Speech Recognition Solutions

Microphone Selection Guide

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Providing a microphone to match your needs is what Speech Recognition Solutions is all about. While you can learn more on our individual product pages, this guide is intended to give you a 30,000 ft. view and help you narrow down the search. For a quick overview of our most recommended microphones based on category or price range, skip to our section of "Quick Recommendations".

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Introduction: The Search for High Levels of Accuracy

While efficiency and ease of text creation may be the main driver for most speech recognition software users, absent an acceptable level of accuracy, true productivity enhancement may be lost. High levels of accuracy depend upon a number of factors, some related to the user and some related to hardware and software. The most important determinants of accuracy in decreasing order of importance are:

1. Dictation style (careful enunciation; speaking in phrases or complete sentences)
2. Lack of contaminating external noise
3. **High quality microphone**
4. High quality sound card
5. Computer with needed RAM and processor speed

While a high-quality microphone is not on the top of the list, absent a good microphone you will not see the highest attainable accuracy. This turns out to be particularly important when dictating in

environments with significant contaminating noise. It turns out that the difference between low cost and high cost mics is not particularly noticeable in a totally quiet environment. It is the external noise rejecting qualities of a mic that truly set it apart.

At the end of the day, your choice of a microphone is very dependent upon both your dictating environment and other factors critical to your use. Important considerations include:

1. The purpose of your dictation and the need for it to be free of errors from the start
2. The extent of contaminating noise in your dictation environment
3. The strength of your voice
4. Logistical considerations based on physical disabilities
5. Preferences in terms of microphone style (headset, desktop, hand-held, wireless or not)

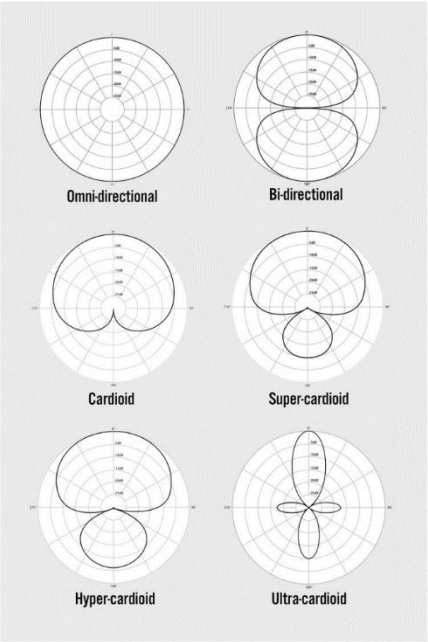
This guide has been created to help you better understand what products are out there and which will best meet your needs and finances.

Microphone and Sound Card Basics

Microphone Considerations

Microphone Element: In the simplest terms, a microphone is a transducer - it converts acoustic or sound energy into an equivalent electrical energy. Virtually all of the commonly used microphones employed with personal computers are termed electret microphones and operate by using a permanently electrically charged material which alters its voltage when deflected by sound waves. Generally, such microphones include a very small "pre-amplifier" to boost this signal and which requires application of a small external voltage. The alteration of voltage caused by sound waves (an analog type signal) travels into your PC sound card or external sound card and is converted into a digital signal which is interpreted by your PC software.

Microphone Polar Pattern: While in some situations it may be beneficial for a microphone to pick up sounds in all directions, for speech recognition software users, the ideal microphone will pick up sound coming only from the direction of your mouth. Microphones vary in their level of directionality and this is typically referred to as the "polar pattern" of the microphone.



- In general, microphones employed in headset microphone come under the category of "cardioid", "super-cardioid", or hypercardioid", all of which infer that the microphone preferentially accepts sounds immediately in front of the element and not so much from the sides or behind the microphone.
- Desktop microphones, particularly when based upon a performer's hand-held microphone, can vary tremendously depending upon the design of the mic. It is critical, therefore, that you pick a microphone with one of the "cardioid" type patterns and not an omnidirectional mic which accepts sound from all directions.

Microphone Type: There are, in addition, a variety of microphone types based on the outward design of the microphone:

- Wired headset microphones: these are the most common mics and tend to provide the most value for the dollar. Their big advantage is leaving your hands free for typing and other computer activities
- Wireless microphones: For those with the need or desire to be "untethered" to the computer, wireless microphones provide this benefit. There are wireless headsets and wireless hand-held microphones. In general, there are compromises when going wireless. Connections issues sometimes occur. It is necessary to keep the battery charged. With few exceptions, there is usually a small loss in signal fidelity when going wireless. All wireless microphones use some form of "compression" of the signal to facilitate transfer and ideally you should seek one that uses "lossless" technology.
- Handheld microphones: handheld microphones offer the advantage of not needing to be worn. Another big plus is the presence of buttons which can be programmed to control the microphone on/off function, navigate through fields on a document, and a variety of other functions that can be programmed to a button push. These can be valuable productivity enhancers.
- Table-mounted microphones: although a desktop microphone takes up valuable real estate on your desk, they offer the advantage of being neither worn nor held. Older desktops suffer the issue of requiring the user to be within 3-4 inches of the microphone element which leaves you somewhat of a captive of the microphone, some newer desktops offer auto-gain technologies and advanced digital signal processing which make use from greater (and variable) distances entirely practical.

USB versus non-USB connection to your computer

All microphones create an analog signal which needs to be converted to a digital signal for use with your computer software. The important questions are 1) where this happens and 2) how this happens. In terms of where, the analog to digital conversion can happen within the structure of the microphone, in a device that that serves as an interface between an analog microphone and a USB port on your computer, or with your computer's on-board sound card. How this happens gets extremely complicated and delves into issues of sampling rate, digital signal processing and lots of issues which go way beyond the scope of this guide.

There are three main advantages to using either a microphone that includes its own analog to digital converter (and interfaces via USB) or an external USB sound adapter:

1. The external USB Sound Adapter accomplishes the process outside of the "electrically loud" environment of your personal computer and theoretically this may improve the quality of the process.
2. External sound adapters are specifically designed for use with pc microphones are more apt to provide the correct voltage for your microphone and provide more predictably good results
3. The use of an external sound adapter makes it more practical to move a voice profile from one computer to another and get predictably similar results, because both the user files and sound converting device are being moved.

The bottom line is that use of an external sound conversion device (adapter) is not essential but is highly recommended. Many of the microphones described in this guide do the conversion internally and this is a predictably good way to go. If your microphone needs lead you in the direction of a purely analog device, we recommend purchasing an external USB sound adapter and interfacing your microphone to your computer with this adapter. You can read more about these devices near the bottom of this guide.

Our Rating System

Comparing microphones is a difficult task as objective criteria for such comparisons are difficult if not impossible to develop. Further complicating matters is the likely variability of microphones based on dictation environment, user voice qualities, dictation style, and computer. What we have used to develop our rating for each microphone is admittedly somewhat subjective and is based on a series of factors, including:

- our own experience in using these microphones*
- feedback from customers
- comments and evaluations posted on on-line forums
- ratings provided by other microphone dealers

We will provide relative rating of microphones using a scale of 1-5, with 5 being the best, and shown visually as follows:

*Our true "proving ground" for the quality of a microphone is our experience on a busy and noisy hospital ward. In significantly quieter environments the differences between microphones can be expected to be somewhat less.

Quick Recommendations

Without knowing the specifics of your situation, it's a pretty good bet you are here because you are wondering how you can make speech recognition work for you ... or work better. You want to make a smart decision and get the best value for your dollar. And you'd like to know that there wasn't another product you SHOULD have considered. Let us take the liberty of simplifying things for you. As full-time users of speech recognition software for more than a decade and with more than a decade of experience catering to the needs of speech recognition users, we have learned what works and what doesn't.

Shown below are some of the most common scenarios presented to us and, in our opinion, the best solutions. Please read further before making a decision and browse the entire guide … but consider the following a good place to start.

Inexpensive Replacement: Are you using Dragon non-mission-critical dictation but lost the microphone that came with your product and looking for an inexpensive replacement? Check out the Andrea NC181 or the Cyber Acoustics AC104 (one speaker) and AC204 (two speakers). They're comfortable, durable, inexpensive, and work fine. You can review other entry level microphone on our Microphone Selection Guide: Entry Level Microphones Page.

Cost effective upgrade: Looking to upgrade from the microphone that came with Dragon but have a limited budget? Consider any of our mid-level headset microphones, such as the Andrea ANC 700 or ANC 750, or the Sennheiser SC630 or SC660. These products are a step up from the mic coming with your software and offer a significant improvement in the accuracy and external noise rejection without emptying your wallet.

Best Wired Microphone: Looking for the highest quality wired microphone? Money not a major limitation? See Microphones for Advanced Users . Our most highly recommended headset microphone

is the SpeechWare FlexyMike Dual Ear Cardioid. The newest, third-generation version provides absolutely stunning results with Dragon and other audio applications. Combine this microphone with the SpeechWare USB MultiAdapter and you will have only your dictation style to blame for any errors!

Best Wireless Headset Microphone for computer use only: If you absolutely want the best headset to use with your computer, look into the Philips SpeechOne. This is an expensive but exquisitely performing headset using lossless wireless technology and connects to your PC with a wireless connection to either the supplied USB connected charging station or with an optional Philips AirBridge (a small USB dongle.) The Sennheiser MB Pro-1 or Pro-2 are also worth exploring but do not sport some of the advantages of the more expensive Philips product.

Best Wireless Microphone with simultaneous wired telephone use: Looking for the best wireless microphone that can also be used with your wired telephone? Pick the Sennheiser SD Pro-1 (one speaker) or SD Pro-2 (two speakers). Sennheiser knows how to do it right and these are the mics that sit on OUR desks. We love them!

