Product Announcement

SpeechMike Premium series firmware updates for new button modes

- SpeechMike Premium LFH3500/3600 series
- SpeechMike Premium Touch SMP3700/3800 series
- SpeechMike Premium Air SMP4000 series

SpeechControl for Windows 4.1
SpeechControl for Mac 3.4

Wolfgang Spannlang
July 2018
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Dear Speech Processing Solutions partner,

In 2014 the Philips SpeechMike was the first dictation microphone that introduced a keyboard mode to support environments where no additional software installation was possible or required.

With this release, we now further enhance the opportunities by providing up to 6 different preconfigured button modes on the SpeechMike Premium series for Windows, Mac and browser applications.

The new firmware versions will provide an intuitive method to switch between the diverse button modes and for some special use cases it will also be possible to send hot keys and to control the microphone with a single button click.

In addition the new firmware even allows users to send hot keys when a SpeechMike button is pressed and when it is released (e.g. for programming push-to-talk mode).

To increase the backwards compatibility for legacy integrations the SpeechMike Premium Touch SMP3700/3800 series will also include the SpeechMike 2 mode.

On top of that, both SpeechControl for Windows as well as the SpeechControl for Mac software, have been enhanced to support the configuration of the new button modes.

For all SpeechMike Premium devices we will also provide updated Quick Start Guides and User manuals describing the options with the enhanced SpeechMike Premium firmware.

All in all the new firmware versions make the SpeechMike Premium series fit for the future providing great opportunities to continue the successful SpeechMike story on a long term.

Please find below the highlights of the new firmware and software releases.

More details will be available with the corresponding release announcements, which are planned to be sent out in the second week of August 2018.

With kind regards,

Wolfgang Spannlang

Senior Product Manager
Speech Processing Solutions
HIGHLIGHTS

NEW FIRMWARE VERSIONS

With the new firmware versions, we can provide the new custom button modes to our customers.

After updating their firmware, they will be able to benefit from the new options, providing a new flexibility for tailoring the SpeechMike buttons in diverse IT environments.

For the SpeechMike Premium Air the new firmware will also include some small improvements with regards to LED indicators based on customer requests.

The new functions will be provided from following firmware versions onwards:

- SpeechMike Premium LFH 3500/3600 series: FW 2.60
- SpeechMike Premium Touch SMP 3700/3800 series: FW 3.50
- SpeechMike Premium Air SMP 4000 series: FW 4.50

HIGHLY COMPATIBLE - 3 NEW CUSTOM BUTTON MODES

With the three new custom button modes, the SpeechMikes can be used in all potential environments without the need for integration or driver software installation.

The new custom button modes enable users to control their dictation and speech recognition application with the SpeechMike by assigning hotkeys to the programmable SpeechMike buttons according to their individual needs.

For example: for convenient and efficient utilization of speech recognition software you would program the record button to start and stop recording and for editing you would program the Rewind button to mark the recognized text backwards.

In addition to the keyboard mode the new custom button modes also enable to control the SpeechMike microphone + Record LED + the recording application with a single button click – see also The Record LED challenge.

On top of that, users can define to send hotkeys when a button is pressed and when it is released. This enables to even program functions like push-to-talk to the SpeechMike buttons.

The new custom button modes make it possible to use the SpeechMikes on Zero-clients where no driver installation is possible and where the SpeechMike microphone and Record LED has to be controlled via the SpeechMike.

Benefits

- No integration required
- Flexible button programming of audio, application and text navigation commands
- Compatible with most IT environments without driver software installation
PLUG AND PLAY

The 3 new custom button modes contain **3 preprogrammed configurations** enabling plug-and-play functionality for the most common speech recognition applications out-of-the-box:

- Custom 1: Windows speech recognition mode
- Custom 2: Dragon Dictate speech recognition mode (for Mac)
- Custom 3: Dragon speech recognition mode (for Windows)

Users can reprogram the buttons with the new SpeechControl software versions for Windows and Mac in order to tailor the button commands according to their individual needs either for the mentioned or other speech recognition and recording applications.

**Note:** the Custom 2 mode can only be reconfigured in Mac environments with SpeechControl for Mac 3.4

EASY BUTTON MODE SWITCHING

The SpeechMike Premium series now includes up to 6 different button modes. Therefore, it was required to provide an easy and intuitive option to switch between the button modes.

