The MICROS Bump Bar

MBB-10 and MBB-20 User’s Guide

This document describes the MBB features, shows how to adjust the speaker and LED from the keypad, as well as determine the firmware version and how to update if required. Other sections describe how to open the unit and configure the MBB circuit board configuration switches, and to service the unit.

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Introducing the MICROS Bump Bar

The MBB-10 and MBB-20 are shown in the Figure below.

Figure 1: The MBB-10 and MBB-20

- USB Interface - 6ft cable standard.
- Extruded aluminum case /w gasket sealed end caps for spill resistance to IP55 standards.
- Magnetic keys offer improved tactile response over a membrane switch and millions of actuations.
- Blue LED with adjustable brightness.
- Internal speaker with adjustable volume.
- The alpha and numeric keys can be reversed to allow the MBB interface cable to exit from the left or right.
- Order notification through the speaker and LED. Refer to the PMA for specific POS software support.
Template
Each MBB is supplied with a standard template shown in the illustration.

Mounting Brackets
Each MBB is supplied with a quick release mounting bracket that can be mounted to a counter, wall surface or current third party KDS mounting hardware. The MBB-20 bracket hole locations are compatible with the QSR bumpbar for easy replacement. Refer to the MICROS Bump Bar PMA for more information about KDS mounting options.

Adjustable LED and Speaker
The MBB includes an internal speaker that serves two functions. The speaker sounds each time a key is pressed. If supported by the KDS software, the unit can also beep when an new order is received from the KDS controller. The keypress and order notification beep volume can be adjusted independently directly from the MBB keypad.

USB Interface Cable
The MBB-10 and MBB-20 both use a 6 ft. (1.8M) USB Interface Cable. If a longer interface cable is required, you can purchase and install an 11 foot (3.5M) cable, P/N 700503-070. Another option is the Belkin F3U130-16, a 16 ft. USB 1.1 cable extender. The MBB has been tested with two of the extender cables connected to the standard KDS controller. The extender cable (P/N 700503-071) does not require an external power supply.
Adjusting the LED and Speaker from the Keypad

The LED brightness and Speaker volume can be adjusted directly from the keypad at any time. Figure 3, below summaries each adjustment.

![Figure 3: Adjusting the LED and Speaker volume from the Keypad]

Adjusting the LED Brightness
To adjust the LED brightness, press and hold the [1] and [A] keys, then tap the [2] key to cycle through the Off, Normal, and Bright settings.

Adjusting the Keypad Speaker
To adjust the volume, press and hold the [1] and [A] keys, then tap the [B] key to cycle through the Off, Normal, and Loud speaker settings.

Adjusting the Order Notification Beep
To adjust the order notification volume, press and hold the [1] and [A] keys then tap the [3] key to cycle through the Off, Normal, or Loud settings.

Internal Configuration Switches
The MBB circuit board includes two switches that can be set to send lower or upper case characters, or reverse the location of the character and numeric keys for increased mounting flexibility. See Figure 10 for more information. To open the MBB and access the configuration switches, see page 8.
MBB Spare Parts

In addition to a 3.5M USB Interface Cable, several other spare parts are available for the MBB-10 and MBB-20.

USB Interface Cables

Figure 4, below displays the MICROS Part Numbers for the standard 6 foot (1.8M) and optional 11 foot USB cables. Each cable includes a custom molded water resistant strain relief.

See page 8 to open the unit.

<table>
<thead>
<tr>
<th>Length</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Feet</td>
<td>700503-069</td>
<td>CABLE, USB, 1.8 METER, MICROS BUMPBAR</td>
</tr>
<tr>
<td>11 Feet</td>
<td>700503-070</td>
<td>CABLE, USB, 3.5 METER, MICROS BUMPBAR</td>
</tr>
</tbody>
</table>

Figure 4: MBB Upgrade and Replacement USB Interface Cables
Circuit Board, MICROS BUMPBAR - 700364-101
Replacement main board, with firmware. A jumper determines if the board supports the MBB-10 or MBB-20.

![Figure 5: Micros Bump Bar Circuit Board](image)

Bracket, MICROS 20-Key BUMPBAR - 600526-026
Mounting bracket for 20 Key MBB. The hole centers are compatible with current 3rd party KDS mounting hardware. Mounting hardware not included.

![Figure 6: MBB-20 Mounting Bracket](image)
Bracket, MICROS 10-Key BUMPBAR - 600526-025
Mounting bracket for 10 Key MICROS Bumpbar. Mounting hardware not included.

Figure 7: MBB-10 Mounting Bracket

COVER KIT, FLANGE, RIGHT & LEFT, /W SCREWS and GASKETS - 000160-012.
Replacement left and right end caps, with gaskets and hardware.