Best wired hand-held mic for use with Dragon:

- If you using the medical version of Dragon and looking for the convenience of a hand-held microphone with programmable buttons? Get the Nuance PowerMic III
- Less expensive but equally good hand-held USB mics that require a bit more work in programming the buttons but which work with ALL versions of Dragon (not just he medical versions) are the Philips SpeechMike Premium and the Grundig SonicMic3
- If you are using a non-medical version of Dragon, you can use the PowerMic II described above if you combine it with Octopus USB controller. Otherwise consider the use of Philips SpeechMike Premium (wired with USB interface) or the Grundig SonicMic3

Best wireless hand-held microphone: At this point in time, the only serious contender in this category is the Philips SpeechMike Premium Air. This is a solidly performing wireless version of the popular SpeechMike Premium and includes a docking station which both charges the microphone and acts as the wireless bridge between your microphone and personal computer.

Best Desktop Microphone: Want a high quality desktop microphone without a lot of complications? Choose the SpeechWare 3-in-1, 6-in-1 or 9-in-1 TableMike (see "Desktop Microphones"). A less expensive alternative with considerably less external noise rejection but which works well in a quiet environment is the SoundTech GN-USB-2.

Best Microphone for use with a mobile device: The SpeechWare "TabletMike" is the perfect solution for the mobile user wanting to add a high-quality microphone element.

USB Microphone Controlling Utility: If the OEM utility for programming the buttons on your hand-held USB microphone are driving you crazy, strongly consider purchasing SpeechWare's Octopus USB Controller.

Best device to make you analog microphone wireless: There is only one contender in this category and it works well. Check out the LiveMic2.

Entry Level Headsets

For those new to speech recognition software, particularly the user planning to dabble with this technology but not necessarily use it regularly or in association with his/her occupation, any of the

inexpensive entry level microphones should be fine. The difference in accuracy between these "low end" mics and more expensive microphone is not huge and for the cost savings, these are very effective. Inexpensive microphones that we recommend and carry are shown below. The microphones are also reasonable replacements if your starter microphone died for some reason.

Of the microphones described below, we tend to recommend the Andrea microphones since they have a more substantial microphone element and Andrea has been producing microphones for speech recognition use for many years. The CyberAcoustics mics have been recommended to us by other users, but don't seem quite as substantial in terms of the quality of build as the Andrea products.

Comparison of entry-level speech recognition microphones

Microphone	MSRP	Accuracy	Noise Cancellation	Durability	Warranty	Overall Rating
Andrea NC 181	$24.95	●●●○○	●●○○○	●●●○○	1-year	●●●○○
Andrea NC-181 VM	$29.95	●●●○○	●●○○○	●●●○○	1-year	●●●○○
Andrea NC-181VM USB	$49.95	●●●○○	●●○○○	●●●○○	1-year	●●●○○
Cyber Acoustics AC104	$14.99	●●●○○	●●○○○	●●●○○	1-year	●●●○○
Cyber Acoustics AC204	$19.99	●●●○○	●●○○○	●●●○○	1-year	●●●○○

Andrea NC 181 and 185 Series Microphones

This is a series of microphones released by Andrea to replace its prior NC series. The 181 series has a speaker for one ear and the 185 has a speaker for each ear. Each series comes in 3 versions.

1. A simple version with simple 3.5 mic and audio plugs (NC-181 and NC-185)
2. A slightly fancier version with a microphone mute switch and speaker volume control (NC-181VM and NC-185VM)
3. A higher end version which includes both the mute/volume controls and also a built in Andrea Pure Audio USB sound adapter (NC-181VM-USB and NC-185VM-USB)

For more information on the differences between the microphones in this series, please refer to the comparison table below:

	Mono	Stereo	3.5 mm connectors	USB Connection	Volume & mute	Active Noise Canceling Circuitry
NC 181*	+	-	+	-	-	-
NC 181VM	+	-	+	-	+	-
NC 181 VM USB	+	-	-	+	+	-
NC 185**	-	+	+	-	-	-
NC 185VM	-	+	+	-	+	-

NC 185VM USB	-	+	-	+	+	-

This is a series solidly performing microphone series and in the years that they been around we have sold many thousands of these and virtually never get a return or call with a question. Do we consider this microphone series to be worthy of the "5 Dragons" that Nuance provides in their quality evaluation? Not really. Although the native accuracy of this microphone series is quite good, when it comes to noise cancellation (rejection of external noise) they fall short in our opinion. But they are cost-effective work-horse microphones.

The addition of the Andrea Pure Audio Adapter included with the 181VM-USB and 185VM-USB means that you will not be using your on-board sound card, but rather the included USB adapter. This provides a greater level of certainty that the microphone will be compatible with your PC and also offers the theoretical advantage of doing the analog to digital sound conversion in a more "electrically quite" environment (not inside the less "quiet" confines of your desktop or laptop). Again, this is a theoretical advantage.

Overall Rating: ●●●○○
Warranty: 1 Year

Learn more or order an Andrea Product

Andrea NC-181

Andrea NC-181
MSRP: $24.95

Learn more

Andrea NC-181 VM

Andrea NC-181VM
MSRP: $29.95

Learn more

Andrea NC-181VM-USB

Andrea NC-181VM-USB
$49.95

Learn More

Andrea NC-185

Andrea NC-185VM

Andrea NC-185VM-USB

Andrea NC-185
MSRP: $29.95

Learn More

Andrea NC-185-VM
MSRP: $34.95

Learn More

Andrea NC-185-VM USB
MSRP: $54.95

Learn More

CyberAcoustics

Although we were reluctant to carry these microphones simply on the basis of their incredibly low cost and sense that "they couldn't possibly be good at that price", over the years we had enough customers tell us they had used these microphones and noted good performance that we had to try them out. Our thoughts? These are perfectly good microphones and for the cost, a great value. The only difference between the two models we carry is the presence of one versus two speakers. The microphone element and performance with speech recognition is identical. Both microphones are constructed with a single 4-conductor plug, so these are perfect for immediate use with a computer or mobile device with a single jack for both microphone-in and sound-out. But if you have the usual computer or sound card with separate mic-in and sound-out jacks, these microphone are packaged with an adapter that will allow this.

Cyber Acoustics AC-104	Cyber Acoustics AC-204

	
CyberAcoustics AC104 **MSRP: $19.99** **Learn More**	**CyberAcoustics AC204** **MSRP: $21.99** **Learn More**

Overall Rating:
Warranty: One year

Learn more or order

Mid-Level Headset Microphones

If you plan to use your speech recognition software with some regularity and are not entirely happy with your existing level of accuracy, you will likely appreciate the increase in accuracy seen with the following relatively inexpensive and higher quality microphones that represent a step-up from the mic that came with your software. The Andrea ANC models have been around forever and while discontinued by the manufacturer, is still obtainable. The SC630 and SC660 are single and double ear microphones by Sennheiser and are solid performers which come with a 2-year warranty. Although the VXI microphones are favorites of ours, VXI was bought out by a competitor and these are no longer being produced. There are still some to be found, but it's unclear how warranty claims will be handled on this headset.

Comparison of Mid-Level Headset Microphones:

Microphone	MSRP	Accuracy	Noise Cancellation	Durability	Warranty	Overall Rating
Andrea ANC-700	$69.95				1 year	
Andrea ANC-750	$79.95				1-Year	
Sennheiser SC630	$199.99				2-Year	
Sennheiser SC660	$239.99				2-Year	
VXI TalkPro UC1	$149				2-Year	

VXI TalkPro UC2	$159	●●●●○	●●●●○	●●●●○	2-Year	●●●●○
VXI TalkPro UC3	$155	●●●●○	●●●●○	●●●●○	2-Year	●●●●○

Sennheiser SC630 and SC660 Microphones

These two microphones which differ only on the basis of having one speaker (SC630) or two speakers (SC660), are both strong contenders within our "mid-level" microphone category.

Best in Class Award
SpeechRecognitionSolutions

These wired headsets are designed specifically for all-day use with Unified Communications (UC) and softphones in busy contact centers and offices. They work wonderfully with speech recognition software as well. Built to withstand the rigors of the toughest contact center or office, they are designed for quality-conscious professionals requiring HD voice clarity, durability and all-day comfort. Users can manage calls seamlessly through the call control unit and enjoy the stereo sound quality from the high- quality neodymium speakers.

Key features:

- Integrated USB sound adapter to do the analog to digital conversion and interface with your computer via an available USB port.
- They use a microphone element that is both sensitive and external noise rejecting
- They include an "ActiveGard" technology that prevents excessively loud sound from coming through the speakers to hurt your ears.
- The cord length is about 114 inches (about 9.5 feet)
- These include very comfortable "leatherette" earpads

Comments: Although designed for the quality, functionality and comfort needs of a call center product, this microphone also works well with speech recognition software and internet telephone applications. We particularly like the controls which allow simple muting of the microphone and volume control.

Sennheiser SC630 USB-CTRL MSRP: $199.99	Sennheiser SC660 USB CTRL MSRP: $239.99
Learn more	Learn more

VXI TalkPro UC Microphones

[Special note about the VXI microphones: In October of 2016 GN Audio, the makers of Jabra products, acquired VXI. Since then, the fine line-up of high-quality VXI products has become increasingly difficult to find. Our usual channels have pretty much dried up, but other online resellers are still selling VXI products, likely from old inventory. What follows is information based on our pre-Jabra acquisition of VXI.]

