

Speech Recognition Software: The Medical Provider's Guide

A Comprehensive Guide to Dragon
Medical Practice Edition 2

Jon W. Wahrenberger, MD FAHA FACC



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Edition 2

Jon W. Wahrenberger, MD FAHA FACC
Speech Recognition Solutions, LLC

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Speech Recognition Solutions, LLC
4 Spencer Rd.
Hanover NH 03755
www.SpeechRecSolutions.com

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The Guide in a Nutshell

The following principles are the key to effective use of speech recognition technology in medical dictation; consider them as you browse through the guide and as you use your software.

- Dragon-based speech recognition can truly improve documentation, save money and get you home sooner ... if you use it right.
- High quality hardware, including the fastest computer you can afford with at least 4-8 GB of RAM, will improve both accuracy and speed of operation; a high quality microphone will similarly improve your results.
- Your best accuracy and productivity will result from use of the medical version of Dragon.
- Be sure to select the vocabulary appropriate for your dictation, and add any unique words you use regularly to Dragon's vocabulary; if you switch from medical dictation to general dictation, be sure to change your vocabulary.
- Learn how to correct mistakes so they won't be repeated; learn how to tell the difference between Dragon errors versus sloppy dictation; these should be handled differently.
- Learn how to create and use "text commands" – they will improve your documentation and dramatically improve your efficiency.
- Remember that nothing affects accuracy more than your dictation style; enunciate carefully and speak in phrases or complete sentences
- Manage your microphone to reduce the influence of contaminating environmental noise.

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PART ONE: General Use of Dragon

Chapter 1: Introduction

Previously seen only in the realm of science fiction, during the last decade the dream of computerized speech recognition has truly been realized. Nowhere has the success of this technology more revolutionized work flow than in the medical field. It has led to dramatic time and cost savings when compared with secretarial transcription. It has contributed to remarkable productivity enhancement when compared to hand typing. The latest medical version of medical speech recognition, **Dragon Medical Practice Edition 2 (DMPE2)** is associated with improvements in speed and accuracy. Further, it includes a variety of feature enhancements that make it particularly useful to the medical practitioner.



What does speech recognition software accomplish? In the simplest terms, speech recognition software is a means to control your personal computer with your voice. Following just a few short minutes of training, Dragon will effectively do the following:

1. Turn your spoken word into text in word processing documents
2. Accomplish a variety of computer actions traditionally done by means of the mouse and keyboard with your voice
3. Through the use of “commands”, allow more complex and sequential tasks to be accomplished with your voice

Why consider Speech Recognition Software? In today’s changing medical environment, with increasing movement to electronic documentation, reduction in reimbursement, and heightened pressure upon medical providers to improve productivity, many are looking for ways to optimize efficiency while still maintaining the quality of the medical record. Speech recognition software is the perfect way to do this. It provides instantaneous results and with high levels of accuracy. Further, speech recognition software can help your practice or hospital save money compared with traditional transcription. At my home institution, for instance, when Dragon was provided to 47 providers previously using outsourced transcription, we calculated an annual saving of nearly \$100,000. It is highly cost effective and with a return on investment coming after just 2 to 3 months of use.

“[Speech recognition software] provides instantaneous results and with high levels of accuracy. Further, speech recognition software can help your practice or hospital save money compared with traditional transcription.”

Perhaps the most remarkable feature of this software is its high level of accuracy. Out of the box and with the basic 5 to 6 minutes of training, Dragon offers accuracy rates in the 95% or higher range. With a little more practice and use, typical users are seeing accuracy rates in the 99% range.

Key Point: Dragon Medical Practice Edition 2 (DMPE2) has become an accurate, cost-effective alternative to hand-typing and formal transcription and is perfectly poised to assist medical providers in documentation.

The scope of this guide: In this brief guide I *will not* walk you through everything Dragon is capable of doing in painstaking detail. You have neither the time nor interest in this. Rather, I hope to provide you with a distilled version of *what you really need to know as a medical provider* to make speech recognition a worthwhile investment and effective documentation tool. Can you get by without this guide? Yes, of course you can. You can install Dragon, muddle through the User Guide to figure out how it works, and use it reasonably effectively. This is what I did 15 years ago and it took me a few months to get reasonably facile. With just a small investment in understanding how Dragon works, how your dictation style impacts accuracy, how Dragon can learn from its mistakes, and how some of the underlying functionality beyond simple speech to text conversion works, you can quickly get up to speed and reap all the benefits of this exciting software without having to spend five years getting good at it!

Will this guide be helpful if you are using the original Medical Practice Edition, or other versions of Dragon? Almost certainly yes. The majority of the first part of the guide pertains to general principles that apply to almost all versions of Dragon. Whenever possible, when methods of accomplishing some tasks have changed with more advanced versions of Dragon, I have also included reference to how this is done in earlier versions. While there are a few functions that are present only in the advanced versions of Dragon (Professional, Legal and Medical) and not the Premium version, this tends to be rare. Most of the advanced techniques described in Part Two of the guide will be useful for all Dragon users.

“Will this guide be helpful if you are using the original Medical Practice Edition or other versions of Dragon? Almost certainly yes.”

Part One of the guide: The first part of the guide is about the basics. You will learn how to install the software, some recommended set-up tweaks, and the basics of effectively using the software including dictating, correcting, and building commands. In addition you will be provided with some basic strategies for using DMPE2 with your electronic health record.

Part Two of the guide: The second half of this guide is a collection of short tutorials on a variety of advanced topics. By virtue of being segregated into the “Special Topics” area, this is a signal that this is optional material. Most is directed to specific accessory products, techniques, and challenges. You may want to scan the chapter headings and consider visiting any of these topics should they apply to your use of Dragon in the future.

Dragon Medical Practice Edition 3? In July of 2013 Nuance began the release of NaturallySpeaking 13, first with the Home and Premium versions and later the Professional and Legal versions. Version 13 has some interesting new features, including:

- 15% increase in accuracy
- Shorter profile creation time
- Simplified audio set up process
- Expanded web browser compatibility
- Enhanced Windows 8 support
- New DragonBar behavior, new help menu design and new user interface

Will a Dragon Medical Practice Edition 3 – based on the version 13 speech engine - be released? At this point we simply don’t know. At the time of publication there isn’t even talk of a DMPE3. Typically the Healthcare Division at Nuance releases the medical version 6-12 months after non-medical versions have been released. At this point, though, we know that Nuance is working on a new, cloud-based medical product termed [Dragon Direct](#) (see chapter on Dragon Direct in Part Two) and it would not be surprising if Nuance released this subscription product before (and perhaps instead of) DMPE3.

“Will a Dragon Medical Practice Edition 3 – based on the version 13 speech engine - be released? At this point we simply don’t know.”

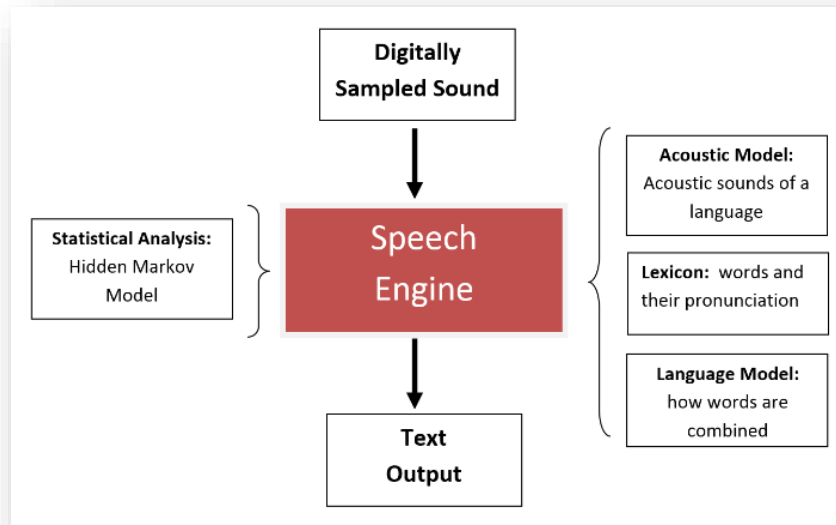
Chapter 2: The Basics: How it works

Quick Overview

If the truth be known, you don't need to know a whole lot about how Dragon works in order to use it effectively. Suffice to say

over a few decades some very smart software engineers, statisticians, and language experts have come together to figure out how your spoken word can be digitized, broken into the basic phonemes of speech, have individual words recognized, and then using complex statistical modeling accurately string these words together into coherent

sentences. Obviously there is a huge amount going on below the surface in order to make a lot of quick decisions on the fly. How much of the underlying processes does a medical user need to understand? Thankfully, just the basics.



The Essentials

What you need to know is the practical implications of how Dragon works. Here are the key points:

1. The *accuracy* of the process depends upon a number of factors, including the version of Dragon you are using as it has become more accurate over time, the care with which you dictate, a clean signal from your microphone, a lack of competing noise, and some computer factors including the amount of RAM and processor speed.
2. The *speed* of the process is dependent upon having a good quality computer with a fast processor (see hardware recommendation). In this respect, the faster the better. Speed is also affected by the presence of contaminating noise. In loud environments Dragon needs to do more "thinking" to figure out what is speech and what is noise.
3. Dragon can learn from its mistakes and get more accurate with time, but only if you take the time to formally correct mistakes.

4. Of all the factors that impact overall accuracy, it is your dictation style that impacts accuracy more than anything. As you will learn below, enunciating carefully and speaking in phrases or complete sentence will lead to the highest levels of accuracy.

“Of all the factors that impact overall accuracy, it is your dictation style that impacts accuracy more than anything. As you will learn below, enunciating carefully and speaking in phrases or complete sentence will lead to the highest levels of accuracy.”

5. The software’s decision on any given word is based not only upon the word in question, but also the words that come before and after that word. Combining language model data about word frequency and word associations with complex statistical models, Dragon makes a series of complex decisions in real time as a user is talking, and generally with an extremely high level of accuracy. Because the process is highly dependent upon the context of any word (the words coming before and afterwards), it works best when lots of words are presented. For this reason, better results will occur when a user speaks in long phrases or complete sentences, rather than slowly one word at a time. Learn more about the current speech model, [BestMatch V](#), in the Special Topics area.
6. Having an appropriate set of words (vocabulary) from which Dragon can choose as you dictate is an essential determinant of accuracy in that it greatly increases the likelihood of the correct word being chosen. Similarly, having Dragon evaluate some of your own documents to learn your writing style and the words you use frequently, will also improve your results.

Key Point: Dragon doesn’t work the same on every system and for every user. Performance will depend upon the processor speed and RAM of the system. Likewise, it will be impacted by the way in which a user sets up and interacts with the software

Chapter 3: Prerequisites: Hardware, Software & Microphone

Hardware: Before you spend money on a medical version of Dragon, be sure your computer is up to the task. As described above in the section on basic principles, a fast computer with plenty of RAM will impact both your speed and accuracy while using Dragon. So how can we advise you on what to buy, or whether your current machine is up to the task? There are really three sets of recommendations to consider:

1. The Nuance “minimum” recommendation: this is the minimum system requirement needed to install and run Dragon
2. The Nuance “recommended” system: these recommendations will allow you to take advantage of all Dragon features and in a brisk and accurate manner.
3. Aiming for the Stars: this is our own term. It represents the recommendations of non-Nuance consultants and experts in speech recognition. These are the recommendations oriented to those who don’t mind dropping a few thousand dollars on a computer and who want blistering speed and performance with Dragon.

Overview of Recommended Hardware:

	Nuance “Minimum”	Nuance “Recommended”	“Aiming for the stars”
CPU	1 GHz Intel Pentium	2.2 GHz Intel Dual Core	Intel i-7 dual core
Processor Cache	512 Kb L2	2MB L2	
Free Hard Drive Space	3.2 Gb	3.2 Gb	3.2 Gb
RAM	2Gb	2Gb	8 Gb or more

For more detailed hardware recommendations and buying strategies, please see the expanded section on [Detailed Hardware Recommendations](#) in Part Two of this guide.

Key Point: For the best speed and accuracy, use a computer with as fast of a processor and as much RAM as you can afford.

Software: For use in medical documentation, the vocabulary and functionality of the dedicated medical versions of Dragon is highly recommended.

Which Product to Buy: Depending upon your practice size and IT infrastructure, you may consider one of several versions:

- Dragon Medical Practice Edition 2: This is designed for practices of 24 providers or less and is best version for providers in small groups. It includes more than 90 medical specialty and sub-

specialty vocabularies. The current version of DMPE2 is using the Dragon 12 speech engine.

- **Dragon Medical 360 | Network Edition:** This version of Dragon is designed for larger practices and medical centers, particularly those that are using an electronic medical record implemented virtually (typically via Citrix). Although functionally is nearly identical to the Medical Practice Edition from a provider's perspective, this version involves centralized institutional control of licensing, back-up and certain Dragon functions. The most current Network Edition is using the Dragon 12 speech engine.
- **Dragon Medical 360 | Direct:** this is a relatively newly released subscription-based product which utilizes cloud-based speech recognition, a medical vocabulary and allows institutional management of licensing, vocabulary, and commands. At this time the Dragon Direct product is sold only to institutions and is not available for individual users. Learn more about this product in the expanded section on [Dragon Direct](#) in Part Two of this guide. For additional information, please visit our website at: <http://www.speechrecsolutions.com/dragondirect.html>

Key Point: For the majority of medical providers in small practices, Dragon Medical Practice Edition 2 is the best product to buy. If you are part of a large institution, you should be talking with your IT department before making a purchase.

Medical Practice Edition 1 versus 2: If you already own a license for the original version of Medical Practice Edition (which uses the Dragon 11 speech engine), you may be wondering if you should spend the money to upgrade to DMPE2. The quick answer is that if you are happy with your current results, don't spend the money to upgrade. If you find your current level of accuracy less than ideal, then definitely consider the upgrade to DMPE2. These are the main feature differences between the two versions:

1. By virtue of use of the new "BestMatch V" speech model, the DMPE2 is about 20% more accurate than the original version. The original DMPE used BestMatch III.
2. DMPE2 includes an enhanced Dictation Box which can be employed in a hidden manner or with variable degrees of transparency. This is an ideal way to collect information while browsing through an electronic health record (HER) for later inclusion in your documentation.
3. DMPE2 includes more than 90 medical vocabularies rather than 60 in the original version; depending upon your specialty, this can contribute to enhanced accuracy
4. DMPE2 allows improved handling of USB microphones (you can remove the microphone at will without leading to an error message; upon reconnecting the user profile will be immediately functional again.)
5. DMPE2 includes the ability to use an iPhone or Android mobile device as a microphone

Can you get by with a non-medical version of Dragon? Although it isn't recommended, an occasional medical provider can get by with the less expensive Premium or Professional version of Dragon, which does not include medical vocabularies and many of the unique functions available in the medical version. You should consider this only in a few situations:

1. You are reluctant to pay the \$1600 or so for the full version and want to try the \$99 “street version” (Premium) as a “proof of concept” (you can transfer the license to your spouse or child should you decide to purchase DMPE2.)
2. You are not working in an electronic medical record. Non-medical versions of Dragon are designed in such a way that the microphone is disabled in the presence of a recognized EMR. This is a cute trick Nuance developed and has angered a lot of people. Don’t blame us for this one!
3. Your dictation is not likely to involve a lot of medical terminology
4. You don’t intend to use a hand-held microphone such as the Dictaphone PowerMic II (Note: there are ways to get around this limitation. Please refer to the section below on [Octopus USB Controller](#))

Where to buy Dragon: If you are part of a practice of more than 24 medical providers, you will need to purchase directly from Nuance. If you are part of a small practice, we strongly hope you will consider purchasing from Speech Recognition Solutions, but we will refrain from any further self-promotion. We recommend you consider the following when buying a copy of Medical Practice Edition 2:

1. If you buy from a large on-line seller such as Amazon, CDW, etc., you will be buying software with absolutely no user support. You will not have a phone number to call in order to talk with a knowledgeable person to help with installation issues, usage recommendations, or troubleshooting should you have a problem. This is a major disadvantage.
2. Buying from a “value added reseller” allows you the benefit of experience, often from regular users of Dragon, as you get started.

Should you buy Nuance Maintenance? One year maintenance contracts are available from most resellers and offer the user the following:

1. 24/7 telephone support
2. Official Nuance iSupport (access to online support database)
3. Upgrade support: if a new version of Dragon medical is released while you have an active maintenance plan, you get the upgrade for free.

We believe maintenance is worth considering, but it’s not a “slam-dunk” decision. If you are an experienced user, you will be unlikely to need the support. Dragon medical tends to be on an 18 -24 month release cycle and the upgrade typically costs around \$600. With maintenance running about \$300 a year it’s probably a wash in terms of the upgrade assurance, particularly if you purchase soon after a product is released. On the other hand, if you are purchasing Dragon well into the release cycle, it might make sense to get maintenance since it will assure you a free upgrade to the next released version. Be aware, though, you can only buy maintenance at the time you purchase the software. You cannot wait and buy maintenance when you anticipate a new release. When was DMPE2 released? During the summer of 2013. As of March of 2015, we have heard no talk of a DMPE3 and suspect this is unlikely to be released any time before the summer of 2015, if at all.

Key Point: Purchasing maintenance only makes sense if you are a true “newbie” or if you are purchasing well into the release cycle of Dragon Medical since it will buy you a free upgrade when the new version arrives.

Microphones & USB Adapters

Why do microphones matter? We have already suggested that the biggest determinant of accuracy is the manner in which you dictate, with the key issue being enunciating carefully and speaking in phrases and sentences. This is entirely true. But this isn't to say that the choice of microphone isn't an important consideration as well. It is, and for these reasons.



- Accuracy: Not all microphones are the same. The \$10 microphone that is bundled with Dragon simply will not provide the accuracy of a high quality microphone. The added accuracy is most noticeable in properly differentiating between commonly used pronouns such as “a” and “the” which can easily be mistaken for each other.
- External noise rejection: most microphones will perform well in a totally quiet environment. Where the high quality microphones set themselves apart is in the rejection of contaminating noise. For those using Dragon for “mission critical” purposes and where background noise is a fact of life, the noise cancelling qualities of a microphone may be critical.

“Most microphones will perform well in a totally quiet environment. Where the high quality microphones set themselves apart is in the rejection of contaminating noise.”

- Efficiency: For the user needing to navigate through documents in an electronic health record and frequently performing repetitive tasks on the computer, a hand-held microphone with programmable buttons may be the best solution.
- Convenience: for the user needing both hands free for non-dictation related keyboarding, either a headset or desk mounted microphone may be the best solution.
- Personal factors: we have seen both men and women who simply don't want to mess up their hair with the constant attachment and removal of a headset microphone. For those with long and perhaps thick hair, reaching the ears is sometimes a challenge.
- Hygiene: In certain situations in which multiple users share a computer work-station, it is sometimes preferable to avoid use of a shared headset which, to be frank, has a microphone element so close to the mouth that it becomes a repository for respiratory secretions. In this type of situation, you may be best with a desktop mounted microphone that will allow use from a distance (refer to the section on the SpeechWare TableMike).

Overview of Preferred Microphones: After selling microphones for nearly 10 years and catering to a medical audience, we have developed some general recommendations which are listed below:

Category	First Choice	Approx. Cost	Alternatives
Best Wired Microphone	Sennheiser ME3	\$195 (includes Andrea USB Adapter and storage bag)	SpeechWare FlexyMike Dual Ear Cardioid
Best Wireless Microphone	VXI VoxStar UC	\$159	Andrea WNC1500; Sennheiser SD Pro-1 and Pro-2, Sennheiser MB Pro UC
Best Hand-Held Microphone	Philips SpeechMike Premium	\$335	Nuance PowerMic II
Best Desktop Microphone	SpeechWare TableMike (3-in-1, 6-in-1 or 9-in-1)	\$279 (3-in-1)	Buddy DesktopMic
Best Portable Notebook Microphone	SpeechWare TravelMike	\$249	None

For detailed information on the above recommended microphones, please visit the section on [Detailed Microphone Recommendations](#) in the Part Two of the guide.

Key Point: Microphones matter. Don't use the cheap microphone that came with Dragon. Once you know that Dragon will work for you, upgrade to a higher quality microphone that matches your needs and workflow.

External USB Sound Adapters: Although it is possible to use an analog microphone by plugging it into your computer's on-board sound card, there are a number of reasons you should consider using a good external sound adapter rather than your on-board sound card. An external USB sound adapter substitutes for your on-board sound card and has several important advantages:

- **Lack of interference:** External USB adapters accomplish the analog to digital conversion outside of the electrically "loud" environment of your computer's motherboard (most computer sound cards involve circuitry built into the motherboard and not a separate dedicated device). Using an external sound card moves the process away from this potential source of interference.
- **Compatibility:** On board sound cards may vary in the amount of voltage provided to an attached microphone. Some are adequate and some are only marginal. By using an external sound card manufactured specifically for use with a computer microphone you are assured proper compatibility.
- **Portability:** When you base a user profile on an external sound card, you are, in effect, basing it on a sound source that is portable. If you ever need to move your profile to another computer, you can move the sound circuitry as well (the USB sound adapter) and expect very similar results.



For all of these reasons we highly recommend that users of analog microphones interface the microphone with a high quality external USB sound adapter.

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Overview of Available USB Adapters: A variety of external USB sound adapters are available and all work well. The monaural or “MA” version of the Andrea pure audio USB adapter is a good choice for a headset microphone without speakers. The “SA” version is a great for use with most standard headset microphones which include speakers, since it handles both sound in and sound out. The SpeechWare MultiAdapter is unique in including “auto-gain” technology to accommodate varying microphone sensitivities and varying user distance from the microphone, and includes some advanced digital processing algorithms to remove external noise, but also comes with a very high price tag.

- Andrea Pure Audio USB Adapter (SA Version): This is a “workhorse” adapter which works great with virtually all typical headset microphones. It includes digital signal processing circuitry to exclude repetitive external noise. This adapter is used for both the analog-to-digital conversion (sound in) and digital-to-analog conversion (sound out). The outgoing signal is stereo.
- Andrea Pure Audio USB Adapter (MA version): Very similar to the SA version of the adapter, this version is intended only for a microphone input signal (it handles the incoming analog-to-digital processing) and does not handle sound out. We recommend using this version with headsets that do not include a speaker, such as the Sennheiser ME3, SpeechWare FlexyMikes and Audio Technica 8HEmW.
- Buddy 7G USB Adapter: This is another “workhorse” adapter and works very similarly to Andrea Pure Audio (SA version) adapter. The maker of this product line does only direct sales, so you will need to purchase this through Amazon.
- SpeechWare SpeechMatic MultiAdapter: While clearly the most expensive of the USB adapters, arguably this is also the best. Based on the same circuitry contained in the SpeechWare TableMikes, this adapter includes two unique functions: a) more extensive digital sound processing algorithms to reduce external noise and b) auto-gain technology to flexibly change the microphone input volume as your distance from the microphone element changes. This latter function is optional and a user can toggle between a “Normal” or blue mode (no auto-gain) and a “Distant” or green mode which employs the auto-gain technology.



Device	Function	Suggested Price	Comments
Andrea Pure Audio SA	Duplex	\$45	Excellent general use adapter
Andrea Pure Audio MA	Monaural	\$39	Good choice for Sennheiser ME3, SpeechWare FlexyMike & Audio Technica 8HEmW
Buddy 7G	Duplex	\$70	Excellent general use adapter
SpeechWare MultiAdapter	Duplex	\$149	Includes auto-gain and advanced digital sound processing algorithms

Notes on above table: Duplex adapters route sound in and out of the computer via USB. A monaural USB adapter only handles microphone input through USB.

Key Point: When using an analog microphone, it is strongly advised that you use a good quality external USB sound adapter. Good devices are made by Andrea, Buddy and SpeechWare. A USB adapter is NOT needed if your microphone attaches to your computer via USB, since it already includes a

Chapter 4: Installation and Set-up

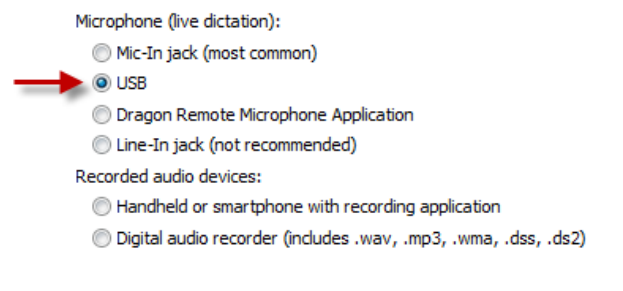
Basic Installation

Basic Installation is fairly straight-forward. If you have a previous version of NaturallySpeaking installed on your PC, you can transfer your vocabulary and personalized commands to the new version. I recommend that you manually export these from your old version (storing them somewhere on your hard drive) before doing the installation of DMPE, rather than simply upgrading your old user profile into the new version (see methods of Exporting Commands and Vocabulary below for more information on this topic.) Before doing the actual install, the following is recommended:

- Export your personalized words and commands from your current version 8 or 9 user profile (see sections below on [exporting words](#) and [exporting commands](#))
- Close all open applications
- Turn off or disable antivirus software
- Insert the installation disk and follow all instructions
- Unless you have reason to do otherwise, you should choose “Typical/Complete” when asked during the installation process

A few caveats about installation:

1. When you get to the early screen asking you to select a speech device (see image to right), be sure to select the radio button appropriate for your planned input device (attached USB microphone versus analog microphone plugged into you on-board sound card.) In the example to the right a USB device is selected.



2. During the two steps in which you are setting the volume and assessing the accuracy of your chosen microphone, be sure to position your microphone about ¾ inches away from your mouth and speak with a relaxed volume (loudness) and speed while enunciating carefully. It is not necessary to speak loudly or forcefully.

“... be sure to position your microphone about ¾ inches away from your mouth and speak with a relaxed volume (loudness) and speed while enunciating carefully. It is not necessary to speak loudly or forcefully.”

3. At the step at which you prepare to begin reading to Dragon (see below), do not choose to skip training. Although Dragon will work without formally training it to your voice, it will not work as well. The formal training takes only about 5 minutes and is well worth the time. Note: in the most recent upgrade of DMPE2 you are given the option to skip additional training. We recommend you do the reading.
4. When you get to the step in which you select the passage you will read, it is strongly suggested that you select “What to Expect from Speech Recognition” since this will provide you with helpful information in your reading.

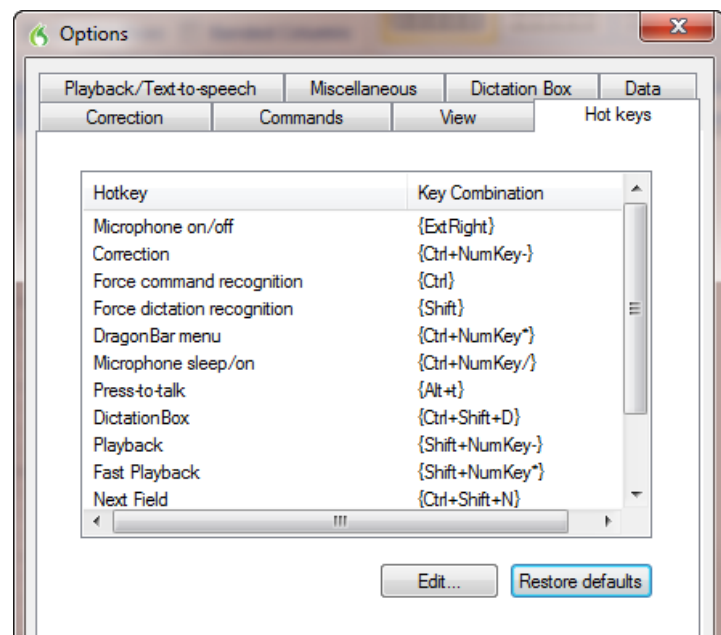
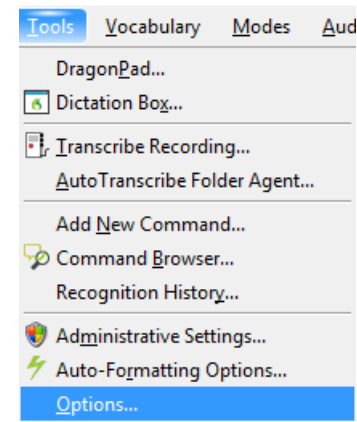
Fine-Tuning Your Installation

Once you have completed your installation, activated your software, and optionally registered it, a few basic configuration steps are recommended. These can be done at any time, but you’ll find it helpful to have some of this done before you start using Dragon. These configurations are done from the “Options” menu, which can be accessed from the Tools menu (see image at right).

Hot-Keys: Assign a few Dragon allows assignment of keyboard “hot-keys” to control several functions. After opening the options menu and selecting the “hotkeys” tab, a hotkey is programmed either by double-clicking on the line associated with the hotkey function or by selecting the line and clicking on “Edit” near the bottom of the hot keys tab. Once in the “edit” mode, a function is assigned by simply pressing on a key or key combination on your keyboard. You may find some keys may not be selectable for certain functions and this is because they are already assigned to another running application on your computer.

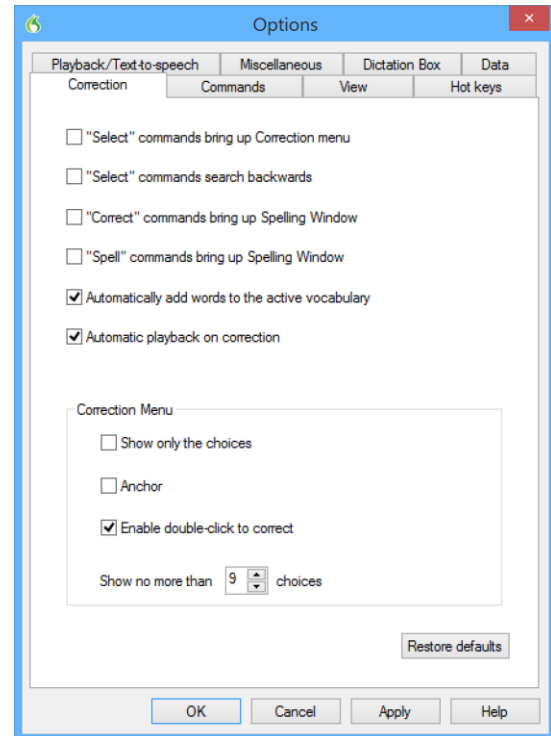
The only hot-key assignment we consider important is assignment of one or more hot-keys to control the microphone. This is particularly helpful if using a headset or desktop microphone. There are two microphone control options that can be assigned to a key, including:

- **Microphone On/Off functionality:** when a key is programmed to do this, one push of the key turns the Dragon microphone on and another push turns it off. This is a fairly practical function to employ if you use a headset microphone



and want a means of turning the microphone on and off without having to click on the microphone icon.

- **Press-to-talk functionality:** although programming which leaves the microphone on or “hot” only when a key is depressed is potentially very useful, doing this with a keyboard key is a bit demanding of your hands. We recommend reserving this type of microphone control during use of hand-held microphones and not for use on a traditional keyboard. In this situation, with a hand already on the microphone, press-to-talk control is quite practical and a great way to keep the microphone on only when you are talking. For PowerMic II users, Dragon provides a separate tab for programming the PowerMic buttons in the Options menu (see section below and the more detailed information in “Part Two” of the Guide). For users of other hand-held microphones, such as those sold by Philips and Olympus, you can use the somewhat complex manufacturer’s control program to assign press-to-talk function to a key. Or you can use the much simpler [Octopus USB Controller](#), which is described in detail in Part Two of the Guide.



Programming a PowerMic II microphone: Medical versions of Dragon since version 10 have included a high level of integration with the PowerMic II microphone. In fact, if a user profile is based on use of a PowerMic II as its sound source, a separate PowerMic tab will show up on the Dragon options menu. If you don’t see the PowerMic Tab, it means you have not formally set the PowerMic as a sound source for your user profile. See the [Microphone Set-up and Troubleshooting](#) section of the appendix for further information. Assuming you do have the PowerMic tab, we strongly recommend that you program this device before serious use of Dragon with this microphone. Programming a button is as simple as opening the PowerMic II options tab, identifying the button you want to program, and selecting the desired programming action from the drop-down menu associated with the button. For detailed information on using and programming a PowerMic II, please refer to the dedicated section on the [PowerMic II: Use and Programming](#) in Part Two of this guide.

Fine Tune Your Correction Options: Over the years we have noticed a few tricks that assist in the correction process which is essential to Dragon learning and reducing errors. The two options we particularly like are the following:

- Automatic Playback on correction: this has Dragon play back the word or phrase you are correcting so you can decide if the issue was sloppy dictation or a Dragon error. We will cover this in more detail later, but in a nutshell if your dictation was sloppy, you should just re-dictate the word or phrase. If your enunciation was clear and it was a Dragon error, then you should continue with the formal correction process.
- Enable double-click to correct: this option is helpful when you are proof reading a document. If you come across a word which is wrong, simply double-click on it to launch the correction menu.

