WIRELESS MICROPHONE FACE-OFF
Philips SpeechOne, Sennheiser Presence UC, Sennheiser MB Pro UC, Philips SpeechMike Premium Air (Wireless)

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Introduction:
Attempting to select the best wireless headset microphone for speech recognition is nothing short of a daunting task because there are so many excellent choices. For obvious reasons, this review does not cover every wireless headset microphone that can be used for speech recognition but we have spent several years compiling this information from the most popular speech recognition forums like the KnowBrainer Speech Recognition Forums and working directly with numerous microphone manufacturers. The following review consists of 3 parts:

(1) My personal take on the evolution of speech recognition microphones

(2) The Pros and Cons of what a general consensus of many top speech recognition experts believe to be the top seven wireless headset speech recognition microphones

(3) My personal assessment of what the numbers mean

If you wish to skip past the brief microphone history, click Pros and Cons. If you wish to skip further ahead to my conclusions, click recommendations.

Note that while only one of these microphones could achieve the 1st place overall rating, each is still an excellent choice for speech recognition.

Evolution of Speech Recognition Microphones
When we first began using DragonDictate speech recognition software in the 1980’s it seemed to be incredibly impressive technology. Never minding the very deliberate pause after each and every word, we waited with baited breath to see another (hopefully correct) word miraculously appear on our somewhat blurry little screens. It was fun! It was frustrating! It was not very practical. Back then, the couple of wired headset microphone choices available to us were more than adequate.

In 1996, NaturallySpeaking continuous speech recognition was released. With the emergence of this new technology, we had a viable tool for professional as well as personal use. That being the case, we needed microphones designed to better utilize this increasingly more sophisticated software. Microphone manufacturers responded. They designed wireless systems. They designed combination headset microphones that could additionally be used with cell phones, landlines and even hydraulic lifters which picked up our handsets for us. While noise canceling and accuracy continued to improve, ultimately many of us still were not happy with our headset microphones, finding them to be rather inconvenient and/or uncomfortable. Physicians and other professionals were often forced to don and then remove their headsets every few minutes, between patients or clients. Other end users, needing to take verbal notes while talking on the phone, put their callers on hold, which was both inefficient and impolite.

While microphones such as the Philips SpeechMike Premium (LFH-3500) USB Handheld/TableMike now allow concurrent use of both a microphone and a telephone, they don’t solve all problems for all end users. Some of us simply need to cut the cord. Fortunately, microphone manufacturers have also been busily designing high quality wireless microphones.

A wireless headset microphone just might be your best option if:

- You don’t like to be tethered to your computer
- You are tired of the wheels of your chair severing your headset cable
- You need to keep both hands free
- You are tired of pushing the microphone cable out of your way

**Pros & Cons**
**SpeechOne PSM6000 Headsets**

MSRP: $589 ($429 Street price)

Accuracy: 100% (quiet) 99.5% (moderately loud environment)

Noise Cancellation: 10 out of 10

Overall Rating: 10 out of 10

**SpeechOne Pros:**

- Excellent noise cancellation
- Professional grade hardware
- Exceptionally high quality lossless wireless transmission
- 12 hours runtime
- Expander pad to position the speaker away from your ear (for comfort)
- 2 different wearing styles
- Antimicrobial surface
- Replaceable magnetic ear pads and speaker pad
- Very high quality sound for playback
- Includes bright indicator light (green on/red off)
- The best wireless headset on the market
- Optional portable AirBridge dongle for notebook and tablet computers
- 1 year manufacturer warranty

**SpeechOne Cons:**

- Expensive
- 16 foot minimum wireless range

**Philips SpeechMike Premium Air SMP4000**

MSRP: $395 - $409 (wireless)

Accuracy: 100%

Noise Cancellation: 8 out of 10

Overall Rating: 10 out of 10

**Philips SpeechMike Premium Air Pros:**

- 100% Accuracy
• Doubles as a desktop TableMike that can be used from a distance of up to 4 feet when combined with the
• Recipient of Nuance’s highest 6 Dragon rating
• Very well constructed including lots of informative lights
• More sensitive than any other handheld microphone (longer-range)
• Improved signal-to-noise ratio
• Jar/bump free-floating decoupled microphone element
• Antimicrobial housing
• 12 hour battery life
• Like the PowerMic III, the SpeechMike Air allows you to program any Dragon factory or end-user commands into the programmable buttons.
• Built-in touchpad
• Largest playback speaker in its class
• Automatic microphone mute when setting on a flat surface
• Integrated pop filter
• Auto volume control (increases or decreases volume input as you move closer or away from the microphone)
• 1 year manufacturer warranty

**Philips SpeechMike Premium Air Cons:**

• None

**Sennheiser MB Pro1&2 UC (Bluetooth)**

MSRP: $209/$219
Accuracy: 100%
Noise Cancellation: 8 out of 10
Overall Rating: 9 out of 10

**Sennheiser MB Pro1&2 UC Pros:**

• The Best bluetooth microphone we have tested
• **15 Hour battery**
• Wideband bluetooth
• Doesn’t require AC power
• **Includes Pre-paired Bluetooth USB dongle**
• 75 foot range
• Bluetooth also works exceptionally well on cell phones
• Pictorial Dragon step-by-step setup guide (KnowBrainer exclusive)
• Optional AC charger (KnowBrainer exclusive)
• Comfortable traditional headset style
• 1 year manufacturer warranty