VXI released a series of microphones to replace their workhorse TalkPro USB 100 and 200 series microphones. VXI Corp. is known for creating excellent microphones for use with speech recognition and these new microphones are no exception. All three products in this series are Unified Communications (UC) ready, include USB sound cards with digital sound processing (DSP). Being Unified Communications ready means that these mics are intended for use in a variety of settings, including speech recognition, internet telephony, web conferencing, etc.

This series includes the following:

- TalkPro UC1
- TalkPro UC2
- TalkPro UC3

Overall Rating:
Warranty: 2-years

VXI TalkPro UC1: This is the simplest of the 3 microphones in this series, but performs identically to the others in all applications.

Features:

- UC-ready headset with USB connection that plugs directly into a USB port on your computer for clear, natural voice conversations
- Digital signal processing (DSP)
- Echo cancellation
- One-touch answer/end controls allow for quick and easy call adjustments
- Improved noise-canceling microphone ensures your software application hears precisely what you say, free of extraneous, error-causing information
- Flexible "stay put" microphone boom stays where put for consistent, optimal voice quality
- Plug-and-play set-up means no drivers or software to install
- Compatible with Microsoft Windows 7, Vista, XP, 2000,
- Macintosh OS 9.1 and higher and Linux operating systems

- 2-year warranty

VXI TalkPro UC1
MSRP: $149

Learn more

VXI TalkPro UC2

This microphone is similar to the UC1, but includes two speakers.

Features:

- UC-ready headset with USB connection that plugs directly into a USB port on your computer for clear, natural voice conversations
- Digital signal processing (DSP)
- Echo cancellation
- One-touch answer/end controls allow for quick and easy call adjustments
- Improved noise-canceling microphone ensures your software application hears precisely what you say, free of extraneous, error-causing information
- Flexible "stay put" microphone boom stays where put for consistent, optimal voice quality
- Plug-and-play set-up means no drivers or software to install
- Compatible with Microsoft Windows 7, Vista, XP, 2000,
- Macintosh OS 9.1 and higher and Linux operating systems
- binaural (stereo) speakers
- 2-year warranty

VXI TalkPro UC2
MSRP: $159

Learn more

VXI TalkPro UC3: This is similar in function to the TalkPro UC1, but includes 3 wearing styles as shown in the image to the right.

Features:

- Different Wearing Styles: Over-the-head, over-the-ear, and behind-the-head wearing styles for personalized comfort
- UC-ready headset with USB connection that plugs directly into a USB port on your computer for clear, natural voice conversations
- Monaural over-the-head wearing style that is light enough to wear all day long
- Digital signal processing (DSP)
- Echo cancellation
- One-touch answer/end controls allow for quick and easy call adjustments
- Improved noise-canceling microphone ensures your software application hears precisely what you say, free of extraneous, error-causing information
- Flexible "stay put" microphone boom stays where put for consistent, optimal voice quality
- Plug-and-play set-up means no drivers or software to install
- Compatible with Microsoft Windows 7, Vista, XP, 2000,
- Macintosh OS 9.1 and higher and Linux operating systems

VXI TalkPro UC3
MSRP: $155
Overall Rating: 
Warranty: 1 year

Andrea ANC 700 and 750 microphones

These two mics are identical except that the ANC-700 is a monaural headset (speaker on just one ear) and the ANC-750 is binaural (speaker for each ear). Both employ an active noise canceling (ANC) process to reduce the influence of ambient noise. As Andrea Electronics puts it "At the heart of the Andrea ANC technology is a pair of matched omni-directional microphone elements positioned to optimize noise cancellation and capitalize upon their directional frequency independent characteristics." Neither include a USB sound adapter. We consider these to be strong performing microphones and very reasonably priced. Added performance may be realized when utilizing them in conjunction with an Andrea USB sound adapter rather than your PC's internal sound card.

An important thing to realize about these microphones is that they require a bit more power than most microphones in order to drive the noise cancelation circuitry. As a result, a rare on-board sound card will not provide enough power for these. If this is the case, you can use either the Andrea APS-100 power adapter to boost the voltage, or (preferably) use these microphones with any of the commonly sold external USB sound cards.

Note: Andrea electronics is no longer making these microphones. They have been solid performers over many years, so many resellers still have them in stock. In our opinion, if you can obtain one (from us or elsewhere), these remain good mid-quality products.

Learn more

Andrea ANC-700

Andrea ANC-700
MSRP: $69.95

Learn More

Andrea ANC-750

Andrea ANC-750
MSRP: $79.95

Learn more

Headset Microphones for the Advanced User

For those that truly depend on speech recognition software and who have the need to absolutely minimize the presence of recognition errors, there are several microphones that we believe to be truly superior for use with speech recognition software. The difference in accuracy and sound cancellation among the microphones in this category is minimal and the main reason for choosing one over another is matters of comfort, style, or cost.

Comparison of High-Quality Wired Speech Recognition Headset Microphones:

Microphone	MSRP	Accuracy	Noise Cancellation	Durability	Warranty	Overall Rating
SpeechWare FlexyMike DEC	$189	●●●●●	●●●●●	●●●●●	2-year with registration	●●●●●
Sennheiser ME3	$166	●●●●●	●●●●●	●●●●●	2-year	●●●●●
Audio-Technica 8HEmV	$159	●●●●●	●●●●●	●●●●●	1-year	●●●●●

SpeechWare FlexyMike Dual Ear Cardioid

Best in Class Award
SpeechRecognitionSolutions

Although it took a while for the FlexyMike DEC to displace our previously most recommended headset (the Sennheiser ME3), with some incremental changes in the DEC and simultaneous small changes in the ME3, the FlexyMike DEC clearly wins our "Best in Class" designation. It is so lightweight that you may forget you are wearing it and it has unsurpassed accuracy and external noise rejection. If we have any criticisms, it is that it's so lightweight as to be potentially fragile (you don't want to sit on it) and the microphone element is fairly sensitive and if you are a fairly loud talker, you may need to move the microphone element a little further away from you mouth. But in a work-flow where the best accuracy and external noise rejection equate to lower speech recognition errors, this microphone is clearly the best.

About the Microphone

- The Third Generation FlexyMike Dual Ear Cardioid - FMKDEC - is a lightweight (about 25g.) stainless steel headset microphone designed specifically for speech recognition. Manufactured in the style of a traditional headband, the frame is covered with injected rubber protectors that covers both ears for maximum working comfort. An extremely flexible gooseneck and cardioid microphone enables the consistent positioning of the microphone capsule and superior recognition accuracy with Dragon NaturallySpeaking® and other speech recognition and audio applications.
- Unlike the 2nd generation model and in response to a request from Speech Recgnition Solutions, the third gen model has been manufactured with a slightly stiffer and 1/2 inch shorter boom to deal with an issue of the 1st and 2nd generation boom being a bit too long and floppy. We consider this a great improvement.
- At the core of this microphone is a microphone element of the highest quality, with a unidirectional "cardioid" polar pattern which provides excellent isolation from ambient noise and effective noise control from adjacent sound. Its distinguishing clarity in close talk operation and excellent gain before feedback make it suitable for all mobile situations.
- The FlexyMike Dual Ear Cardioid - DEC has a polished 1m/40" long cable sheathed with durable transparent plastic, along with a standard 3.5 mm gold-plated jack. It has a very high performance and noise rejection microphone capsule which is acoustically matched for

maximum performance with the SpeechWare USB MultiAdapter and Speech recognition or VoIP applications. It also works well with the Andrea Pure Audio MA USB adapter.

- Unlike many headsets, this product does not include a speaker and wraps over the user's ears and around the back of the head, rather than over the top of the head. The result is an extremely stable fit, and the full exposure of the user's ears, allowing for situational awareness and concurrent use of a telephone.

Comments: we were astounded at the performance of the first generation FlexyMike Dual Ear Cardioid microphone. When combined with the SpeechWare MultiAdapter (our highest quality external USB adapter) we witnessed the best accuracy we had ever seen with a headset, even surpassing the Sennheiser ME3, our previous "gold standard". This third-generation model adds a slightly shorter and stiffer boom to prevent the boom from moving with rapid movements of your head.

In addition to its outstanding accuracy and external noise rejection, this product is so lightweight that you will forget that you are wearing it.

Regarding an external USB adapter, you can expect the best possible results when combined with the SpeechWare USB MultiAdapter (save money by purchasing the combination product - see "Related Products" below), but this microphone will also show excellent results with the Andrea Pure Audio MA USB adapter.

One final note: the basic microphone includes a cord which is about 3 ft in length. This is perfect for laptop users. In case you plan to use this with a desktop computer located on the floor, it also includes a 79-inch accessory cord to extend the length.

Overall Rating: 
Warranty: 2-year (2-year warranty requires registering the product with SpeechWare at time of purchase)

Price:

Microphone alone: $189
Microphone plus Andrea USB Adapter: $209
Microphone plus SpeechWare USB MultiAdapter: $318

Learn more

Sennheiser ME3

The Sennheiser ME3 was long our personal favorite and only recently was displaced by the lighter FlexyMike Dual Ear Cardioid. Many still consider the ME3 to be the best wired microphone for use with speech recognition software. It is highly accurate and uncanny in its ability to reject external noise.