Other recommended options: Consider a few of the following selections from the Options Menu:

- In the View Tab > Results section, select “Never show” from the drop-down menu. Showing results in a separate window while dictating is a little processor dependent and not really necessary.
- In the Miscellaneous Tab, check “Automatically Save the profile changes”
- If you always use Dragon when your computer is running, you may want to select “Launch Dragon in QuickStart Mode when Windows starts” on the Miscellaneous Tab.

Chapter 5: Basic Use

This section is extremely short because once you have the program installed and preliminary training done, there's not much to using Dragon Medical Practice Edition 2.

Basic Dictation

Basic use of Dragon involves nothing more than the following:

1. Opening NaturallySpeaking
2. Having the cursor in the window of a word processing program (EMR, Word, email program, etc.)
3. Making the microphone active by clicking on in Dragon toolbar or activating it with your assigned "hotkey"
4. Talking (enunciating carefully and speak in phrases or sentences, not slowly or one word at a time)
5. Being sure to dictate all punctuation (comma, period, new line, new paragraph, etc.)

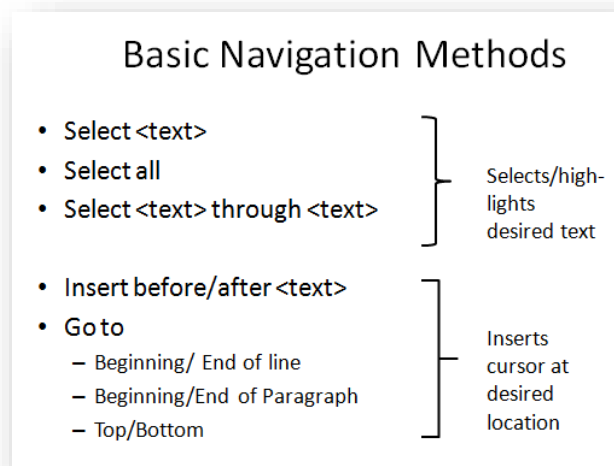


That's it!

Selecting Text and Navigating

One of the beauties of use speech recognition is that many of the actions you would usually accomplish with your mouse can be easily and more quickly done with a voice command stating your desired action.

See the graphic to the right to see how easily you can select specific text, a range of words, or change the position of your cursor. In each of these examples the "<text>" indicates the actual text in your document that is to be included in the command.



"One of the beauties of use speech recognition is that many of the actions you would usually accomplish with your mouse can be easily and more quickly done with a voice command stating your desired action."

Changing Font Size and Style

Alternatively, if you want to change the appearance of text you just dictated or modify text earlier in the document, you can do this with simple voice command. Like selecting text (shown above), you can modify a word, series of words, or entire selection depending upon your needs.

Undoing Dictation

If you have done some dictation and want to undo it, it's as easy as saying "Scratch that" or "Un-do that". Both commands can be used repetitively. If you don't have specific text selected at the time you initiate either of these commands, Dragon will work its way backwards from your last utterance. If you want to delete a word, phrase or more in the meat of a document, simply select it by voice (see above) and then say "delete that" or "scratch that".

Change Font Style

- Bold text by saying:
 - Bold <Text>
 - Bold from <text> to <text>
 - Bold <text> through <text>(Works identically for italicize and underline)
- Capitalize word by saying "Cap <text>"
- All Cap word by saying "All Caps on" <text> "All Caps off"


Summary: Using Dragon is as simple as turning on the microphone and talking. Learning the simple process of navigating and selecting text by voice will dramatically reduce your need for a mouse.

Chapter 6: Microphone Management

Key to maintaining a high level of accuracy is managing your microphone. In fact, the ability to control the microphone in a “push-to-talk” method may be one of the best reasons to consider using a hand-held microphone with programmable buttons. The idea is that you want the microphone on when you are dictating, but not at other times. This is key because dragon works on the basis of what it receives as a digitized signal from your microphone. If it is hearing only your voice, this is good. If it’s hearing a mixture of your voice, the phone ringing, and loud conversation from the colleague sharing the dictation room, your speech will not be clear and the results not as good.

Noise Control

- Most noise is unlikely to be translated into words
- Noise will merge with your own speech input and compromise its clarity, thereby reducing accuracy
- Try to use Dragon in a quiet setting

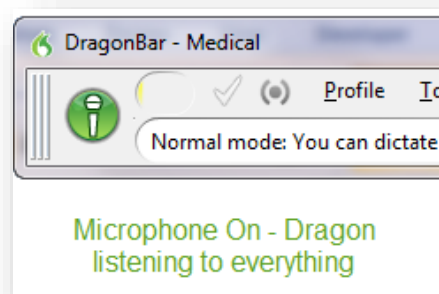


“Key to maintaining a high level of accuracy is managing your microphone.”

Microphone Control Methods

There are several ways to control your microphone (turn it on and off):

1. Clicking on the microphone icon on the toolbar
2. Pressing a keyboard “hot key” assigned to controlling your microphone
3. Use of a key on your desktop or hand-held microphone programmed to control the microphone
4. Issuing a verbal command to control the microphone
5. Mechanically turning the microphone on and off if the microphone includes a mute or on/off switch



There is no best method of controlling the microphone, although we personally prefer the scenario in which a hand-held microphone operates the microphone in a push-to-talk method, since this is the easiest way to quickly control the microphone’s input to Dragon. We consider clicking on the microphone icon in the DragonBar or Toolbar the *least* practical method since it tends to be slow.

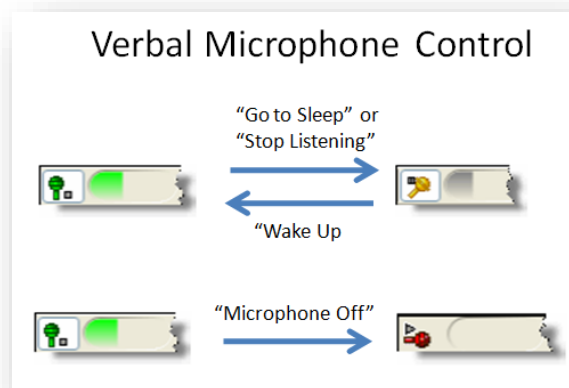
Programming a Keyboard Hot-Key to Control the Microphone

This is detailed in the “Fine Tuning” section earlier in this guide. Be aware that you can assign either microphone on/off behavior or push-to-talk behavior to a key. We like to use the former method and on a laptop it’s best to pick an easily reachable key on the periphery of the keyboard, such as the right arrow key. We have not found it practical to use a key in a push-to-talk method since it leaves you needing to keep a hand on your keyboard which tends to be laborious.

Voice Control of the Microphone

Although it’s not my preferred method, for some, using voice is a practical way of controlling the microphone. Here’s what you need to know:

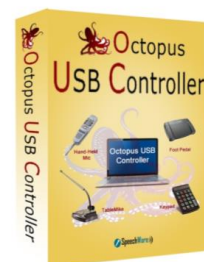
- You can put the microphone in “Sleep mode” by saying “Go to Sleep”. The microphone icon will turn amber and wait until you say “Wake Up” before turning on.
- You can turn the microphone off by saying “Mic Off”, “Microphone Off” or “Stop Listening”. The microphone icon will turn red and will not turn on unless you click on the microphone or activate it by another means (saying “wake up” will not work when the mic icon is red)



Controlling the Dragon Microphone with a Hand-Held Microphone

Virtually all hand-held USB microphones work well with Dragon and include buttons which can be programmed to control a variety of Dragon functions, including the microphone. Below are the options you can employ for using a hand-held microphone to control the Dragon microphone. For more information, please refer to the expanded sections on Octopus USB Controller and recommended microphones in the Appendix.

- **Octopus USB Controller (OUC):** this is a third-party utility which you should know about if you plan to use a hand-held microphone with Dragon. OUC facilitates the programming of buttons on virtually all commonly sold hand-held USB microphones (and other USB HID devices) and which, in our opinion works better than any other method. It works with all of our recommended microphones, including the SpeechMike Premium, PowerMic II, and Olympus hand-held microphones. OUC will also allow you to program buttons on a portable USB keyboard to control the



microphone and other Dragon functions. OUC runs about \$69 and you can read more about it in the [dedicated section](#) in Part 2 of this guide.

- **SpeechMike Premium:** this is our favorite hand-held microphone and the one we use on a daily basis. It includes a track ball and uses a suspended microphone element to reduce transmission of button clicking noise. Although you can use the Philips Device Control Software to program the buttons, we have found this software to be very un-intuitive and difficult to use. Strongly consider OUC as a means of programming this microphone.
- **PowerMic II:** this is a favored microphone for many Dragon Medical users since it is recognized by Dragon and when a user profile has been set up with the PowerMic II as the sound source, Dragon will present a separate tab on the Options menu for programming the buttons on the PowerMic. It's hard to beat this convenience. This is the best hand-held microphone to use if your institution is using the newly released Dragon Medical 360 Direct cloud-based application. Although this product is a bit old (and awaiting an update from Nuance) it works quite well in terms of accuracy and external noise rejection.

Summary: Controlling the microphone is key to maintaining a high level of accuracy, particularly in situations with intermittent contaminating noise. An advantage to hand-held microphones is the ability to program a button to control the microphone in a push-to-talk manner.

Chapter 7: Punctuation and Built in Commands

Unlike secretarial transcription in which a human being on the other side knows when your sentences start and end and know where to put the punctuation, Dragon only transcribes what you say. If you want punctuation, you need to say it. Likewise, if you want to start a new paragraph (equivalent of depressing the enter key), you need to say it. Inserting punctuation is as simple as saying it. For example, to get “His cardiac exam revealed no murmurs, rubs or gallops.” You would say “his cardiac exam revealed no murmurs comma rubs comma or gallops period.” It’s as simple as that. Unlike most other commands, including personally created commands, you don’t need to slow down or pause when stating punctuation – just dictate full speed, including any needed punctuation, and Dragon will put the punctuation where you speak it.

“Unlike secretarial transcription in which a human being on the other side knows when your sentences start and end and know where to put the punctuation, Dragon only transcribes what you say. If you want punctuation, you need to say it.”

Basic Punctuation

In the table to the right are the basic punctuation elements that you are likely to use frequently and which are used by stating the name of the punctuation element. Unlike other “commands” there is almost no need for a delay before and after stating a command. If you aren’t accustomed to dictating

punctuation, there is typically a bit of a “learning curve” with this. But if you stick with Dragon you will eventually find it becomes second nature and you won’t give it a thought. And unlike human transcription, the punctuation will go where you want it.

Common Punctuation Commands	
New Line	Hyphen
New Paragraph	Question Mark
Comma	Exclamation Point
Period	Open Quote
Colon	Close Quote
Semicolon	Open Paren
Dash	Close Paren

Advanced Punctuation and Commands

We have put together a fairly extensive collection of built in Dragon commands which is presented in the [Overview of Built in Dragon Commands](#) in Part Two of this guide. Particularly for new users, you might consider printing these pages and having this available to you during your first weeks or months of Dragon use.

Overview of Built in Dragon Commands			
The following list shows commands built into Dragon Medical Practice Edition 2.			
Control the microphone			
SAY:	TO:	Next Field	Move to and highlight next variable region
Go to Sleep	Make the microphone stop listening temporarily.	Previous variable	Move to and select previous variable region
Stop Listening		Previous field	Move to and select previous variable region
Wake Up	Reactivate the microphone when it is asleep.		
Listen to me			
Microphone Off	Turn the microphone off.		
Delete text and undo actions			

Summary: You must dictate all punctuation. At the beginning you might benefit from the extensive overview of built in punctuation and other commands found in the Appendix. Consider printing this and keeping it handy when you start using Dragon.

Chapter 8: Helping Dragon Learn From Its Mistakes

While Dragon is amazingly good right out of the box and following the mandatory 5 minutes or so of training, it will make mistakes. Why does this happen? Keep in mind the following:

1. Dragon does not understand content. It simply does the best it can with what it hears, the loaded vocabulary, and the statistical models it employs. Sometimes the nuances of your clinical dictation are just too unique and won't be recognized accurately.
2. You may not have enunciated clearly and Dragon just didn't hear the words you were intending to speak. If you've ever seen a transcriptionist struggling to understand a phrase you can imagine how Dragon can face the same challenge.
3. As the day goes on, your voice may change a bit and become coarser; similarly, if you have a cold or laryngitis, Dragon won't be hearing the same voice it was trained to recognize.

Dragon's accuracy will improve and errors will be less likely to recur if you take the time to correct errors when they happen.

The important point is that recognition errors will occur – some of your making and some of Dragon's. You can put up with these occasional errors if you want, and hopefully catch these on a proof read of your document. Or, you can formally correct errors when they occur and dramatically reduce the likelihood of repeat offences.

“... recognition errors will occur – some of your making and some of Dragon's ... you can formally correct errors when they occur and dramatically reduce the likelihood of repeat offences.

Basics of correction

Correction of a word or phrase is accomplished by means of initiating a formal correction process which brings up the **Correction Window** and which may be initiated by one of three methods:

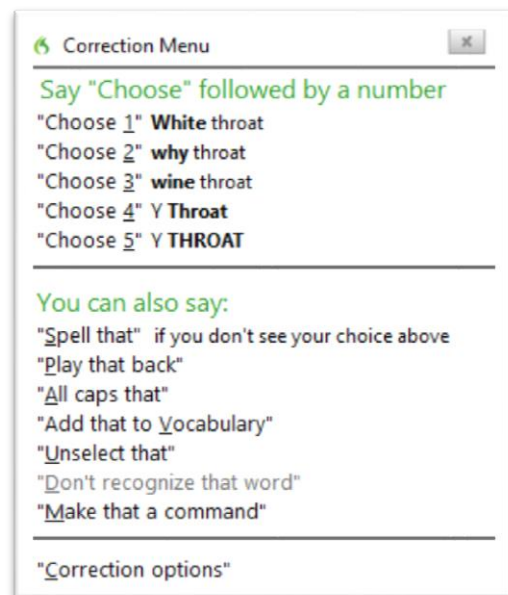
1. Correcting the word or phrase by saying “Correct <word>” or “correct <phrase>”, speaking the word or phrase in the form displayed by Dragon.
2. Selecting the word or phrase by voice (or manually) and saying “correct that”
3. Double-clicking on the word (assuming the “double click to correct” option has been selected in the Correction tab of the Option menu.)

If you initiate a correction by voice, it is helpful to say the incorrectly word or phrase as Dragon has written it and not as you intended it so as to make it most likely Dragon will understand what you are attempting to correct.

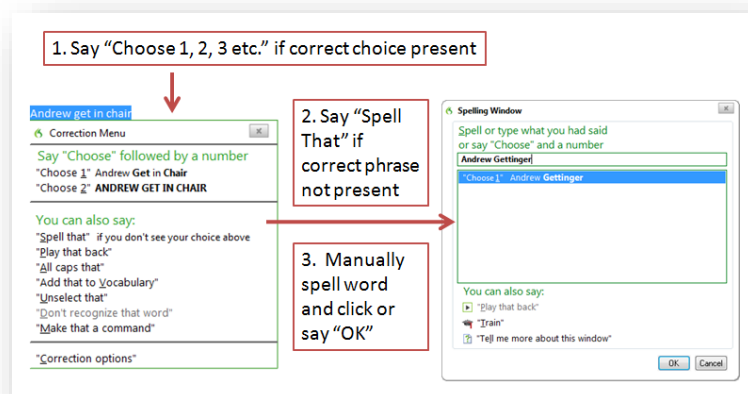
“If you initiate a correction by voice, it is helpful to say the incorrectly word or phrase as Dragon has written it and not as you intended it so as to make it most likely Dragon will understand what you are attempting to correct.”

However you initiate the process, one you do so, the Correction Window will show up and the word or phrase in question will be front and center. The example to the right occurred when dictating the term “Wyeth Road” using a medical vocabulary and it incorrectly transcribed “Y throat”.

1. If the correct selection is shown among the choices, say “choose” followed by the number corresponding to the correct choice. The corrections window will close and the correct text will replace the incorrect word or phrase in your document.
2. If the correct choice is not present, then say “Spell that” to bring up the spelling into in which you can spell the correct choice and, optionally select “Train” in order to train the word or phrase.



In the example to the right, I dictated the name of a colleague named “Andrew Gettinger” and Dragon got this wrong by printing “Andrew get in chair”. The correct choice was not provided in the Correction Window, so I said “spell that” and manually typed his name in the window before clicking OK.



Your mistake or Dragon's?

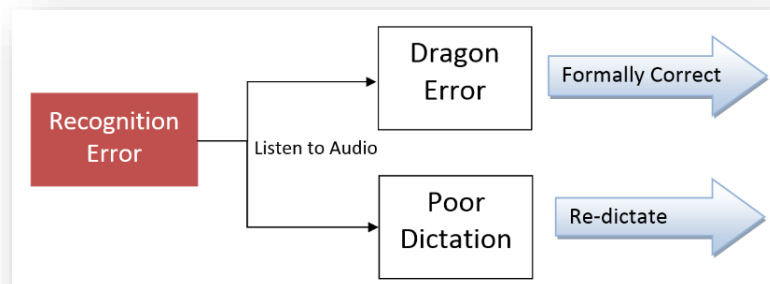
As alluded to earlier in this guide, it's important to differentiate between mistakes made by Dragon legitimately misrecognizing your speech and a mistake resulting from your sloppy dictation. One of quirks of the correction process is that when you formally correct text, the pronunciation you used when saying the phrase is saved by Dragon and incorporated into the user profile. As a result, if you pronounce something poorly, correct it with formal correction techniques, this may actually contribute to worsening your speech profile over time. Therefore correction should truly be reserved for the Dragon mistakes and not your mumbled dictation. How

"... correction should truly be reserved for the Dragon mistakes and not your mumbled dictation."

can you determine whether the error was yours or Dragons? Under the Correction tab in the Options menu, select "Automatic Playback on Correction (see image above). When correcting an error, listen to the playback of your text and handle it as follows:

☒ Automatic playback on correction

- If the pronunciation was good (Dragon mistake), continue with formal correction
- If the pronunciation was poor (your mistake), simply re-dictate the text from where you are. Upon your re-dictation, the newly dictated text will be placed in the document and the correction menu will go away.



Key Point: If the mistake was Dragon's, you should formally correct it. If the mistake was a consequence of sloppy dictation, you should simply re-dictate it

Correct phrases rather than single words

Although it may occasionally be fine to correct just the misrecognized word, in many cases it will be better if you correct it in the context of other associated words, especially if the word misrecognized typically occurs with other words. If a misrecognized word typically occurs as part of a larger phrase, it is best to correct the entire phrase rather than just a single misrecognized word.

“If a misrecognized word typically occurs as part of a larger phrase, it is best to correct the entire phrase rather than just a single misrecognized word.”

- Example 1: If you dictated the condition “atrial fibrillation” and Dragon interpreted it as “actual fibrillation”, it would be better to correct the entire term – atrial fibrillation – and not just the atrial/actual misrecognition, since it is the entire phrase that you want Dragon to get right the next time. By correcting both words together you are giving Dragon important added context.
- Example 2: It hasn’t happened in years, but in older versions of Dragon the term “peripheral vascular disease” would somewhat comically show up as “peripheral bastard disease”. Again rather than correcting just the “bastard”, it makes more sense to correct the entire “peripheral vascular disease” phrase.

Summary: Consider whether recognition errors are from sloppy dictation or Dragon’s mistake. When Dragon is at fault, formally correcting errors will dramatically lessen the likelihood of repeat errors and will improve accuracy.

Chapter 9: Managing Your Vocabulary and Words

The vocabulary is the underlying set of words from which Dragon chooses when making its decisions. It is critical that you match the active vocabulary with the type of dictation you are doing. By this we mean that if you are an endocrinologist, you should have selected the endocrinology vocabulary. Likewise, if you are moving from medical dictation to dictating some non-medical material, you should switch to a general non-medical vocabulary.

“It is critical that you match the active vocabulary with the type of dictation you are doing.”

Vocabulary in Action

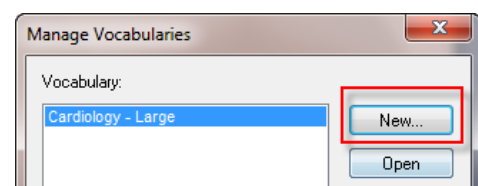
The importance of using the right vocabulary is easily demonstrated in this true example shown below, with the first paragraph dictated using a general (non-medical) vocabulary and the second using a medical (cardiology) vocabulary. Recognition errors are highlighted in yellow.

Non-Medical Vocabulary	Medical (Cardiology) Vocabulary
This elderly woman comes for brief follow-up visit regarding her coronary artery disease. She presented with a non-stemming about a month ago, underwent heart catheterization which showed a subtotal excluded modality and was treated with a promise struggle that extent.	This elderly woman comes for a brief follow-up visit regarding her coronary artery disease. She presented with a non-STEMI about a month ago, underwent heart catheterization which showed a subtotally occluded LAD, and was treated with a Promus drug-eluting stent.

The opposite results might be seen if the dictation was general in nature, and not medical, i.e. the general vocabulary would have been more accurate.

Changing your base vocabulary

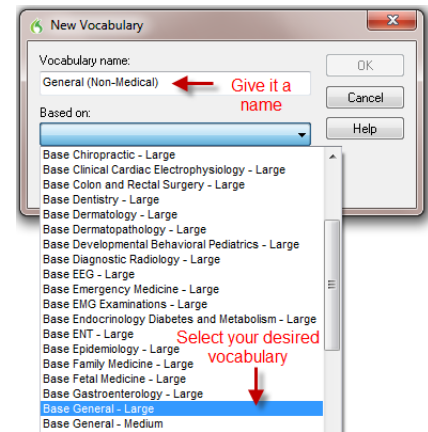
Although DMPE2 will allow you to have only one active vocabulary loaded at one time, you can have several included in your user profile and switch quickly (relatively quickly) from one to another as needed. This type of strategy might be helpful if, for instance, you practice Internal Medicine part of the time and Infectious Disease part-time. Likewise, you may want to use Dragon for non-medical dictation some of the time, perhaps for personal communication, and a medical vocabulary at other times.



“Although DMPE2 will allow you to have only one active vocabulary loaded at one time, you can have several included in your user profile and switch quickly... from one to another as needed.”

Adding a new vocabulary:

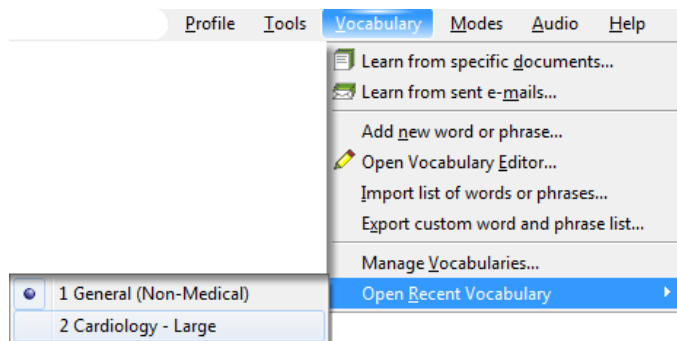
1. Open the “Manage Vocabulary” editor (you will see your current vocabulary or vocabularies when opening it – see image above)
2. Click on “New...” to launch the “New Vocabulary” window (shown to the right)
3. Give your new vocabulary a name (anything you choose)
4. From the “Based on:” scroll down menu, select the vocabulary you desire to add to your profile and then click OK
5. Be patient while the new vocabulary is added to your user profile.
6. Select the vocabulary you wish to have open at this time (highlight it) and then click “Open”



Switching Vocabulary: Once you have added an additional vocabulary to your user profile, you will now have the choice of switching between vocabularies (view image below), simply by scrolling to the “Open Recent Vocabulary” selection on the Vocabulary menu.

Hint: you can streamline the process of opening an alternate vocabulary by simply saying “Open recent vocabulary”.

Regardless of how many vocabularies you have created, it will always open the last one you used.



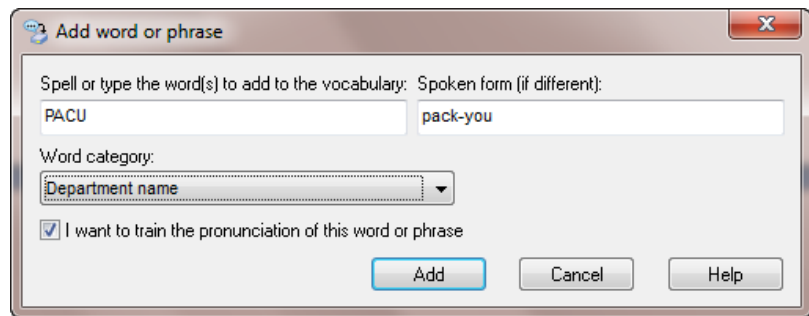
Adding Words

The base vocabulary you loaded when creating your profile provides you with a large standard vocabulary for your chosen specialty or subspecialty. Although highly comprehensive, there may be words you want to add to the vocabulary. In fact, we highly recommend you add words to the vocabulary if they are not already there. Specific words you may want to add include the following:

- New drugs that are not in the base vocabulary
- Names of referring doctors or practices you dictate frequently

- Names of places within your practice or institution
- Word combinations which had 2 vocabulary proper names

Adding simple words: this can be done in a number of ways including 1) saying “add new word” or 2) navigating to Vocabulary > Add new word or phrases .. Either way it opens the Add Word or Phrase Editor as shown to the right.



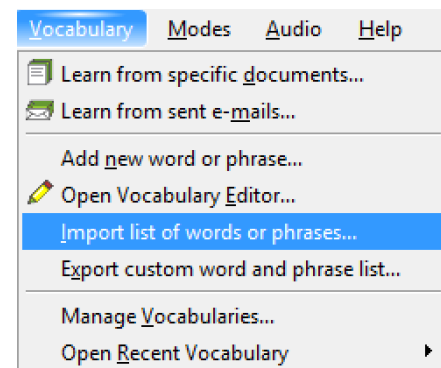
Written Form vs. Spoken Form:

If a word is somewhat unique and the pronunciation doesn’t necessarily follow from its spelling, you may want to give Dragon a hint about what to listen for. In the example above, for instance, the Post Anesthesia Care Unit at our institution is nick-named the PACU (pronounced like pack-you). By providing the separate written and spoken form of the word as shown above it will transcribe it the way you want. You can use this same principle to do some tricky things as well. Consider some of the following examples, in which you say one thing and Dragon transcribe another:

Written Form	Spoken Form
Jon Wahrenberger	My name
Richard Belliveau	Richard bella view
The Man from U.N.C.L.E.	The man from Uncle

Importing words in bulk: An extremely useful function is to import a list of unique words which you want added to your vocabulary. We have found this useful to add, in bulk, a list of regional hospitals, fellows or residents in the training program, names of other providers with which you work, and common institutional places. Here’s how it’s done:

1. Create your list of words in a text document with one word per line
2. It’s ok to have several words comprising a phrase if this is your intension (see the example written forms above).
3. If your works need to have a separate written form and spoken form (see above), add these using the following format written form\\spoken form
4. Add the following text to the top of your list: @Version=Plato-UTF8
5. Save your document in a text (.txt) format



6. Import your word list by navigating to Vocabulary > Import list of words or phrases; follow the subsequent instructions.

Exporting Words

Exporting words is useful both for archiving your collection of custom words and also for sharing with a colleague. Doing so is extremely simple and involves the following steps:

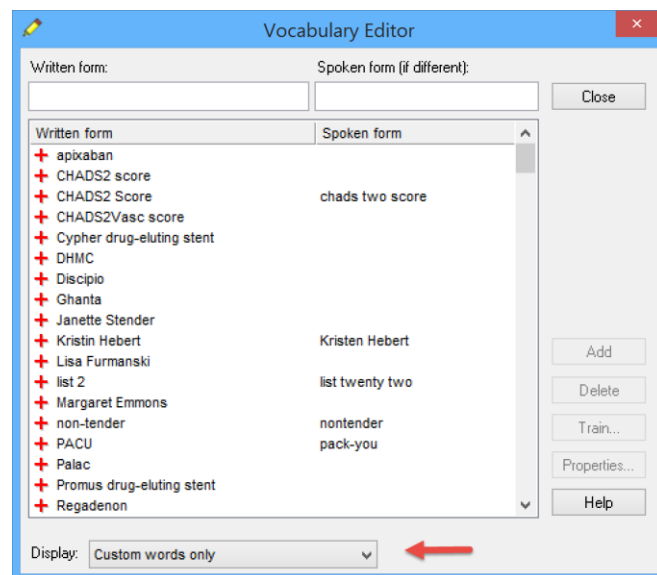
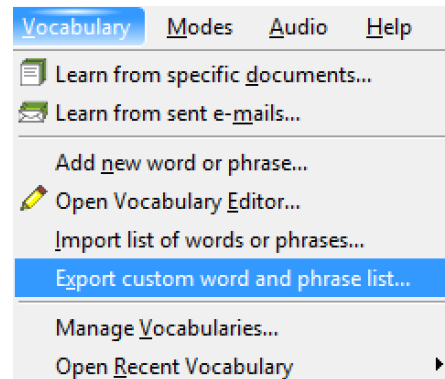
1. Navigate to Vocabulary > Export custom words and phrases list.
2. Save the text file wherever you want on your hard drive.

Although it's not mandatory, it is considered good practice to periodically export your custom words once in a while so you will have a good back up in case your user profile is ever corrupted.

Note: For reasons which are sometimes hard to tie down, you will find that many unintended words will get into your collection of custom words.

Before doing the export as described above, it's a good idea to look at your custom and delete any that are not there for a good reason. This is done as follows:

1. Navigate to Vocabulary > Open Vocabulary Editor
2. From the "Display" drop-down on the bottom of the Vocabulary Editor, select "Custom Words Only":
3. Review the list of words
4. If there are any words you want to delete, select them and click on "delete"



Summary: Since your active vocabulary and collection of words is the set from which Dragon selects as you dictate, having the right vocabulary and adding custom words is key to high levels of accuracy when using speech recognition.

Chapter 10: Achieving High Levels of Accuracy

Although achieving high levels of accuracy is possible by almost anyone using Dragon, it doesn't happen by luck. Dragon has the potential to be highly accurate, but it needs a bit of help on your part. Any mistake in a medical document has the potential for being, at a minimum, an embarrassing mistake. In the worst of cases it could lead to an error in communication with potential legal ramifications. What can you do to reach nearly 100% accuracy? Speaking clearly and dictating in complete phrases and sentences is the biggest determinant of accuracy when using Dragon.

Optimize Your Dictation Style

Despite our tendency to seek technical ways to improve recognition accuracy, far and away the most important key to optimizing accuracy with voice recognition software is the manner in which you dictate.

- Enunciate clearly – the importance of this cannot be overemphasized.
- Speak in a smooth manner, neither overly slowly or excessively rapidly. Speak in either sentences or phrases. Recognition is worst when speaking one word at a time.
- Maintain a relatively consistent pitch and tone when dictating

If you forget to turn off your microphone while you are engaging in normal conversational speech you will see the results in the form of awful accuracy. Over time you will develop the dictation style that will provide you with optimal results.

“Speaking clearly and dictating in complete phrases and sentences is the biggest determinant of accuracy when using Dragon.”

Optimize Your Hardware

While you might not have any choice in regard to your hardware, don't underestimate the value of optimizing certain aspects of your system.

- Don't run unnecessary programs (will compete with available RAM)
- Run disk defragmenter periodically (programs > accessories > system tools > disk defragmenter). This can be somewhat time-consuming, so don't start it in the middle of the day!
- Be sure your computer has adequate RAM; although 2 GB is considered the minimum, 8 GB or more may be optimal. Get as much as you can.
- Increase the paging file size, so that your system has enough virtual memory available to handle the tasks you'll be asking of it. This is probably not necessary if your PC has a solid state hard drive (SSHD). For an easy tutorial on increasing paging file size, visit: <http://www.online-tech-tips.com/computer-tips/simple-ways-to-increase-your-computers-performace-configuring-the-paging-file/>

- Change your Windows performance settings to disable advanced visual effects. This means selecting the "Adjust for best performance" radio button found as follows: Control Panel > System > Advanced System Settings > Advanced Tab > Performance Section > Settings.
- If you notice recognition accuracy deteriorate during the day, consider restarting your computer to clear your RAM. This is rarely necessary.
- Use the best microphone you can afford. See the section on [Detailed Microphone Recommendation](#) in Part Two of this guide.
- If you are using a laptop computer and are not getting great accuracy, consider bypassing your on-board sound card by using a "USB sound adapter". This is a device into which you plug your microphone and which in turn is plugged into a USB port on your computer. The USB pod digitalizes the analog signal from your microphone and bypasses the internal sound card on your computer.