This could be realized by providing a simple two-step approach:

1. Initialize the button switch operation by pressing EOL and INS/OVR simultaneously for 3 seconds (familiar method)
   
   *The LEDs that are close to the buttons will start flashing yellow*

2. Select the appropriate button that represents the intended button mode
   
   *The LED of the selected button will briefly light up.*

**Button assignments**

<table>
<thead>
<tr>
<th>SpeechMike button</th>
<th>Button mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>SpeechMike event mode</td>
</tr>
<tr>
<td>F2</td>
<td>Keyboard mode</td>
</tr>
<tr>
<td>F3</td>
<td>Browser mode</td>
</tr>
<tr>
<td>F4</td>
<td>Custom 1: Windows speech recognition mode</td>
</tr>
<tr>
<td>EOL</td>
<td>Custom 2: Dragon Dictate for Mac mode</td>
</tr>
<tr>
<td>INS/OVR</td>
<td>Custom 3: Dragon for Windows mode</td>
</tr>
</tbody>
</table>

3. To check the selected button mode briefly press EOL and INS/OVR.

   *The LED of the corresponding button mode will light up in yellow.*

**Note:** more information about the button modes and the button assignments will be available in the release announcement and in the updated user manuals.
FUTURE PROOF – BROWSER MODE FOR SMP3700/3800 SERIES

With the new firmware, the **Browser mode** can now also be enabled in the SpeechMike Premium Touch (SMP3700/3800 series).

This will enable users to utilize their SpeechMike Premium Touch as well as the SpeechMike Premium Air in browser-based recorders and speech recognition applications with no need for installing any SpeechMike drivers on the client PC.

More information about the browser mode can be found in this document below.

**Note:** The SpeechMike Premium LFH3500/3600 firmware update will not include the browser mode, but users can reprogram the new **Custom modes** to control browser based recording applications via hotkeys.

SPEECHMIKE 2 MODE FOR SMP3700/3800 SERIES

We have got some few requests to enable the **legacy SpeechMike 2 mode** also in the SpeechMike Premium Touch SMP3700/3800 series.

This shall enable customers to use these devices in environments where no upgrade to the latest SpeechMike drivers and extensions has been done within the last 7 years.

We have learned that this sometimes happens if system administrators do not want to change their running system to avoid any glitches in their working environment.

More information on how to switch to SpeechMike 2 mode will be available in the release announcement.

**Note:** Due to technical limitations of the SpeechMike Premium Air electronic we cannot add the SpeechMike 2 mode to the SpeechMike Premium Air SMP4000 series

ENHANCED SUPPORT FOR MAC ENVIRONMENTS

With the Custom 2 mode the SpeechMike Premium series now includes preprogrammed commands for **Dragon Dictate** for Mac speech recognition software.

With the new SpeechControl for Mac **version 3.4** software, the Custom 2 mode can now also reprogrammed to support the native **Mac Dictation** speech recognition.

**Note:** since **Mac Dictation** requires more sophisticated configuration on both the Mac as well as on the SpeechMike it was not possible to put Mac dictation as a preprogrammed button configuration on the device. However, in the release announcement we will provide detailed descriptions how to reconfigure the Custom 2 mode as well as the speech recognition settings on the Mac to control Mac Dictation with a SpeechMike Premium.

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EASY CUSTOMIZATION WITH NEW SPEECHCONTROL SOFTWARE VERSIONS

SpeechControl for **Windows 4.1**

The Windows version now additionally supports to load and configure all new Windows-based button modes.

It also supports the configuration of the browser mode for the SMP3700/3800 series.

SpeechControl for **Mac 3.4**

From this version onwards, it is now possible to also configure Mac specific keyboard shortcuts to the SpeechMike buttons, which was not possible in earlier versions.

In addition, users can load and configure the new **Custom 2** mode that is preprogrammed with hotkeys for Dragon Dictate for Mac.

For the utilization of **Mac dictation**, users are able to configure their SpeechMike buttons accordingly.

More information on how to do that will be available in the release announcement.

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NEW Firmware Details

The Button Modes

The new SpeechMike Premium series firmware versions provide up to six different button modes:

- SpeechMike event mode (default)
- Keyboard mode
- Browser mode (not for LFH3500/3600 series)
- Custom 1: Windows speech recognition mode
- Custom 2: Dragon Dictate speech recognition mode (for Mac)
- Custom 3: Dragon speech recognition mode (for Windows)

SpeechMike Event Mode

The SpeechMike event mode is the ‘classic’ default button mode with which all SpeechMikes are supplied. All SpeechMikes that have ever been produced have used this mode in integrated solutions like SpeechExec, Winscribe, BigHand and many other dictation or speech recognition applications.

The event mode requires that the SpeechMike is integrated in the recording application. It also requires the installation of driver software on the client PC and the installation of VDI extensions on clients and servers in virtual environments.