The Sennheiser ME3 is manufactured in Germany and is made for use with their "Evolution Wireless" transmitter and primarily for stage entertainers. Because it is not made for use with PCs it has three limitations you should know about:

1. It has a non-stand plug which includes a "locking ring". This ring is present to assist in locking the plug to the belt-worn transmitter with which this microphone was intended to match with. The issue is that when plugged into other audio devices, the locking ring takes up space and prevents the plug from fully engaging with a USB sound card. Speech Recognition Solutions gets around this issue with the use of a specially made adapter which concerts the unusual plug into a standard audio plug. If you bought this microphone elsewhere and are having issues, this adapter can be purchased separately.

2. It is wired in a slightly manner than most microphones (the tip and base connections on the 3-conductor plug are reversed) and the result is that it turns out to be incompatible with some sound cards (both internal sound cards and external USB sound cards).

3. Because it is designed for stage entertainers that are potentially singly loudly, a few years ago, in association with the release of the "ME-2", Sennheiser began using a less sensitive microphone element. This did not impact external noise rejection, but did impact the use of this microphone with some of the less amplifying sound cards. We have found, for instance, that with a Windows-based machine it works best with Buddy 7G USB adapter, and not so well with the Andrea Pure Audio USB adapter or the SpeechWare USB multiadapter.

One thing to keep in mind regarding the Sennheiser ME3 is that it does not include any speakers - it is purely a head-mounted *microphone*.

The Sennheiser ME3 is highly durable and has been kicking around the back of the author's backpack for nearly four years now and is still going strong! It comes with a 2-year warranty from Sennheiser.

Overall Rating: 
Warranty: 2-year

MSRP: $155 (mic alone)
MSRP: $195 (our complete "combo" with storage bag and USB adapter)

Learn More

Audio-Technica Pro 8HEmV

[A note on the Audio Technica 8HEmV: while we consider this to be an excellent product in terms of performance, we got a lot of complaints about the comfort. We got so many returns for this reason that we eventually decided to stop carrying it on our site. This should not be taken as an alteration of our otherwise high regard for this product.]

Like the ME described above, this microphone was actually designed for another application - in this case use with a camcorder. But it turns out to be a superb microphone for use with speech recognition. This is a newer arrival to the speech recognition community and while we are confident that it is the rival of the ME3 in terms of accuracy and external noise rejection, we have not sold it long enough to have a good feel for such things as comfort, durability, and overall user satisfaction.

Unique features about this product include:

- Outstanding accuracy and external noise rejection
- Compatibility with all pc sound cards
- Ability to mount over top of head or behind head

Please note that while the picture seems to show speakers, these are not speakers but rather foam cushioned areas for mounting to the user's head.

Overall Rating: 
Warranty: 1-year

MSRP: Mic Alone: $129
MSRP: Combo with mic, storage bag and USB adapter: $160

Learn More

Hand-Held Microphones

Many speech recognition users prefer not to wear their microphones, and this leaves open the option of either a desktop microphone or hand-held microphone. The advantage of the hand-held microphone is the presence of buttons which can be programmed for a variety of key functions, including controlling the microphone and navigating through a document in progress.

While there are many options in the hand-held category, there are a few generalizations worth considering.

1. If you are using the hand-held with either of the Nuance medical software products (Dragon Medical Practice Edition or Dragon Medical One), the extend of built in integration of the PowerMic is so extensive that this becomes a fairly strong best choice. The same goes for Dragon Professional 15 – it is built to integrate with the PowerMic.
2. If you are not using the mic with Dragon or if you are willing to trade some convenience for the best possible accuracy, we consider the Philips hand-held mics to be slightly more accurate, more finely manufactured (and more ergonomic) – and at a better price.
3. If cost is a major issue, the Grundig mic performs extremely well. It does not enjoy any direct integration with Dragon but can be programmed using included software to work well with Dragon. It's not as polished as the Philips mics. But the quality to cost ratio is quite high with the SonicMic3.

Comparison of hand-held microphones for speech recognition

Microphone	Price	Accuracy	Noise Cancellation	Durability	Warranty	Overall Rating
Nuance PowerMic II	$424				90-day	

Olympus DR-1200	$349	●●●●○	●●●○○	●●●●○	●●●●○
Philips SpeechMike Premium	$335	●●●●◐	●●●○○	●●●●○	●●●●○
Philips SpeechMike Premium Air	$499	●●●●○	●●●○○	●●●○○	●●●●○
Grundix Digta SonicMic3	$268	●●●●○	●●●○○	●●●●○	●●●●○

Nuance PowerMic III

This is an extremely high-quality handheld microphone manufactured by Nuance (formally Dictaphone). This is considerably more expensive than i's rival microphone made by Philips and Olympus (see below). Is it worth the extra cost? Here are three reasons to think it might be:

1. It appears to be slightly more accurate than the SpeechMike
2. It is notably more noise canceling than the SpeechMike
3. It is specifically designed for integrated use with NaturallySpeaking and this integration and added functionality. This high level of integration includes Dragon Professional 15, recent versions of Dragon Medical Practice Edition (DMPE, DMPE2 & DMPE4), and Dragon Medical One.

The downside? The two significant downsides are cost and a short warranty period. In terms of durability, though, it's a rugged device and over the years we've been tossing them in backpacks and computer bags and they've faired well. The older "PowerMic II" had the disadvantage of a mechanic "pointer stick" for controlling mouse function and this was sometime prone to breaking with excessive pushing. This version of the PowerMic moved to a non-mechanical touch-sensitive "track point" which is not prone to issues. As for the cost issue, this is a business decision by Nuance and unfortunate.

This product enjoys high level of integration with key versions of Dragon (Dragon 15 Pro all recent Dragon medical versions, and Dragon Medical One) and with each of these software products you will see a dedicated visual representation of the microphone in the Option menu and can easily select programming functions for the buttons. If you have more complex programming needs or want to initiate a more complex "script" (series of actions) with a button push, you should look into Octopus USB Controller (OUC), which is a product jointly developed by SpeechWare and Speech Recognition Solutions.

Overall Rating: 
Warranty: 90 Days

MSRP: $424

Learn more or purchase

Grundig Digta SonicMic3

This hand-held microphone from Grundig is a wonderful addition to the hand-held USB microphone selection available for the speech recognition user. The product we sell is Grundig GDD8300.

Unique to this product are the following:

- Superb performance with Dragon (6 Dragon rating from Nuance)
- Brilliant speech clarity with frequency optimized microphone and pop filter
- Precise mouse control with OPTICAL TRACK PAD and mouse buttons
- Individually programmable buttons using included software

Having tested this microphone in the real-world environment of a medical clinic dictation room, we consider the SonicMic 3 to be solid competition for the Philips SpeechMike Premium (LFH3500). We consider the big selling features of this product to be the following: a) significant cost savings compared with the LFH3500), b) a more user-friendly and functional mouse control using the optical trackpad and c) the simple configuration software which is dramatically easier to use than the Philips Speech Control software.

When compared to its closest competitor (the Philips SpeechMike Premium), this mic is a bit lighter. This can be good or bad in that it doesn't feel quite as substantial but is also less weight to carry. It doesn't have quite the refined, smooth finish of the SpeechMike and appears a bit less refined in its manufacture. It does not include the suspended microphone element. On the other hand, we love the optical trackpad to control cursor movement, its seems to work every bit as well as the SpeechMike in terms of speech recognition accuracy and noise rejection, and the control software is quite a bit more straight-forward when compared to the Philips Speech Control software. To get all of this and for $80-100 less than the SpeechMike, we consider this a great choice. In the years that we've carried this on our site, we have yet to have a return request, so this suggests it is rugged and well-performing.

Overall Rating: 
Warranty:
Price: $268

Learn more

Olympus DR-1200

We love the touch and feel of this microphone. Although it is described by Olympus as having 5 programmable buttons, we actually find that there are 10 buttons which can be programmed for both the Mac and PC. When using this with a PC you can configure the buttons using "Device Configuration Manager" which is downloaded from Olympus. Another alternative, which is far more intuitive but which must be purchased, is Octopus USB Controller which was created by SpeechWare. With a Mac, you must obtain the freeware system utility called "USB Overdrive" which allows you to easily assign buttons to a variety of functions with Dragon or other programs.

While we love the feel of this product and are very happy with its accuracy, we do not find the external noise rejection properties of this product to be any better than the Philips SpeechMike II (average at best) and somewhat less than what is seen with the Dictaphone PowerMic II. Although you can use the Device Configuration Manager to program functions within Dragon, integration with Dragon is not nearly as tight as it is with the PowerMic. Where this product excels is a) overall ergonomics b) a nicely functioning trackball c) ability to use this with any version of Dragon (the PowerMic II is limited to use with medical versions and d) ability to use it with an Apple computer (along with USB Overdrive to assign functions to keys in the Apple environment).

Features:

- Large multi-functional push buttons with trackball
- Symmetrical and ergonomic design for comfortable hold
- USB direct dictation device
- Symmetrical design giving optimum use for both left and right handed users
- Directional microphone to reduce undesired background noises
- Engineered to work best with Dragon NaturallySpeaking speech recognition software
- Powerful integrated speaker for clear playback

Overall Rating: 
Warranty:
MSRP: $349
Our Price: $249 (save $100!)

Philips SpeechMike Air (LFH 3000)

The Philips SpeechMike Air is a high quality handheld wireless microphone that comes in 3 varieties, depending upon your dictation workflow. All three share some great features: high quality performance, wireless convenience, and a sense of extreme quality as it sits in your hand. Our only complaint about this microphone and one which is shared with its wired version, is a relatively poor external noise rejection. It will pick up background noise fairly easily and this may impact your performance with speech recognition software if significant.