"If you are using a laptop computer and are not getting great accuracy, consider bypassing your on-board sound card by using a 'USB sound adapter'."

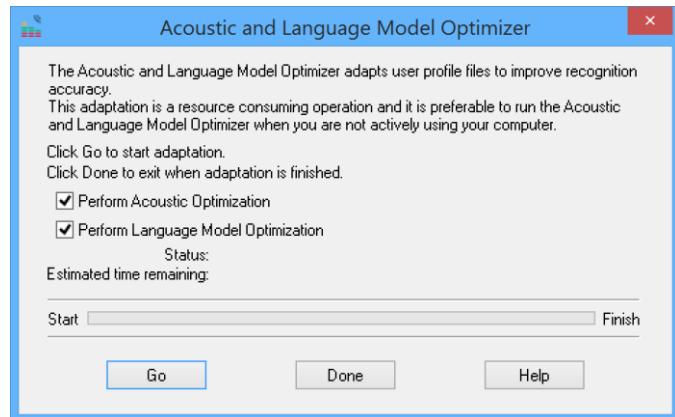
Optimize Your Software

Many aspects of the way Dragon is configured and how you use your software will significantly impact the accuracy you observe. Here are some suggestions:

- Be sure you have loaded the appropriate vocabulary for the type of dictation you are doing. This means the correct specialty or subspecialty vocabulary if doing medical dictation, and perhaps a general, non-medical vocabulary if doing non-medical dictation.
- Run the "audio set-up wizard" (navigate to Audio > Check Microphone or simply say "check audio") when making a major change in dictating environment or when you notice a deterioration in recognition accuracy.
- Let Dragon learn from its mistakes by employing formal correction methods when Dragon makes a mistake
- Before training Dragon to fix an apparent "error" you should listen to the dictation either by setting Dragon for "automatic playback on correction" (under the tools > options > correction menu) or by choosing "Play that Back" from the correction menu.
 - If your enunciation was clear, you can reasonably correct the dictation.
 - If your enunciation was not clear, you should simply re-dictate the wrong word or phrase; otherwise the poor enunciation will be stored with your correction and acoustic model degraded.

- Periodically run Dragon's "Acoustic and Language Model Optimizer". This is accessed by navigating to Audio > Launch Accuracy Tuning. The process, shown below, leads to a 5-10 minute process during which all of your recent corrections are formally incorporated into your speech model and can dramatically increase your recognition accuracy. We recommend running this every few weeks.

Note on running the Acoustic and Language Model Optimizer: running this optimizer is fairly processor dependent and may take 5-10 minutes to complete depending upon how long it's been since you ran it. So launch this when you do not need to do anything active on your computer.



- After establishing a good working user profile (typically after a week or so or regular dictation and corrections), consider no longer saving your user files regularly. Rather, save user file only after making major corrections or additions to your vocabulary.

Summary: Achieving and maintaining a high level of accuracy depends upon a combination of factors related to your dictation style, the software and your computer.

Chapter 11: Dragon Templates as Navigation Aids

Overview

The ability to navigate through a document by voice is a function that has been present ever since the first version of Dragon Medical Practice Edition. The concept is that a letter, office note, consult etc. can be built in advance in a simple form with pre-placed markers or navigation fields and serve as a template into which you can sequentially move from field to field and add personalized information at each stopping point. In practice, these navigation points or “variable regions” are defined by Dragon with a left and right square bracket, with or without intervening text. The brackets themselves are termed “variable delimiters” and if you prefer to use something other than squared brackets for this function, you can change this in the Dragon Options menu.

Keep in mind that any character, word, sentence or longer segment of text placed between the defined delimiters becomes part of such a variable region. The beauty of these variable fields is two-fold:

1. They can be used as navigation markers since Dragon has the ability to navigate, upon your command, sequentially from one to another throughout a document. Doing so requires only that you say “next field” or “previous field” to move forward or backward through these variable regions. Alternatively these commands can be assigned to a key on a hand-held microphone.
2. They can contain text which you can choose to accept or reject as you go through a document

The term “template” comes from the fact that use of this function requires that these “variable regions” are constructed into a note template in advance of the time that it is actually used. These can be added to a note template in your electronic health record or added to the text within a text command you intend to initiate.

Key Point: You can quickly navigate through pre-defined “navigation fields” within a document defined by voice, a hot-key, or a button on a hand-held microphone

Template Examples

Shown below are examples of two common uses of Dragon Templates:

1. Simple use of Dragon Templates as a means of navigation: The most basic example is the basic “SOAP note” template in which an office note is broken down to subjective, objective,

assessment and plan regions. If this the basic structure of your note, you might construct a template that looks like the text to the right:

In this scenario, you would navigate through this note template by saying “next field” or “previous field” or by programming a button on your PowerMic or other hand-held microphone to emulate the same function, and dictate appropriate text at each stopping point.

2. Using Dragon Templates as a means of handling variable content

In some situations you may want to pre-populate a document with a number of pieces of variable information, with the intension of keeping some and deleting others. We have found it helpful, for instance to populate a normal Review of Systems and toggle through it using the “next field”

functionality on a hand-held microphone

Northeast Medical Center

OUTPATIENT FOLLOW-UP

SUBJECTIVE: [01]

OBJECTIVE:

Physical Exam: [02]

DIAGNOSES:

1.[03]

DISCUSSION: [03]

PLAN:

1.[04]

General: [No weight loss, fatigue, anorexia, insomnia, or fever.]
Eyes: [No visual loss, double vision, drainage, eye pain, or dry eyes.]
ENT: [No sore throat or dry mouth.]
Pulmonary: [No shortness of breath, cough, or hemoptysis.]
Hem/Lymph: [No swollen glands, fever, or bleeding.]
GI: [No abdominal pain, change in bowel habits, melena, nausea, vomiting or dysphagia.]
GU: [No urethral discharge, dysuria, frequency, or nocturia.]
Endocrine: [No hot spells, cold spells.]
Musculoskeletal: [No limb pain, joint pain, or joint swelling.]
Neuro: [No focal weakness, ataxia, confusion, paresthesias or headache.]
Skin: [No rashes or dry skin.]
Psych: [No depression, anxiety, suicidal ideation.]
Cardiac: See HPI

Clearing variable field delimiters

If you are using fields only as a means of navigating, each field (including brackets) will be selected and dictated over as you navigate through the note. In this scenario the field brackets will disappear as you go. In the event that you are using Dragon templates as a means of actually handling variable content, you may be deleting some and leaving some. In this case some of the brackets may remain when you have gone through the document. **All of the extra brackets can be removed with a simple Dragon command of “Accept Defaults”**

Summary: Use of Dragon templates or navigation fields can be a huge productivity enhancer by facilitating rapid movement throughout a document.

Chapter 12: Commands to Enhance Efficiency

Overview of Command Use

Although the basic voice-to-text functionality of Dragon is a huge time saver, one of the often unappreciated capabilities of Dragon is the use of commands or macros. If you do anything repetitive on your computer, whether dictating or typing the same text, opening a document/folder/program with frequency, or completing a series of repetitive actions on your computer, you could save huge amounts of time through the use of commands.

“If you do anything repetitive on your computer, whether dictating or typing the same text, opening a document/folder/program with frequency, or completing a series of repetitive actions on your computer, you could save huge amounts of time through the use of commands.”

What are commands? In essence “commands” are a means by which Dragon allows you to accomplish something on your computer with a voice request. What kind of “somethings” are we talking about? The list is fairly endless, but includes the following:

- Insertion of chunks of text (anything from single words, phrases, or a series of paragraphs)
- Insertion of images
- Typing of specific keys or key combinations that may control another application
- Opening of documents, folders or applications
- Typing of key combinations that affect function in an electronic health records, such as those that insert a note template or insert specific structured information
- Creation of complex, multi-sequence commands
- Lots, lots more

Are commands hard to create? There are four different types of commands which can be created with Dragon, including Text and Image commands, Step-by-step commands, Macro-recording commands, and Advanced Scripting commands. The first two types of commands are simple enough for your grandmother to figure out and are also the most useful. Advanced Scripting commands require a bit of programming knowledge so are probably not practical for the average user.

Overview of Command Types

Here’s a quick run-down of the types of commands:

- **Text and Graphics Commands:** these are probably the most useful for medical providers and also the simplest to create. The idea is you issue a verbal command such as “insert my signature” and a graphic version of your signature is inserted in your document. Or you say “brief male exam” and a boilerplate male exam is inserted into your document. Since a lot of medical documentation involves a use of repetitive text, this type of text is perfect to turn into a text command. Text commands save time almost instantly and are a snap to create.
- **Step-by-Step Commands:** These are almost as easy to create as Text and Graphics commands, but typically involve a sequential action. In the Epic EMR, for instance, insertion of a “smart-phrase” or “dot phrase” is initiated by typing a period, some specific text, and then the Enter or Tab key. The two steps required for insertion of a specific dot phrase, perhaps the one you use to open a note template, can be emulated by a step-by-step command which is initiated by a verbal command of your choosing. It takes about a minute to create one of these and over the ensuing months you will accumulate hours of saved time.
- **Advanced Scripting Commands:** these types of commands are clearly a bit trickier and require you to delve just a bit into the world of Visual Basic programming. Once mastered, these types of commands can do amazing things and lead to huge efficiencies. The only issue is whether you have the time to learn how to build these. For most of you – probably not! But check out the examples below.
- **Macro Recorder Commands:** this type of command is for the processes or actions that are hard to nail down with any of the other categories. In essence, you allow Dragon to record some specific action or series of actions you take on the computer and it will remember these and launch this series upon your command in the future.

Text and Graphics Commands

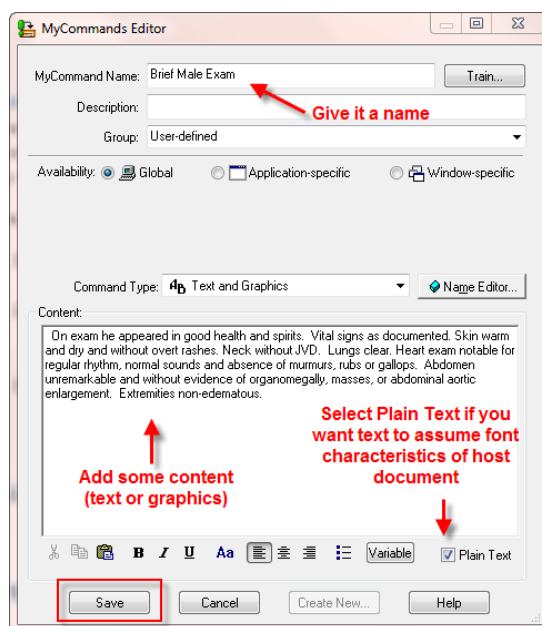
These are so simple and so useful that you absolutely have to browse this section and learn how to make these. These are designed to insert text or graphics into your word-processing document with a verbal command and take only a few seconds to create. Text commands are huge time-savers for insertion chunks of text you use repetitively in medical documentation such as aspects of the physical exam, procedural consents, and documentation of counseling discussions.

“Text commands are huge time-savers for insertion chunks of text you use repetitively in medical documentation such as aspects of the physical exam, procedural consents, and documentation of counseling discussions.”

Basic steps in creating a Text Command

Creating a text command takes only a few seconds and will save you massive amounts of time. Here are the few simple steps:

1. From the Tools menu, select Add New Command (or with Dragon open say “add new command”)
2. In the MyCommands Editor which appears (image at right), enter the following: 1) a name for the command (this is the term you speak to launch the command and 2) the content of the command (add text or graphic to the “content” area either manually or by pasting.)
3. Optionally click on the “Plain Text” box (see below)
4. Click “Save”.



Suggested Use of Text and Graphics Commands

Text commands are particularly useful in the documentation of the following:

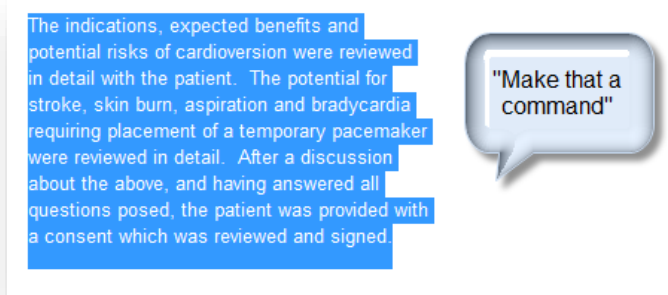
1. Physical exam (full exam or individual parts of exam)
2. Common discussions, i.e. risk factor counseling, side effect warnings
3. Procedural consents
4. Overview of treatment plans
5. Listing differential diagnosis of common symptoms, lab abnormalities, etc.
6. Creation of note templates

Caveats on using Text and Graphics Commands

1. Plain Text Option: If you want the text inserted with this kind of command to assume the behavior (font size, style, etc.) of the text in the document into which it is being inserted, be sure to check the “Plain Text” box. Plain text infers that it will not carry any specific formatting behavior when inserted. On the other hand, if you want the font size, style and other characteristics of the text you use in this type of command to be maintained, leave the Plain Text box unchecked. This is appropriate if you text command is for an overall note template and you want, for instance, the heading to be in a bold font.

“If you want the text inserted with this kind of command to assume the behavior of the text in the document into which it is being inserted, be sure to check the “Plain Text” box.”

2. **Quick Text Command Creation:** If you have already created the text which you would like to make into a text command for future use, all you need to do is select (highlight) the text and then say “Make that a Command”. Dragon will open the New Command Editor and automatically add the selected text into the content area. You will simply need to give it a name and save it.



Step-by-Step Commands

Step-by-Step commands are commands in which one or a series of sequential actions of your choosing are carried out upon your verbal initiation. There are 8 potential categories of steps:

1. **Keystrokes:** send any keystrokes (useful for sending key combinations using the control, alt, shift and other similar keys, combined with letters)
2. **Open Application** (open any application or document)
3. **Wait** (do nothing for a specified period of time – this is useful when waiting for an application to open or something to happen before moving to next step)
4. **Type Text** (types specific text, similar to “Text and Graphics” commands described above, but these are intended for shorter chunks of text and will not allow formatting of text)
5. **Send Keys** (this is a somewhat more elaborate way of sending keys and key combinations. Alpha numeric keys are entered just as they are on the keyboard. Other functions are inserted by placing appropriate verbiage between curly braces { }.
6. **Stop Listening** (puts Dragon in sleep mode)
7. **Microphone On** (turns microphone on)
8. **Microphone Off** (turns microphone off)

While there are only 8 categories of steps, all but the last three listed above have almost endless possibilities. Consider the following:

- The simplest thing you can do with a step-by-step command is to open a document or application (Open application step).
- If you want to print a document you can have Dragon submit the key combination Control + P (Key stroke category).
- If you want to open a document and then print it, you could combine these steps into a single step-by-step command and perhaps use a “wait” step to give time for the application of document to open before printing it (wait step).
- If you have a long series of steps and want to be sure the microphone is turned off as steps are being completed, you can add microphone off and microphone on steps at the beginning and

end of command sequence.

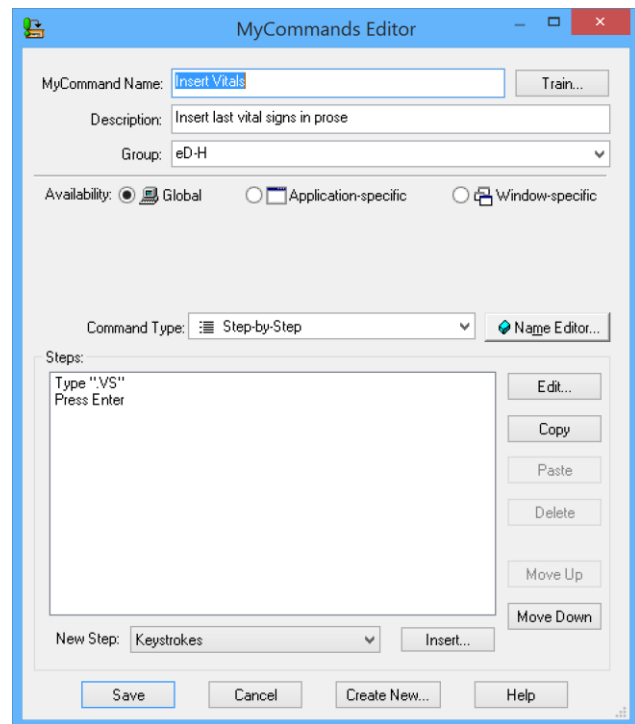
Step-by-step commands are particularly helpful for initiating built-in commands in an EMR which require the use of certain keystrokes. In Epic, for instance, vital signs can be inserted into a note in progress by typing a period followed by the letters “vs” and then hitting either the tab or enter key to complete the “dot phrase” and insert the last set of vitals. This is a perfect thing to do with a step-by-step command. See the example to the right.

“Step-by-step commands are particularly helpful for initiating built-in commands in an EMR which require the use of certain keystrokes.”

Building a Step-by-Step Command

Follow these simple steps to create a step-by-step command.

1. Open the MyCommands editor by saying “add new command” or navigating to Tool > Add new command”
2. Name the command (you can do this later if you want, but you must do so before saving)
3. Select “Step-by-Step” from the Command type drop-down menu
4. Select the function of the first step by choosing from the “New Step” drop-down menu
5. Click on “insert” to initiate the first step
6. If the step is simple, such as the microphone being turned off or on, the step will be inserted; for each of the other step types, another dialog box will show up into which you enter the text or keystroke required for the step.
7. If needed, change the order of the steps using the “Move Up” and “Move Down” selectors at the right of the MyCommands editor.
8. Click “Save” to complete the command.



If your command is very similar to a previously built command, consider copying the other command, renaming it, and changing just the unique step in the new command. A command is copied by clicking on the “Create New” button at the bottom of the MyCommands window.

“If your command is very similar to a previously built command, consider copying the other command, renaming it, and changing just the unique step in the new command.”

Macro Recorder Commands

These types of commands are used for the “last resort” tasks that you can’t think of any other way to make. Building this type of command involves having Dragon record a series of steps you take on the computer and saving them for recreation upon initiation of the command. Most users never use this type of command. If you build such a command, you can review all the steps and delete all but the key events in order to simplify and speed the command.

Advanced Scripting Commands

These are extremely powerful commands that use a variant of a simple programming language called Visual Basic and can accomplish a variety of functions ranging from simple to complex. Teaching you how to build this type of command is clearly beyond the scope of this document. For further information, you might consider the following:

- **Scripting for NaturallySpeaking:** this is truly the “bible” of constructing commands. It’s written by Larry Allen of Softnet Systems, Inc. and can be purchased either directly from Larry (see www.pcspeak.com) or from Speech Recognition Solutions (www.SpeechRecSolutions.com).
- **NaturallySpeaking QuickMacros:** This is a short and helpful 52 page book on creating custom commands. You can learn more about it or purchase it at: <http://www.speak-it.com/quickmacros.htm>
- Speech Recognition Solutions offers some very brief instructions on building Advanced Scripting commands on its website. Please see: [SRS Command Building Guide](http://www.speechrecsolutions.com/BuildingCommands/buildingcommands.htm). (<http://www.speechrecsolutions.com/BuildingCommands/buildingcommands.htm>) This is an old guide, based on somewhat older versions of Dragon, but it might provide you with some ideas.

Summary: Use of commands, particularly “text and graphics commands” is a simple way of saving time with repetitive tasks.

Chapter 13: Dragon with an Electronic Health Record

To be worth its cost, Dragon must be able to help you efficiently and accurately document in an electronic medical record. For most providers and with most EMRs, this is entirely feasible. But there are a few things to keep in mind.

Key considerations:

- Take note of how your EMR is implemented. Is the application installed on your computer or is it being presented virtually by means of Citrix or a similar technology. Be aware that DMPE2 works well only when both Dragon and the target window for text or action are on your local machine. If the EMR is running on your machine, you can expect fairly good results if the EMR is

“Be aware that DMPE2 works well only when both Dragon and the target window for text or action are on your local machine.”

using Dragon compatible text entry windows. On the other hand, when an EMR is presented via Citrix, which is increasingly common these days since it is dramatically easier for your practice or institution to administer, you’re likely to have problems. When presented via Citrix, your EMR is actually located on a server somewhere else and you (and Dragon) are seeing only a visual representation of the EMR on your local machine. In this situation, you can expect issues with using Dragon and you may need to adopt those suggestions described elsewhere in this Guide related to using Dragon in non-compatible applications. If you are having serious issues because of Citrix related issues, you should explore with your IT personnel the possibility of switching to either the Network Edition of Dragon or a network installed version of Dragon Direct.

- Remember that not all text entry windows are the same. Dragon works beautifully in Microsoft Word, WordPad, Dragon Pad, and most other word processing or text entry environments (see Part Two of this guide for a list of [compatible applications](#)). But there are many text entry environments within an EMR and they vary in compatibility with Dragon. As a result, Dragon will not necessarily perform identically in every window in your EMR. You can learn more about general EMR compatibility with Dragon from Nuance’s [Dragon EMR Compatibility Page](#) in Part 2 of this guide. If you have questions about how Dragon works with a specific EMR, we recommend you reach out to the EMR vendor or existing users.

What can you do with Dragon in your EMR?

Keep in mind that different providers use Dragon differently. Some use it for everything and some use it for text entry only. Here are some of the functions you might accomplish with Dragon in your EMR:

- Opening EMR and entering your logon password

- Navigating from section to section within the EMR
- Selecting and opening note templates
- Text entry in notes, and other windows including problem lists - MOST HELPFUL!
- Inserting structured data into a note on the fly, including lab data, vitals, etc.
- Clicking buttons

Dragon with your EMR: Practical Strategies

With every EMR being different and with great variability in how EMRs are implemented, you may need to do a bit of digging to optimize your use. Here are some things to think about

- Find out if there are ready made Dragon “commands” or macros prepared for your EMR or your specific institutional implementation of your EMR. These may be available from your institution or from your EMR vendor. Epic Systems, for instance, offers a set of Dragon commands on their “User Web” portal. If you can get such a set, do so and use them. Modify them if you desire.
- Inquire of your colleagues and any institutional Dragon “champions” to see if they have commands or practical strategies they can share.
- Since most EMRs have assigned keyboard “hot-keys” to navigate and do other things, ask for a list of keyboard shortcuts. These are useful for creation of Dragon commands.
- Know when to use Dragon and when to use your mouse or keyboard. Just because you CAN do something by voice does not mean it’s necessary or practical to do it by voice. Because Dragon’s integration with most EMR’s is not all that tight, many users limit use of Dragon to text creation in notes and use the mouse and keyboard for all the navigation and other functions within the EMR. See what works best for you.

“Know when to use Dragon and when to use your mouse or keyboard. Just because you CAN do something by voice does not mean it’s necessary or practical to do it by voice.”

Chapter 14: Strategies for the High Noise Environment

Previously, the importance of a clean signal for your voice has been stressed. Further, the benefit of using Dragon in an environment free of contaminating noise has been reviewed. As important as this is, we have found that some users simply can't get away from the noise and must, somehow, dictate in this environment. A few days ago I was contacted by a physician struggling to use Dragon in a dialysis unit. In my own practice, I find the craziness of busy inpatient ward to be the biggest challenge. Sometimes, though, it is just the loud voice of a colleague sharing a dictation room in clinic.

So the question is, how can you deal with this type of noise? Are there options to mitigate the effects of this unwanted sound?

Practical Strategies to Deal with a noisy environment

Here are a few things to consider in minimizing the consequences of a loud environment, shy of locking yourself in a soundproof booth:

- A simple trick that sometimes makes Dragon a little less susceptible to contaminating noise is to run the Audio Setup wizard and during the first step, talk somewhat louder than you ordinary do. This will cause Dragon to crank down the mic input volume. When you're done, Dragon will be operating with the input volume lower and theoretically less likely to be affected by the noise. I've seen this help.
- Think about how noise is affecting your dictation style. In the course of some fairly intense microphone testing we have developed a protocol in which dictation is done with a recorded voice rather than live, spontaneous speech. Somewhat surprisingly, the impact of noise in this testing environment is quite minimal, even during the phase of testing in which the noise is loud and fairly random. With almost every microphone tested, accuracy drops by less than 1% during the loud noise exposure stage. The implication is that one of the reasons external noise impacts accuracy in real-life situations is that it leads the user to pause, talk louder, or otherwise change his/her dictation style. When you can't make it go away, simply do your best in ignoring noise and continuing your dictation.

“... one of the reasons external noise impacts accuracy in real-life situations is that it leads the user to pause, talk louder, or otherwise change his/her dictation style. When you can't make it go away, simply do your best in ignoring noise and continuing your dictation.”

- Consider the use of the most noise tolerant hardware. This includes both the microphone and your USB sound adapter.

- In terms of microphones, if you are not already using one, consider switching to the Sennheiser ME3 or SpeechWare FlexyMike Dual Ear. These are the two most externally noise rejecting headsets on the market
- Consider using the SpeechWare “SpeechMatic MultiAdapter” instead of your on-board sound card or current external USB sound adapter. While expensive compared to others, this device uses very intense digital signal processing and handles external noise rejection better than anything else we’ve seen.



- Finally, if you can deal with the logistics of the device, consider switching to the type of mask microphone used by court reporters using speech recognition. These are typically called “speech masks” or “steno masks” and the process termed "voice writing". They have a microphone contained within the mask and the entire set-up serves both to prevent your speech from being heard by others and preventing external noise from being picked up by your microphone. Learn more about this type of technology by doing the following:



- Search the term “steno mask” or “speech mask” online
- Visit <http://talktech.com>

Summary: Dealing with the high-noise environment may require a number of modifications in your equipment and technique, but don’t underestimate the potential benefit of simply ignoring the noise and continuing your dictation.

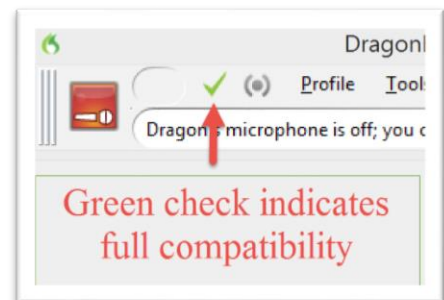
Chapter 15: Dragon in Non-Standard Applications

Assessing Dragon Compatibility

While Dragon works in an amazing breadth of applications and electronic health records, occasionally you will be in a situation in which full functionality isn't present. If you are working with an electronic health record that is implemented via Citrix or are using an EMR which uses non-standard text entry windows, you may have problems.

How can you tell if Dragon isn't fully compatible with your application? There are two major ways:

1. On the top of the DragonBar you will see a green check mark if full "text control" is present within your active application. In some older versions of Dragon, this will be a green circle and not check-mark. If text control is not present, this check mark or circle will be gray.
2. Dragon will not behave normally. You will notice the following "symptoms":
 - a. You are unable to navigate by voice and unable to select or correct text by voice
 - b. Text will not necessarily format correctly. Capitalization may not happen at the beginning of a sentence and you may see double letters appear.



Dealing with lack of full compatibility: Options

Whenever possible, you should try to correct the underlying issue if possible. If your EMR is implemented via Citrix and you are using DMPE2 and NOT the Network Edition of Dragon, see if your institution has the Network Edition available and get it. If this isn't an option, inquire about whether it is an option to get a full version of your EMR installed on your computer, rather accessing it virtually via Citrix.

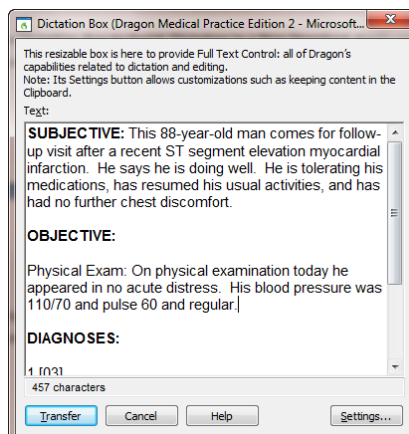
Assuming you are not able to swing either of the above, here are your basic options:

1. Do your dictation in a compatible program such as DragonPad, WordPad or Microsoft Office Word and simply paste completed dictation into your EMR. Although this adds the step of launching the extra application and copy/pasting the dictation, when you do this regularly, it's not a big deal.
2. Use the "Dictation Box". This is a built in "mini word processing window" that can be launched via voice and from which text can be easily moved back to your EMR. See below for more details on the Dictation Box.

Dictation Box: Essentials of Use

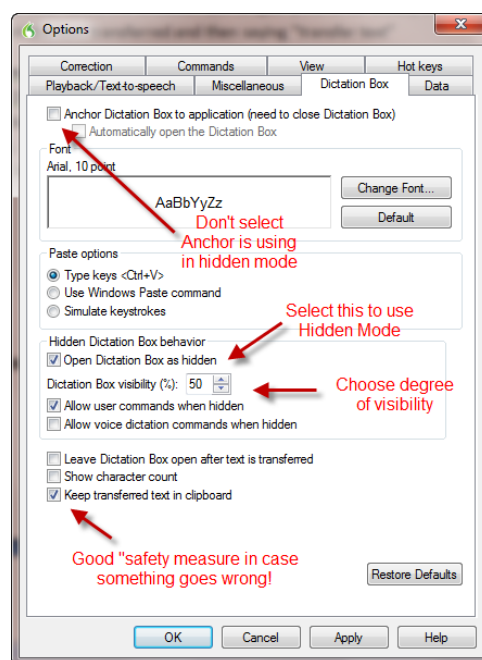
The Dictation Box has been a part of Dragon for many years and has been enhanced in DMPE2. In addition to providing a fully functioning environment to complete dictation if your application is not fully compatible, the Dictation Box can also serve as a repository of (dictated) information as you browse a medical record. Let's briefly look at each of these functions.

The Dictation Box is launched simply by saying "show dictation box". Once launched and active, you can dictate using Dragon and can use all normal commands within the Dictation Box, including all punctuation, Dragon templates, etc.



The dictation box can be used in two different modes:

1. **Anchored:** When "Anchored", the Dictation Box is linked with the application and place from which it was launched. When done with the Dictation Box you can either click on the "Transfer" button or say "Transfer Text" and the contents of the dictation box will be sent directly to the spot you were in when launching the Dictation Box. We find this the most practical way to use the Dictation Box when dealing with a non-standard EMR.
2. **Unanchored:** In this mode, the Dictation Box is not anchored to a particular application or window. In this mode, the only way to move contents from the Dictation Box to the application is to move to the place to which you want the contents moved and then say "Transfer Text".



When dictation is completed, text is transferred to where you want it, either by clicking "Transfer" or saying "transfer text" while the Dictation box is open (Anchored Mode) or by navigating to where you want the text transferred and then saying "transfer text" (unanchored).

For more information on using the Dictation Box, please see the dedicated section on [Promoting Efficiency with the Dictation Box](#) in Part Two of this guide.

Chapter 16: Controlling Your Computer with Dragon

We have already shown you ways that commands can be built to accomplish some time-saving actions on your computer. What you may not realize is that built into Dragon is a wealth of computer command and control actions that are initiated with a single voice command. Below is a basic chart showing some of the basic functions built into Dragon. For more of this, please refer to the [overview of built-in commands](#) in the Part Two of this guide.

Function	Method	Example
Verbally press any keyboard key or combination	Say “press <key name>”,	“Press escape” “Press alt tab”
Open any Program in start menu or desktop	Say Open <program name> or “Start <program name>”	“Open Internet Explorer”
Open any Document on Desktop	Say “Open <document name> or “start <document name>”	“Open inpatient consult template”
Navigate through menus on any program	Say name of menu, or menu item (“File”, Edit”, etc.)	“File”, “Print”, “Okay”
Conduct web searches on Google, PubMed, UpToDate	Say “Search <site name> for <topic name>”	“Search PubMed for pulmonary hypertension”
Send Email	Say “Send email to <recipient name>”	“Send email to George Smith”

Key Point: Dragon can do far more than create text. When you have time, explore some of the computer controlling functions. These can be great time savers.

Chapter 17: Proofreading – is 95-99% Good Enough?

The Problem

Why a chapter devoted to proofreading? It's time for a little brutal truth, and one that every Dragon user knows perfectly well. For all it is an amazing technology and for all it has dramatically improved in performance over the years, it still isn't perfect. Dragon doesn't understand content and will occasionally make errors. While 99% accuracy may be the best you will achieve, in the real-life environment of a dictation room or hospital ward and in the context of the somewhat rushed technique we developed in the days when a thinking human being would put together the pieces, actual accuracy may be in the 95-99% range. So this means up to 5 words out of a hundred may be wrong. The question is, which words? And will these errors meaningfully impact the intent of the dictation and the quality of the medical communication?