**Sennheiser MB Pro1&2 UC Cons:**

• Noise filtering could be a little better

**Sennheiser Presence UC** (Bluetooth)

MSRP: $199
Accuracy: 99%
Noise Cancellation: 7 out of 10
Overall Rating: 8 out of 10

**Sennheiser Presence UC Pros:**

• The 2\textsuperscript{nd} best bluetooth microphone we have tested
• Wideband bluetooth
• The only KnowBrainer approved low-profile Bluetooth headset
• Doesn’t require AC power
• Includes Pre-paired Bluetooth USB dongle
• Very Light weight (low-profile)
• Inexpensive
• 75 foot range
• Bluetooth also works exceptionally well on cell phones
• Pictorial Dragon step-by-step setup guide (KnowBrainer exclusive)
• AC charger (KnowBrainer exclusive)
• 1 year manufacturer warranty

**Sennheiser Presence UC Cons:**

• Noise filtering could be a little better
Conclusions

We formally recommended UHF entertainer nearly wireless microphones like Nady, Sennheiser, Shure and Samson which have been around since the late 90s. While these microphones were designed exclusively for entertainers, they worked well for speech recognition but are expensive, not designed for speech recognition and require an AC outlet. Fortunately Philips and Sennheiser have met and exceeded that challenge by creating wireless headset microphone specifically for speech recognition.

1st Place ~ SpeechOne (Click to See)

On the downside, the SpeechOne is the most expensive wireless headset we have ever tested what if you don’t mind the price and you can’t settle for anything but the best, this microphone takes 1st place. Noise cancellation exceeds all other wireless microphones including 99.5% accuracy in a moderately to noisy environment. Rather than Bluetooth, Sennheiser introduced its own version of high quality lossless wireless transmission, which we found to be slightly better over Bluetooth. When you see and touch this microphone, you could feel the professional grade hardware and the magnetic speaker and headset pads of far more comfortable than the MB Pro1. This microphone includes additional perks such as an indicator light in AirBridge USB dongle (optional) for portability. Note the AirBridge USB dongle is the same quality as a base station but isn’t due to be available until May 15, 2019.

Additional manufacturer information available at https://www.usa.philips.com/

2nd Place ~ Sennheiser MB Pro1&2 UC Bluetooth (Click to See)

Accuracy is extremely good but the SpeechOne took 1st place because of the increased noise filtering. The MB Pro1/2 includes a choice of 1 or 2 speakers (for playback) and is extremely portable (doesn’t require an AC outlet or base station. It is also inexpensive. The MB Pro1/2 features ease-of-use, Bluetooth connectivity, 15 hour battery (that’s no typo) 100% accuracy, completely wireless, and doubles as a high quality cell phone microphone, at the flick of the headset toggle. If wireless connectivity, cost, extreme
portability and decent comfort (notebook and tablet computer use) are important to your workflow, we believe the MB Pro1/2 would be the best microphone choice.

Additional manufacturer information available at http://en-us.sennheiser.com/

3rd Place ~ Philips Premium SpeechMike Air (Click to See)
This microphone is the only wireless handset and only made this list because it is wireless. On the upside, it uses the SpeechOne technology and features the same accuracy but not as noise filtering. This is the perfect microphone if you want programmable buttons which is a classic for physicians and you can use the same microphone on multiple computers. Note the AirBridge USB dongle is the same quality as a base station but isn’t due to be available until May 15, 2019.

Additional manufacturer information available at https://www.usa.philips.com/

4th Place ~ Sennheiser Presence UC Bluetooth (Click to See)
The Presence UC features low-profile, ease-of-use, built-in Bluetooth soundcard, 99% accuracy, comfort, true wireless connectivity and powers up in under 2 seconds (including inserting the miniature headset into your ear) and doubles as an awesome cell phone microphone. If wireless connectivity, cost, low-profile and extreme portability (notebook and tablet computer use) are important to your workflow, we believe the Presence UC would be the best microphone choice.

Additional manufacturer information available at http://en-us.sennheiser.com/

Previous Reviews:

If you would like to see some of our previous reviews check out the following:

KnowBrainer TableMike Face-Off
KnowBrainer Handheld Microphone Face-Off
KnowBrainer Headset Microphone Face-Off
KnowBrainer Telephone Microphone Face-Off
KnowBrainer Digital Recorder Face-Off
KnowBrainer Wireless Headset Face-Off
KnowBrainer USB Soundcard Face-Off

Current Gold Standards:

The following is a list of microphones, USB soundcards and digital recorders that we consider to be #1 in their respected categories:

Best Wireless Microphone = Sennheiser MB Pro1 UC & MB Pro2 UC (Bluetooth)
Best Combo Telephone Wireless Microphone = Sennheiser SD Pro1
Best Handheld USB Microphone = Philips SpeechMike Premium (LFH-3500)
Best USB TableMike = SpeechWare 3-in-1, 6-in-1 & 9-in-1
Best Wired Headset Microphone = FlexyMike DEC
Best USB soundcard = SpeechWare MultiAdapter
Best Mobile Bluetooth Microphone = Philips SpeechOne
Best Digital Recorder = Olympus DS-9500
Best Speech Recognition Application = Dragon Professional 15
Best Dragon Command Utility = KnowBrainer 2017

Lunis Orcutt - Developer of KnowBrainer 2017 (see What Is KnowBrainer) and founder of KnowBrainer Speech Recognition Forums (the world’s largest speech recognition forum)
Chat Live w/ a Nuance Gold Certified Speech Recognition Solutions Provider