Features:

- Superb recording quality optimized for speech recognition
- Trackball for navigation through documents
- Recording control with 4-position slide switch or push button version
- High-end front speaker for crystal clear playback
- 3 function buttons for individual configuration
- Up to 7 hours of recording time on a single charge (2.45 hours for full charge)

Overall Rating: ●●●●○
Price: $499

Learn more or purchase

Philips SpeechMike Premium (LFH 3500)

This is the newest entry to the hand-held USB microphone market and huge leap in technology by Philips. Made for the demanding workflows and requirement of the professional , this produc combines the best of design, ergonomics, and functionality. Unique to this microphone is a suspended electret condenser microphone element which is "decoupled" from the housing to offer both unprecedented accuracy, but also immunity from background noise, touch, and click noises.

Microphone Characteristics

- Type: electret condenser
- Capsule: 10 mm
- Characteristics: uni-directional
- Frequency Response: 200-12,000 Hz
- Sensitivity: -37 dBV
- Signal to noise ratio: > 70

Connectivity: USB 2.0

System Requirements:

- Processor: intel Pentium 4, 1.0 GHz or equivalent

- RAM: 1 GB (2 GB recommended)
- Hard Disk Space: 250 MB hard-drive disk space for Microsoft.Net Framework, 30 MB for SpeechControl Software
- Operating System: Windows 7 (32/64-bit), Vista, XP (32-bit), Mac OS X 10.7/10.8

Comments: For the user preferring to hold rather than wear a microphone, this is an excellent product and may be the most accurate hand-held microphone on the market. If we have any complaint about this product it is the need to use and understand a separate software package (SpeechControl Application) in order to integrate the buttons with Dragon. Unique to this product is the application control software for use with a Mac computer and the "suspended" microphone element that reduces its susceptibility to external noise.

Price: $335

Learn more or purchase

Wireless Microphones

Although wireless microphone by default come with the disadvantage of certain logistical needs, including the necessity of charging, they offer the advantage of untethering the user from the computer and providing the freedom to move about and fully support the creative urges. As you will see from the table below,

Comparison of Wireless Microphones

	Price	Performance		Comfort	Stability	Talk Time	Range	Warranty
		Accuracy	Noise Cancellation					
Philips SpeechOne						12 hr	16 ft.	2-Years
Sennheiser DW Pro-1	$379					12 hr	180 m	2-Years
Sennheiser DW Pro-2	NA					12 hr	180 m	2-Years
Sennhseiser SD Pro-1	$349.95					12 hr	180 m	
Sennheiser SD Pro-2	$369.95					12 hr	180 m	
Andrea WNC-1500	$99.95					8 hr	30 ft	1-year
VXI Voxstar								
Samson Airline Micro						10 hr		2-years
Samson Airline Micro Camera	$299.99	No mic	No mic	NA	NA			
Samson Airline 77						14 hr		2-years

Comfort: This parameter is obviously extremely subjective and variable from user to user. In general we weight headsets with typical over-the-head mounting arrangements a bit higher than ear mounting (BW900) given that most users are accustomed to the feel of a typical over-the-head arrangement.

Stability: This refers to the tendency of this microphone to remain in place in reference to the user's mouth during movement of head and potentially when assuming a supine (laying on back) position

Price: Prices represent current prices for the microphone, with basic additional hardware if required (both the Plantronics CS55 and Sennheiser BW900 require the GN Netcom rocker switch in order to work with a PC and prices include this). With the exception of the VXI and Revolabs mics, all of these microphones work best when used with an external USB sound adapter. The cost of this is not included in the prices listed above.

*The VXI Xpressway does not come with a base station and must be used with a Bluetooth equipped device or pc.

Philips SpeechOne (PSM6300 and PSM6500)

The Philips "SpeechOne" is the newest addition to the wireless headset market and clearly a mark above everything else on the market. Its main advantages are the use of a studio quality mic, "lossless" wireless transmission, comfort, and multiple mounting styles.

Best in Class Award
SpeechRecognitionSolutions

The basic microphone is shown below, but it's important to realize that the mic is just one part of the kit you are purchasing.

About the PSM6000 Series

Philips has long been on the leading edge of products for the professional requiring the highest quality in dictation. The PSM6000 series is their most serious foray into the wireless headset market. While unquestionably in unique price range for a headset, without doubt this is the most outstanding wireless headset we have ever seen.

What makes it unique are several features:

1. **Studio quality microphone element:** the SpeechOne headset has been specially designed to match the needs of users who frequently use dictation or speech recognition to create documents. The premium decoupled microphone offers crystal-clear recordings, perfect for accurate transcriptions.
2. **Lossless wireless technology:** What this means is that despite the need to compress the audio signal when it is transmitted from your headset to the receiver and your computer, the decompression happens in such a way that there is no loss of information. Behind the scenes, audio files consist of sound and of silences. Lossless formats compress the silences to almost zero space while maintaining all of the sound data. The result is practical wireless transmission but no loss of audio data.
3. **Comfort and hygiene:** the comfort of this device is achieved through a variety of design features, including: a) 360 degree rotation of the boom so it can be worn on either ear b) exchangeable, magnetic ear and head cushions, c) three wearing styles (classic, neckband, and ear-free) and d) Antimicrobial boom and remote control (inhibits the ability of microorganisms to grow)

4. **Convenience:** It includes a wireless charger, has a 12 hour "recording" life (100 hours of standby), has a 16 ft. range, and includes a "status light" which is used to alert those around you when you are dictating or on a call when used with internet telephone. An optional "remote control" allows push-button control of a number of computer and dictation-related functions. For the mobile user not wanting to carry the charging base, an optional "AirBridge" USB dongle can serve as the sole connection on the computer

Three Configurations: The SpeechOne is bundled by Philips in 3 ways, depending upon your intended use and needs:

1. PSM6300: This is the basic bundle and includes the headset, charging base, USB cord, and status light. Price $469.
2. PSM6500: In addition to the basic stuff, this bundle adds the remote control which is a device akin to a standard SpeechMike which offers buttons which can be programmed for a variety of purposes. Price $589
3. PSM6800: The includes everything in the PSM6500 bundle, plus the SpeechExec Pro dictation software. Price $699

PSM6300	PSM6500	PSM6800
		
Includes headset, base station, status indicator and USB cable.	Includes everything in the PSM6300 plus a hand-held remote with programmable buttons.	Includes everything in the 6500 plus the SpeechExec Pro dictation software
Price: $469	Price: $589	Price: $699

Our Take: If you can afford it (yes, it's pricey) and need the best quality speech recognition and internet telephony results in a wireless format, the SpeechOne is the way to go. It truly has no competition. We don't believe most users will need the remote control, but this is an option.

Links:

- View QuickGuide
- View full User Guide

Sennheiser MB Pro 1 and Pro 1 UC

For the speech recognition user wanting the hands-free convenience of a headset but desiring an "untethered" wireless connection, this exquisitely designed headset from Sennheiser may be exactly what you are looking for. Made in both single speaker and two-speaker versions, this product comes with a pre-paired Bluetooth dongle, so connection to your personal computer is a breeze. It can, in addition, be paired with your Bluetooth-capable phone.

Of particular interest to the speech recognition user, the MB Pro-1 and 2 come with a full-length boom and include a high-quality ultra-noise cancelling microphone element and proprietary noise rejection technology that leads to brilliant sound quality for your software. Beyond that, it is comfortable, provides all-day use, and simply works great with Dragon. This is also an excellent choice for the Unified Communications business professionals who demand wireless communication freedom, brilliant sound quality, and exceptional wearing comfort.

Key Features:

- Up to 15 hours talk time - communicate in high definition audio for a full-work day
- Range: up to 25 meters (82 ft.)
- Optimized for major softphone brands
- Sennheiser voice clarity - for a natural speech and listening experience
- Sound-enhancement profile - for multimedia purpose
- Ultra noise-canceling microphone - for perfect speech transmission
- Noise Dependent Volume Control (NDVC) - provides ideal speaker volume in changing environments
- Large leatherette ear pad - for exceptional wearing comfort and powerful sound
- Multi connectivity - to seamlessly manage PC and mobile phone calls from a single headset for maximum call-handling flexibility
- Voice prompts for status - the user is always updated
- iPhone battery meter - keeps the users aware of available talk-time
- Sennheiser BTD 800 Bluetooth™ mini USB adapter - can stay in your laptop port
- Sennheiser CH 20 MB charger stand

Formal Specifications:

- Wearing style: Fully adjustable headband, over-the-head wearing style
- Technology: Bluetooth® Version 4.0 / supported profiles: HSP 1.2 + HFP 1.6 + A2DP 1.2
- Talk Time: up to 15 hours
- Charging Time: 2 hr 30 min
- 50% charging time: 40 min
- Range: up to 25 meters (82 ft)
- Weight of headset: 63 g / 2,22 oz
- Microphone type: ultra-noise cancelling
- Microphone frequency response: 150-6800 Hz
- Speaker type: Dynamic, neodymium magnet
- Speaker frequency response: 150-15,00 Hz
- Speaker sound pressure: Max 118dB (SPL) limited by ActiveGard

Warranty: 2-year Sennheiser Warranty plus 30-day "no questions asked" Speech Recognition Solutions return policy.

Comments: We consider this a very solidly performing wireless headset which comes pre-paired with a small dongle and which sports a number of wonderful features, including a high level of accuracy, better external noise rejection compared with the Philips SpeechOne, and a very fair price.