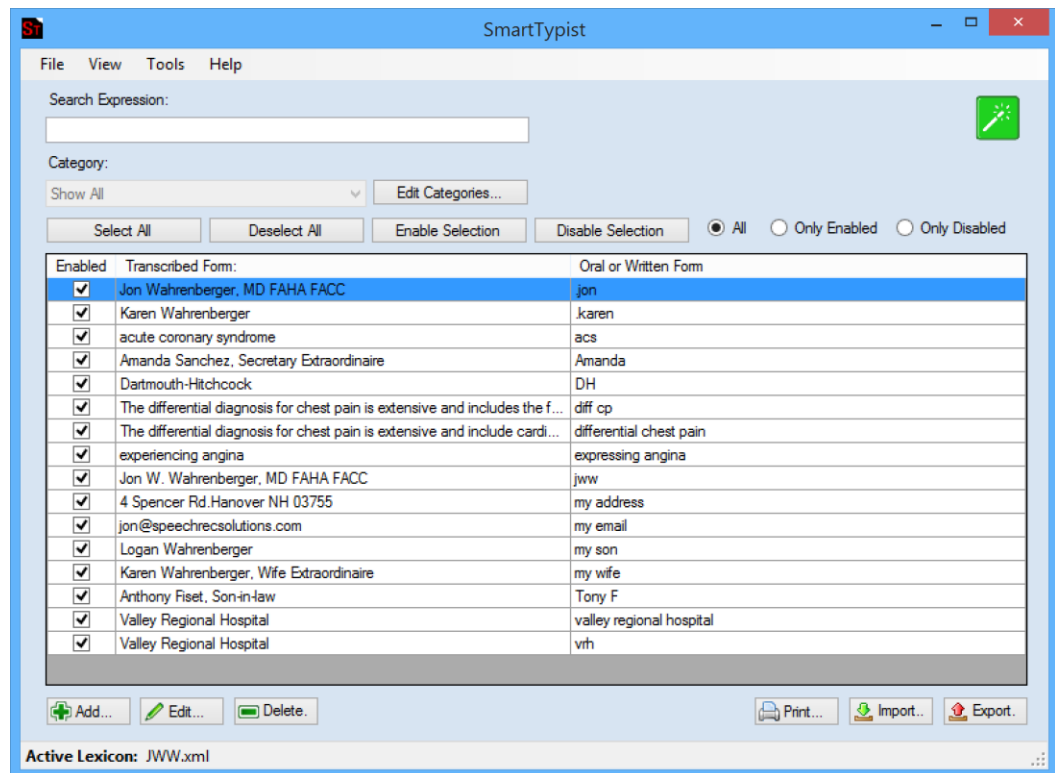
Suggestions

Here are some of my own thoughts, having used Dragon for medical documentation for more than 10 years:

1. Proof-reading truly needs to be done, either by you or by support personnel.
2. Although you can watch your dictation as it appears on the screen ("proofing on the fly"), this turns out not to be a reliable way of proof-reading unless you truly pause and read before you continue dictation.
3. Proof-reading content created by speech recognition is more challenging than proofing typed content. With the exception of words you have manually entered into the Dragon vocabulary, your text will not contain *spelling errors*. Rather, the use of speech recognition technology will create perfectly spelled *recognition errors*. Since our usual quick proofreading technique tends to *visually* scan for words that appear wrong (typically misspelled), this quick scanning technique will not pick up recognition errors. The best technique for proofreading Dragon-created content is to truly read the text in your head, even if quickly. Only then will you find words that are out of place.
4. If you proof-read a document hours or days after you complete a dictation, you may find a recognition error that is so out of place and bewildering that it might not be obvious what you were trying to say. The trick is to play with the sound and flow of the word or words placed in error by Dragon and hoping your brain will reconnect with what they should have been.
5. Although it is tempting to simply retype misrecognitions, Dragon won't learn anything when you do this and is likely to repeat the error. Formally correct errors when you spot them.
6. If you have a misrecognition that occurs repeatedly despite having formally corrected the error in the past, you have a few choices:

- As best you can, use extra care when enunciated the word or phrase that you tend to get wrong. I find that in 90% of the cases this will solve the issue. It's often just sloppy dictation that leads to the misrecognition.
- Create a Written form/Spoken form for the word or phrase within Dragon
- Consider the use of a third party program such as SpeechWare's SmartTypist, which will allow you to create automatic substitutions, somewhat similar to using a Spoken Form/Written Form within Dragon. SmartTypist follows along as you dictate and makes the substitutions in real time. In addition, it will make substitutions automatically as you hand-type.

Below is the main window from SmartTypist, showing how the transcribed and oral/written forms are listed within the applications.



For more information on SmartTypist, please visit our site and view Products > SpeechWare (<http://store.speechrecsolutions.com/speechware-c39.aspx>)

Key Point: As good as it is, Dragon is not perfect and mistakes (recognition errors) will happen. Save yourself some embarrassment by having your documents proofread, ideally before they are immortalized in your EMR!

PART TWO: Special Topics

We provide this expanded section of “Special Topics” with the hope of providing more detailed information about topics which may be a bit too detailed to be placed in the body of this guide and which are not necessarily important for most users of Dragon.

Chapter 18: Detailed Hardware Recommendations

For the user wanting to buy the best system for use with Dragon, please review these detailed guidelines from Tony Fiset, our resident computer and technical expert:

- Dragon is one of the few programs that can tax a modern CPU, and Nuance's system requirements and recommendations are woefully inadequate in our opinion. The bare minimum specs they list are so bad that we've seen systems that were unable to even manage the user adaptation process, which arguably is a core part of the software.
- Without going into too much detail on the CPU side of things, we recommend an Intel Core i5 as the minimum; if an i7 is in your budget, the larger L2 cache will be beneficial. All of these will be dual-core models, which should be fine as long as you aren't doing much multi-tasking - Dragon can only use two cores anyway, so a quad-core CPU only helps if there are other programs using those cores.
- Intel is currently on their third generation Core-series product, so all of the parts will have names with the following conventions: i7-3xxxM, where the first part indicates the overall performance classification, the "3" denotes third generation (known as "Ivy Bridge"), and "M" signifies that it is a mobile, or laptop, CPU, versus one intended for a desktop. The "y" is an optional modifier, either a Q for quad-core or a U for Ultra Low Voltage (parts that sacrifice some performance for longer battery life). The "xxx" is the specific part, and usually indicates the clock frequency. But maybe that was too much detail...
- While 4GB of RAM is the minimum you'll want, RAM is relatively cheap right now, so we recommend getting at least 8GB. If you're at all technically inclined, you can usually upgrade to 8GB or 16GB for much less than it costs from the manufacturer.
- Another nice upgrade is a solid state drive, or SSD. This won't really have much impact on Dragon, but will dramatically boost the overall performance and responsiveness of your system.
- We generally recommend going with a "business class" laptop, such as a Dell Latitude, Lenovo ThinkPad, or HP ProBook; they tend to have fewer issues, last longer, and you often get better support.

Chapter 19: Purchasing Microphones for Medical Providers: Practical Strategies

Over the years and through both our sales experience and direct observations during testing in the hospital and clinic environment, we have developed a good sense of what will work for your medical providers. We believe that the principles listed below should guide you in your hardware selection:

- Most medical providers prefer not to wear their microphone. Already straddled with a stethoscope and a pocket-filled white coat, and needing to transition frequently between examination rooms and places of documentation, the last thing a doctor wants to do is constantly adorn his/her head with a headset microphone. While the headset tends to be the most inexpensive option and this makes such microphones attractive to those making purchasing decisions, they will quickly disappear, break, and require replacement. We strongly recommend that once you have become convinced that speech recognition will work for you or your institution that you transition away from the usual headset microphone and consider either a hand-held or desk mounted microphone. The two best hand-held microphones are the Nuance PowerMic II and the Philips SpeechMike Premium (LFH3500).



- With the exception of the rare provider doing dictation in the confines of an office with a closed door, most medical documentation occurs in areas with a high degree of environmental noise. In addition to adding stress to the provider, this has the potential to negatively impact speech recognition accuracy. For this reason we put an emphasis on microphones with strong external noise rejecting characteristics. For the loudest of environments we recommend breaking our "no headset" rule and considering the uniquely external noise rejecting headset – either the Sennheiser ME3 or the SpeechWare FlexyMike Dual Ear Cardioid.
- Keep in mind that these recommendations are being typed by a physician. In general, doctors tend to focus on their clinical responsibilities and are a little less sensitive when it comes to handling equipment. This is probably not news to you. So if you are buying a microphone for a documentation strategy which you hope will be sustained at your institution, we believe there will be a strong ROI on the purchase of a durably constructed product. Don't expect the \$5 microphone that came with your software to be durable and when it falls apart don't replace it with a similarly poorly constructed product.

- While convinced of the importance of medical communication, most medical providers tend to consider aspects of the documentation an unfortunate distraction from the more important face-to-face interaction with the patient and the clinical decision making. For this reason, many providers will not put much time into editing and correcting documentation once created. So unless your workflow allows for proof-reading by support staff, we strongly urge you to orient your speech recognition program such that it will optimize accuracy of the documentation at the time at which it is first created. In addition to providing the training to your providers in the method of dictation that is most associated with accurate results, you must provide them with the hardware which will facilitate this as well.
- Finally, medical providers are feeling a lot of pain in the transition from paper to an electronic record and for this and a number of other reasons, job satisfaction isn't exactly at a high level these days. If you accompany your transition to speech recognition with a well thought out implementation strategy, organized training which includes follow-up sessions, and equip your providers with comfortable and well-performing equipment you will greatly improve provider satisfaction ... and results.

Chapter 20: Detailed Microphone Recommendations:

Please forgive the shameless links to products on our on-line store, but we have bills to pay, payroll to fund, and hopes of actually turning Speech Recognition Solutions into a viable retirement business. Your business will be greatly appreciated! What follows is the “down and dirty” on our most popular products and those – in our opinion – which are best suited for a medical provider.

Philips SpeechMike Premium (LFH3500)

Replacing the PowerMic as our favorite hand-held microphone and setting the standard in terms of comfort and functionality, the LFH3500 or “SpeechMike Premium” represents a huge leap in technology by Philips. Made for the demanding workflows and requirement of the professional, this product 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 and immunity from background noise, touch, and click noises.



Key Features:

- USB interface (microphone does analog to digital conversion)
- 11 programmable buttons
- Suspended electret microphone element with high level of accuracy and external noise rejection
- Includes Control software for both Mac and Windows users (also works beautifully with our generic “Octopus USB Controller” for simple integration with Dragon)

Comments: Although the SpeechMike Premium comes with control software to program the buttons on this microphone, we have found this software to be fairly difficult to use. We prefer to control this microphone with Octopus USB Controller which is described in detail elsewhere in this guide. We find this microphone to be highly accurate and sufficiently noise cancelling to allow use in a busy hospital ward.

Approximate Price: \$335

For more information, please visit: <http://store.speechrecsolutions.com/philips-speechmike-premium-p101.aspx>

Nuance PowerMic II

Historically the PowerMic II has been considered the “doctor’s choice” when it comes to microphones. In addition to being highly accurate and rejecting of external noise, the PowerMic II includes 9



programmable buttons and enjoys a high level of integration with medical versions of Dragon. Buttons can be programmed to emulate almost any Dragon function, to navigate through a note template, and to initiate any Dragon “command” including both integrated and user-created commands. This is our best-selling hand-held

microphone. For additional functionality, program the keys on this microphone with Octopus USB Controller (see below.)

Key Features:

- High accuracy and excellent noise canceling properties
- Programmable buttons with high level of integration with Dragon medical versions
- USB interface with PC
- No need for drivers and compatible with Windows XP, Vista, 7 and 8
- Optionally works well with Octopus USB Controller (generic control software) to work with any PC and all versions of Dragon

Comments: Over the years we have truly enjoyed this microphone, although for our personal use switched to the Philips SpeechMike Premium (see above) for reasons of ergonomics. Either of these two microphones are great choices. Both are most easily eased and programmed with Octopus USB Controller. The one downside of the PowerMic II is the very long cord. Realistically it needs to be coiled up to keep it out of the way. We have heard quiet talk about a “PowerMic III” with an optional short cord, but at this point only in the form of rumors.

Price: \$424

For more information, please visit <http://store.speechrecsolutions.com/dictaphone-c104.aspx>

SpeechWare TableMike

For the medical provider doing the majority of dictation at a fixed location and preferring not to wear or hold a microphone, any one of the TableMikes from SpeechWare is an excellent choice. Differing in




some peripheral characteristics such as boom length, presence of speaker, and availability of accessory ports, all share the same highly accurate microphone element and unique circuitry which allows operation in two modes. In the green or distant mode, this microphone can be used at distances from 10 to 20 inches with automatic adjustment in the microphone gain as distances change. This flexibility in terms of dictation distance makes them particularly convenient and appreciated by medical providers. In the near or blue mode, this product is intended for close range (3-4 inches) and provides exceptional accuracy.

These are our biggest sellers to hospitals and medical providers. They are particularly popular among pathologists. Because this product is used with a significant distance between the user's mouth and microphone boom, they are easily shared without concern about hygiene. Several accessories for this series of products are available, including a foot pedal, extra length booms, bracket for wall-mounting, and spare foam windscreens. Each of the TableMikes includes free access to a version of Octopus USB Controller ("TableMike Configuration Utility") to allow programming of the volume up/down buttons to activate a variety of Windows and Dragon functions.



Features common to all TableMikes:

- Extremely high quality microphone element which contributes to high levels of accuracy during use with Dragon NaturallySpeaking
- Equalizer (auto-gain) technology to allow practical use between 10-20 inches from the microphone element (only when in "Green Mode")
- Advanced digital signal processing (DSP) to reject external noise
- Mute switch
- Ability to choose between "Normal" (highest accuracy) and "Distance" (highest distance flexibility) modes
- Availability of free "TableMike Config" software that allows programming of the volume up and volume down buttons for a variety of functions
- Durable construction
- 1-year warranty which is extended to 2-years with product registration

3-in-1 TableMike	6-in-1 TableMike	9-in-1 TableMike
		
Features: <ul style="list-style-type: none"> • All the features listed above • 15 inch boom 	All features of 3-in-1 plus: <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Longest boom in industry (telescopes between 21 and 25.5 inch) • Two accessory USB ports • Card reader
Price: \$279	Price: \$329	Price: \$379

Comments: These are clearly the best *desktop* microphones available for use with Dragon and are notably more accurate than similar products manufactured by Buddy and Audix. We recommend use of a desktop microphone in situations in which you neither want to hold or wear your microphone. Each of the three models in this microphone series employ the same microphone element and circuitry, so you can expect the same results with each. The differences in the three microphones pertain to the length of the boom, the presence of a speaker, and additional functionalities as detailed in the table above. We do not propose that this has quite the accuracy or noise rejection of closely worn headset microphone, but it is unique in allow dictation from distances of 10-20 inches from the microphone element and does so with remarkable accuracy

For more information on the TableMike series please visit
<http://store.speechrecsolutions.com/speechware-c39.aspx>

SpeechWare TravelMike

The latest release from our partner in Brussels, SpeechWare, this is an exciting new product which includes all of the unique functionality of the larger TableMike series of microphones, but in a small form that allows portability. This is an ideal solution for the medical provider that is mobile, either moving and working throughout the hospital, or going from office to office. This microphone was released in September of 2013 and has been selling as fast as we can get them. It plugs directly into a side USB port and can be used with an optional base if desired. It includes the ability to toggle between a short-range mode which emphasizes external noise rejection, or a long-range mode which allows use from 10-20 inches from the tip of the microphone boom and which provides maximum flexibility for users.

Key Features:

- High level of accuracy and external noise rejection when used with Dragon
- Working range of 10 to 20 inches from microphone element
- USB interface
- Highly convenient since neither held nor worn



Comments: this is a truly unique product and designed for the notebook computer user that doesn't want to hold or wear a microphone. It enjoys essentially identical circuitry used in the full size TableMikes described above. As with the TableMikes, we do not propose that this has quite the accuracy or noise rejection of closely worn headset microphone, but it is unique in allow dictation from distances of 10-20 inches from the microphone element.

Average Price: \$259

For more information please visit <http://store.speechrecsolutions.com/speechware-travelmike-p144.aspx>

Sennheiser ME3

For the serious speech recognition user and especially the medical provider working in a loud environment, the ME3 truly sets the standard when it comes to accuracy and external noise rejection.

This is Speech Recognition Solutions' best-selling headset and is truly the microphone to which others are compared when considering performance.

Rather than mounting over the head, the headband on this microphone wraps around the back of the user's head and includes no speakers. Absent the speakers, it allows for full situational awareness and easy

use of the phone when needed. We bundle this product with a small external USB adapter (Andrea Pure Audio MA) because it is incompatible with an occasional computer sound card and the USB adapter assures predictably great operation. This is the favorite of the Emergency Department physician and hospitalist working in particularly loud environments.



Features:

- The most accurate and external noise rejecting microphones for speech recognition users
- Highly durable and with 2-year Sennheiser warranty
- Bundled with Andrea Pure Audio USB adapter so has USB interface

Comments: The ME has long been considered the best microphone for use with Dragon, both due to its accuracy and extraordinary external noise rejection. The Sennheiser ME3 shown above and sold through Speech Recognition Solutions (both on our own website and through Amazon) is not the same version of the ME3 sold through large music resellers. We have this model manufactured for us by Sennheiser and it includes two important differences when compared to the ME3 sold elsewhere: 1) it includes a standard 3.5 mm plug rather than the plug with a locking ring (which prevents full insertion into sound cards) and 2) it comes with an 8 ft. cord rather than the 5 ft. cord in units sold elsewhere. One final point: while this product is bundled with a "head strap" which attaches with Velcro, this strap really serves no function and should be scrapped.

Unit Price: \$198 (includes ME3, Andrea Pure Audio USB adapter, and nylon storage bag)

For more information, please visit: <http://store.speechrecsolutions.com/sennheiser-c48.aspx>

SpeechWare FlexyMike Dual Ear Cardioid (FMKDEC)

This is the latest in a series of "FlexyMikes" from SpeechWare and is unique in including a full size, high quality and directional microphone element. While the previous (non-directional) FlexyMikes provided good performance, this unit provides truly exceptional performance, every bit on par with our long-term favorite, the Sennheiser ME3.

Features:

- Highly unidirectional microphone element for effective external noise rejection
- Extremely lightweight (25 gm) stainless steel construction
- Includes both 40 inch and 80 inch cables for both laptop and desktop users
- Includes both cable clip and storage case

Note: a new version of this microphone is shipping in March of 2015 and includes the addition of an “ear bud” to allow provision of sound the to the user. We consider this a nice addition and provides a bit of functionality not seen in the Sennheiser ME3.

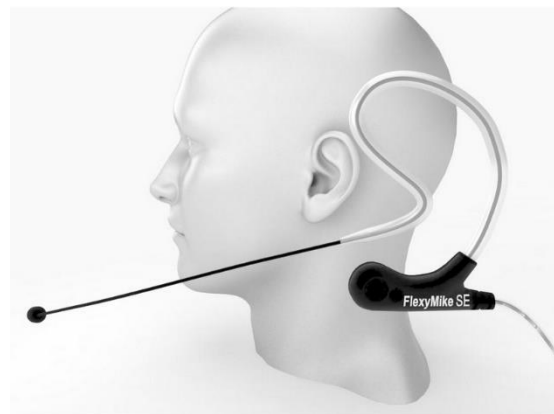


Price: \$189 (Consider buying combination with either SpeechWare MultiAdapter or Andrea Pure Audio MA USB adapter.)

For more information, please visit: <http://store.speechrecsolutions.com/speechware-flexymike-de-cardioid-microphone-p213.aspx>

SpeechWare FlexyMike Single Ear Cardioid

Although this microphone is being released just as this guide is preparing for publication, we have seen enough of it to know it is a serious product and worthy of some attention. Similar in some respects to the “FlexyMike Dual Ear Cardioid” described above, this new product combines a unique, highly sensitive and directional microphone element and a lightweight single-ear mounting system that makes it a perfect choice for the user wanting something extremely lightweight and low profile and yet still needing the high quality results when using it with Dragon.



Features Include:

- Newly designed highly directional cardioid microphone capsule
- “S-shape” ear hook design with silicon protector for more stability and working comfort
- Lightest and most comfy single-ear for many hours of dictation

- Very flexible boom
- Short 1.5 m fixed cable for Notebook
- Long 2.5 m cable extension
- Plastic box for easy storage and transport
- Spare windshield

Price: \$149

For more information, please see this product on our site at:

<http://store.speechrecsolutions.com/speechware-flexymike-single-ear-cardioid-microphone-p261.aspx>

Sennheiser MB Pro 1 UC and Pro 2 UC

This new release from Sennheiser fills a wonderful niche: a high-quality wireless headset microphone which is accurate with Dragon, simple to use, comfortable and durable. Unlike any other wireless microphone this product really does it all for the user preferring a headset and wanting to be untethered. Specific features which will be of interest to you:

- Ultra noise cancelling microphone element at end of full length boom
- Large, comfortable leatherette ear cushion(s)
- One and two speaker varieties (single speaker version shown here)
- 15 hour talk time (all day use)
- 25 meter (82 ft.) range
- Works with both pre-paired nano-dongle and will connect to Bluetooth phone
- Multi connectivity - to seamlessly manage PC and mobile phone calls from a single headset for maximum call-handling flexibility



Price: \$189 (Pro 1 UC) and \$199 (Pro 2 UC)

For more information, please visit these links:

<http://store.speechrecsolutions.com/sennheiser-mb-pro-1-uc-p252.aspx>

<http://store.speechrecsolutions.com/sennheiser-mb-pro-2-uc-p253.aspx>

VXI TalkPro VoxStar UC

For the user wanting a wireless microphone, we highly recommend that you consider the VXI VoxStar UC. This is a wireless microphone which uses Bluetooth frequencies but which does not require interaction with the Bluetooth drivers on your PC. It is pre-pared with a tiny USB dongle which works in a “plug and play” manner. Aside from the simplicity in setting up and using this microphone, it works beautifully with Dragon on your Mac or Window machine and will also work with your cell phone or internet phone application.

Features:

- Advanced noise-canceling and Xtreme Noise Suppression technologies block ringing of phone and other environmental noise contamination
- High-quality audio receiver with a wide volume adjustment range provides crystal-clear conversations even in the noisiest environments
- Bluetooth technology provides wireless connectivity with a functional range of up to 66 feet
- 128-bit encryption offers safe, secure and private conversations.
- Multipoint Connection allows you to easily connect to and switch between two Bluetooth devices (such as another mobile phone or laptop computer)
- One-touch multifunction button for power on/off, call answer/end, voice dial, call waiting and pairing commands
- Comes with multiple wearing styles in each package: over-the-ear, over-the-head and behind-the-neck
- One-year warranty



Comments: Although the picture shows only the ear mounting method for this microphone, keep in mind that it actually comes with three mounting styles: 1) ear mounting 2) around the back of the head mounting, and 3) traditional over-the-head mounting. Of the three, we consider the traditional headset mounting as the most comfortable. The ear mounting method is a bit flimsy and the behind the head method fairly stiff.

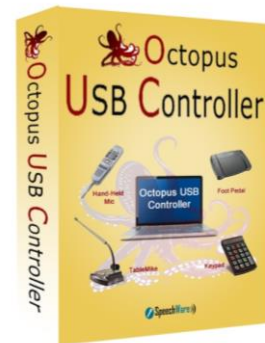
Price: \$159

For more information, please visit: <http://store.speechrecsolutions.com/vxi-voxstar-uc-bluetooth-microphone-p189.aspx>

Chapter 21: Octopus USB Controller

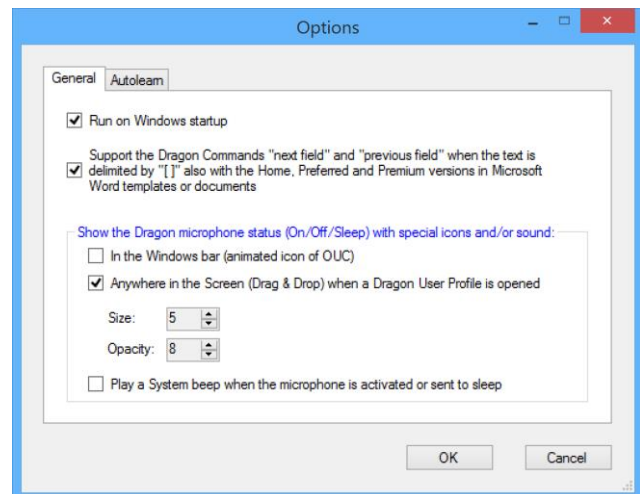
We believe that Octopus USB Controller is a sufficiently essential adjunct for users of speech recognition technology (and for all Windows computer users) that it warrants special attention in this guide. It is, in our opinion, a remarkable software utility. For both the hand-held microphone user and user of any USB Human Interface Devices (HID), this Windows-based controlling utility can program any button, key or lever on most devices to perform a variety of actions, including:

- Inserting boilerplate text
- Emulating keystrokes or keystroke combinations
- Initiating Dragon commands
- Emulating Dragon hotkeys
- Launching applications, documents, folders and web sites
- Initiating a number of Windows functions
- Combining any of the above into sequential scripts
- Advanced functions which allow setting separate behavior for a key or button depression and release



In addition to the above, OUC adds three entirely new features to Dragon, including the following:

1. Addition of a large “microphone status indicator” which can be placed anywhere on the screen, sized variably and set to a variety of transparency levels.
2. Addition of “field navigation” behavior to non-medical versions of Dragon (ability to move sequentially through fields defined by square braces ([]))
3. The ability to play a system beep when the microphone is activated or put to sleep.



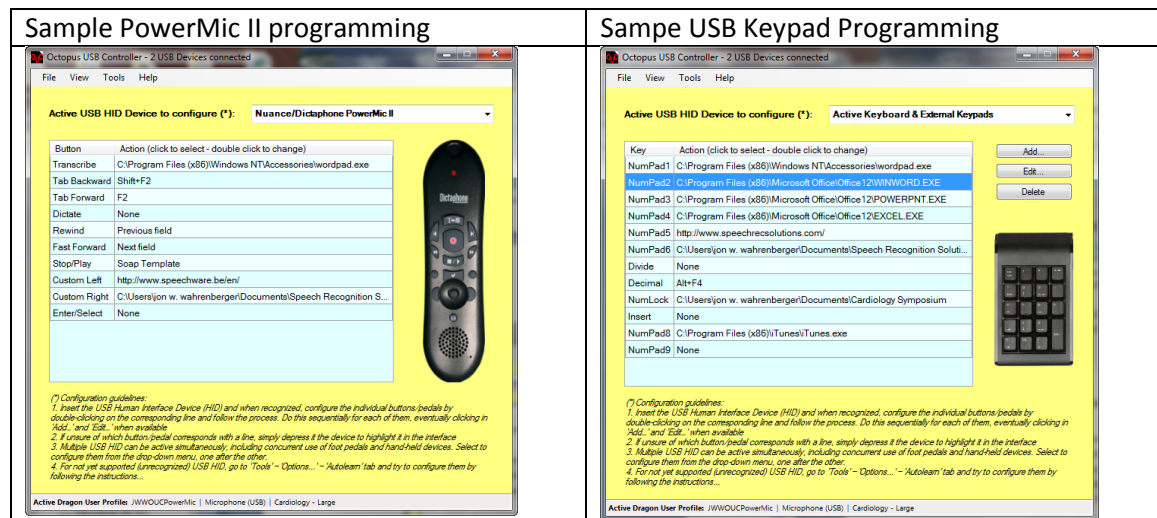
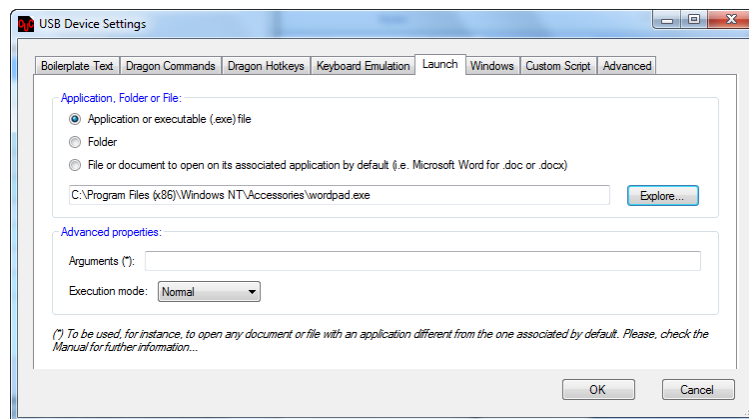
From an institutional perspective, the beauty of this software utility is the ability to interface with virtually any commonly sold USB HID hardware (including hand-held microphones, keypads, and foot-pedals), simple sharing of device configuration profiles, and the ability to simultaneously control multiple devices.

Overview of Features

- Compatible with all recent Windows operating systems
- Works with a long list of existing hand-held microphones, USB foot pedals and external keypads; configurable with most other USB devices on the fly
- Simultaneous control of multiple devices
- Easily exportable and transferrable device configuration profiles

A few key screenshots:

Main Programming windows showing variety of available categories of commands



Price: \$69.99 for single copy (may be installed on two computers and includes updates and support for 2 years)

For more information, please visit: <http://store.speechrecsolutions.com/octopus-usb-controller-p164.aspx>

Chapter 22: Microphone Set-up and Troubleshooting Guide

Contents:

- Setting Up a New Microphone
- Troubleshooting a microphone associated with poor accuracy
- Troubleshooting a Microphone not working at all

Setting up a New Microphone

Overview:

Before setting up a new microphone it is critical to understand a few basic requirements in order for your microphone to work properly with Dragon:

1. The microphone must be attached and un-muted
2. The sound system to which your microphone is attached (either the on-board sound card or a separate external USB sound adapter) must be recognized by your computer operating system.
3. Dragon must be set up to look for sound from the sound device to which your microphone is attached.
4. Dragon must undergo the necessary microphone sound adjustment (audio set-up wizard)

With the above principles in mind, it is not always possible and generally not recommended that you simply replace one microphone with another, with the one exception of replacing your old microphone with a new version of the exact same microphone. Remember that microphones differ in their sensitivity, acoustic properties, and means of integrating with your computer. Also keep in mind that Dragon will always start-up looking for sound from the last *sound source* it used (either the on-board sound card or a sound device attached via USB or Bluetooth).

There are certain principles that should be followed when changing microphones:

1. If you were previously using an analog microphone plugged into your computer microphone input jack and are now switching to a USB microphone, microphone attaching using an external USB sound adapter, or a Bluetooth microphone, you will always need to formally direct Dragon to this new sound device, either by adding a new “source” (see below) or creating a new user profile.
2. If you are maintaining the same sound source - either on-board sound card or external USB sound adapter – you don’t necessarily have to create a new source or new user profile, but do need to recalibrate the audio within Dragon using the “Audio set-up wizard” or “check audio” functionality.

Key Point: When upgrading to a new microphone you should NEVER expect to simply substitute the new mic for the old one. Dragon needs to be informed of the new source and ideally undergoing a bit of training with the new microphone.

Running the Audio Set-up Wizard: This method should be employed only if you are switching from one analog microphone to another and you are NOT switching sound sources or switching to a USB or Bluetooth interfacing microphone. In this scenario you simply plug in the microphone, start Dragon, and then run the audio set-up wizard.

How do you run the audio set-up wizard? If the microphone is attached and Dragon running, the simplest way is simply to say “Check Audio”. Alternatively, on the Dragon toolbar, go to Tools > Accuracy Center > Check My Audio Settings and follow the instructions. The advantage of this is simplicity. When moving from one wired microphone to another (especially when moving to a more accurate microphone) this is often adequate. If you are changing the type of microphone (i.e. moving from a wired to a wireless microphone or vice versa, switching from a simple microphone [3.5 mm plugs] to a USB microphone, or switching to or from a Bluetooth microphone) this simple method is not advisable.

Adding a New “Source” to an Existing User Profile: This method is advised if you are switching from use of an analog microphone plugged into your on-board sound card to any other microphone interfacing method (USB microphone, microphone plugged into a new external USB adapter, or a Bluetooth mic). Adding a new “source” to an existing user profile has the effect of maintaining the entirety of your old profile (with the exception of your microphone settings), including all of your customized training, acoustic information, customized words and commands, and yet tailoring it to the new microphone. In order to complete this process you must do the mandatory 5-6 minutes of reading (exception: Dragon 13). In essence it simply spends some time listening to how you sound with the new microphone source. After creating this added source, you will have the choice of using this new source or your old source to use each time you open Dragon.

The beauty of this method is that you can have multiple “sources” on the same user profile. You might for instance, sometimes use a Bluetooth microphone, sometimes a hand-held USB microphone, and sometimes a file from a digital recorder. When having multiple sources for the same user profile if you add words, commands or make other changes to the profile, these will be retained when you open the user profile with any of the sound sources.

