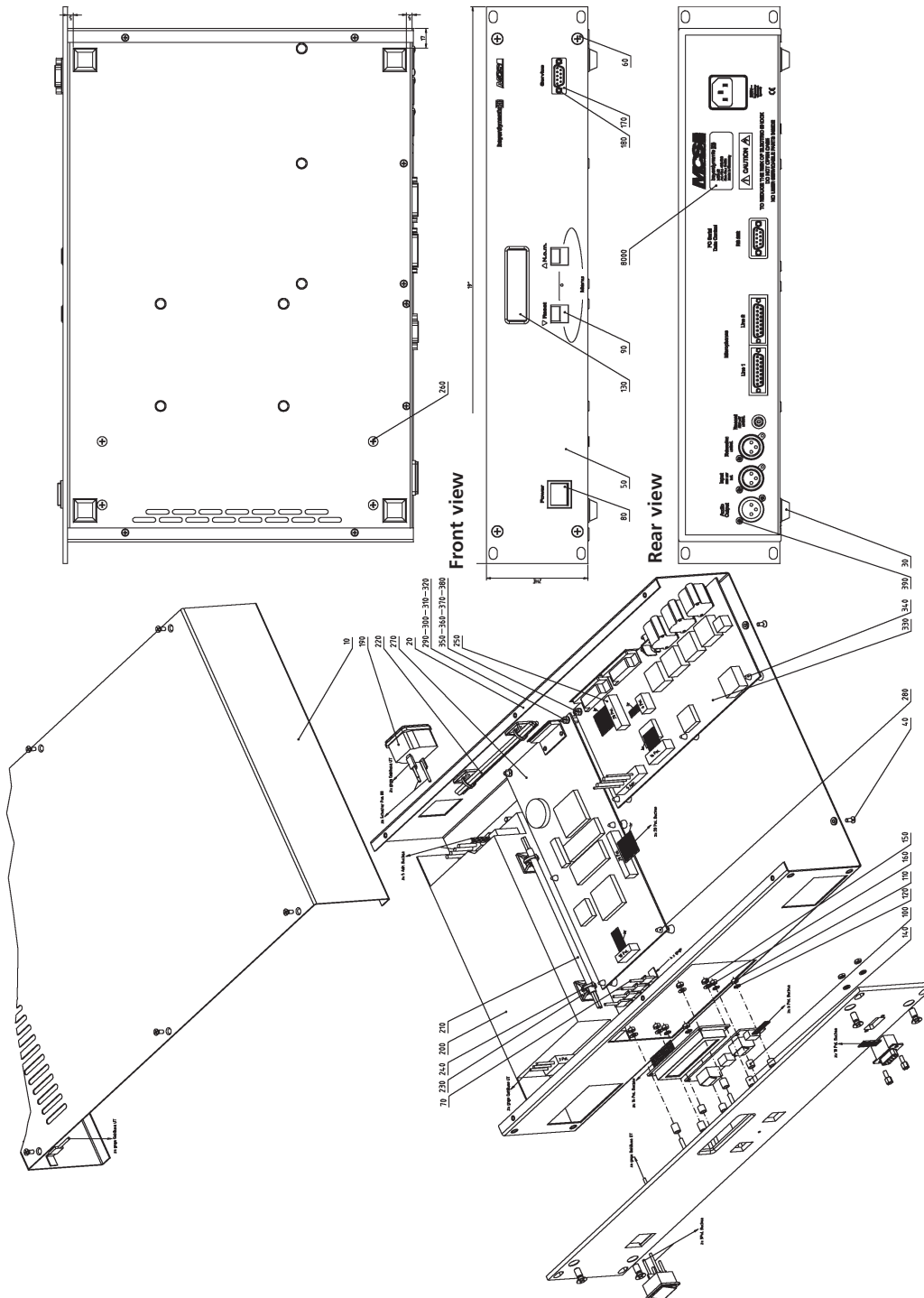
AF-input. . . . . 0 Ohm master, pin 7+, 6- and 14 screen, balanced, floating, adjustable -40 dB