Sennheiser MB Pro 1 UC	Sennheiser MB Pro 2 UC
	
Price: $189	Price: $199

Sennheiser MB Pro-1: Learn more
Sennheiser MB Pro-2: Learn more:

Sennheiser SD Pro-1 and SD Pro-2

This is the newest wireless offering from Sennheiser and is the evolution of the previous DW Pro- series but with a different outer form. Functionally this system provides the same excellent results, whether using it with your computer with speech recognition, or with your corded phone.

Features:

- Iconic design– crafted for best comfort
- Single speaker (SD Pro-1) and dual speaker (SD Pro-2) versions
- Sennheiser HD voice clarity – wideband sound for natural listening experiences
- High comfort wearing styles - perfect adjustment to your ear for a full day wearing comfort
- Ultra noise-canceling microphone filters out unwanted background noise
- One touch on the base station to select the channel you wish to call from -between desk phone and softphone
- Pairing for desk sharing and phone conferences – intuitive and easy to set up
- Microphone mute and volume up and down – intuitive user interface
- Full workday talk time – 8 hours in wideband sound mode and 12 hours in narrowband sound mode
- Re-charge 50% of your battery in 20 minutes – intelligent fast charging

- Long distance wireless range – in typical office building: up to 180 ft and in line of sight: up to 590 ft
- ActiveGard™ technology – protects your hearing against acoustic shock
- DECT for US: DECT 6.0 (1.920 to 1.930 MHz)

Sennheiser SD Pro-1

MSRP $349.95

Learn more

Sennheiser SD Pro-2

MSRP $369.95

Learn more

Andrea WNC-1500 Wireless Headset Microphone – Don't buy this one!

Although this microphone seemed great when first released a number of years back and it's performance appeared to be quite good, over the year or two that we carried and sold it, we got repeated returns. Lots of returns, and for everything under the sun. Eventually, we stopped carrying it. We leave it in this guide only so you can be aware of. Based on our experience with this product, you are strongly recommended to stay away from it.

From Andrea: "Andrea Electronics has combined the benefits of a Wireless headset with our PureAudio USB digital audio which includes Andrea's complete PureAudio™ Voice Solutions software Suite (including Audio Commander, Voice Center and Pure Audio Technology). The WNC-1500 wireless noise canceling computer headset delivers a high fidelity audio enhancement, noise reduction and EQ with an excellent 5 Dragon voice recognition rating awarded by Nuance. Andrea's Pure Audio Wireless USB Soundcard solution bypasses your desktop or laptop computer's integrated sound system, providing increased intelligibility and performance of microphone input and stereo speaker output for all of your digital audio applications including VoIP and speech recognition programs on your Mac or PC."

Features:

- Wireless computer headset with noise canceling microphone and digital audio enhancement software
- Uses Andrea's noise cancellation microphone technology for exceptional speech recognition performance
- Pro-flex wire microphone boom for accurate and stable microphone placement
- Windscreen to minimize breath-related "popping"
- Hi fidelity 40 mm speaker drivers with acoustic bass enhancement
- Wireless USB soundcard with digital sample rates for high definition audio
- PureAudio digital noise reduction for enhancing both the microphone and speaker communications
- Folds flat for storage (see images)
- Includes carrying case for protection while on the go
- Headset can transmit and receive continuously for up to 8 hours and can also be used when recharging
- 30 ft. maximum operating distance

MSRP: $99.95

Samson Airline Micro

We continue to test this unit, but our preliminary impressions are very favorable. It is amazingly small and lightweight and yet attaches so securely that use by a fitness instructor is entirely feasible. On the other hand, it seems to have the accuracy to allow practical use with speech recognition software. We have not yet formally evaluated the external noise rejection qualities of this microphone, but in preliminary testing it seems to do fine and was minimally affected by our babbling 8-year old son, a fairly loud air conditioner and other household noises. The external noise rejection is clearly well above average.

We recommend using this device with a monaural USB adapter such as the Andrea USB adapter since it does not have sound out capabilities. This product is packaged for use with professional sound equipment and not a personal computer. The audio output cord has a 1/4 inch plug. We recommend that you purchase a double male stereo 1/8 inch cord if you plan to use this with a pc. We list both the USB adapter and 1/8 inch double male cord below.

Overall Rating: 
MSRP: $359.99
Price: $ $249.99

Learn more

Samson Airline Micro - Camera Edition

If you don't depend upon headset speakers and want to convert any microphone into a convenient wireless microphone, this is the perfect solution. Although made for use with a video camera and bundled with a simple lavalier microphone, there is nothing about this unit that prevents it from being the ideal means of making your favorite speech recognition microphone a wireless microphone. The transmitter features a standard 3.5 mm (1/8 inch) jack which will accommodate any wired microphone with a 3.5 mm microphone plug. Although the transmitter is equipped with a removeable belt clip, it is so small that it can easily fit in a breast or coat pocket (the transmitter weighs just 1.5 oz and is 1/2 inch thick). Unique to this system is the ability to choose one of two transmitter output strengths and the ability to export the signal from the receiver at either mic- or line-level.

AirLine Micro Camera Wireless System

- Wireless system with micro-sized AL2 transmitter, AR2 receiver and double dock
- Tone squelch and auto mute for clear operation
- Includes a system carry case, hot shoe mount, 3.5mm and XLR camera connectors, AC adapter and charging cables
- Working range 300m (100 ft.) - in line of sight.

AL2 Transmitter

- Beltpack transmitter and LM10 omnidirectional lavalier microphone
- Lithium-ion rechargeable battery (7-8 hours of operation)
- USB DC input for recharging
- Single button operation for power, mute and volume
- Multi-color LED displaying RF, low battery and power

AR2 Receiver

- Low-profile wireless receiver (2.36” x 1.67” x .51”)
- Lithium-ion rechargeable battery (7-8 hours of operation)
- USB DC input for power and recharging
- 3.5mm balanced mic/line level output
- Multi-color LED displaying RF, low battery and power

Price: $299.99

Learn more

LiveMic2

This unique product is both a wireless microphone in itself, but also the means by which you can turn almost any analog microphone with a standard 3.5 plug into a wireless microphone. It communicates with your computer by means of Bluetooth, so if your computer does not have Bluetooth capabilities it will be necessary for you to pick up a simple (and inexpensive) Bluetooth dongle. The basic device is shown to the right and includes both a unidirectional and omnidirectional microphone, so it can be used by itself and provides reasonably good results. Its real beauty is when combining it with other products.

While the classic scenario is to plug in your favorite headset microphone into the external microphone jack on the LiveMic2, our favorite use of this product is with a high-quality snub nosed microphone plugged into the jack. This allows you to use the LiveMic2 as the world's smallest hand-held wireless microphone. And it works great. We have used it in this manner with both the SpeechWare TabletMike and also the less expensive Olympus ME52W.

LiveMic2 Being used to make a headset microphone wireless

LiveMic2 being used as a high-quality hand-held wireless microphone (pictured here with the SpeechWare TabletMic)

The many features built into this small device are highlighted on the image below:

Key Specifications of LiveMic2:

- Rechargeable Li-Polymer battery with up to 8 hours of talk time and 100 hrs of standby time
- Size: 5.5 cm x 2.8 cm x 1.7 cm (LxWxD)
- Weight: 21 gm (0.8 oz)
- Mic frequency range: 50-20KHz; sensitivity 55dB± 2dB
- Charging: Using included USB to micro-USB cable; 2 hrs to maximum charge
- Wireless range: up to 20m (66 ft.)
- Supported Bluetooth profiles: Headset, Handsfree and A2DP

Price: $81.99
Learn more

Samson Airline 77 Wireless Microphone

This is a unique and highly accurate wireless microphone that provides the best accuracy in the wireless category. It does not include speakers and the transmitter sits on the back of the microphone, essentially near the base of your skull. This includes a good-sized transmitter which, in turn, is connected to your PC with a supplied cable. The advantage of this microphone is the freedom from wires and the high accuracy. The disadvantages include 1) It requires daily replacement (or recharging) of the AAA battery in the head-worn transmitter and 2) it is a bit rigid and not the most comfortable microphone we have tried.

This system comes in two version:

- The QV10e or "vocal" version which is best for users of speech recogntion
- The Qe or "fitness" version which has a more moisture-proff microphone element and which is intended for fitness instructors and similar users

Overall rating: ●●●●◐
Warranty: 2 years
Cost (with needed cable for PC):

Vocal Version: $299.99
Fitness Version: $349.99

Learn more or order

Desktop Microphones

Some users would prefer to avoid wearing or holding a microphone. For some users with disabilities, particularly with problems related to use of your hands the concept of a desktop microphone works quite well. In general these microphones work well, although they share the susceptibility of accuracy falling off as your distance and angle of approach to the microphone vary.

Overview of Desktop Microphones

	Price	Accuracy	Noise Rejection	Boom Length (Inches)	Working Range (Inches)	Integrated Speakers	Accessory Mic Jack	Programmable Button
SpeechWare 3-in-1	$279			16*	10-20	No	Yes	No
SpeechWare 6-in-1	$329			18*	10-20	Yes	Yes	No
SpeechWare 9-in-1	$379			16-24	10-20	Yes	Yes	Yes
Audix USB 12	$149							
Buddy Desktop 7G with filtered audio	$179.99				3-4	No	No	Yes
Buddy Desktop Mini	$69.95				3-4	No	No	Yes
Samson Q1U with balanced spring arm	$134.99			36	2-12	No	No	No

*The telescoping 16-24 inch boom which is standard on the SpeechWare 9-in-1 can be purchased separately as an option for the 3-in-1 and 6-in-1 (booms are interchangeable).