How do you add a new source? Simply follow this procedure from the Dragon toolbar:

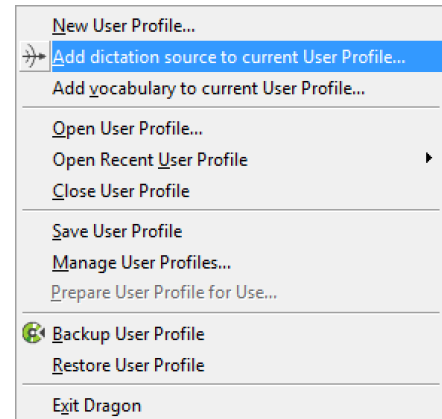
Dragon 13:

1. Go to Profile > Manage Dictation Sources
2. From the “Manage Dictation Sources” window select your new audio source

3. Click “Add New Dictation Source”
4. Follow ensuing steps

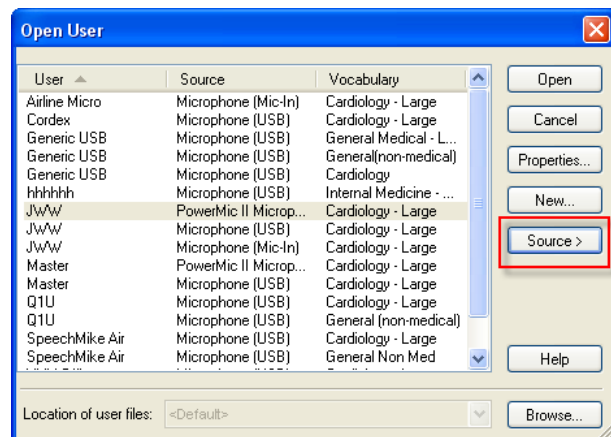
Dragon 12 (DMPE2) or Equivalent

1. Go to the Profile menu and select “Add dictation source to the current User Profile ...”
2. On the next screen select the appropriate type of sound source from the drop-down menu
3. On the next screen select the actual sound source
4. Follow all subsequent instructions



Dragon 11 and earlier

1. If the sound source Dragon was expecting is not available upon opening, you will be presented with the “Open User” profile.
2. If Dragon is already open, Select Profile > Open User Profile ...
3. On the far right of the Open User dialog, click on “Source” and then “New” (Don’t click on the separate “New ...” button shown on the image to the right).
4. Select the new source from those listed and following the usual steps to complete the training for the new source.
5. If you want to delete your old source (doing so will prevent it from showing up for potential selection each time you open Dragon), simply go to Dragon > Open User and select the old profile. Then click on “Source” and then “Delete”.

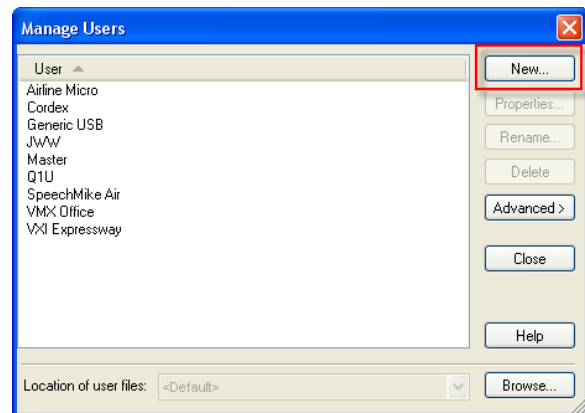


Creating an Entirely New User Profile: Although there is nothing wrong with creating a new profile for a new microphone, we consider this the least preferred method, since the new profile will not take advantage of personalized words and commands in your old profile (without manually moving them over.) We recommend this only if you have an existing profile which is either extremely new (you haven’t invested much in the way of words or commands into it) or extremely old (AND suspected to be somewhat corrupted).

Here are instructions for creating a new user profile from scratch.

1. Export any words and commands from your old profile so you can import them into your new profile once created.

- a. Export your old words from the Dragon toolbar by going to Words > Export. Save your words to a location that you will remember.
 - b. Export you commands by opening the Command Browser (Tools > Command Browser). Under the Mode menu, select “Manage”. Click the box next to the command category you want to export and then click on Export on the left menu
2. From the Dragon toolbar select Dragon and Manage User (In Dragon 12 you will select “Manage User Profiles and will see the same window shown above).
3. Select New (see image above)
4. Follow the subsequent steps, being sure to select the new microphone or device as your audio source.



Troubleshooting a Working Microphone with Loss of Accuracy

Less than ideal results is a common scenario and may or may not be the result of a dysfunctional microphone. Keep in mind that accuracy is dependent upon many factors and the most important of these is your dictation style. In this situation we recommend a sequential approach, as follows:

1. First, rule out obvious audio issues by listening to a recording of your speech. There are many ways to do this but simplest method is to dictate some text and then use Dragon’s playback functionality to hear your speech. This is done by selecting some or all of the text you dictated and then issuing the command “Play that”. You will hear your dictation replayed, in your own voice, and get a sense of the audio quality. Listen to the recording to be sure it sounds clear and that there are no word cut-outs, static or other interfering sounds. If so, you likely have a mechanical problem related to the microphone, sound card or, in the case of a wireless microphone, your wireless connection. If the sound seems clean, then proceed to the next step.
2. Run the audio set-up wizard. This takes just a couple of minutes and resets your microphone gain and also provides a crude check of your system integrity by means of providing a speech to noise ratio. The audio set-up wizard can be access either by saying “check audio” or manually by going to Tools > Accuracy Center > Check My Audio Settings. Depending upon which version of Dragon you are using, you may simply get a “check mark” if the audio was acceptable (Dragon 13), a “Pass” indication (Dragon 11 and 12), or a specific speech to noise ratio indication (Dragon 10 and earlier - anything between 15 and 25 indicates your system is probably OK.)
3. If you are using a laptop computer, it likely has an on-board microphone. If you are using a microphone plugged into the sound/microphone jacks, it is possible that Dragon is using the on-board microphone and not the one you have plugged in. You should manually disable the on-board microphone and this will likely resolve your issue. Alternatively, use a USB interface for

your microphone (external USB sound adapter). These are inexpensive devices that substitute for your on-board sound card.

4. If the above did not help, we suggest that you devote extra attention to your dictation style. Keys to optimal dictation are the following:
 - Enunciate clearly
 - Speak in a smooth manner, neither overly slowly or excessively rapidly. Speak in either sentences or phrases. Recognition is worst when speaking one word at a time.
 - Maintain a relatively consistent pitch and tone when dictating
5. Consider switching to a USB microphone or use your current microphone with an external USB adapter. This may be particularly helpful if you are using a laptop computer. The external USB adapter substitutes for your internal sound card and offers the possibility of removing internal electrical interference which may be negatively impacting your accuracy.
6. Consider upgrading to a higher quality microphone. Be aware that the microphone that came with your version of Dragon cost Nuance about \$10 or less. There are many better microphones that offer better accuracy and rejection of external noise.

Troubleshooting a Microphone Not Working at All

This is a rare situation, but one which leads to great frustration. Keep in mind that Dragon will only use a microphone that is being recognized by the operating system and one that is using a sound source you have directed Dragon to use. So after visually inspecting the microphone to rule out obvious mechanical issues, you should take steps to assure that the operating system and Dragon are recognizing the microphone. If your microphone is not working at all and it is a new microphone, the problem likely relates to the fact that you did not tell Dragon to use the new microphone (especially when switching from an analog to digital USB microphone).

Key Point: When a new microphone isn't working at all, it's most likely a result of Dragon looking for sound in the wrong place. In this situation, follow the instructions on setting up a new microphone earlier in this guide.

Here is our basic protocol:

1. Visually inspect the microphone and cord (and external sound device if being used) to be sure there is no evidence of damage to the wire.
2. Be sure your microphone doesn't have a mute switch. If so, be sure that the muting function is not activated
3. If you are using a USB adapter, be sure that it doesn't have a mute switch, and if it does, be sure the sound is not being muted.

4. If possible, use the microphone with another application, either on your current computer or another to assess its integrity in another environment. For instance, try your microphone with Skype or another audio application which uses a microphone.
5. Confirm that your operating system is sensing the microphone:
 - Windows 8: Go to Control Panel > Sound > Recording tab. You should see your microphone and when talking, you see green deflections in the sound magnitude scale. If you search “sound recorder” on Windows 8 it will launch a sound recorder which can be used to record a sample recording for use in assessing microphone sound quality.
 - Windows 7 & Vista: Go to your Control Panel > Hardware and Sound > Sound, and click on the recording tab. You should see your microphone. When talking, you should see deflections in the green sound magnitude scale.
 - Windows XP: Confirming a microphone is more difficult in XP than in 7. Often, the simplest method is to try a sample sound recording. This is done as follows:
 - i. Click on Start > All Programs > Accessories > Entertainment > Sound Recorder
 - ii. On the sound recorder Edit menu, select Audio Properties
 - iii. Under the Sound Recording section, be sure your sound device is correctly chosen (select your on-board sound card if using a microphone plugged into the mic and sound jacks; if using a USB microphone or device, select the name corresponding to the device – many USB sound adapters show up as AK5370 in windows XP)
 - iv. Make a sample recording by clicking on the record button. If audio is being recorded you will see deviations in the green signal line in the center of the recording.
 - v. Hit the rewind button to bring you back to the beginning of the recording
 - vi. Hit the play button and listen to the recording
6. If you are using a laptop and have a microphone plugged into the sound-out and microphone jacks, it should be disabling the on-board microphone, but there are many examples of this not being the case. It is possible that Dragon is taking the sound signal from the on-board microphone and not the microphone you have plugged in. In this case you should attempt manually disable the on-board microphone. This method varies from machine to machine and may not be possible. As a last resort (but nonetheless an excellent solution), get yourself an external USB sound adapter and do away with the problem. Dragon will be directed to take its sound signal from the USB device into which your microphone is plugged and the on-board



microphone will no longer harass you!

7. If you are plugging your microphone into the sound and microphone jacks on your computer, confirm that you have these properly selected. In general the sound jack is marked in green and the microphone jack in pink or red. If you have more than one set of jacks (front and rear), try plugging the microphone into the other set. If you know your microphone is otherwise working but not with your PC, consider the route of using an external USB sound adapter.

Summary: Adding a new microphone, particularly when it uses a new sound source (USB or Bluetooth) requires that you properly configure Dragon for this new source. Troubleshooting a poorly or non-functioning microphone requires a sequential approach.

Chapter 23: SpeechMike Premium: Use and Programming

Introduction

The SpeechMike premium is our best-selling hand-held microphone and truly sets the standard in terms of comfort and functionality. It also represents a huge leap in technology by Philips. Made for the demanding workflows and requirement of the professional, this product 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 and immunity from background noise, touch, and click noises.

Key Features:

- USB interface (microphone does analog to digital conversion)
- 11 programmable buttons
- Suspended electret microphone element with high level of accuracy and external noise rejection
- Includes Control software for both Mac and Windows users (also works beautifully with our generic "Octopus USB Controller" for simple integration with Dragon)



Installing the "Device Control Center" Software

Before attempting to use the SpeechMike Premium, you should install the "Device Control Center" software. This software utility allows you to control the behavior of the SpeechMike, program the buttons, and is also the means by which device firmware upgrades are accomplished. Later in this guide you will see screen shots and learn more about using the device control software. The software is included on the disk which comes with the microphone.

Below we detail the set-up process when using the SpeechMike premium on a Windows-based computer:

1. Plug the USB end into any available USB port on your computer. If you are using a desktop computer, be sure to use a rear USB ports. We recommend against using a USB splitter or powered hub. Once inserted, drivers will be automatically installed by your operating system.
2. Insert the Philips CD included with the microphone into the CD/DVD drive. If the Philips Device Control Center install doesn't appear, browse the CD and launch the installer by double clicking on the icon called PhilipsDeviceControlCenter.

3. Follow all remaining installation steps (all very intuitive).

Completing Initial Set-up with Dragon

If you are new to Dragon and using the SpeechMike Premium as your first microphone when setting up your first user profile, there is nothing for you to do but select “USB microphone” as your sound source when creating your user profile and then “SpeechMike Premium” in the next step. You can skip the rest of this section.

For those switching from another microphone to the SpeechMike Premium, it is essential that you follow a few key steps to assure that Dragon knows you have switched to the SpeechMike Premium and uses it as the preferred sound source. There are three ways you can integrate this microphone and we recommend the first of these three methods:

1. **Add the SpeechMike Premium as a new sound “source” to your existing Dragon user profile (recommended)** The advantage of this method is that it creates a separate version of your old profile, based on the sound characteristic of the new microphone, but with all of the personalized words and commands shared between the two (or more) versions of your profile.
2. Run the audio set-up wizard and, in effect, simply substitute the SpeechMike premium for your old microphone
3. Create a new user profile based on the SpeechMike

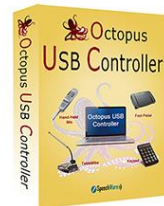
The manner in which any of the above methods is accomplished depends upon the version of Dragon you are using. Below we show the method employed in Dragon 13 and 12 when setting up the SpeechMike Premium as a new sound source on your existing profile.

Add the SpeechMike Premium as a new “Source” to an Existing User Profile	
Dragon 13	Dragon 12
<ol style="list-style-type: none">1. Go to Profile > Manage Dictation Sources2. From the Manage Dictation Sources window select your new audio source (SpeechMike Premium)3. Click “Add New Dictation Source”4. Follow subsequent steps	<ol style="list-style-type: none">1. Go to the Profile menu and select “Add dictation source to the current User Profile ...”2. On the next screen select the appropriate type of sound source from the drop-down menu3. On the next screen select the actual sound source4. Follow all subsequent instructions

Button Programming: Two Options

The Philips SpeechMike Premium (and other Philips mics) can be programmed to control functions within Dragon and other applications using two methods: 1) using the Philips “Device Control” software that comes with the microphone and 2) using the SpeechWare Octopus USB Controller software which must be purchased separately.

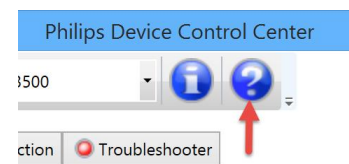
- **Philips Device Control software:** The advantage of the Philips Device Control software is that it comes with your hardware and is available at no additional cost. The disadvantage is that it is fairly cumbersome, unintuitive, and somewhat slower in controlling Dragon functions. Even if you decide to use Octopus USB Controller to program your SpeechMike, you’ll want to launch the Device Control software once in a while to upgrade the firmware or make changes in the device configuration.
- **Octopus USB Controller (OUC):** OUC costs \$69.99 but is dramatically simpler and intuitive to use. We have found that button release functions – such as turning the microphone off with a button release – work with significantly less delay using OUC. This is our preferred method of controlling the SpeechMike. Be aware that you can download a fully functioning version of OUC and use it 5 times before needing to purchase an activation code. The only downside of OUC is that it does not provide the means to upgrade the firmware on the SpeechMike Premium. For this you will need to use the Device Control Software.



This guide focuses entirely on using the Philips Device Control software. For more information on Octopus USB Controller, please visit: <http://store.speechrecsolutions.com/octopus-usb-controller-p164.aspx> To download a fully functioning version of Octopus USB Controller to try, please visit: http://speechware.be/downloads/OctopusUSBController1_42InstallerSpeechRecSolutions.zip

Customizing SpeechMike Keys and Settings

A variety of basic and advanced features of the SpeechMike Premium can be programmed using the Device Control Center. Once opened, you will see that general properties of the device are programmed from the “Device” tab and that you will have both Basic and Advanced options which can be set. For more information on these functions, please refer to the help menu available directly from the Philips Device Control Center by clicking on the “?” icon (shown on image to the right).



The key steps in programming the device are as simple as this:

1. Alter the parameter you wish to change on either the Basic or Advanced tab
2. Click on the “Upload” button to transfer these changes to the device



For more information on these functions, please refer to the help menu available directly from the Philips Device Control Center by clicking on the “?” icon.

Key Programming: General Options

Using the Philips OEM software it is possible to program a variety of functions to a key depression, release, or device key combination, including the following.

- **Hotkey:** Sends a specified hotkey with the optional modifier (Shift, Control, Alt) to the target application with one single button event to execute the needed actions (for example, to reach a menu item or change the screen resolution).
- **Text:** Sends a specified text to the target application by pressing the selected button on the active device.
- **Start Application:** Starts the target application with one single button event after specifying the executable file of the application and its start mode, which can be one of the following: Normal (normal window size), minimized (application is started as a taskbar button) and maximized (application is started in a maximized window)
- **Mouse button:** Sends mouse button pressed events to the target application with just one mouse click.

- **Dragon NaturallySpeaking command:** Executes the selected Dragon NaturallySpeaking command by clicking the specified button on the active device. Here you are also enabled to specify your own commands by selecting **User command** and entering the command into the text field.
- **Delay:** Suspends the execution of a command for the specified time. **Note:** The specified time must be between 10 and 30000 milliseconds.

In addition to each of the individual options listed above, it is possible to assign a series of steps into a script which includes several steps in sequence and which is initiated with a single button push.

Regardless of your intended use, the key steps in programming a button on the SpeechMike are these:

1. From the **Application Control** tab, select the **Target Application Profile** (usually “default ..”)
2. In the list of buttons, navigate as needed to the button you wish to program
3. Click on the gray box to the right of either the pressed or released section for your desired button – the Edit Operation window will appear
4. Delete any unwanted behavior by selecting it and clicking on the “delete” button
5. Click on the “Add” button to assign a new behavior to the button event
6. Select the desired behavior
7. If necessary add any specifics
8. Upload the settings to the active device by clicking the **Upload** menu item.

Programming Keys for Interaction with Dragon NaturallySpeaking

Specific Dragon-related functions, hot-keys or commands which can be programmed to any button are listed below. When “User Command” is selected you are given the subsequent option of adding the text used to verbally initiate your command

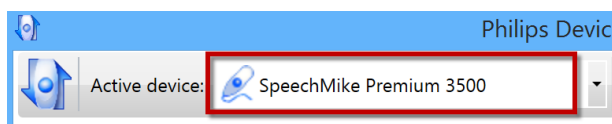
<ul style="list-style-type: none"> • Microphone on • Toggle Microphone • Microphone off and stop • Play from cursor • Playback toggle • Create new command • New word • Train word • Move cursor backward • Move cursor forward • Select words backward • Select words forward • Show collection menu or dialog • Show Dictation Box 	<ul style="list-style-type: none"> • Capitalize that • Compound words • Transcribe recording • Transfer • Tab forward • Next field • Previous field • Clear delimiting characters • Switch to normal mode • Switch to dictation mode • Switch to command mode • Switch to number mode • Switch to spell mode • User Command
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Refer to the diagram below and steps which follow in order to assign a Dragon NaturallySpeaking function to a button push or button release on a Philips SpeechMike. A similar process is used for assigning non-Dragon functions to a key.

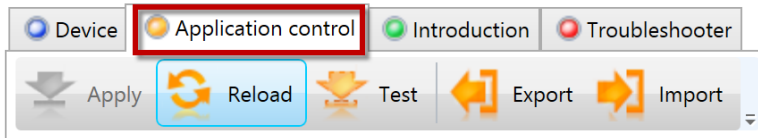


Detailed Key Programming steps (use with Dragon)

1. Be sure your USB microphone is attached to your computer and the Philips Device Control software installed.
2. Open the Philips Device Control Center software
3. Be sure your device is listed and selected in the area at top named "Active Device" (see image below)



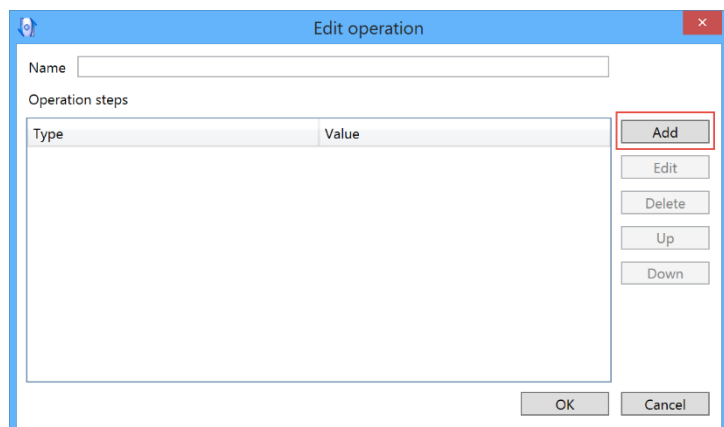
4. Select the "Application Control" tab

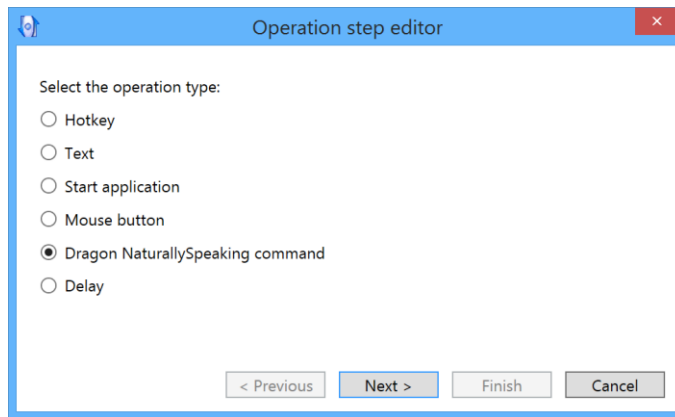


5. For most instances, under “Target Application” you want to select “Default – all other applications”.
6. Notice that in the main section of the application you will see columns termed “Name”, “Pressed” and “Released” and after the pressed and released areas you will see a small square box with three periods “...”.

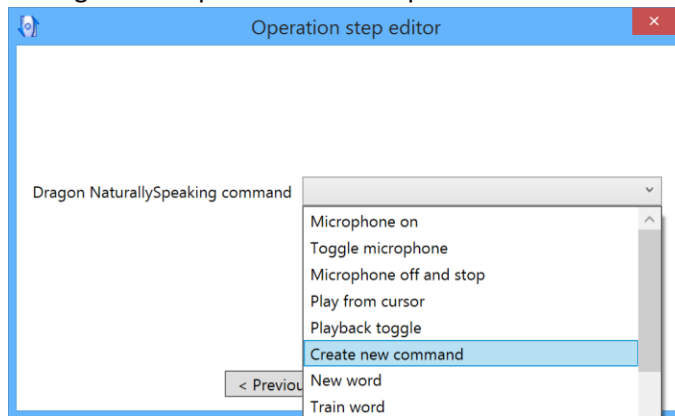
Name	Pressed	Released
Record	Microphone on ...	Microphone off and stop ...
Insert	Show correction menu or dia
EOL	Select words backward ...	Microphone off and stop ...
Rewind	Previous field

- The name column shows the name of the button to be programmed
 - The Pressed column shows the behavior associated with a push of the button
 - The “Released” column shows the behavior associated with the Release of a button.
 - The box with the “...” is what you need to select in order to change the programming for the function of the button event.
7. Program a button as follows:
 - a. Select the “...” box associated with the event (press or release) for the button you want to program
 [Note: if you are unsure where to find the section used to program a desired button, click on that button on the diagram of the microphone and you will see the associated line become highlighted on the Device Control application. This is where you program the press or release function for that specific button]
 - b. If there is an existing command associated with the button/event and you don't want it, select it and then click on the “Delete” button
 - c. Click on the “Add” button
 - d. In order to add a Dragon related functionality to the button/event, click on the radio button associated with “Dragon NaturallySpeaking Command” (see below)

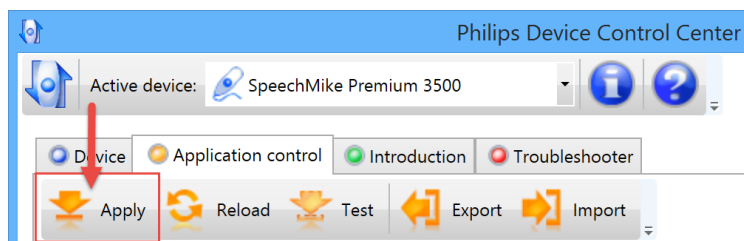




- e. Click “Next”
- f. From the drop-down menu which appears on the next screen, choose the specific Dragon command you want associated with the button/event. You will need to scroll through the drop down to see all possible choices.



- g. Click “Finish”
- h. Important caveat: be aware of the consequences of both the push and the release of a button and associated programming. In some situations you may want a separate event to be associated with a push and release. For instance in order to use a button to act in a “Push to Talk” manner, you can program the push to cause a “microphone on” and the release to cause a “microphone off and stop”
- i. Follow the above steps for other events/buttons as needed.
- j. **IMPORTANT POINT:** your device has not been programmed with the changes you made above until you click on the “Apply” button as shown below



One final note: it is necessary for you to close the active Device Control window in order to start using your newly created programming. Just click on the “X” on the top right of the application.



Importing and Exporting Device Configurations

There are many situations in which you may want to share the way a SpeechMike has been configured, particularly in situations in which you are part of a larger group of SpeechMike users. Described below are the methods used to import or export a device configuration.



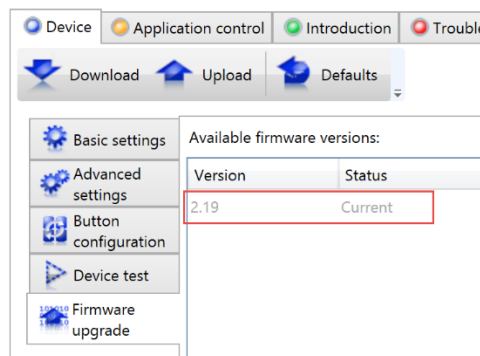
Importing a Device Configuration: If someone has already created a device configuration which they wish to share with you, simply store this file somewhere on your hard drive or a removable drive, click on the “Import” button on the Application Control tab of the Philips Device Control Center and then navigate to the saved file and select “open”. See image above.

Exporting a Device Configuration: If you wish to share a device configuration you have created, simply click on the “Export” symbol on the Application Control tab. You will be asked if you wish to export just the selected profile or the full device configuration. See image above.

Firmware Upgrade

Your SpeechMike Premium is controlled by internal software which is termed “firmware” and which is periodically updated by Philips. This internal software can be updated by means of the Device Control Software and is done as follows:

1. Check to see what your current firmware version is by opening the Device Tab and then clicking on the Firmware upgrade tab. You will see the currently installed firmware in the central window as shown here.
2. To download the current firmware version go to www.philips.com/dictation then go to the Support tab, and choose Product Support. Scroll down to select the SpeechMike premium and you will see a variety of downloads pertaining to your device. Notice that in



addition to a variety of guides pertaining to your device, there are downloadable upgrades to both the firmware and the Device Control application (listed as “speech control”)

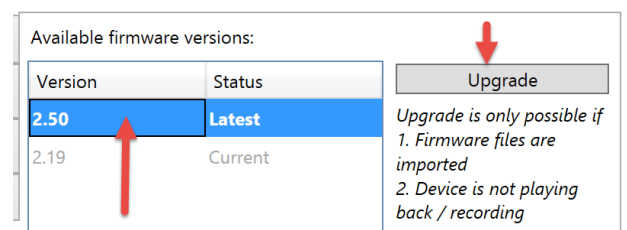
Manuals and documentation

- Leaflet (1.6 MB)
- Product brochure (4.6 MB)
- Quick start guide (push-button version) (687 KB)
- Quick start guide (slide switch REC, STOP, PLAY, REW) (701 KB)
- Quick start guide (slide switch FWD, PLAY/REC, STOP, REW) (607 KB)
- User manual (push-button version) (753 KB)
- User manual (slide switch REC, STOP, PLAY, REW) (759 KB)
- User manual (slide switch FWD, PLAY/REC, STOP, REW) (842 KB)
- User manual (Speech Control for Mac) (1.2 MB)
- Barcode scanner configuration guide (457 KB)

Software and drivers

- Firmware 2.50
- Speech Control 3.4.340.04
- Speech Control for Mac 3.1.04
- SpeechExec Pro Dictate 8.6.861.2

- Download the firmware
- Decompress (unzip) the download
- Open the Device Control Center
- Click on the Device tab and then the Firmware Upgrade sub-tab
- Click on the Import button and navigate to the folder in which you saved the downloaded firmware file
- Be sure the new upgrade is selected and then click the Upgrade button (it will take about 30 seconds to complete the firmware upgrade)



Using the SpeechMike Premium with a Mac

Until this point, the entirety of this guide has been oriented to Windows users. The microphone itself is compatible with a Mac and basic drivers will be installed when you attach the microphone to your Mac. In order to program the device behavior or button functions, it is necessary for you to download the “Speech Control for Mac” application which is shown at the Philips download site in the graphic above. The Mac version of the control software can accomplish almost everything described earlier in this guide for Windows users. It integrates with Mac Dictate versions 2.5, 3, and 4.

For more information, please take advantage of the following resources:

Device Control for Mac User Guide:

http://www.speechrecsolutions.com/assets/speechcontrol4mac_ifu_3.1.04_en.pdf

Download Speech Control for Mac: https://www.dictation.philips.com/no_cache/us/popups/software-popup/?softwareId=2584&prodId=410

Chapter 24: PowerMic II: Use and Programming

Overview: The Dictaphone PowerMic II handheld microphone is a high quality microphone which works extremely well with speech recognition software. In addition to being very accurate, the microphone element in the PowerMic II is somewhat buried in the housing and, as a result, this turns out to be a very noise rejecting microphone. In addition, when used with the following versions of Dragon there is a high level of integration between the PowerMic II and the software:

- Dragon 10 Medical
- Dragon Medical Practice Edition (DMPE) and DMPE2
- Dragon Medical 360: Network Edition
- Dragon Medical 360: Direct (cloud-based)

Unfortunately, the PowerMic, as supplied by Nuance, does not on its own integrate particularly well with non-medical versions of Dragon and with Mac computers. There are, however, some simple work-arounds to allow the PowerMic to work in these situations and they are described in detail below.

Drivers and button integration: the microphone does not come with any drivers. All needed drivers will be installed automatically when using the PowerMic II with appropriate software. The exception is Dragon Medical 360: Direct, with which it will work without drivers when run locally, but if run over Citrix you will need to obtain Citrix PowerMic II drivers from your IT administrator. For more information, please refer to the chart at the end of this guide.



PowerMic II Set-up and Use with Dragon Medical

When used with any of the medical versions of Dragon from version 9.5 and onward, a high level of integration takes place between Dragon and the PowerMic II – so much so that there is even a dedicated tab on the Dragon “Options” window for programming of the buttons on the PowerMic II (see graphic at right).

Key Point: When using the PowerMic II with any medical versions of Dragon it is necessary to formally select the PowerMic II as the sound source for a user profile in order to have the added tab on the options menu for advanced programming of the buttons on the PowerMic II. If you don't see the tab on your medical version of Dragon, it means the PowerMic wasn't properly added. See instructions below.

Adding the PowerMic II to Dragon Medical:

New Dragon User: if you are setting up Dragon for the first time, you should follow this simple procedure:

1. First, plug in the PowerMic II and allow all drivers to automatically installed
2. Insert the Dragon disk and install Dragon
3. Once installed and setting up your first user profile, select the PowerMic as your sound source

Existing Dragon Users: Adding the PowerMic II can be done using one of two methods:

1. Add as new source: The advantage of this method is that it makes a copy of your existing profile, retaining all words and commands in your original profile). From within an existing user, change the dictation source by going to Profile > Add dictation source to current user profile. You will be presented with a window from which you can choose “PowerMic II Microphone” as your new source. You can thereafter choose whether to perform training or not. Selecting a “short” training is ideal but not absolutely necessary.



[Note: in older versions of Dragon Medical a new source is added using a slightly different method. Navigate to Profile > Open User Profile and then selecting Source > New on the right of the Open User screen. From there select the PowerMic II as the sound source and follow subsequent instructions.]

2. Create a New User Profile: We consider this a less preferable method in so much as it's more time consuming and causes you to lose the words and commands you may have added to your original profile .

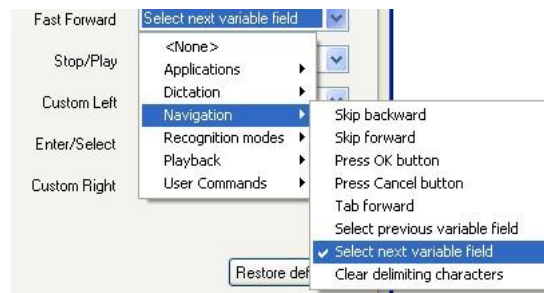
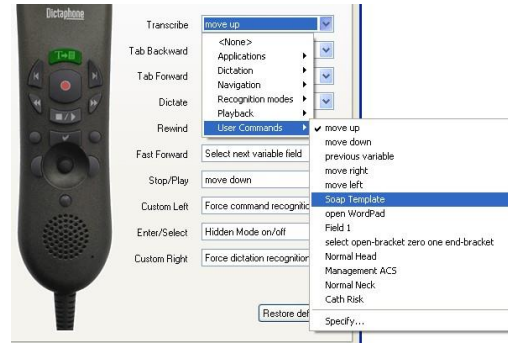
Here are the basic steps:

- a. From within your existing profile, navigate to Profile > Manage User Profiles > New
- b. Select the “PowerMic II Microphone” as the dictation source. Train the new user as usual.