Keyboard Mode

The keyboard mode allows controlling recording applications with hotkeys that can be programmed to the SpeechMike buttons. It is preconfigured to control Dragon NaturallySpeaking with keyboard shortcuts, but with the downside that the user has to press two buttons to start a dictation.

For backwards compatibility reasons we had to keep the keyboard mode as is.

Browser Mode (not for LFH3500/3600 series)

This mode is new to the SpeechMike Premium Touch SMP3700/3800 series.

In this mode the SpeechMike Premium sends joystick events to the PC to which the (browser based) application reacts accordingly. Besides keyboard shortcuts joystick events are the only events that can be used in browser environments.

The big advantage of this mode is that no SpeechMike drivers need to be installed on the client computer.

To provide maximum flexibility the Browser mode can also provide a mixture of hotkeys and joystick events. For example: an integrated browser client ‘understands’ the joystick events for record, playback, rewind, etc., but the user also wants to delete backwards by words, which would e.g. be the <Shift+Backspace> hotkey.

In the Browser mode it is also possible to program a button with the internal microphone on/off function in addition to a Joystick event or a hotkey if the USB audio stream for the microphone has to be kept open. More information about the advantages of this feature can be found in the chapter: The Record LED challenge

Switching the SpeechMike to the Browser mode can be done with a hotkey on the device, or via the SpeechControl software, which can also be used to program the SpeechMike buttons according to individual needs.

**IMPORTANT:** In Browser mode the SpeechMike uses different USB identifiers than in all other button modes. This is important for integrators, because for possible browser controls a new ‘integration’ is required.

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CUSTOM MODES 1-3

The new Custom modes are perfect for controlling applications in browser environments, zero clients or where no SpeechMike integration has been done.

Compared to the keyboard mode the Custom modes additionally allow sending a hot key to the recording application and control the microphone + the Record LED and with a single button click.

More information about the advantages of this option can be found in the chapter: The Record LED challenge.

Additionally the Custom modes enable to send hotkeys at ‘button pressed’ and ‘button released’ events, which allows to realize push-to-talk dictation or similar functions even when no SpeechMike integration has been done.

Equal to the keyboard mode the custom modes do not require any driver software installation.

The custom modes come with three preprogramed configurations:

- Custom 1: Windows speech recognition mode
- Custom 2: Dragon Dictate speech recognition mode (for Mac)
- Custom 3: Dragon speech recognition mode (for Windows)

This allows users to work with the corresponding applications out-of-the-box without installing any drivers or configuration software.

More information on default button assignments will be available with the release announcement and in the corresponding user manuals.

BUTTON MODES OVERVIEW

Below you can find an overview about the available button modes in diverse SpeechMike editions.

<table>
<thead>
<tr>
<th>Edition</th>
<th>Event mode</th>
<th>Keyboard mode</th>
<th>Browser mode</th>
<th>Custom 1 Windows speech recognition mode</th>
<th>Custom 2 Dragon for Mac mode</th>
<th>Custom 3 Dragon for Windows mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>SpeechMike III LFH3200/3300 series</td>
<td>X</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>SpeechMike Premium LFH3500/3600 series</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>FW2.60</td>
<td>FW2.60</td>
<td>FW2.60</td>
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<tr>
<td>SpeechMike Premium Touch SMP3700/3800 series</td>
<td>X</td>
<td>X</td>
<td>FW3.50</td>
<td>FW3.50</td>
<td>FW3.50</td>
<td>FW3.50</td>
</tr>
<tr>
<td>SpeechMike Premium Air SMP4000 series</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>FW4.50</td>
<td>FW4.50</td>
<td>FW4.50</td>
</tr>
</tbody>
</table>

X already in FWx.xx...available estimably from week 34 ´18 onwards

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SPEECHMIKE 2 MODE FOR SMP3700/3800 SERIES

The SpeechMike 2 mode is an operation mode that simulates a connected SpeechMike 2 to the recording application.

From the new V3.50 firmware onwards the SpeechMike Premium Touch SMP3700/3800 series will also support the SpeechMike 2 mode.

In the SpeechMike 2 mode the SpeechMike Premium Touch only provides SpeechMike 2 functionality to the recording application.

Notes:

- Please be aware, that in SpeechMike 2 mode users can neither do firmware upgrades nor switch to any other button modes.
- New buttons like the 'i-' button are not supported in SpeechMike 2 mode, because they were not available in the SpeechMike 2.
- Due to technical limitations of the SpeechMike Premium Air electronic we cannot add the SpeechMike 2 mode to the SpeechMike Premium Air SMP4000 series.