Figure 8: MBB Flanges, Left-Right
Opening the Micros Bump Bar

The following procedure applies to both the MBB-10 and MBB-20.

1. Be sure to disconnect the USB interface cable from the host KDS controller before you open the unit.
2. Refer to Figure 9 and remove the pair of screws from the side where the cable exits.
3. Pull the flange and USB cable out far enough to expose the circuit board, then continue to pull out the board until the connectors are exposed. **Avoid pulling on the keypad ribbon cable when removing the board.**

![Figure 9: Opening the Micros Bump Bar](image)

- Refer to page 9 to set the internal configuration switches.
- Refer to page 10 to change the USB Interface Cable.
- Refer to page 11 to change the MBB circuit board.
Setting the Internal Configuration Switches

Figure 10 describes the function of the two switches and single 5-pin header on the MBB Control Board.

![MBB Control Board Configuration Switches](image)

**SW1 - Selects Normal or Reversed Characters**

In the Normal position, numeric characters appear in the top row, ascending from left to right. Alpha characters appear in the bottom row ascending from left to right.

SW1 can be set to the ‘Reversed’ position for flexibility when mounting the MBB. The reversed selection places alpha and numeric characters in descending order from left to right.

**SW2 - Selects Upper or Lower Case Characters**

SW2 selects upper or lower case alpha characters. Lower Case is the default.

**J2 - Selects MBB-10 or MBB-20 Configuration**

J2 determines if the board supports the MBB-10 (2x5) or MBB-20 (2x10) format.
**Remove/Replace the USB Cable**

1. Open the MBB case to access the cable as described on page 8.
2. Remove the existing cable from mini-USB Connector J1 and the flange strain relief as shown in the Figure below.

![Figure 11: Replacing the USB Cable](image)

3. Connect the USB Interface cable to J1 and the strain relief in the flange cut-out.
4. See page 12 to reinstall the circuit board and close the MBB.
Remove the MBB Circuit Board

1. Open the MBB to access the main circuit board and USB cable as detailed in Figure 9.

2. Refer to Figure 12, below. Move CN1 to the raised position before removing or inserting the keypad cable.

![Figure 12: Removing/Installing the Keypad Ribbon Cable](image)

3. Remove the USB cable from J1.

4. Remove the configuration jumper from J2 and transfer it to the same position on the new board. As shown in Figure 13, the jumper determines if the board supports the MBB-10 or MBB-20.

![Figure 13: MBB Circuit Board Configuration Jumper](image)

5. Install the USB Interface Cable in J1 and the strain relief in the flange cut-out.

6. Install the Keypad Ribbon cable. With CN1 in the raised position, insert the cable into the connector. Move CN1 to the locked position.
Install the MBB Circuit Board

1. Place the MBB Board in the grooves located at the front and rear of the case, then start to slide the board into the case.

2. As you slide the board into place, make sure the keypad ribbon cable does not become bunched up around CN1. Figure 14 shows the correct position of the keypad ribbon cable.

3. Install the molded strain relief in the flange cutout before reinstalling the flange screws.

Figure 14: Installing the MBB Control Board
## Specification Summary

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyswitch Type</td>
<td>Duraswitch PushGate® keys rated for &gt; 30 million actuations.</td>
</tr>
<tr>
<td>Connectivity</td>
<td>USB 1.1 /w 6 ft (1.8M) Cable</td>
</tr>
<tr>
<td>IP (Ingress Protection) Rating</td>
<td>55</td>
</tr>
</tbody>
</table>
| Dimensions (w/bracket) | MBB-10: 6.22”W x 2.87”D x 1.25”H (158mm x 73mm x 32mm)  
MBB-20: 9.38”W x 2.87”D x 1.25”H (238mm x 73mm x 32mm) |
| Weight (w/bracket)     | MBB-10: 0.90 lbs (0.41kg)  
MBB-20: 1.25 lbs (0.57kg) |
| Environmental           | Operating Temperature: 0°C to 65°C (32°F to 149°F)  
Storage Temperature: -25°C to 80°C (-13°F to 176°F)  
Humidity: 90% relative humidity max |
MBB-20 Bracket Dimensional Drawing

- Hole Dia: 6.35mm (0.250"")
- Mounting Hardware: Not Included
- Standard Cable: 1.8M (6ft)
- 9mm (0.35")
- 48mm (1.88")
- 22mm (0.86")
- 185mm (7.28")
- 238mm (9.38")
- 73mm (2.87")
- 32mm (1.25")
- 20mm (0.78")
- 65mm (2.55")