Programming PowerMic Buttons (Dragon medical versions only)

Assigning functions in appropriate medical versions of Dragon is the same as programming keyboard hotkeys. Program buttons in medical versions of Dragon as follows:

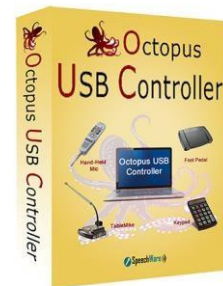
1. Open the PowerMic II tab in the options menu by clicking on Tools > Options > PowerMic II tab. You will see the Options tab shown above.
2. On your PowerMic II microphone, push on the button you want to program. You will notice that the corresponding button on the PowerMic II picture will turn green and the associated drop-down menu to the right will be highlighted
3. From the drop down menu, select the function you want to assign to the selected button.
4. If you want to program a button to cause a command to be initiated, go the “User Commands” selection on the drop-down. This will then reveal the last 5 commands you used and any of these can be selected. If necessary, therefore, in advance of programming a button, be sure to use any commands you plan to assign to a PowerMic II button.
5. If you plan to program a button to advance sequentially through variable fields in a document, make the appropriate selection from the navigation category of the drop-down menu (see image at right).



PowerMic Set-up with Non-Medical Versions of Dragon

As mentioned above, full programmability of the buttons on PowerMic II is allowed only with the medical versions of Dragon. For all other versions, the microphone and speaker will work, as will the pointer stick and left and right click buttons. But nothing more.

Fortunately, there is an option to allow programming of the PowerMic II for non-medical versions of Dragon and for other Windows applications – the use of Octopus USB Controller (OUC). Octopus USB Controller is a third-party software utility that allows you to assign functionality to the buttons or levers on any USB Human Interface Device, including the PowerMic II. Among the functions you can program are the following:



- Insert boilerplate text (text of your choosing)
- Initiate any of a series of Windows activities, such as moving forward and backward through open applications, opening the Task Manager, and other common Windows functions/activities
- Open any application, document, web-page, or folder
- Emulate any key or key-combination
- For Dragon users, initiate any Dragon Hotkey or command (including user created commands)

- Combine an unlimited number of the above functions into a single "script" initiated with a single button, key or lever push

A fully functioning version of OUC is available for free download and can be used 5 times before purchasing an activation code. For more information on Octopus USB controller, please visit the product page on our site at:

<http://store.speechrecsolutions.com/octopus-usb-controller-p164.aspx>

PowerMic II Set-up and Use for Mac Users

Mac Limitations

Although Dragon Dictate shares the same speech engine as its Windows-based cousin (Dragon NaturallySpeaking) and provides high levels of accuracy when dictating, it lacks some of the functionality seen in the Windows version. As relates to the PowerMic II, limitations include:

1. The inability to program any of the keys on the PowerMic II microphone to control the microphone with Dragon Dictate
2. The inability to use any microphone (PowerMic II and others) in a "push-to-talk" manner.
3. The lack of drivers and functionality to allow programming of additional functions to the PowerMic II buttons

Prerequisites for the Mac User

Thankfully, there is a simple way to get around these limitations, although it requires purchase of two (relatively inexpensive) third-party applications. One application allows programming of PowerMic keys in a Mac environment (including emulation of keystrokes.) The other allows keystrokes to control the default Mac microphone in a push-to-talk manner. Here's what you need:

1. **USB Overdrive:** this is a software utility that detects the buttons on most USB devices, including the PowerMic and allows you to program a variety of functions to a button depression. This application is "shareware" and can be used for free, but you will be forced to live through a short count-down every time you launch it. We suggest you buy it for \$20 and support the programmer. It can be seen and downloaded from www.usboverdrive.com . Once downloaded and installed, USB Overdrive will show up as a system utility and is accessed through the Finder at Applications > Utilities. **If the only thing you want is to control Dragon Dictate with a PowerMic in a push-on/push-off method, USB Overdrive is all you need.** You will see that USB overdrive allows programming of lots of functions to the keys on a PowerMic.

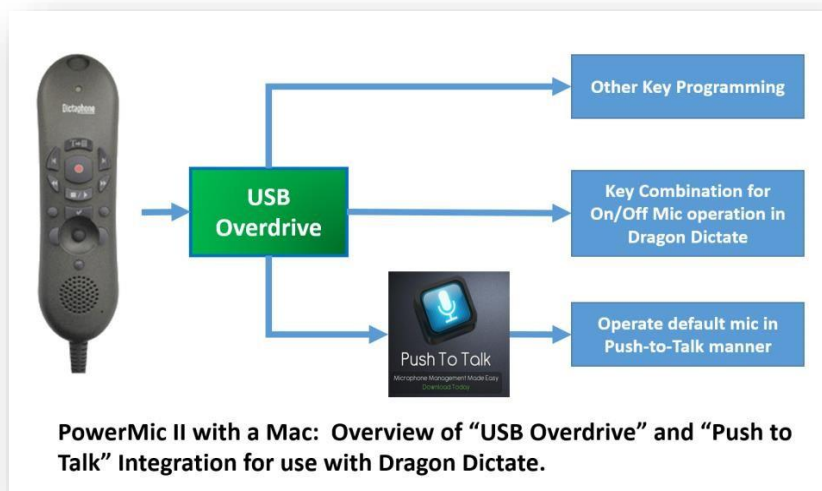


2. **Push to Talk:** this is a very inexpensive (\$.99) application that is available from the Mac App Store and which will allow you to assign any key combination to control the assigned system default microphone in a push to talk method. To be clear, Push to Talk does not interact with Dragon or any other program but, rather, controls the *default* microphone at the system level, activating it while a key or key combination is depressed and inactivating it when the key or key-combination is released. If the default microphone is the PowerMic, then it can be controlled in a push to talk method.



Find “Push to Talk” by searching on the Mac App Store. Once installed, Push to Talk is seen as a small microphone icon on the top of your screen. It provides a visual indication of whether your microphone is active or not and by clicking on the icon you can open its simple menu. You’ll need push to talk if you want to control the Dragon Dictate microphone in a push-to-talk manner.

Overview of the Setup for a Mac:



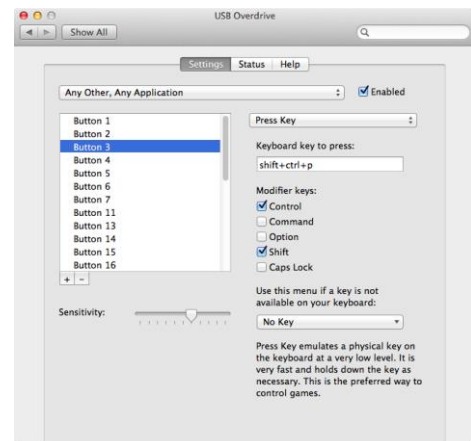
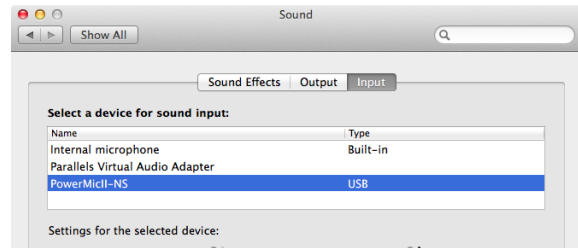
We recommend a strategy using the general flow shown in the figure above and programming USB Overdrive and Push to Talk as follows:

1. Program one key on the PowerMic to issue the key combination needed by Dragon Dictate to control the microphone in an on/off method (press once to turn on and again to turn off) – we like to assign this to the transcribe key, but any key will work.
2. Program one key on the PowerMic to issue the key or key combination used by “push to talk” to operate the default microphone input (PowerMic II) in a push-to-talk manner.

Practically speaking you will use the first button to turn on the microphone, and then use the second button to actually activate the microphone input in a push-to-talk method.

Detailed Set-up Instructions:

1. Download/Install USB Overdrive
2. Download/Install Push to Talk
3. In order to have Push to Talk control the PowerMic II it is necessary to select the PowerMic as your default microphone from the Mac sound control panel (see image at right).
4. Open the Push to Talk Preferences menu as shown below (if it isn't obvious, the application is viewable and accessed from the small microphone icon at the top of your screen)
5. On the Microphone control drop-down be sure "Hold down hotkey to activate mic" is selected.
6. Assign your desired hotkey by clicking in the clear area near the bottom of the Preferences window and select your key combination (shown above is the combination of Ctrl+Shift+P.)
7. Open USB overdrive and program the button on your mic to the key to you want to assign push-to-talk behavior (the same key or key-combination assigned to the Press to Talk application.) Shown below the "button 3" on a PowerMic II (the central record button) is assigned the same key combination assigned by the Press to Talk application to control the microphone.
8. If you want to be slick, use USB Overdrive to program one button to correspond with the key combination assigned in Push to Talk, and another button to emulate the key combination set in the Dragon Dictate preferences menu to cycle the microphone on and off. In this scenario, you can use one button (the "transcribe" button) to turn on the microphone in Dragon Dictate, and then another button (the "Record button") to control the microphone in the operating system in a push-to-talk method.



Key Point: the "Push to talk" application actually controls whether the microphone is providing input to Dragon Dictate (or any application) on your Mac. Even if Dragon Dictate shows the microphone as green and "On" the signal won't be getting through to Dragon until you have activated the key combination (either on the keyboard or via the PowerMic through USB Overdrive) required by Push to Talk. To use the two effectively, you will need to turn on the Dragon Dictate microphone with one key and then actually control the microphone input using another key via Push to Talk.

Caveats on using the PowerMic II with a Mac:

1. This exact set-up can also work with other USB microphones. Unfortunately the Philips microphones do not work with a Mac except in the context of the Philips Control Application. If you program the record button on a Philips mic to emulate a key combination, rather than directly control the Dragon Dictate microphone, you can use this button in a push-to-talk method as described above.
2. If you are using the cloud-based speech recognition program built into your Mac, this same system (Press to Talk, with or without USB Overdrive) will work just as easily. Simply apply the same key or key-combination to activate speech recognition in both the speech recognition software and in Push to Talk.

Overview of PowerMic II Software Compatibility

Software Environment	Use of Microphone	Use of Speaker	Use of Track-Point Stick	Use of left and right mouse buttons	Basic Programming of accessory buttons (1)	Advanced Programming of accessory buttons (2)
Audio programs in Windows XP, 7 & 8	Yes	Yes	Yes	No	No	No
Audio programs on Intel Mac	Yes	Yes	Yes	No	No	No
Dragon Medical 10, DMPE, & DMPE2	Yes	Yes	Yes	Yes	Yes	Yes
Dragon Direct (3)	Yes	Yes	Yes	Yes	Yes	Yes

- (1) "Basic Programming" of the 10 accessory buttons means that standard functions which can be assigned to keys on the pc keyboard can also be assigned to any of the 10 programmable buttons on the PowerMic II using the "hotkeys" tab on the NaturallySpeaking Options window.
- (2) Advanced Programming of the 10 accessory buttons means that a tab specific to the PowerMic II will be present in the Dragon Options window and that keys can be assigned to affect a number of higher level functions within dragon, including initiation of commands.
- (3) When the local version of Dragon direct is run, Dragon direct will allow programming of 3 buttons at this time (Nuance is gradually rolling out more button programming). When using the Citrix based version of Dragon Direct, it is necessary to install dedicated Citrix drivers to allow functionality of the PowerMic on the Citrix-based application.

Chapter 25: Installing Dragon from a USB Thumb Drive or by Download

If you are using Dragon on a tablet or other Windows device which does not include an optical (DVD) drive, you can install Dragon on this device using one of three methods:

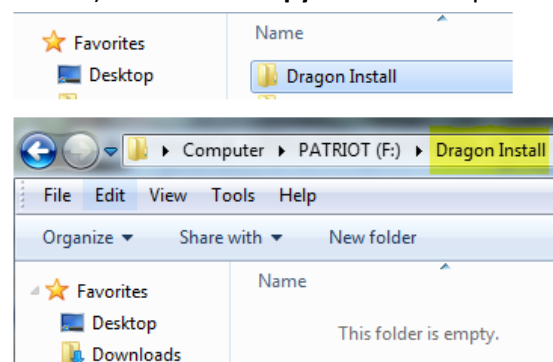
1. Find an online version of Dragon and download this directly to your device (problem: these are hard to find and are huge files which take forever to download. Remember, you will still need an activation code to actually run the software if you download it)
2. Purchase or borrow an external DVD drive and install Dragon using this device.
3. Install by means of a portable thumb drive. In this method, you will use a computer with a DVD to copy all the files from the Dragon DVD onto the thumb drive and then install onto your other computer using the thumb drive.

Installing Dragon with Thumb Drive

Assuming your purchased DMPE2 and have an installation disk but no optical drive, this is the method by which you can install the software on a machine without an optical (DVD) drive.

Step 1: Put the Dragon Installation Files on a Thumb Drive

1. Using any computer with a DVD drive, insert your Dragon installation disc into the optical drive.
2. Since the Dragon DVD includes an “auto install” capability you will likely see the initial installation window (shown to the right) which you should close.
3. Insert your USB Flash Drive. Your drive must have at least 4 GB of free storage.
4. Use Windows Explorer to open the Dragon DVD by clicking on the Windows Start and selecting “Computer”, “My Computer”, or “My Device” depending upon your operating system.
5. Right mouse click on the Dragon DVD (usually drive D or E) and choose **Copy** from the drop down menu. *Note that you may have to wait a few seconds or more for Windows to buffer the files.*
6. Double Mouse click or right click and select **Open** to explore the USB Flash drive
7. Create a new folder on the flash drive, name it something easily recognizable like **Dragon Install** and open the folder.



8. Mouse click into the any region of the empty folder and press **Ctrl + V** to paste a copy of the contents of the Dragon installation disc. You can optionally mouse right-click and select **Paste**.
Note that this process can take as long as 20 minutes depending upon the speed of your computer and type of USB connection.

Step 2: Install Dragon on your device without the DVD Drive

- After the Windows copying process Window disappears, take your flash drive to the computer that doesn't have an optical DVD drive. If you are using a USB 3 flash drive and a USB 3 port on your 2nd computer (typically colored **blue**), you can open the **Dragon Install** folder on your Flash drive and mouse double click the "Setup.exe" icon with a green flame and following the remaining step-by-step instructions.
- If you are using a USB 2 flash drive or USB 2 ports on your second computer, be aware that the installation will be very slow. We recommend that you speed up the process by copying the files on the thumb drive to any folder to your Windows desktop and installing from this location. Whether from the thumb drive or folder on your computer, install NaturallySpeaking from by double-clicking the "Setup.exe" icon with a green flame and follow the remaining step-by-step instructions.
- If you have installed after moving the files to your hard-drive, once the installation is complete you can feel free to delete the files from your hard-drive, but if you have the space, having them available will be helpful if you need to repair or re-install Dragon at some point in the future.



Installing Dragon by Direct Download

The makers of Dragon, Nuance Communications, Inc. allows some versions of Dragon to be installed by direct download. In fact some of versions of Dragon, including the recently released Premium 13, is sold by Nuance as a direct download product.

Downloading your version of Dragon is potentially helpful in several situations, including:

1. You are purchasing Dragon and don't want to wait for the disk to be delivered.
2. You have lost your disk but still have your activation code (or can get the activation code from your reseller).



These downloads are slow and depend upon a good internet connection to be practical. Links to these downloadable products are provided to end-users at the time of purchase. Be aware that you still need to enter an activation code (obtained at the time of purchase) to actually complete the installation and activate the software

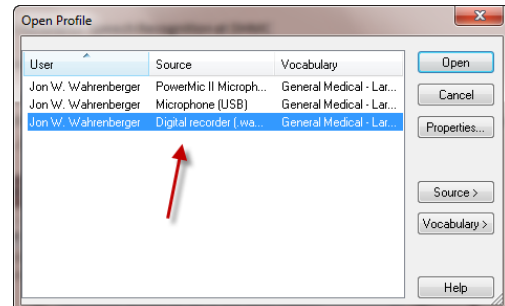
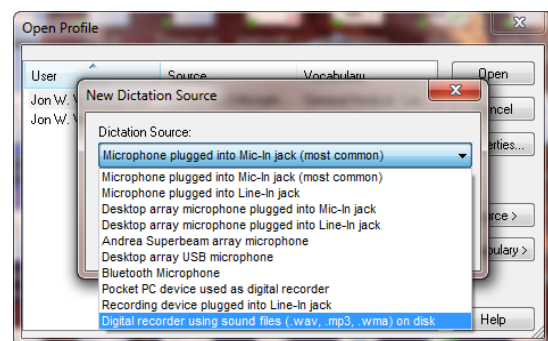
Chapter 26: Using a Digital Recorder with Dragon NaturallySpeaking

For those desiring to record dictation “on the go” and later have it transcribed by Dragon, the use of a portable digital dictating device is a perfect solution. When choosing a digital recorder, keep in mind that Dragon is fairly flexible about recorders and the only real issue is being sure your recorder saves the file in a format compatible with Dragon transcription.

Creating a New User Profile or Source for Use with a Portable Digital Recorder

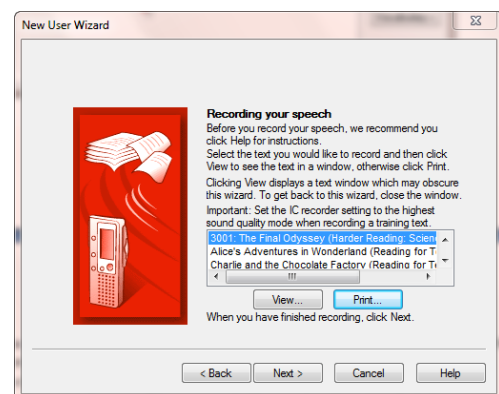
Note: although the method shown below which has you create a separate user profile for your digital recorder is recommended by Nuance, in practice we have frequently skipped this step and simply transcribed the recording from within an existing user profile and it seems to work fine. But for the record, here is the formal method of creating a user profile for a digital recorder:

1. Go to Dragon > Open Profile > Source > new
2. From the pull-down on the “New Dictation Source” window, select “Digital recorder using sound files ...” (see image at right)
3. Click OK
4. Select the new source and click “Open” (see below)
5. You will be presented with a message that “Recorder Training has not yet been successfully completed ...” Click OK.
6. On the following “New User Wizard” screen, click next.
7. On the next screen you will be presented with several readings, one of which you must select and read into your portable recorder before proceeding with the next step. Select the reading and either print it or read it (into your portable recorder)



WARNING: you need to read for about 15 minutes, so time yourself. There is no reason to read beyond 15 minutes.

8. Click next in order to see the screen shown below, and then click the “Browse” button and browse to the file containing your 15 minutes of reading. Be sure to select the type of file appropriate for your recorder (either .mp3, .wav or .wma)

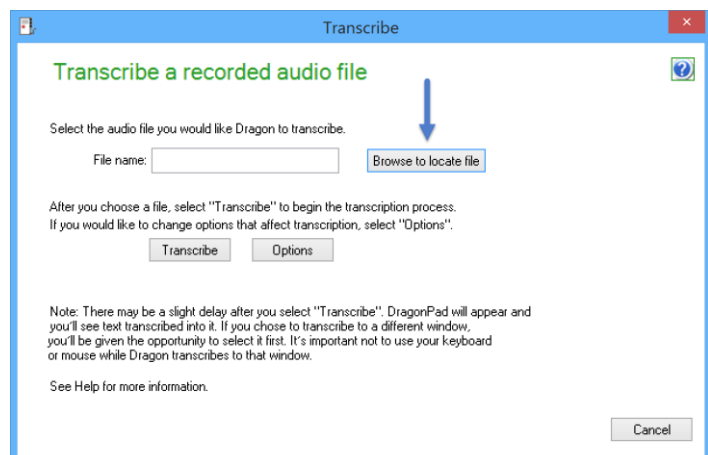
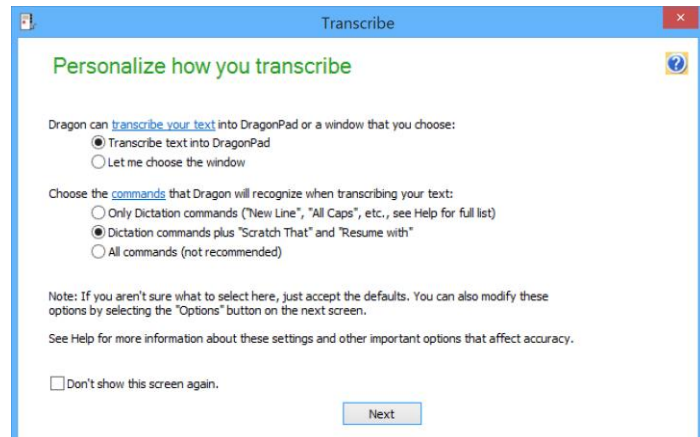


Importing and Transcribing Sound Files

There are several ways you can import a file for transcription with Dragon. We will describe both a fully manual method (which is actually quite quick and simple) and a more automated way. Keep in mind that some of the expensive recorders come with proprietary software that can streamline some of this process.

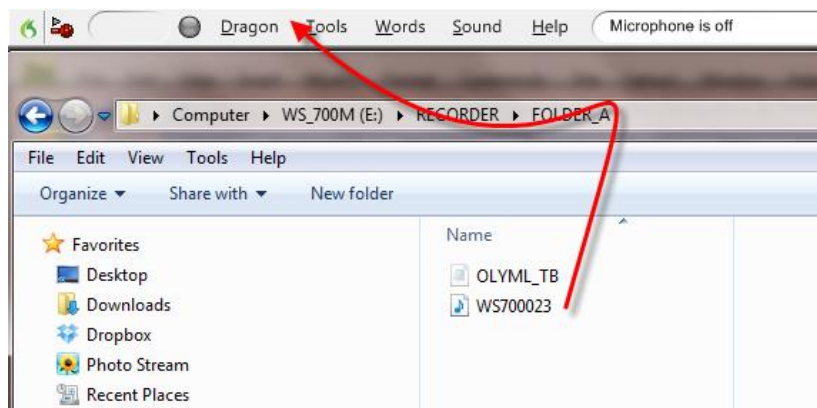
Manual Method:

1. Dock or otherwise attach your portable digital recorder to your computer
2. With Dragon running and opened to your digital recorder profile, navigate to Tools > Transcribe Recording. This will open up the window shown below.
 - a. When choosing “destination” if you choose “DragonPad window”, it means that when you ask Dragon to transcribe a recording, it will automatically open DragonPad and enter the recording into the DragonPad window; if you choose “A selected window” it will enter the recording into the last window in which you placed the cursor.
 - b. Under the command category, decide if you want commands to be carried out when the recording is transcribed. We have found it to be a little hit or miss as to whether commands will actually work under this setting, but you can experiment with it.
 - c. With these advanced settings determined (you will only need to do this once, unless you decide to change these settings by once again clicking on the “Advanced” tab), click OK to go back to the last window.
3. Click on the “Next” tab to bring up the next screen. Click on the “Browse to locate file” button and navigate to the file on your digital recorder or the location you saved the file. The next time you do this it will default to the same location.
4. Once the file is selected, click on the “transcribe” button to start the transcription.
5. That’s it!



Drag and Drop Transcription

Once you've created a profile for your digital recorder (or even if you haven't), another method of initiating the transcription of a file from your digital recorder is to simply drag the file from your digital recorder (as viewed from your computer desktop - see image at right) to the Dragon Bar. As soon as you let go of it,

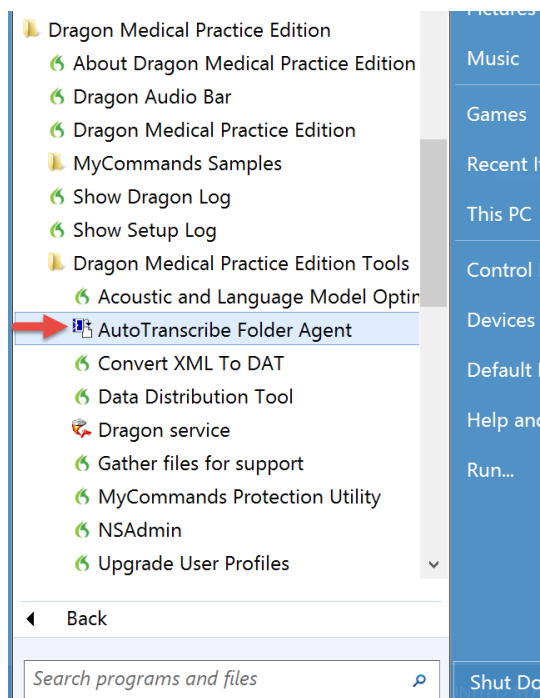


the transcription window will come up your recording will be automatically transcribing using the protocol you specified previously. See image below.

Auto Transcribe Folder Agent Method:

Dragon offers yet one more way of transcribing dictation from a digital recorder and in this case it is done in the background with Dragon turned off (application closed). This method is a bit tricky to set-up, but when properly configured has the effect of automatically detecting a suitable sound file in one location (a file in your digital recorder docked or connected to your computer) and transcribing it in the background and placing it as a text file in a designated target folder.

The nice thing about this method is that it places both the completed dictation and associated audio file in the destination folder, so if the file is being proof-read by another and if there are questions, the original audio can be reviewed directly from the folder. This method works with the advanced versions of Dragon (Professional, Legal, and Medical) and will allow use of any of the following sound file types:



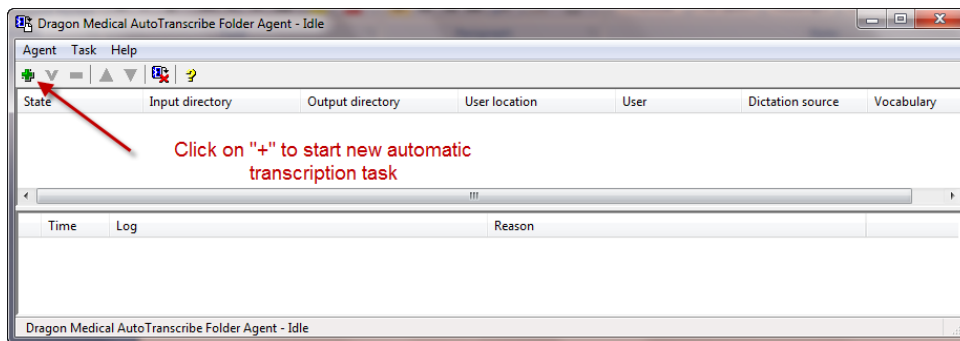
<ul style="list-style-type: none">• WAV• WMA• MP3	<ul style="list-style-type: none">• DSS• DS2.
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The supported output file formats are Plain Text (.TXT), Rich Text Format (.RTF), and Word Document (.DOC).

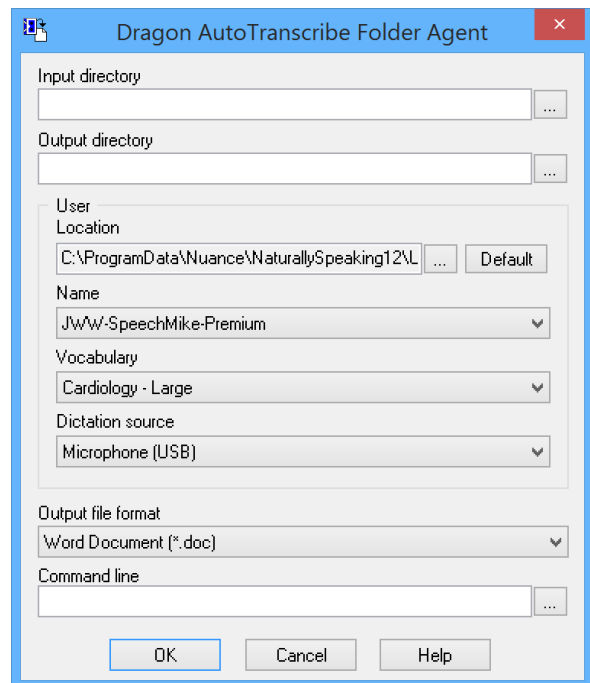
Setting up Auto-Transcribe

Here's the basic process:

1. From the Start Menu (or equivalent on your PC) navigate to All Programs > Dragon Medical Practice Edition > Dragon Medical Practice Edition Tools > Auto Transcribe Folder Agent. Once you find this application it's a good idea to drag it to your taskbar or desktop so it will be easy to open in the future.
2. Once you've opened the Auto Transcribe Folder Agent application you will see the window shown below:



3. Click on the "+" sign to create a new task (automated process). You will see the window below:
 - a. Click on the small box with "... " to the right of the Input directory area and Output directory area to assign the fold to be monitored. The input directly folder is ideally a folder on your digital device, so you'll need to have your device docked in order to navigate to this.
 - b. The Output directory folder is the folder in which you want the completed transcription to be placed. You may want to create a folder for this purpose in advance and then set it as the destination folder now.
 - c. The User Location will generally be selected by default.
 - d. Under dictation source, be sure you pick the source which was set up and prepared for your digital recorder. If you didn't set up a user profile specifically for the digital recorder, it's OK to select any valid user profile.



Details on the AutoTranscribe Agent Fields

Field	Description
Input Directory	Selects the directory which the AutoTranscribe Folder Agent will monitor for new files to transcribe
Output Directory	Selects the directory where the transcribed file will be placed
Location	Specifies the location of Dragon user files
Name	Select the User name for user for whom the transcription will take place
Vocabulary	If multiple vocabularies are present for a user, this specifies the vocabulary to be used.
Dictation Source	Select the dictation source for the user

Initiating Auto-Transcription

The only requirements are:

1. You must have configured the Auto-Transcribe Agent Folder as shown above
2. The Dragon program must be turned OFF – closed – when using the AutoTranscribe process (seems counter-intuitive, but this is a background process and depends upon Dragon being turned off)
3. The AutoTranscribe Folder Agent must be launched and running. You can keep this running in the background as long as you want and it will be sitting in “idle” waiting for a new file to show up in the input directory (folder).

Here’s the basic workflow: You plug in your digital recorder, the Auto-Transcribe agent is on the lookout for any change in the folder on your digital recorder and see the file, the audio file is transcribed, and both the audio file and transcription are put in your designated destination folder. The cool thing about the process is that it’s all automated – in other words a minute or so after docking your digital recorder the transcribed file or files show up in your destination folder – all complete. Complete doesn’t mean you should read the docs and do any needed proof-reading!

Chapter 27: Using an iPhone with NaturallySpeaking

With mobile devices being so ubiquitous these days it shouldn't be surprising that these can be used in conjunction with your computer and with Dragon. There are two ways your mobile phone can integrate with Dragon. Both are potentially very helpful.

1. **Wireless Microphone:** Your iPhone can be used as a portable microphone and provide a signal directly to Dragon by means of your wireless network ... and in real time.
2. **Digital Recorder:** Your iPhone can be used much like a portable digital recorder and capture your dictation for subsequent processing by Dragon

iPhone as a Remote Microphone

Setting up an iPhone as a remote microphone takes only a few minutes, will cost you nothing, has few requirements, and works fairly well. Although you can create a brand new profile using an iPhone as the sound source, it's probably more practical to add it as a new "source" to an existing user profile. By adding it as a source, you reap all of the advantages of your existing profile (custom words, commands, etc.) and simply have the option of opening either your iPhone based profile or usual profile each time you start up Dragon.



Is there a special advantage of using the iPhone as a wireless microphone? In our opinion, not really. But it's simple to set-up, works fairly well, and is an alternative to buying a wireless microphone if you want to be untethered to your computer. Are there downsides? There are few. First, the signal passes from your phone to Dragon by means of your Wi-Fi network and is a bit slow. It's certainly slower than a dedicated wireless microphone that connects via Bluetooth. Second, while the iPhone has a reasonably good microphone, it's not terribly rejecting of external noise, so it might not be practical in a loud environment. Finally, in the opinion of some, it's a little awkward to hold the iPhone while dictating. But assuming you want to try this, here's what's involved.