Focus on the SpeechWare TableMikes

As you will read below, the series of "TableMikes" from SpeechWare are our most recommended desktop microphones. We award the "Best in Class" award to the entire series because these microphones perform identically and the differences between the 3 models pertain to features other than basic performance. A chart comparing the 3 versions is found below.

Unique to this entire line of products is the ability to use each microphone in a near (blue) mode or far (red) mode, and when in the far mode, an auto-gain or "equalizer" function in the microphone input volume which will automatically increase the gain as you move further away from the microphone element and allow a workable distance between 10 and 20 inches. The near mode is intended for more close-range use and does not engage the auto-gain or extensive digital signal processing. In the far mode, extensive digital signal processing is used to prevent pick-up of external noise.

Comparison of the 3 TableMikes

3-in1 TableMike	6-in-1 TableMike	9-in-1 TableMike

		
• **Digital and user configurable volume buttons (with TableMike Configuration Utility)** • **Highly acclaimed mic element with unrivaled accuracy and external noise rejection** • **Speech Equalizer technology to allow 10-20 inch working distance from mic element** • **16 inch boom with single articulation** • **USB interface** • **Mac and PC compatible**	• All features of 3-in-1 • Speaker included in base • Longer (21 Inch) boom with two points of articulation • Jack for optional foot pedal • Accessory USB port	• All features of 3-in-1 & 6-in-1 • Longest boom in industry (telescopes between 21 and 25.5 inch) • Two accessory USB ports • Card reader
$279	$329	$379

SpeechWare 3-in-1 TableMike (TK03)

This "second generation" TableMike from SpeechWare is the result of more than a year of the best Belgian engineering and input from a number of experienced speech recognition users/resellers including Chuck Runquist, Larry Allen, Lunis Orcutt and Speech Recognition Solutions. While the first generation product was good and clearly on par with other table-mounted microphones, their subsequently released "second generation" 3-in-1 is proving to be nothing less than extraordinary.

Unique to this product is an auto-gain or "equalizer" function in the microphone input volume which will automatically increase the gain as you move further away from the microphone element and allow a workable distance between 10 and 20 inches. Also unique is a digital signal processing built into the circuit board which does an extraordinary job removing external noise. The result is a microphone with a high level of accuracy over a great variation of distances and relative immunity to external noise. In our opinion this is the best table mounted microphone for speech recognition users, unless you need the features contained in the 6-in-1 or 9-in-1 microphone (these offer the same quality with speech recognition software, but other helpful features).

Like the other microphones in the TableMike series, this microphone can be used in one of three modes:

- Speech Red mode (auto gain employed; maximal noise cancellation; working range 10-20 inches; speaker not operational in this mode)
- Normal mode (most realistic sound and noise rejection but auto-gain not operational and working range 2-4 inches; speaker operational in this mode)
- Accessory microphone mode (a separate headset microphone of user's choice can be plugged into microphone jack)

Overall Rating:

MSRP: $279

Learn More

SpeechWare 6-in-1 TableMike (Tk06)

This microphone has undergone re-design with the best Belgian engineering and is currently in production in Taiwan. It uses the same microphone element and circuit board as the 3-in-1, so i5 provides identical performance with speech recognition software.

Features this microphone has over the 3-in-1 TableMike are the following:

- a longer boom (18 inches)
- integrated speaker with volume controls
- a jack for integration with an optional foot pedal
- an accessory USB jack

Overall Rating:

MSRP: $329

Learn More

SpeechWare 9-in-1 TableMike (TK09)

This is the "grande" of the SpeechWare TableMike series. It uses the same microphone capsule and circuit board as the other members of this series, so it will exhibit the exact same accuracy, noise cancellation, and working range. Unique to this product is a number of additional features, including:

- A unique telescoping boom which can vary from 16 to 24 inches
- Two accessory USB ports
- An integrated SD/SDHC/MMC/MS/MSPro/MSPro-HG card reader
- A programmable button which can be used to control other applications

Like the 6-in-1, this product includes a built in speaker, and foot pedal jack to use with an optional foot pedal to control the microphone's on/off functionality. Like the other members of this series, the 9-in-1 includes an accessory microphone jack and a sound out jack. This microphone truly has it all!

Overall Rating: 

MSRP: $379

Learn more

Audix USB12 Desktop Microphone

The Audix USB 12 is a plug and play desktop USB microphone. The Audix USB-12 records in high definition with a 16 bit sample resolution and supports 44.1k and 48k sample rates for both playback and recording.

The Audix USB12 features a push-to-talk button with the option of 'steady on' or 'momentary on' as well as a headphone jack for real time monitoring and a bass roll-off filter to control unwanted low frequency signals. The Gooseneck is 11".

The USB 12 is perfect for Speech Recognition with Dragon NaturallySpeaking, podcasting, Skype or other VoIP and chat programs. We find that the Audix USB12 has moderate noise canceling and performs as well as the higher priced Buddy Desktop microphones.

Features:

- Flexible gooseneck design
- Records directly into computer via USB port
- Studio quality sound
- "Plug and play"
- Mac and PC compatible
- 16 bit sample resolution
- Supports 44.1k and 48k sample rates
- 12 mm high resolution condenser capsule
- Push to Talk-- 'steady on' or 'momentary on'
- Bass roll-off filter
- Headphone jack for real time monitoring

MSRP: $149

Learn More

Buddy 7G USB Desktop Microphone

This is a considerably better desktop microphone than the inexpensive ones seen in electronics stores. We don't consider this to have the accuracy of our better headset microphones, and falls short of the SpeechWare microphone shown above. It is, however, considerably less expensive than the SpeechWare microphone and it is notably better than the average desktop microphone sold at your local Best Buy. For those seeking a reasonably priced microphone and needing to keep their hands and heads free, this is an excellent choice.

Important features include the following:

- USB plug-and-play microphone
- Built-in noise-canceling microphone designed for speech applications like dictation and transcription
- Includes FilteredAudio™ technology for highly effective mechanical noise cancellation (Selected Models)
- Configurable microphone buttons:
  Push-To-Talk to hear sound only when button is held or set for mute toggle
- Direct control of the microphone On/Off function in Dragon NaturallySpeaking
- One programmable button simulates keyboard or mouse input for repetitive tasks or to insert text.

- Once programmed, Buddy DesktopMic 7G retains its configuration
- Free MyBuddyMic™ software download allows you to customize advanced tasks to control Microsoft Speech and Dragon NaturallySpeaking
- No need for additional drivers -- MyBuddyMic is optional for most normal operations

Overall Rating: 
MSRP: 179.99

Learn More

SoundTech GN-USB-2

The SoundTech GN-USB-2 is a desktop microphone designed with practicality in mind. It is a solid performer and at a fraction of the cost of other desktop microphones. It works solidly with speech recognition software (both Dragon Profession 15 and Dragon Medical One) and is roughly similar to the Buddy Desktop 7G in performance. It is well-constructed and rugged. The base is metal, heavy, and will stay stay in place on your desk. Additionally, it has 5 rubber feet to prevent sliding. The 17-inch boom articulates at both the top and the bottom, so it can be easily situated to match your needs. Given the auto-gain technology used in both Dragon 15 and Dragon Medical One, it has a very flexible working range from the user and easily accomodates a distance of 4-24 inches from the user.

While we don't consider this product a match for the performance of our most highly recommended desktop microphone (the SpeechWare 3-in-1), it's about a third of the cost and works quite well.

Features:

- Plug n Play
- Noise cancelling
- On/Off LED indicator
- Detachable USB A~B cable
- 16 inch adjustable neck - total of 18 inches neck length
- Weight base with non-skid rubber mounts

Specifications:

- Element: fixed-charge back plate, permanently polarized condenser
- Polar Pattern: Hypercardioid
- Sensitivity: -40 +/- 2dB(0dB=1V/Pa at 1KHz)
- Frequency Response: 40Hz~16KHz
- Output Impedance: 75-Ohm +/- 30%
- Max Input S.P.L.: 138dB
- Signal/Noise Ratio: 65dB
- Output Connector: USB A~B

- Power Supply: Phantom Power 3V DC

Operating System Compatibility:

- Microsoft Windows 2000, Windows XP, Windows 7 Windos 8 and Windows 10
- Apple Mac Os9 and all OX X variations

Warranty: 90 Day Mail In Parts/Labor

Samson Q1U - Balanced Spring Arm Combination

Although we have this listed last, in many respects this is our most highly recommended desk mounted microphone. The combination includes a high-quality hand-held microphone with a USB interface and a mounting mechanism which allows attachment to a distant site on your desk or work surface.

In terms of quality, this is an outstanding microphone. It provides excellent accuracy and extremely high level of external noise rejection. Unique to this set-up is the ability to use the microphone when positioned as far as 12-14 inches from your mouth (we recommend doing the training and sound set-up with the microphone just a few inches from the mouth, but thereafter it can be successfully positioned much farther away during actual use.

Overall Rating: 

MSRP: $134.99 (stand and Mic)

Learn More ...