AF-output . . . . . 1.55 V (+6 dBm), Pin 5+, 4- and 12 screen, balanced, floating, adjustable -40 dB  
 Power supply output . . . . . Pin 1 and 9 +24 V, 6 A  
 Data-Bus-line (CPU) . . . . . Pin 2 = A, Pin 3 = B, Pin 10 = screen  
 Max. cable length . . . . . 300 m (328.08 yd)

## CONNECTION SYSTEM CABLE



## EXPLODED VIEW



## SPARE PARTS

| Illu. No. | Part No. | Drawing No.               | Description       |
|-----------|----------|---------------------------|-------------------|
| 10        | 553.093  | BN 17-640/A               | Casing, top       |
| 20        | 553.387  | BN 17-644/A               | Casing, bottom    |
| 30        | 322.881  | Best.-Nr. 544.873 schwarz | Adhesive base     |
| 40        | 391.018  | DIN 965-M 3 x 8           | Countersunk screw |
| 50        | 553.433  | BN 56-990/A               | Front panel       |
| 60        | 503.576  | DIN 965-M 5 x 12          | Countersunk screw |
| 70        | 553.182  | 41 L 07563 600GNGE300     | Wire              |
| 80        | 252.581  | Nr. 1802.0102             | Mains switch      |
| 90        | 535.419  | B 24-635.00-00            | Button panel      |
| 100       | 283.371  | BN 37-36/5,7 (Alt/I)      | Sleeve            |
| 110       | 142.727  | DIN 934-M 3               | Hexagonal nut     |
| 120       | 187.194  | DIN 6797-J 3,2            | Studded disc      |
| 130       | 538.698  | B 24-642.00-00            | LCD-Display       |
| 140       | 231.940  | BN 37-36/7,5 (Alt/I)      | Sleeve            |
| 150       | 142.727  | DIN 934-M 3               | Hexagonal nut     |
| 160       | 284.858  | DIN 125-A 3,2             | Disc              |
| 170       | 538.825  | B 7-660.00-00             | Connecting cable  |
| 180       | 516.791  | 4-40 UNC                  | Threaded bolt     |
| 190       | 552.518  | KES 3SI                   | Appliance inlet   |
| 200       | 554.480  | LEB150F-0524-Z35/SN       | Power supply      |
| 210       | 554.464  | B 21-67.00-00             | Cable form        |
| 220       | 554.472  | B 21-68.00-00             | Cable form        |
| 230       | 545.473  | H 19, 0XB19, 0XD 6,0      | Adhesive base     |
| 240       | 529.834  | PLT.6SM-C B 1,8L 71D0,75  | Cable binde       |
| 250       | 538.833  | B 7-659.00-00             | Connecting cable  |
| 260       | 321.303  | DIN 965-M 4 X10           | Countersunk screw |
| 270       | 554.227  | B 24-640.01-00            | Processor panel   |
| 280       | 551.473  | Best.-Nr. 680096          | Spacing piece     |
| 290       | 391.018  | DIN 965-M 3 X 8           | Countersunk screw |
| 300       | 553.794  | BN 48-141/A               | Spacing bolt      |
| 310       | 143.278  | DIN 137-A 3               | Spring washer     |
| 320       | 142.727  | DIN 934-M 3               | Hexagonal nut     |
| 330       | 553.514  | B 24-698.00-00            | Analogue panel    |
| 340       | 551.473  | Best.-Nr. 680096          | Spacing piece     |
| 350       | 391.018  | DIN 965-M 3 X 8           | Countersunk screw |
| 360       | 553.794  | BN 48-141/A               | Spacing bolt      |
| 370       | 143.278  | DIN 137-A 3               | Spring washer     |
| 380       | 142.727  | DIN 934-M 3               | Hexagonal nut     |
| 390       | 122.424  | DIN 7981-B 2,9 X 9,5      | Sheet metal screw |
| 8000      | 324.264  | 50,00 X 20,00 Al-matt     | Sticker           |
| 9800      | 118.826  | 3 X 0,75                  | Mains cable       |