The table below shows which devices will be including the SpeechMike 2 mode:

<table>
<thead>
<tr>
<th>Device</th>
<th>SMII mode</th>
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</thead>
<tbody>
<tr>
<td>SpeechMike III LFH3200/3300 series</td>
<td>X</td>
</tr>
<tr>
<td>SpeechMike Premium LFH3500/3600 series</td>
<td>X</td>
</tr>
<tr>
<td>SpeechMike Premium Touch SMP3700/3800 series</td>
<td>FW3.50</td>
</tr>
<tr>
<td>SpeechMike Premium Air SMP4000 series</td>
<td>-</td>
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</tbody>
</table>

*X already in FWx.xx...available from week 34 ´18 onwards*

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THE RECORD LED CHALLENGE

If a SpeechMike is **fully integrated** into a recording application the **microphone** as well as the **Record LED** are controlled by the application. Utilizing the **SpeechMike event mode** the SpeechMike microphone and the LEDs just react on commands that are sent to the SpeechMike by the recording application over the (SDK) interface.

However, if the SpeechMike is **not integrated** into the recording application (e.g. Dragon NaturallySpeaking), or if no SpeechMike driver software can be installed (e.g. on Zero clients), or if the user is working in browser environments the recording application cannot control any of the SpeechMike functions over the SDK interfaces.

The user has to switch to one of the new **Custom modes** and to **control** the recording **application** via **hot keys**.

Now, when users start recording in these environments they expect, that the **Record LED lights up** when the recorder is **in record mode** and that it is **turned off** if the recorder is **not recording**.

Since the recording application cannot control the SpeechMike Record LED in these environments the SpeechMike has to do that on its own.

We realized that by watching whether the microphone USB audio channel is opened or closed which is usually done by the recording application. If the microphone USB audio channel is open the Record LED will light up and if it is closed it would be turned OFF.

**The challenge**

Some applications or some environments do not close the USB audio channel, even if the recorder is switched off.

In this case, the Record LED would always be turned **ON** and the users would be confused, because they do not see the real record status of the recording application on the SpeechMike.

We have experienced this behavior in some Dragon NaturallySpeaking installations and in some browser-based applications were a fast switching of USB audio channels is not possible.

**The solution**

To control the **Record LED** on the SpeechMike the user can program to switch on and off the SpeechMike microphone whenever sending a start or stop recording hotkey to the recording application.

By doing this the microphone USB audio stream is opened on the device and the Record LED lights up when recording is started and the Record LED is turned off when recording is stopped.

**Note:** it might happen that users confuse this behavior by pressing record start and stop on the recording application instead of the SpeechMike. Then the SpeechMike microphone and the Record LED will come out of sync with the recording application. To synchronize the SpeechMike with the recording application again just press record start or record stop once in the recording application.

If possible, it would be even better to disable the record start and stop button in the recording application user interface, which would avoid that the SpeechMike comes out of sync.
# SPEECHMIKE FEATURE LIST AND FEATURE COMPARISON LIST

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<tbody>
<tr>
<td>Button/slider</td>
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<td>Control Elements</td>
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<tr>
<td>Primary dictation controls</td>
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<tr>
<td>Fast Rewind button</td>
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<td>Play/Stop button</td>
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<td>End Of Letter /Priority (EOL) button</td>
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<td>Insert/Overwrite button</td>
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<td>Mouse functions</td>
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<td>Trackball</td>
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<tr>
<td>Trackball/Touchpad key</td>
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<tr>
<td>Right mouse button</td>
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<tr>
<td>Left mouse button top side</td>
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<tr>
<td>Left mouse button rear side (trigger)</td>
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<td>Pick&amp;drop for left mouse button function</td>
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<td>✓ (OFF)</td>
<td>✓ (ON)</td>
<td>✓ (OFF)</td>
<td>✓ (ON)</td>
<td>✓ (OFF)</td>
<td>✓ (ON)</td>
<td>✓ (OFF)</td>
<td>✓ (ON)</td>
<td>✓ (OFF)</td>
<td>✓ (ON)</td>
<td>✓ (OFF)</td>
<td>✓ (ON)</td>
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<tr>
<td>Scroll wheel via F-keys</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
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<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
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<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
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<td>Other Functions</td>
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<tr>
<td>ON/OFF button</td>
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<td>COMMAND button</td>
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<tr>
<td>Barcode scanner</td>
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<tr>
<td>Volume Control - via touchpad or trackball</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Full Duplex audio data transfer</td>
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</tr>
<tr>
<td>Motion control (mic or rec status)</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
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<td>✓ (OFF)</td>
<td>✓ (OFF)</td>
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### Function Elements