Basic Requirements:

- Dragon NaturallySpeaking V11.5 or higher (works fine with DMPE2)
- iPhone
- "Dragon Remote Microphone" application installed on your iPhone
- A Wi-Fi network to which both your computer and iPhone are connected
- The presence of Bonjour on your Windows or Apple computer. If you aren't sure if you have it, you can assess this from <http://www.apple.com/support/bonjour>

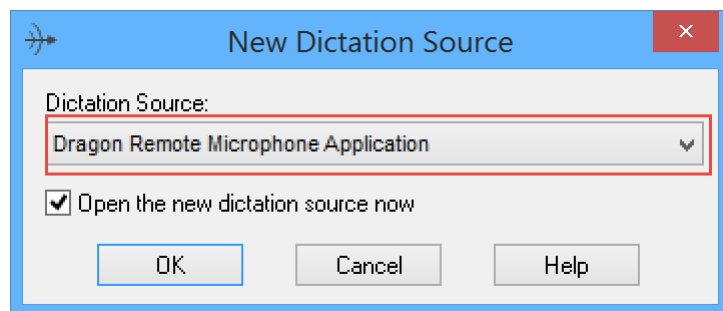
Set-up Process: iPhone as a Remote Microphone

Here is the basic process:

1. If you haven't done so already, download the Dragon Remote Microphone application from the Apple App Store and install it on your iPhone. Here's the direct link if you want to learn more about it:
<https://itunes.apple.com/app/dragon-remote-microphone/id436624808?mt=8> But searching for it from your iPhone is the only practical way to get the app.
2. Open Dragon and add the Dragon Remote Microphone as a new "source" to your existing profile in DMPE2. This is done by navigating to Profile > Add Dictation source to existing user Profile. From the "New Dictation Source" window that opens, select "Dragon Remote Microphone Application".

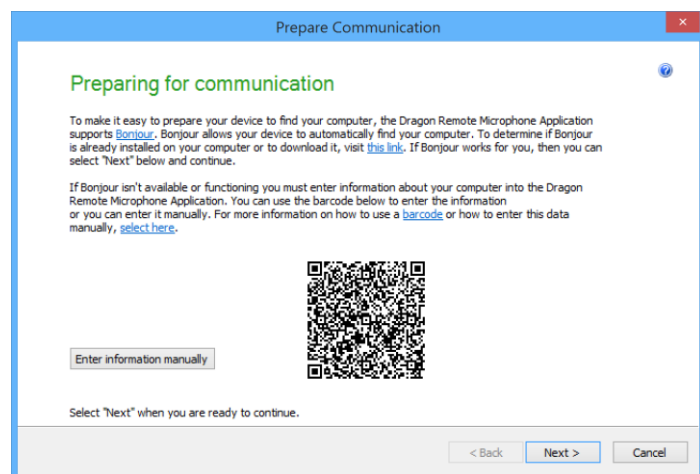


3. Select the check box labeled "Open the new dictation source now"
4. Click "OK" and your new source will be added and you will see the "Prepare Communication" window as shown to the right. As this point you have several options for establishing a



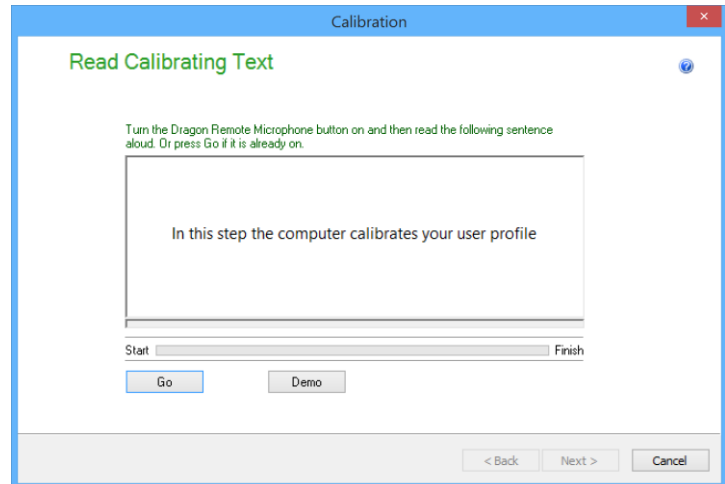
communication between NaturallySpeaking on your PC and the Dragon Remote Microphone on your iPhone.

- If you have Bonjour on your computer, you can simply open you Dragon Remote Microphone on your iPhone, click on the small gears icon on the bottom right, and the application should automatically detect the computer on which you are running Dragon. It will show all of your profiles on Dragon. Simply select the profile you created with the iPhone as a sound source.
- Alternatively, you can set up the connection manually. Click on the button "Enter information manually" (see image above) to start this process. At this point another window will show up and will



contain all the information (profile name, IP address and port number) you will need to enter into the Dragon Remote Microphone application.

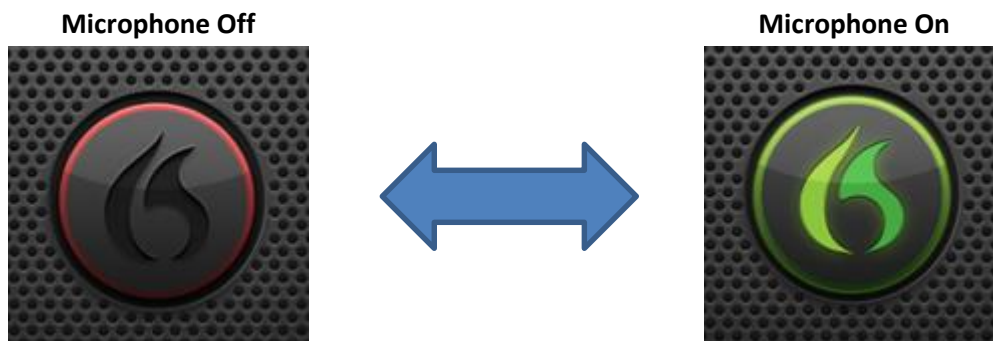
- Finally, you can use the “barcode” method to link your iPhone and PC. From your Dragon Remote Microphone application click on the gears icon, click on “manual entry” and then click on “Use a barcode”. Your phone will open your camera. Simply point your camera to the barcode image on your computer (shown above) and the connection information will be entered seamlessly.
5. When you are done making the connection or entering the correct connection information as described above, click the “Next” button on the “Prepare Communication” window on your computer
 6. You will next be asked to “calibrate” your microphone. Click on the Nuance icon in the center of your Microphone application and it will change from Red to Green, indicating an active connection and live microphone. Follow the instructions on your computer.



Using the iPhone as a remote microphone

Actual use of the set-up is simple and involves the obvious:

1. Open Dragon, selecting the Profile/Source created for your mobile device
2. Open the remote microphone application on your iPhone
3. Toggle the microphone off and on by touching the Nuance flame insignia on your iPhone



iPhone as a Portable Digital Recorder

Many speech recognition users find it efficient to capture dictation in a portable recorder and later transfer the resulting digital file to Dragon for transcription. Although you can do this with a dedicated digital recorder, it is also feasible to do this with your iPhone or Android mobile device. The main advantage of this work-flow is that you can capture dictation any time you want (assuming you are carrying your iPhone) and there is no need to purchase or carry another device. The downside is that the process is a bit more awkward compared with using a digital recorder. Most high-end digital recorders include a very convenient and ergonomic slide switch which is used to initiate record, play, rewind, etc.

Basic Requirements:

The process can be accomplished with any digital recording software on your mobile device, including those offered by Nuance, Andrea and others. The only requirement is that the application can capture your audio in an acceptable format for Dragon (WAV, WMA, MP3, DSS or DS2) and somehow transfer it to your computer for transcription by Dragon. The rest of this tutorial will take you through the process using the Dragon Recorder app.

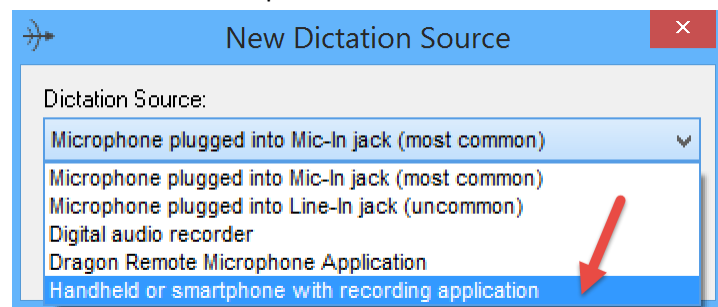
To be explicit, here are the requirements:

- iPhone
- Dragon Recorder application from the iOS App Store (free download)
- Any recent version of Dragon NaturallySpeaking

Set-up Process: Dragon as a digital recorder

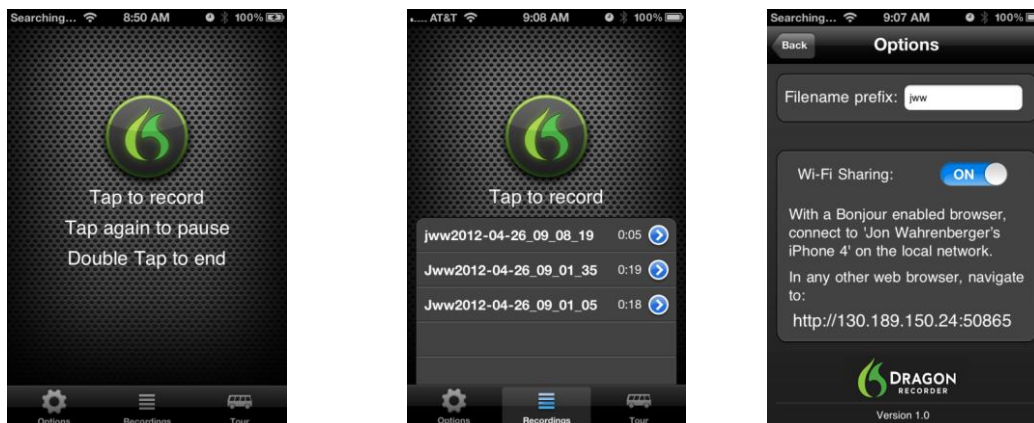
Here is the basic process you need to follow in order to set-up you iPhone as a digital recorder for use with Dragon.

1. Although you can transcribe a recording made with an iPhone or other digital recorder from any Dragon user profile, you will get better results if you create a new “source” on your current user profile. The following steps show you how to do this.
2. Navigate to Profile > Add Dictation Source to current user profile
3. From the pull-down on the “New Dictation Source” window, select “Handheld or smartphone with recording applications”
4. Click OK
5. Follow instructions provided hereafter. You will need to do about 15 minutes of reading into your portable device and later have Dragon process this in order to adjust to your voice and the acoustics of your portable device.



Creating a Recording

1. Assuming you have already downloaded the Dragon Recorder app from the App Store, simply launch it and create a new recording:



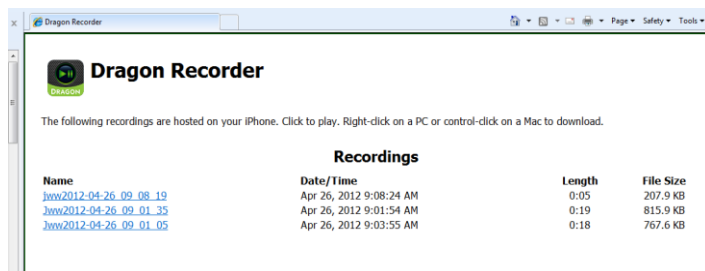
2. A few notes on controlling the recording:
 - a. Tap the central button to begin a recording.
 - b. Tap it again sequentially to pause and resume recording.
 - c. Double tap the button to complete a recording
 - d. Once a recording is done, you can add to it by selecting it, dragging the slider bar to the far right and again touching the record button.

Transferring Recording to Computer & Dragon

There are two ways to transfer your file to your computer: 1) wirelessly via Wi-Fi and 2) using your sync cable with iTunes.

Wireless (Wi-Fi) Transfer:

1. From within the Dragon Recorder application click on the “Options” button on the bottom left. Turn on “Wi-Fi Sharing” and you will see an assigned URL.
2. Launch a browser on your computer (both the computer and iPhone must be on the same wireless network) and enter in the URL shown on your iPhone. This will open a page as shown below which provides a list of the recordings on your iPhone



3. Right click on the recording you want to transfer and select “Save Target As”. Save the file to a place on your hard drive that you will remember. You will later point dragon to this file in order to transcribe the recording.

Wired Transfer Using iTunes:

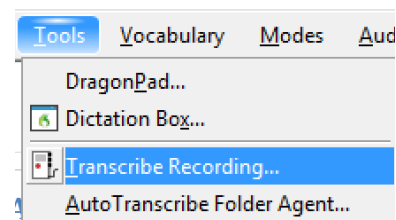
1. Connect your iPhone to your computer using the sync cable.
2. If it doesn't open automatically, open iTunes
3. Within iTunes, follow the steps shown in the diagram below to identify and save your file or files to any memorable location on your hard drive.



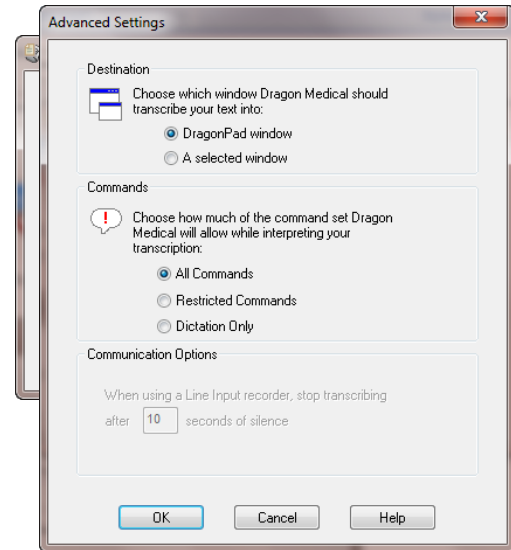
Transcribing a Digital Recording

Once you have created a digital recording and saved it to your hard drive using either of the methods shown above, follow these simple steps to transcribe your recording:

1. Open Dragon (If you have created a separate source for digital recordings you should open this profile; otherwise just open your basic user profile.
2. From the “Tools” menu, select “Transcribe Recording”
3. On the dialog box that opens, first click on the browse button and navigate to the file you saved from your iPhone, then click on the “transcribe” button. If you don't see the file, be sure that “wav file” is selected as the file type (for digital recorders other than the iPhone you may need to choose MP3 File or WMA File as the file type).



4. Note: By default, Dragon will transcribe your recording into “DragonPad”, a simple word-processing window from which you can copy your text and paste into the electronic health record or other text window. If you prefer to transfer text directly into a specific window, you show open the advanced tab shown in the dialog box above. You will see the following options window which will allow you to change this behavior and also determine whether or not you want Dragon to process voice commands as it transcribes your recording. See the help menu on this screen for further information about this.



More information

Nuance Dragon Recorder web page: <http://www.nuance.com/dragon/recorder-app/index.htm>

Dragon Recorder User Guide: http://dragoncontent.nuance.com/recorder-app/help/enx/dragon_recorder_app.htm

View demonstration of Dragon Recorder from Nuance:

http://www.nuance.com/videooplayer/videooplayer.asp?w=640&n=Dragon_Recorder_App_000&h=390&p=naturallySpeaking/dragonrecorderapp/&fileType=MP4&autoPlay=false&videoPage=true

Chapter 28: Moving Commands from One User Profile to Another

Moving commands from one user profile to another is a fairly simple process with any of the Dragon versions above the Premium (works for Professional, Legal and Medical). The process involves exporting the commands from one profile and importing them to another.

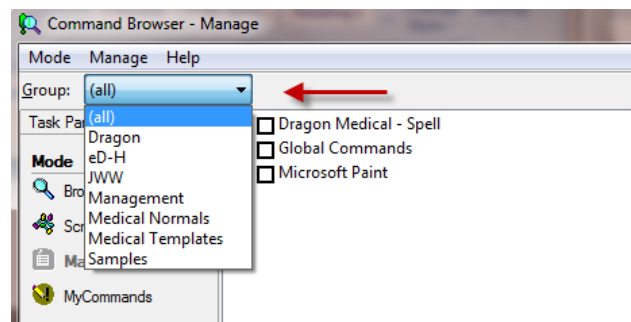
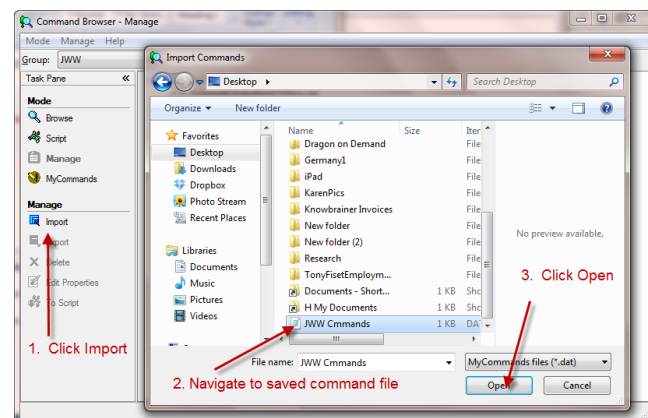
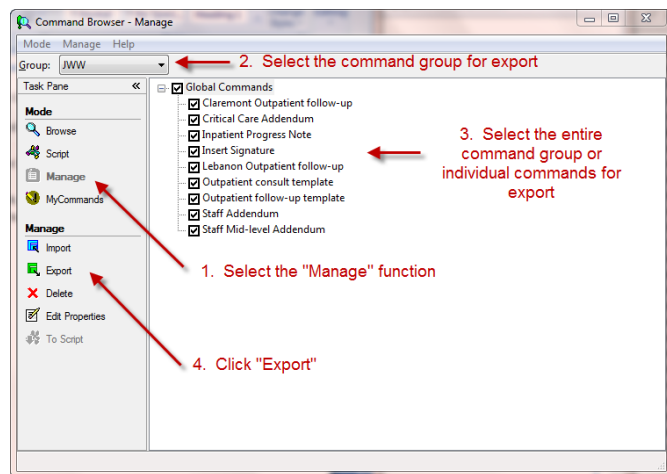
Exporting Commands

Here's the basic process, in this case illustrated with version 10 Medical, but similar in version 11 and 12 and DMPE2:

1. Open the Command Browser (either issue command "Open Command Browser" or navigate to Tools > Command Browser
2. Be sure the Command Browser is expanded to show 3 full columns; if it isn't, click on the "task pain" to expand it.
3. Put the Command Browser into the "Manage" mode, either by clicking on the "Manage" area in the left column or navigating to Mode > Manage. You should see something looking like the image below, but with your own commands. Follow the listed steps.

Note: If you want to move ALL of your commands from one user profile to another, rather than selecting a single group from the "group" selection, select the "All" category. See below

4. Save the command group with any name you want and to any location you desire.



Importing Commands

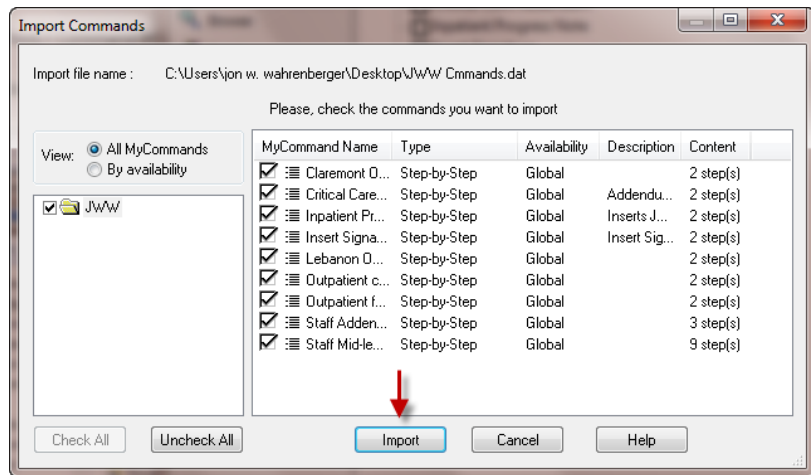
This is basically the reverse of the exportation process and goes as follows:

1. Switch to the user profile into which you want to import the commands
2. Open the Command Browser (Tools > Command Browser)
3. Open the “Manage” area.
4. Click on “Import” button and follow instructions shown below:

- On the Import Commands

window that appears confirm the commands you want to import (uncheck any you don't want to import)

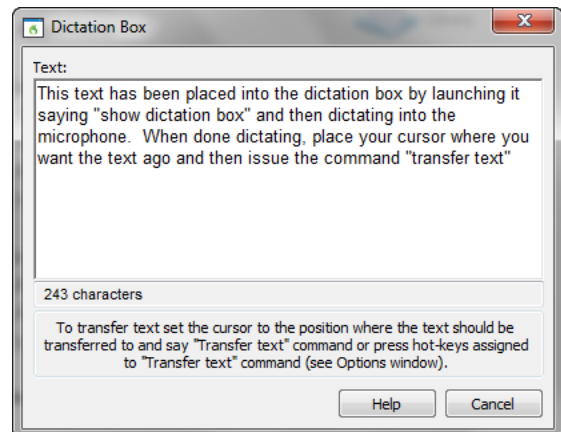
- Click the import button. They will be instantly imported into you active profile.



Chapter 29: Promoting Efficiency with the Dictation Box

Overview

If you haven't made use of the Dragon's "Dictation Box", you might find this to be a very helpful tool. In essence, the dictation box is a small word-processing window which can be launched quickly with the command "show dictation box" (or a keyboard command) and which can be used as a place to dictate with Dragon and from which you can later transfer (paste) material somewhere else. How might this be helpful? Consider two scenarios:



1. You are working in one of the rare programs in which Dragon doesn't have full functionality (perhaps your Citrix based EMR) and you know that Dragon simply doesn't work well in this application. You can do the dictation into the dictation box, where Dragon has full functionality and then paste it where you want when finished.
2. You are trolling through your EMR for information which you eventually plan to place into your note – perhaps lab reports, radiology reports, old notes, etc. – and you'd like a place to conveniently "Park" some information as you travel through the EMR. Simply launch the Dictation Box and dictate anything you want into the box as you troll the record. When done, modify this information as you desire and paste it into your note.

For both of these scenarios, the dictation box can be a lifesaver. Dragon Medical Practice Edition 2 (DMPE2) goes one step farther – it allows you to open the dictation box in a semi-transparent state so that you can see it and dictate information into it, but also *see through it*, so as not to block your view of the underlying documents you are reviewing.

Dictation Box: Basic Use

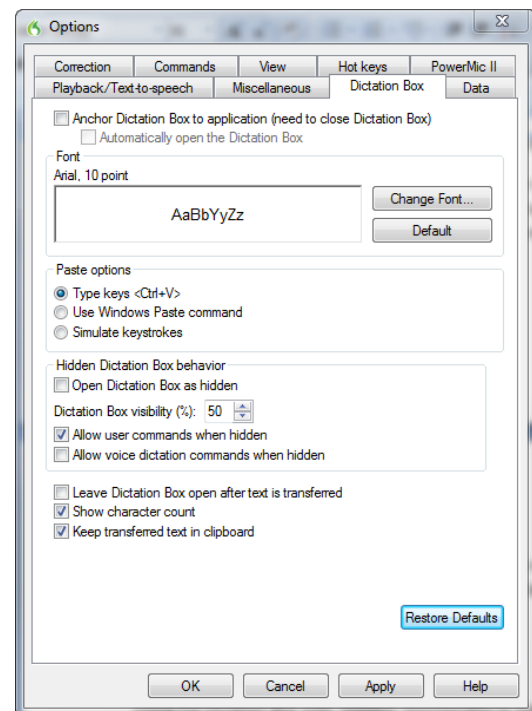
In the simplest terms, using the dictation box involves nothing more than this:

1. Open it by saying the command "show dictation box" (it will open in the manner specified by your selections in the "Dictation box" tab in the options menu)
2. Dictate using your microphone (any dictation done while the dictation box is open will go to the dictation box and NOT other open windows.
3. When ready to move the data from the Dictation box, insert your cursor where you want the text transferred and then issue the command "transfer text"

Anchored Mode

The basic options window for the Dictation Box is accessed by means of Tools > Options and then clicking on the Dictation Box tab. Shown to the right are the default options. A few things should be explained.

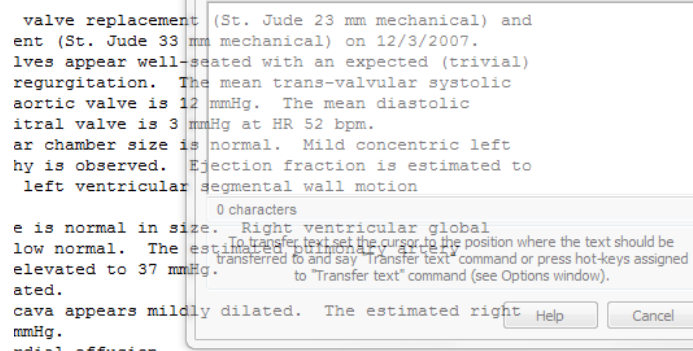
Clicking on the “Anchor Dictation Box to Application” will cause the dictation box to be anchored to the program which was active when launched and will give you no choice but to transfer the dictation box content to the place you had the cursor active at the time you launched it. If you are using the dictation box as you work your way through a clinical note in a non-standard program, this is a perfectly fine way to use it. Simply navigate to one place on your note for narrative, launch the Dictation Box, create the dictation and then return the dictation by either saying “transfer text” or clicking on the transfer button.



Hidden Mode: Dictation Box as a Storage Place

If you don't need the Dictation Box anchored and prefer to use it as a storage place for information you dictate while moving about an electronic health record, this is an ideal time to use it in the hidden or transparent mode. In order to do so, you need to set the Dictation Box options menu such that you have unchecked the “Anchor Dictation Box to Application” button and then lower in the options menu select the degree of transparency you desire. Keep in mind that “0” means fully opaque (visible) and 100% means fully transparent (invisible).

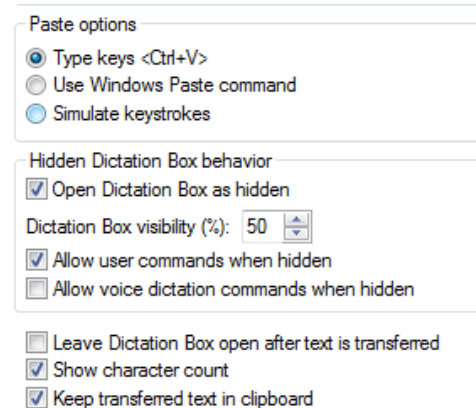
Shown below is the appearance of the Dictation Box in the “Hidden Mode” with the transparency set to 50% and superimposed of some medical text in an EHR.



When using the Dictation box in the manner shown above, it will follow you wherever you go and any dictation will go into the Dictation Box and not the EHR. Keep in mind that if you have space, you do not need to superimpose the Dictation Box over your background text and you can move it to the side. In fact at any time if you click on the Dictation Box it will become full visible. It will become transparent again if you click outside of the dictation box as you move through other records in the EHR or other places on your computer desktop.

Caveat Regarding Dictation Box

1. Depending upon your program, you may need to play with the default method of transferring text from the Dictation Box to the receiving window/program. By default, the Dictation Box uses the standard command ctrl + V to paste material to the receiving application. As far as we can tell the “Use Windows Paste Command” does the exact same thing. Some programs may disable the Windows clipboard, in which case you can choose the final option “Simulate keystrokes” to make the transfer.
2. Changing the font: If for any reason you aren’t happy with the default font that the Dictation Box uses (Plain Ariel, 10) you can change this to match your destination font size and style by clicking on the “Change Font” button on the top of the Option box.
3. Remember that you can use common commands when dictating into the Dictation Box. You can insert a note template with navigation fields and navigate throughout the template in the Dictation Box. You can select, correct, and perform other normal voice commands within the Dictation Box.
4. Finally, the Dictation Box can be opened in several ways, including:
 - Say “Show Dictation box” or “Open dictation box”
 - Navigate to Tools > Dictation Box
 - Use hotkey combination ctrl + shift + D



The image shows a screenshot of the Dictation Box options menu. It is divided into two sections: 'Paste options' and 'Hidden Dictation Box behavior'. Under 'Paste options', there are three radio buttons: 'Type keys <Ctrl+V>' (selected), 'Use Windows Paste command', and 'Simulate keystrokes'. Under 'Hidden Dictation Box behavior', there are several checkboxes: 'Open Dictation Box as hidden' (checked), 'Dictation Box visibility (%)' set to 50, 'Allow user commands when hidden' (checked), 'Allow voice dictation commands when hidden' (unchecked), 'Leave Dictation Box open after text is transferred' (unchecked), 'Show character count' (checked), and 'Keep transferred text in clipboard' (checked).

Chapter 30: Overview of Built in Dragon Commands

Control the microphone

SAY:	TO:
Go to Sleep	Make the microphone stop listening temporarily.
Stop Listening	
Wake Up	Reactivate the microphone when it is asleep.
Listen to me	
Microphone Off	Turn the microphone off.

Create new paragraphs, lines, and spaces

SAY:	TO:
New Paragraph	Press the Enter key twice.
New Line	Press the Enter key once.
Tab	Press the Tab key.
Space	Press the space bar.

Move around in a document

SAY:	TO:
Go to Bottom	Move the cursor to the end of your document.
Go to Top	Move the cursor to the beginning of your document.
Press Home	Move the cursor to the start of the current line.
Press End	Move the cursor to the end of the current line.
Insert After (text)	Place the cursor after a specific word or words (must be visible on screen).
Insert Before (text)	Place the cursor before a specific word or words (must be visible on screen).

Navigation Fields (Dragon Templates) – Dragon 10 Medical Version Only

(Variable regions are defined by “field delimiters” which by default are right and left brackets ([and]))	
Next Variable	Move to and highlight next variable region
Next Field	Move to and highlight next variable region

Previous variable	Move to and select previous variable region
-------------------	---

Previous field	Move to and select previous variable region
----------------	---

Delete text and undo actions

SAY:	TO:
Scratch That	Erase the last thing you said. You can say "Scratch That" more than once to keep erasing previous words or phrases.
Delete That	Delete selected text.
Undo That	Undo the last action (useful for undoing commands).
Backspace	Press the Backspace key. To press it more than once, say Backspace 2, Backspace 3, and so forth (up to 20).

Correct and Edit Text

SAY:	TO:
Correct That	Correct either the last thing you said or selected text.
Correct [text]	Correct a specific word or words (must be visible on screen).
Select [text]	Select a specific word or words (must be visible on screen). Used to dictate substitute words or phrases.
Select Again	Select the same text again but in a different place (must be visible on screen).

Capitalize text

SAY:	TO:
Cap That	Capitalize either the last thing you said or selected text.
All Caps That	Make either the last thing you said or selected text all capitals.
No Caps That	Make either the last thing you said or selected text all lowercase.
Cap [word]	All Caps On Turn all capitals on (like pressing the CAPS LOCK key).

All Caps Off	Turn all capitals off.
No Caps On	Turn all lowercase on.
No Caps Off	Turn all lowercase off.
No Space [word]	Type the next word without a space before it. <i>Example:</i> "cap john no space cap paul" = JohnPaul.

Apply formatting

SAY:	TO:
Bold That	Apply bold to either the last thing you said or selected text.
Italicize That	Apply italics to either the last thing you said or selected text.
Underline That	Apply underlining to either the last thing you said or selected text.
Restore That	Remove formatting from selected text.

Copy, Cut, and Paste Text

SAY:	TO:
Copy That	Copy selected text.
Cut That	Cut selected text.
Paste That	Paste cut or copied text.

Quick Voice Editing and formatting (New to version 10)

SAY:	TO:
Delete <text>	Delete the specified text or range of text
Delete from <text> to <text> Delete <text> through <text>	
Cut <text>	Cut the specified text or range of text
Cut from <text> to <text> Cut <text> through <text>	
Copy <text> specified text or range of text Copy from <text> to <text> Copy <text> through <text>	Copy the
Bold <text> specified text or range of text Bold from <text> to <text> Bold <text> through <text>	Bold the
Italicize <text> specified range of text.	Italicize text or

Italicize from <text> to <text>
Italicize <text> through <text>

Underline <text> Underline text or specified range of text
Underline from <text> to <text>
Underline <text> through <text>

Select <text> Select the specified text or range of text
Select <text> through <text>
Select <text> to <text>
Select from <text> to <text>

Enter Figures

Start the next word with a capital. *Example:* "Cap the Cap end" = The End
Example "Cap business Cap department" = Business Department

All Caps [word]	Type the next word in all capitals. <i>Example:</i> "All Caps please" = PLEASE
No Caps [word]	Type the next word in all lowercase. <i>Example:</i> "No Caps jack" = jack
Caps On	Turn initial caps on.
Caps Off	Turn initial caps off.