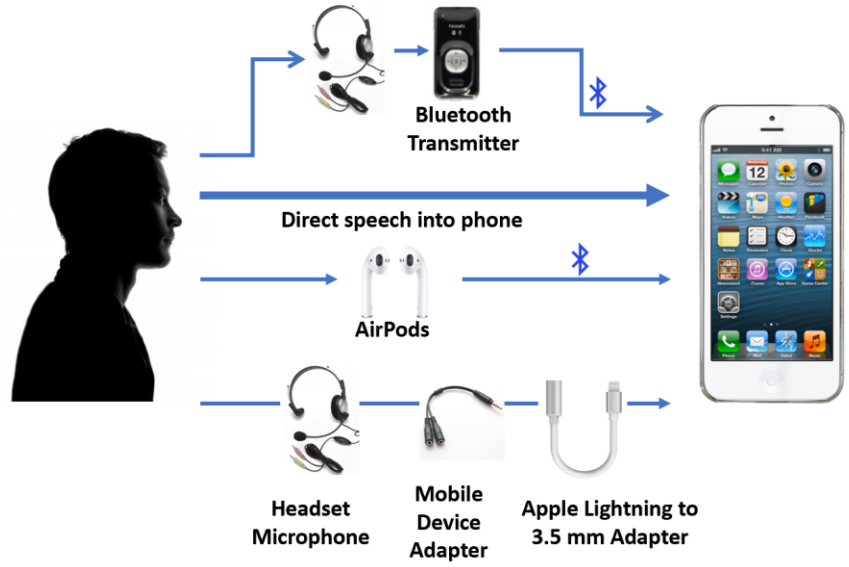
Microphones for the iPhone, iPad and other Mobile Device

Many Ways of Inputting to a Mobile Device

Although there are differences between mobile device types, there are only a few ways to input sound to most devices. This includes the on-board microphone, the use of accessory audio jacks, and a wireless connection by means of Bluetooth. Many devices have a standard audio jack which accepts a 1/8-inch (3.5 mm) plug. Recent vintage Apple devices are unique in having a “lightning” connector, and if attempting to connect a wired microphone to such a device it is necessary to use a couple of adapters. Even if a device has a standard audio jack, you cannot simply plug a microphone into the jack for reason which will be reviewed.

The diagram below, using an iPhone as a sample device, highlights the many methods of inputting your voice to an application on a mobile device. Is there a best way? Keep in mind the following:

- Speaking directly into the device is usually good, but the onboard mics on mobile devices are not very directional and tend to pick up extraneous noise if present, so you can expect to get marginal results when in a noisy environment
- Bluetooth devices, either in the form of a Bluetooth equipped microphone or with use of a Bluetooth transmitter as a bridge between an analog microphone and you device, have limitations resulting from the low bandwidth used by such devices and usual need to compress the audio signal and lead to degradation of the audio signal. For this reason, the "fidelity" of the audio signal is often compromised. This having been said, the handling of audio by Bluetooth devices is getting better and better.
- While the direct connection of a microphone to a mobile device offers the simplest solution, the actual input jacks on the mobile device tend not to be compatible with usual microphones and this leads to the need for and complication of one or more adapters.



The Need for Adapters

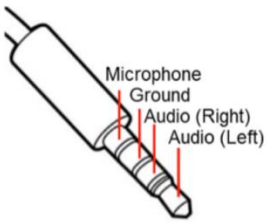
For the average user seeking improved performance over the on-board microphone, interfacing with the audio jack or lightning connector is the simplest and most reliable method to do so. The advantages of using a headset microphone plugged into an audio jack rather than using the on-board microphone on the mobile device are two-fold:

- Improved accuracy
- Improved external noise rejection

The challenge of using a headset microphone with a mobile device are multi-fold:

1. First, even if your device has a standard audio jack, this jack is intended for two simultaneous function if interfaced with the right plug: exporting stereo sound and importing a monaural microphone signal. If your headset had a single jack prepared to deal with both functions, you would be all set … but this is rarely the case.
2. If you have a recent vintage Apple device, you may not have an audio jack at all. Newer devices have a "lightning connector" and you'll need a special adapter to convert this to a standard 4-connector audio jack.
3. Many mobile devices are configured so that they will change from the on-board mic to an accessory mic ONLY if the accessory mic has certain characteristics.

The key to understanding the need for an adapter when dealing with a headset adapter connecting to a mobile device is a simple fact about the jack into which it will be plugged. Unlike a computer sound card or an external USB sound adapter which has separate mic-in and sound-out jacks, a mobile device (and many newer vintage computers) have only a single jack intended to accomplish both functions. The way this is possible is that under the surface, the jack has 4 conductors as follows:



- Tip: Left sound out
- Ring 1: Right sound out
- Ring 2: Ground
- Sleeve: Microphone in

Since the average headset microphone does not have a single plug with 4-conductors designed to integrate with such a jack, it is necessary to "blend" the two plugs on a headset into a single integrated 4-conductor plug. This is what the adapter does. Many companies make such adapters, including Speech Recognition Solutions, KV Connections, StarTech and others. They all do the same basic thing.

The original adapter Speech Recognition Solutions created and had manufactured in China is shown to the left. These were costly and we later switch to a generic adapter created in China and marketed by Startech which accomplishes the exact same thing and which we call our "Mobile Headset Adapter".

So, what you will need depends upon which device you have. This is summarized in the table below:

Device	**Needed Adapters**
Mobile device with 3.5 mm audio jack	Mobile headset adapter
Apple device with lightning connector only	Apple lightning to audio adapter plus mobile headset adapter

Recommended Microphones for use with Mobile Devices

The following are headset microphones that we have specifically tested with the iPad and which we recommend. Keep in mind that for many or perhaps most casual users, the on-board microphone works fine. We have been very impressed with the results using the on-board mic and recommend these products only if you have the need for more intense accuracy, external noise rejection, or desire

for the process to be a little more discrete. In general, you can talk a bit more softly when using a headset microphone. Remember, you will need to purchase the iPad headset adapter (shown above) in order to use a headset microphone with your iPad. If your device has only a lightning port, you will need the lightning to 3.5 mm audio adapter as well.

Andrea NC 181
Andrea NC 181 VM
Andrea NC 185
Andrea NC 185 VM
AudioTechnica 8HEmW
Buddy DM 101
CyberAcoustic AC 101, 104, 201 and 204
Sennheiser ME3
SpeechWare FlexyMike Dual Ear Cardioid
SpeechWare FlexyMike Single Ear Cardioid

USB Adapters

Traditionally, a PC mic is plugged into the microphone input jack on a computer and the analog signal is sent to the computer sound card where it is converted to a digital signal and then used by your software. On some computers, particularly laptops where the sound conversion circuitry is typically integrated directly onto the motherboard, it is thought that other electrical devices in close proximity of the sound conversion circuitry may lead to interference and degradation of the signal and reduction in accuracy. An external sound adapter accomplishes the analog to digital conversion outside of the computer and imports the signal via an available USB port.

The need for an external sound card is variable and depends upon your equipment, the quality of your PC's sound conversion device (sound card) and the extent of shielding within your PC. In most instances a good sound card will serve you fine and you needn't consider an external device. There are a few exceptions.

- First, if you are using a Sennheiser ME3, you are using a microphone that was wired for a different purpose and only a few sound cards can deal with the unusual wiring pattern. We know of only one external sound card which will reliably deal with the unusual wiring of the Sennheiser ME - this is the Andrea USB sound adapter.
- The second situation in which an external sound adapter should be considered is if you are not using one and don't feel you are getting the accuracy which would otherwise be expected with your selection of equipment.

When considering an external sound adapter, also consider whether you need a full duplex (sound going in and out) or a monoplex device that simply needs to input your microphone signal into the PC. As an example, if you are using a headset that includes only a microphone (such as the Sennheiser ME3 or Audio-Technica Pro 8HEmV) you are better off with a monoplex adapter such as the Andrea Pure Audio MA (MA = monaural) USB adapter which will port sound in via the USB adapter, but leave sound out in the hands of the on-board sound card.

Comparison of Currently Available USB Sound Adapters

	Duplex Usage?	Auto-gain	Choice of Normal and Long Range Modes	MSRP

Andrea Pure Audio Sound Adapter (SA Version)	Yes	No	No	$49.95	**Learn More**
Andrea Pure Audio Sound Adapter (MA Version)	No	No	No	$39.95	**Learn More**
Buddy 7G USB Adapter	Yes	No	No	$75.00	**Learn more**
SpeechWare MultiAdapter	Yes	Yes	Yes	$139	**Learn more**

	**Andrea Pure Audio SA USB Adapter** • Monaural • Ideal for use with headsets without speakers • Simple and reliable
	**Andrea Pure Audio SA USB Adapter** • Binaural USB adapter (deals with sound in and sound out) • Works well with almost all headsets • Simple and reliable
	**Buddy 7G USB Adapter** • Binaural USB adapter (deals with sound in and sound out) • Works well with almost all headsets • Includes mute switch • Simple and reliable
	**SpeechWare USB MultiAdapter** • Binaural (sound in and sound out) • Mute function • Offers both near and distant mode • Employs auto-gain technology • Includes high level of digital sound process to remove external noise • Expensive!

Caveats:

1. The two versions of the Andrea Pure Audio USB sound adapter are extremely similar except that the SA version is duplex (handles sound in and sound out) and the MA version is monoplex and handles only sound in to your computer. They both perform well with speech recognition microphones. The MA version should only be considered if you are using it with a headset or other microphone that does not include speakers, including the Sennheiser ME3, the Audio Technica mics shown on our site, and for use with hand-held microphones such as the Samson Q7, Sennheiser MD431, and the Audix OM2.

2. The Buddy 7G is a well performing USB adapter and is an old favorite.

3. The SpeechWare USB MultiAdapter is the newest USB adapter and is unique in several ways, including employing auto-gain technology (automatically adjusts microphone input volume as the sound changes volume) and also offers the choice of a normal and long-range mode. In the long-range mode it allows much greater distance from any attached microphone and employs a high degree of external noise rejection. Is it worth the fairly high cost? For most users we we say no. But if you are truly striving for perfection in speech recognition accuracy and have no financial constraints, this is the one to choose.