#### SpeechMike version

<table>
<thead>
<tr>
<th>Type no.</th>
<th>Premium Air</th>
<th>Premium Air</th>
<th>Premium Touch</th>
<th>Premium Touch</th>
<th>Premium Touch BC</th>
<th>Premium Touch BC</th>
<th>Premium</th>
<th>Premium</th>
<th>Premium</th>
<th>III</th>
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<tr>
<td>SMP4000</td>
<td>Button</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Button</td>
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<td>Slider</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Slider</td>
</tr>
</tbody>
</table>

#### Function keys

- Function key 1 + LED
- Function key 2 + LED
- Function key 3 + LED
- Function key 4 + LED

#### Operation modes

- SpeechMike 3 mode
- SpeechMike 2mode

#### Button modes

- SpeechMike event mode
- Dragon mode (Windows) – Custom 1
- Windows speech recognition mode – Custom 2
- Dragon Dictate (Mac) – Custom 3
- Keyboard mode
- Browser mode

#### Microphone

- Free floating microphone suspension
- Metal microphone grille with hexagonal openings
- Integrated pop filter
- Unidirectional capsule

#### Other function elements

- Loudspeaker Ø 30 mm
- Record LED (red/green/yellow)
- Insert/Overwrite LED (red/green/yellow)
- Command/Instruction LED (red/green/yellow)
- Anti skid bottom elements
- Battery status indication LED (red/green/yellow)
- Connection LED (red/green/yellow)
- Haptic connection loss indication (vibration alarm)

#### Connectors

- Micro USB connector for emergency charging
- Mini USB connector for PC connection
## SpeechMike new button modes

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Type no.</td>
<td>SMP4000</td>
<td>SMP4010</td>
<td>SMP3700</td>
<td>SMP3710</td>
<td>SMP3800</td>
<td>SMP3810</td>
<td>LFH3500</td>
<td>LFH3510</td>
<td>LFH3520</td>
<td>LFH3200</td>
<td>LFH3210</td>
<td>LFH3220</td>
</tr>
<tr>
<td>Button/slider</td>
<td>Button</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Slider</td>
<td>Button</td>
<td>Slider</td>
<td>Slider</td>
</tr>
</tbody>
</table>

### Wireless functions

- **Quick & Easy pairing**
  - ✓ ✓ n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.
- **Wireless connection up to 5m**
  - ✓ ✓ n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.
- **Gesture control (find docking station)**
  - ✓ ✓ n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.
- **Wireless charging**
  - ✓ ✓ n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.

### Built in Hot Keys

- **Disable/enable microphone mute motion control (F2+F4, 5s)**
  - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ - - -
- **Disable/enable mouse functions (left+right mouse button, 5s)**
  - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
- **Button mode switch (EOL+INS/OVR, 3s + button selection)**
  - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
- **SpeechMike 2 mode toggle (F1+F3, 5s)**
  - - - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

Changed options compared to the predecessor firmware are marked in **orange**
AVAILABILITY

The release of the new firmware together with the new SpeechControl software versions is planned for mid of August 2018.

ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>Barcode</td>
</tr>
<tr>
<td>EOL</td>
<td>End of Letter</td>
</tr>
<tr>
<td>DNS</td>
<td>Dragon Naturally Speaking</td>
</tr>
<tr>
<td>DPM</td>
<td>Digital Pocket Memo</td>
</tr>
<tr>
<td>DSS</td>
<td>Digital Speech Standard</td>
</tr>
<tr>
<td>LED</td>
<td>Light Emitting Diode</td>
</tr>
<tr>
<td>MDC</td>
<td>Philips Master Digital Center</td>
</tr>
<tr>
<td>MDCi</td>
<td>Philips Master Digital Center Integrator</td>
</tr>
<tr>
<td>MDCE</td>
<td>Philips Master Digital Center Enterprise</td>
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<tr>
<td>PPT</td>
<td>Microsoft PowerPoint</td>
</tr>
<tr>
<td>PRDM</td>
<td>Philips Remote Device Management tool</td>
</tr>
<tr>
<td>SPS</td>
<td>Speech Processing Solutions</td>
</tr>
<tr>
<td>SDK</td>
<td>Software Development Kit</td>
</tr>
<tr>
<td>SM</td>
<td>SpeechMike</td>
</tr>
<tr>
<td>UI</td>
<td>User Interface</td>
</tr>
<tr>
<td>USB</td>
<td>Universal Serial Bus</td>
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</table>

July, 2018

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Author: Wolfgang Spannlang

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