FOR:	SAY:
1 – 9	numeral [number] (Numbers <i>one</i> through <i>nine</i> should be dictated with the word "numeral" to obtain figure format.)
57	fifty-seven
235	two hundred thirty-five
4385	four thousand three hundred eighty-five (correct to 4,385)
13,837	thirteen thousand eight hundred thirty-seven
142,015	one hundred forty-two thousand fifteen
April 22, 2004	April twenty-two [comma] two thousand four
04/22/04	zero four slash twenty-two slash zero four
9:30 a.m.	nine colon thirty a m
\$65	sixty-five dollars
\$99.50	ninety-nine dollars and fifty cents
½	one half

818-710-4244	eight one eight seven one zero four two four four
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Switching Between Open Applications

SAY:	TO:
Switch to next window	Switch to next application

Switch to previous window	Switch to previous application
---------------------------	--------------------------------

Switch to [application]	Switch to application you say
-------------------------	-------------------------------

Changing font STYLE as you dictate

SAY	THEN:
Set font to	Arial Courier Courier New Garamond Helvetica Palatino Times Times New Roman

Changing font SIZE as you dictate

SAY	THEN:
Set size	Any number between 4 and 100

Enter punctuation and special characters

For:	Say:	For:	Say:
.	period	;	semicolon
,	comma	-	hyphen
?	question mark	!	exclamation mark
:	colon	'	apostrophe
/	slash	\	backslash
"	open quote	"	close quote
(open parenthesis)	close parenthesis
(open paren)	close paren
[open bracket]	close bracket
@	at sign	-	minus sign

#	number sign	+	plus sign
\$	dollar sign	=	equal sign
%	percent sign	...	ellipsis
^	caret	~	tilde
&	ampersand	*	asterisk
:-)	smiley face	:-(frowny face

Desktop Search Commands (these commands require use of either Google Desktop or Microsoft Vista Search. Google desktop is available from <http://desktop.google.com> Need to wait for search engine to fully index your hard drive before desktop search with Google Desktop will work)

SAY:	TO:
Search computer for [keyword]	Search engine displays all indexed items with the chosen keyword
Search Mail for [keyword]	Search engine displays all indexed email with the keyword
Search Documents for [keyword]	Search engine displays all indexed documents with the keyword
Search web history for [keyword]	Search engine displays search results containing all pages from your web history with the keyword

Web Search Commands (in each case the "text" can be any word or phrase)

Starting your browser

SAY:	TO:
Start Internet Explorer	Open Internet Explorer
Start Mozilla Firefox	Open Mozilla Firefox
Start Google Chrome	Open Google Chrome

Navigating in your browser

SAY:	TO:
Go to Address bar	Move insertion point to address bar
Click Go	Go to the Web address in the Address bar
Refresh page	Refresh current page
Reload page	Refresh the current page
Click <button>	Click a button on an HTML window
Click <link text>	Click link with corresponding name
Stop loading	Stop loading a web page
Go back	Load the previous page in the web history list
Go Forward	Load the next page in the web history list
Go Home	Load your home page
Click favorites	Activate the Favorites and RSS icon in IE9 and IE10
Page Down	Move the page down by a screen
Page Up	Move the page up by a screen
Scroll down	Move down to the bottom of the page
Scroll up	Move up the top of the page
Line down	Move the page down by a few lines
Line up	Move the page up by a few lines
Next frame	Go the next frame in a multiframe page
Previous frame	Go the previous frame in a multiframe page
Go to Top	Display the top of the current page
Go to Bottom	Display the bottom of the current page
Start scrolling Down	Start automatic downward scrolling
Start scrolling up	Start automatic upward scrolling
Stop Scrolling	Stop automatic scrolling
Scroll faster	Increase rate of automatic scrolling

Scroll slower Decrease rate of automatic scrolling

SAY “Search” (site below) for “text”	TO:
web	Open default web browser and display search for specific text
eBay	Opens eBay and searches for specified text
Amazon.com	Opens Amazon.com and ...
About.com	
Answers.com	
Creative Commons	
Wikipedia	
Altavista	Opens specified search engine and initiates search for text term
AOL Search	
Ask.com	
Google	
Microsoft live search	

Searching Medical Websites

Search ICD9 drugs for <drug name>
Search ICD9 procedures for <procedure name>
Search ICD9 dictionary for <words>
Search ICD9 coding for <codes>

Search PubMed drugs for <drug name>
Search PubMed for <any term>

Search UptoDate for <any term>

Search WebMD for <any term>
Search WebMD drugs for <drug name>
Search WebMD condition for <condition name>

Chapter 31: Medical Commands for Downloading

Over the years we have put together a number of medically oriented Dragon commands which we are happy to share. In fact, Nuance liked our commands so much that they borrowed many of them and included them as built in commands in Dragon Medical 10 and onward. Most of these commands were created for the author's cardiology practice, so they may not be appropriate for your practice and needs, but if nothing else we hope they will generate ideas. You are entirely free to share these commands among your colleagues.



Available Command Sets for Downloading:

While the links shown below are clickable on the electronic version of this publication, for those reading this on paper, you can find direct links to all of the command resources shown below from the following URL: <http://www.speechrecsolutions.com/commands.htm>

Utility Commands: this group of commands assists in a variety of tasks and is oriented to improving general efficiency.

Note Template Commands: Nuance liked our command set so much that they included it in medical version from version 10 onward. This is the unadulterated set, ready for your use or modification. And you don't have to say "Dragon" before initiating each of these.

Physical Examination Commands: This set of medical commands is oriented solely to documentation of the physical exam. It includes some basic boilerplate male and female exams, and also a series of exam "snippets". We consider the use of exam snippets the perfect way to quickly and accurately document an exam.

Differential Diagnosis Commands: although oriented toward many of the diagnoses which come up in the author's practice, but may be practical for you. These are all text commands and are launched by saying "differential <disease condition>"

Epic Commands: this set of commands has been made available for use by customers of Epic System's EMR. Some are dated, some are geared for an Epic implementation at the author's home institution, but most are highly helpful and, if nothing, else will give you lots of ideas for creating your own commands. Many of these are step-by-step commands which can be easily edited to suit your needs.

Key Point: Gain access to our set of starter commands by visiting
<http://www.speechrecsolutions.com/commands.htm>

Instructions for Downloading and Importing Commands

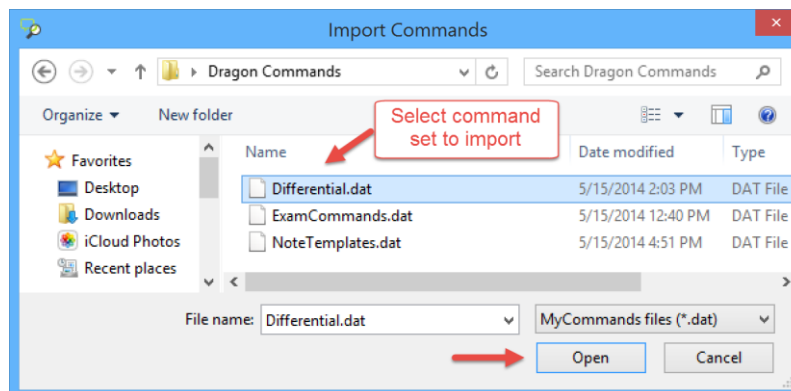
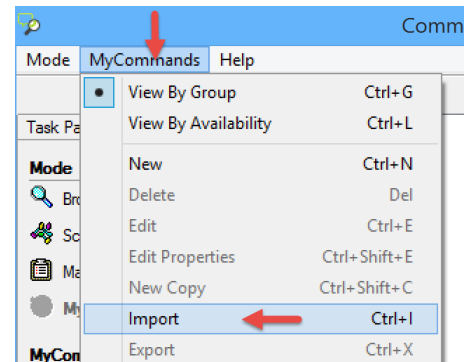
XML versus .DAT Files: Clicking or right-clicking on any of the links on our command downloading page (link above) will offer you the option of saving either the .DAT or .XML version of the command set. The advantage of the XML version of each command is the ability to visualize the commands in a web browser or other application which can read or edit XML files. Unfortunately, the XML version of the command set cannot be imported directly into Dragon, so you should download or view the XML version only if you want to see the commands before importing into your user profile.

XML Versus DAT format of Commands:

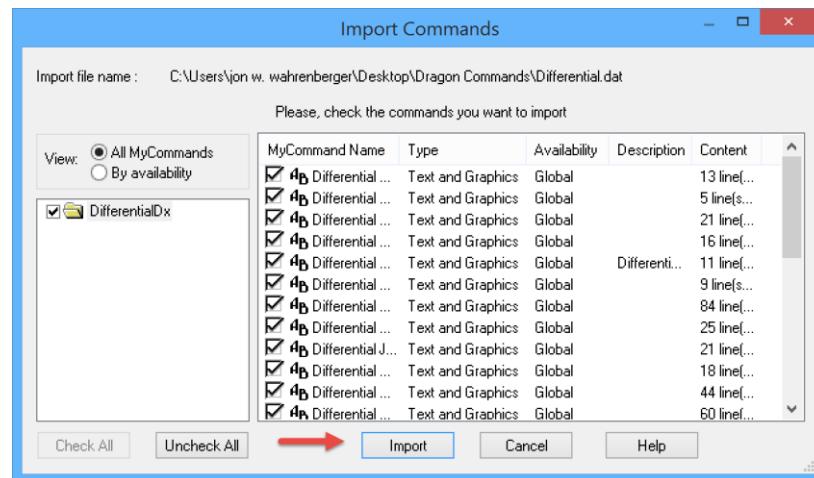
	.XML	.DAT
Viewable in Text Editor	Yes	No
Able to Import in Dragon	No	Yes

Importing commands: .DAT files must be uploaded or imported to Dragon one file at a time and are done so from the “Command Browser”, the place where all commands are stored.

1. Open the Command Browser (Tools > Command Browser)
2. From the MyCommands menu, select Import
3. Browse to the location of your saved command
4. Select the command set and click Open
5. On the following screen, determine the individuals commands to be imported (by checking or unchecking the associated box) and then click “Import”
6. Repeat the above steps as needed for each command set



Note: unfortunately you can only import one file at a time. After navigating to the location of your command files, select the file you want to import and then click “Open”. Once you have completed the import, sequentially import other command files as desired.



Note: By default, all of the individual commands in the set you are to import will be selected. If there are any you don’t want to import, un-check the box to the left of these commands.

Sharing Our Medical Commands

We make these commands freely available for your use and to share with friends and colleagues as you please. The only thing we ask is that you don’t publish them or sell them. Feel free, though, to share links to the download locations and descriptions.

Chapter 32: Dragon EMR Compatibility – Detailed List

With most medical practices having transitioned to electronic documentation, many medical providers wonder about the compatibility of their electronic health record with speech recognition software. This table, taken directly from the Nuance website, is current as of April 29, 2014. If you have questions about compatibility with a specific EMR, we suggest you contact the EMR vendor.

Dragon Medical works with most windows-based EHRs such as Epic®, Cerner®, GE®, McKesson® and many more listed below which self-report compatibility to EHRscope.com. Note that EHRscope.com is not a Nuance-sponsored site, and therefore Nuance has not validated claims made by vendors regarding compatibility with Dragon Medical.

- A.I.med EMR By Acrendo Software, Inc.
- ABELMed EHR - EMR / PM By ABEL Medical Software Inc.
- Abraxas EMR By Abraxas Medical Solutions
- Accel™ By CliniWorks™, Inc.
- AdvantaChart™ By AdvantaChart, Inc.
- Agastha Medical Records (EMR) By Agastha, Inc.
- AllMeds EMR System By AllMeds, Inc.
- Amazing Charts By AmazingCharts.com, Inc.
- ARIA™ Oncology Information System By Varian Medical Systems, Inc.
- BETTERHEALTH record™ By BETTERHEALTH Global (USA), Inc.
- Centricity® By GE Healthcare
- ChartCare EMR By CHARTCARE, Inc.
- ChartEvolve By The CIMS Group
- ChartLogic EMR By ChartLogic, Inc.
- ChartMaker® By STI Computer Services, Inc.
- ChartWare® By Chartware, Inc.
- Clinical Navigator By Systemedix, Inc.
- CureMD PRS® By CureMD PRS®
- CYRAMED™ By Mountain Medical Technologies, Inc.
- DC Talk™ By JR Consulting
- digiChart® By digiChart, Inc.
- Doc-U-Chart for the Tablet PC® By Doc-U-Chart
- DoctorAssistant By HealthHighway™.com, Inc.
- Doctors Choice EMR™ & Nurses Choice EMR™ By EMRSystems
- DocuMed® By DocuMed, Inc.
- Dragon® Medical By Dragon® Medical
- e-MDs Solution Series By e-MDs, Inc.
- e-Medsys™ Electronic Health Record By PracticeOne, LLC
- E-Record EMR By Exscribe, Inc.
- eClinicalWorks By eClinicalWorks
- EDIM By EDIMS, LLC
- Electronic Patient Charts By American Medical Software
- eMedRec By Holt Systems, Inc.
- EmpowER System™ By ECDS (Emergency Care Documentation Systems)®
- Medamation™ MD By Medamation, Inc.
- MedAppz iSuite By MedAppz, LLC
- Medflow EMR By Medflow, Inc.
- Medi-EMR By Medi-EMR, LLC
- Medical and Practice Management (MPM) By LSS Data Systems®
- MedicalNotes.com By MedicalNotes.com
- Medical Practice Solutions By Medical Voice Products
- MedicsDocAssistant™ By Advanced Data Systems Corporation
- Medios EHR By IOS Health Systems
- Medscribbler™ By Scriptnetics, Inc.
- MedTemps™ By Trigram Technology
- MicroMD® EMR By Henry Schein® Medical Systems, Inc.
- MindLinc from Duke University Behavioral Health Informatics By MindLinc: Duke University Behavioral Health Informatics
- mMD.net EHR By Health Communication Systems, Inc.
- NetPractice EHR By Noteworthy Medical Systems, Inc.
- Nightingale On-Demand By Nightingale Informatics Corporation
- OfficeEMR™ 2008 By iSALUS Healthcare™
- OmniMD™ EMR By Integrated Systems Management, Inc.
- OncoEMR By Altos Solutions
- ORIGIN By Medaxis Corporation
- Patient Chart Manager By Prime Clinical Systems, Inc.
- PBOmd By PBO Corporation
- PeakPractice™ By Eclipsys®
- PerfectMed™ EHR By Imogen Systems
- Phoenix Ortho By Phoenix Ortho, LLC
- Physician Practice Documentation (PPD) By Healthland, Inc.
- Power Chart By Exan Mercedes Software, Inc.
- PowerSoftMD By Data Tec, Inc.
- Practical Medical Record™ By Electronic Pediatrician, LLC
- Practice 2009 By NexTech Systems, Inc.
- PracticeOrders By PracticeSuite.com/Incite Systems, LLC
- Practice Partner® By Practice Partner/McKesson Corporation
- PracticeStudio.NET® By MicroFour, Inc.
- Practice Today By Legacy Press
- PRAXIS EMR V4.0 By Infor*Med, Inc.
- PrimeSuite® 2008 By Greenway® Medical Technologies
- PrognoCIS™ By BizMatics®, Inc.
- ProgNote/MobileLink By ACS

- EMR4DOCTORS By EMR4DOCTORS
- emr4MD By Mednet System
- EMRWorks™ By MedStar Systems, LLC
- EndoSoft® By Utech Products, Inc.
- EpicCare Ambulatory EMR By Epic Systems Corp.
- Epitomax® By PsyTech Solutions, Inc.
- Evolution EMR™ By Portico Systems, Inc.
- EyeDoc® EMR By Penn Medical Informatics Systems, Inc.
- EZChart™ By AssistMed, Inc.
- FreeMED By FreeMED Software Foundation
- gCare™ By gMed, Inc.
- GlaceEMR™ By Glenwood Systems, LLC
- gloEMR By gloStream, Inc.
- Harmony e/Notes EMR By HARMONY MedTec, Intl.
- HealthPort EMR V9.0 By HealthPort™
- Health Probe Professional By Health Probe
- Horizon Ambulatory Care™ By McKesson
- iAchieve EHR By ChartLogic, Inc.
- iDocLocker By Sagittarius Software, Inc.
- InSync By Intivia, Inc.
- IntelliDOX® By Businet
- Intelligent Medical Software / IMS By SuiteMed, LLC
- IO Practiceware By IO Practiceware
- Janus Health By Janus Health, Inc.
- Life Record™ EMR By Life Record, Inc.
- MD-Journal By HemiData, Inc.
- MD-Navigator Clinical® By Benchmark Systems™
- MD Advantage™ By Compulink Business Systems, Inc.
- MDAware® 2.2 By eMedicalFiles®, Inc.
- MDLAND Electronic Health Record and Practice Management Systems 8.0 By MDLAND
- MDSyncEMR By MDSyncEMR, LLC
- MED3000 InteGreat EHR By MED3000, Inc.
- Pronto By Clinical Insight Systems, Inc.
- PsychNotesEMR By American Psychiatric Management Services, LLC
- Pulse Patient Relationship Management (Pulse PRM) By Pulse Systems, Inc.
- Quick Notes EMR By Quick Notes, Inc.
- Raintree By Raintree Systems, Inc.
- Rosch EMR-Allergy By Rosch Visionary Systems, Inc.
- SamNotes2000 By ICS Software Ltd.
- ScriptSure By Daw Systems, Inc.
- SmartEMR By VipaHealth Solutions
- SOAPware® By SOAPware, Inc.
- STIX EMR By Integritas, Inc.
- Team Chart Concept By Ulrich Medical Concepts, Inc.
- TexTalk Medical By Alma Information Systems
- The AMCIS Network By M.D. Web Solutions
- The Chart! By DescriptMED, LLC
- TheraManager™ By TheraManager™ Software, Inc.
- Touch ED® By Touch Medix®, LLC
- TransMed By TransMed Network
- Turbo-Doc EMR By Turbo-Doc, Inc.
- Unifi-Med™ By Unifi Technologies, Inc.
- UroChart™ EMR By Intuitive Medical Software, LLC
- Valant EMR By Valant Medical Solutions™, LLC
- VersaSuite 7.5 By Universal Software Solutions, Inc.
- Visionary™ DREAM EHR 7.1 By Visionary Medical Systems, Inc.
- Waiting Room Solutions Practice Management System By Waiting Room Solutions
- WebChartEHR By Exeior Healthcare Systems
- Webchart EMR and MIE™ Minimally Invasive™ EMR By MIE - Medical Informatics Engineering
- Wellsoft EDIS By Wellsoft Corporation
- workflowEHR™ By Workflow.com, LLC
- WriteMD® By Medinformix®, LLC
- WritePad™ EMR Systems By Addison Health Systems, Inc.
- XLEMR By XLEMR

Chapter 33: Compatible Applications

Although Nuance has made great strides in making Dragon compatible with a wide breadth of word processing programs, at the end of the day it is important to realize that not every EMR and not every word processing program will work well with Dragon. The following list of compatibility between Dragon NaturallySpeaking 12 and various applications comes directly from the Nuance website:

Current List of Dragon Compatible Applications

- **Internet Explorer 7.x, 8.x, 9.x and 10.x:** Full Text Control, Menu Tracking, Natural Language Commands, and ability to say links.
- **Windows Explorer:** On Windows XP, Windows Vista, Windows 7 and Windows 8.
- **Microsoft Word (Office 2003, 2007, 2010 and 2013) [32-bit and 64-bit]:** Full Text Control, Menu Tracking and Natural Language Commands.
- **DragonPad:** Full Text Control, Menu Tracking and Natural Language Commands.
- **Microsoft Excel (Office 2003, 2007, 2010 and 2013) [32-bit and 64-bit]:** Full Text Control, Menu Tracking, Natural Language Commands.
- **Microsoft Outlook (Office 2003, 2007, 2010 and 2013) [32-bit and 64-bit]:** Full Text Control, Menu Tracking, Natural Language Commands.
- **Microsoft PowerPoint (Office 2003, 2007, 2010 and 2013):** Menu Tracking and Natural English Language Commands.
- **Mozilla Firefox 18.x:** Menu Tracking, Natural Language Commands, plus ability to say links.
- **Mozilla Thunderbird 17:** Menu Tracking and Natural Language Commands (Professional and Legal only).
 - Compatibility is only available for an English installation of Thunderbird.
- **OpenOffice Writer 3.4 (Apache):** Full Text Control, Menu Tracking and Natural Language Commands.
- **Windows Live Mail 2012:** Menu Tracking and Natural Language Commands.
- **Lotus Notes 8.5.3:** Menu Tracking and Natural Language Commands (Professional and Legal only).
 - Compatibility is only available for an English installation of Lotus Notes.
- **Windows NotePad & WordPad:** Full Text Control, Menu Tracking and Natural Language Commands.
- **Corel WordPerfect X6:** Full Text Control, Menu Tracking and English Natural Language Commands.
 - Compatibility is only available for an English or French installation of Corel WordPerfect.

Additional details on application support:

- Full Text Control allows you to use voice to perform direct dictation, selection, correction and cursor movement within text.
- Menu Tracking provides the ability to use voice to "click" an application's menus, buttons, dialogs boxes, etc.
- Natural Language Commands let you state your intent within a specific application instead of following the menu-selection and mouse steps of the Windows interface.

For an updated list of Dragon compatible software, please visit:

http://nuance.custhelp.com/app/answers/detail/a_id/6919/~information-on-applications-that-are-compatible-with-dragon-naturallyspeaking-12

Working with Non-Compatible Applications

Please view our expanded section on working with [Dragon in Non-standard Applications](#) in PART One of this guide. Two key reminders:

1. Remember that you have a visual indication of compatibility by seeing the green arrow in the DragonBar (image to right).
2. If your application happens to be one of the few with which Dragon is not compatible, you have the option of dictating into the "Dictation Box" and moving completed dictation into your preferred application either manually (copy and paste) or through any of a number of automated methods allowed by the Dictation Box.



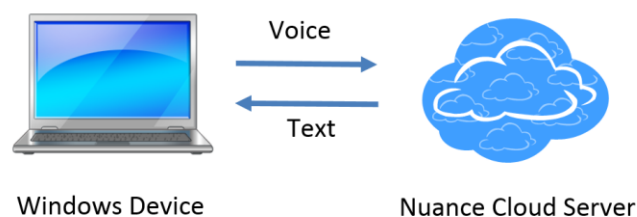
Chapter 34: Dragon Medical 360 Direct

Overview

Dragon Direct is the newest speech recognition product coming from the Nuance Healthcare division and combines the simplicity of the cloud-based version of Dragon many of us are accustomed to using on our mobile devices, with the vocabulary and functionality needed by a medical provider.



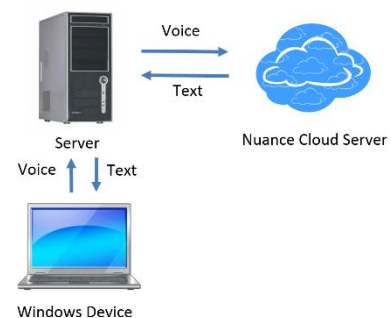
The basic concept of this technology is shown below. A very small application on your computer or an institutional server takes in your voice and sends it securely to a Nuance cloud server that does the speech processing and sends the text back to your local device.



Two Versions

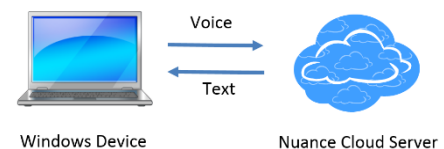
This product comes in two “flavors”, depending upon the needs of the user or institution:

- **Server installed or “Stand-alone” installation:** in this scenario the installation occurs centrally and is accessed by users indirectly through Citrix or another virtual methodology. This arrangement is used if an electronic medical record is presented virtually to a user and in this scenario the application is placed directly on the Citrix server. This is the best installation type for EMR’s implement via Citrix, since it allows full text control with the EMR and a note in progress, it also comes with some additional headaches in terms of installation and integration with microphones is a bit more difficult.



Stand Alone Installation

- **Local or “Click-once” installation:** this is for installations in which the application is installed directly on the user’s computer and the application is launched and used locally. This works well only if the target text editing windows is on the local computer. Although the appearance and functionality of this version are



Click Once Installation

essentially identical to the server based version of Dragon Direct, it is clearly simpler to use.

General Features

We have been extremely impressed with Dragon Direct and the almost hard to believe speed and accuracy without a minute of training. Here's a brief overview of its features:

1. High level of accuracy and speed while using cloud-based speech recognition (honestly we find this even more accurate than the full version of Dragon Medical Practice Edition.
2. Several medical vocabularies and one general (non-medical) vocabulary
3. Minimal (almost negligible) deployment needs and costs
4. Subscription based pricing
5. Editing control functionality in most EMRs, including Epic, Cerner, Allscripts, Meditech; instant launching of Dictation Box when text editing not possible
6. Set up as either "Click Once" or "Stand-alone" (see above)
7. Other functionalities include use of step-by-step commands, vocabulary management, use of "AutoText" (text commands created on the fly), and Text Control Commands (ability to select, navigate, and correct by voice)

System Requirements

1. Operating system: 32-bit: Microsoft Windows XP, Microsoft Windows 7, Microsoft Windows 8 and Microsoft Windows 8.1. Make sure that the latest service pack is always applied; 64-bit: Microsoft Windows 7, Microsoft Windows 8 and Microsoft Windows 8.1. Make sure that the latest service pack is always applied.
2. Processor Speed: Minimum: 1.7 GHz; Recommended: 2.8 GHz
3. RAM: Minimum: 512 MB; Recommended: 2 GB
4. Compatible Text Editors: n TX Text Control 12 to 16, .NET; Microsoft Word 2003, 2007, 2010; Microsoft Rich Text controls (including .NET Forms); Ter32 and Ter13 – Ter17; DM360 Direct Dictation Box
5. Microphones: Any microphone that can record audio data in 16 kHz, 16 bit mono format is supported.

For more information on Dragon Medical 360 Direct, please visit our more in-depth user guide to this product. Our full guide is located at:

http://www.speechrecsolutions.com/assets/user_guides/DragonDirect_SRS_UserGuide.pdf

Chapter 35: BestMatch V Technology

Over the years, and under the ownership of various corporate entities and in the context of ever more powerful computers, Dragon has been gradually improving in both speed and accuracy. The latest iteration of the underlying recognition technology is termed “BestMatch V” and we think it helpful for you to know just a little bit about how it works.

As Nuance describes it: “The BestMatch V speech model is known as a “triple-pass” model because this model performs two (2) simultaneous recognition passes, and if the recognition accuracy from the dual pass does not meet certain criteria, an additional third (single) recognition pass is made. This “triple-pass” action occurs each time a dictator speaks an utterance. The BestMatch V speech model operates from RAM memory.”

System Requirements

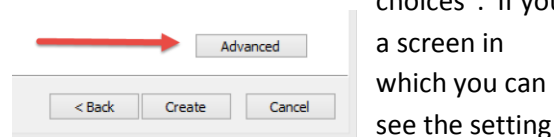
BestMatch V has several computer-related requirements, including:

- A processor with at least 2 cores
- 64 bit system
- At least 4 GB of RAM (under certain circumstances it will work with less than 4 GB)

Be aware that the BestMatch V technology is the most demanding in term of your system and when creating a new profile Dragon makes an assessment as to which speech model will be used based on your processor speed and available RAM.

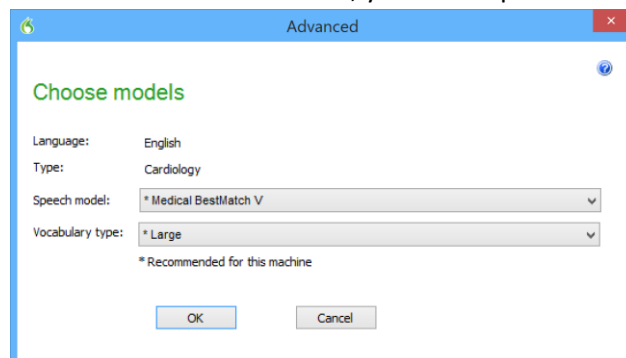
Confirming Speech Model

Unfortunately a user can confirm or alter the speech model only at the time a new user profile is being created. Early in the profile set-up process you will see a screen which asks you to “Confirm your choices”. If you select the “Advanced” button, you will be presented with



a screen in which you can see the setting

Dragon has chosen (with your input) and have the option of changing these as shown in the image to the right. In general we recommend that you accept the choices chose to simply-year-old man n by Nuance.



Chapter 36: Sources of Additional Information

For the individual who truly wants or needs to learn more about Dragon, we offer the following links to additional information. Be sure to take a look at the Nuance “End User Workbook” pertaining to your version of Dragon. If you have a specific question or problem, it’s best to submit a question to one of the on-line forums. I hate to admit it, but I do it occasionally!

Online forums

- Speech Recognition Solutions On-line Forum: <http://forums.speechrecsolutions.com/>
- KnowBrainer Forum: <http://www.knowbrainer.com/forums/forum/index.cfm>
- Nuance NaturallySpeaking for Windows Forum: <http://nuance-community.custhelp.com/hives/be1ac29547/summary>

Sources of NaturallySpeaking Commands

- Knowbrainer.com: It's not free, but it's the largest source of commands on-line and well worth the money
- Scripting for NaturallySpeaking 11 - <http://store.speechrecsolutions.com/scripting-for-naturallyspeaking-11-p122.aspx> - This excellent book on building commands by Larry Allen is a superb source of information on building commands, and by example includes a huge number of commands.
- Kim's Speech Recognition Macros - http://www.scriven.com/RSI/RSIdata/KimsMacros/Kims_Macros.html
- NaturallySpeaking QuickMacros <http://www.speak-it.com/quickmacros.htm>
- Creating Voice Commands - <http://www.speechrecsolutions.com/assets/VoiceCmd.pdf> - This is an old document from Dragon Systems, the original developer of Dragon NaturallySpeaking. It has lots of useful information related to building legacy "DVC" commands.
- USAFP Text Commands - <http://www.nuance.com/for-healthcare/military-health-systems/mhs-tips-and-tricks/mhs-commands/index.htm> this is a set of text commands from the Uniformed Services Academy of Family Physicians and provided by Nuance.

Disabilities Oriented Web-sites

Assistive Technologies:

- Ability Hub: Assistive Technology Solutions - <http://www.abilityhub.com/index.htm> - A limited source of microphones, but a great source of information.
- Assistive Technology Solutions <http://www.atsolutions.org/> - Interesting site which provides plans for do-it-yourself devices to assist persons with disabilities
- Computer and Software Accessibility for the disabled - <http://www.mapcon.com/computer-and-software-accessibility-for-the-disabled> - this is a wonderful overview of sources of information on both software and hardware options for those with disabilities, kindly organized by Lisa Richards.

- Quadomated - <http://www.quadomated.com/> - An amazing site put together by a self-professed "happy geeky quadriplegic engineer" with lots to share.

General Accessibility Information

- Web Accessibility Standards: Guidelines for Making the Internet More Accessible: (<http://www.high-speed-internet-access-guide.com/articles/web-accessibility.html>) This does not pertain to use of speech recognition software per se, but is a good source of information related to web accessibility

RSI Prevention and Treatment

- RSI Exercises - <http://www.will-harris.com/yoga/rsi.html>) A useful site with lots of information on preventing RSI
- Mayo Clinic Prevention Tips - <http://www.mayoclinic.org/diseases-conditions/carpal-tunnel-syndrome/basics/definition/con-20030332>

Microphone Information Resources

- Wikipedia Review on Microphones
http://en.wikipedia.org/wiki/Microphone#Electret_capacitor_microphones
- Review article on Powering Electret Microphones
http://www.epanorama.net/circuits/microphone_powering.html
- Review of Computer Soundcard Wiring - http://www.epanorama.net/links/pc_sound.html
- UCSC Review of Microphones - <http://artsites.ucsc.edu/EMS/Music/equipment/equipment.html>
- Wikipedia review on Bluetooth - <http://en.wikipedia.org/wiki/Bluetooth>

Nuance Resources

Dragon Workbooks: For a number of years Nuance has been putting together "End-User Workbooks". Designed for specific version of Dragon, each provides in depth information and tutorials on completing common functions with Dragon. Below are links to the workbooks for the last few versions of Dragon. These are large PDF documents which can be downloaded to your computer.

Version	Direct Link
Dragon NaturallySpeaking 10 End-User Workbook	http://www.speechrecsolutions.com/assets/workbooks/DNS10_workbook.pdf
Dragon NaturallySpeaking 11 End-User Workbook	http://www.speechrecsolutions.com/assets/workbooks/DNS11_End-User_Workbook.doc
Dragon NaturallySpeaking 12 End-User Workbook	http://www.speechrecsolutions.com/assets/workbooks/DNS12_workbook.pdf
Dragon NaturallySpeaking 13 End-User Workbook	http://www.speechrecsolutions.com/assets/workbooks/dragon13_workbook.pdf

Dragon User Guides: Although installed on your computer at the time you install Dragon, the User Guide for your version is buried fairly deeply on your hard drive. Nuance provides access to a variety of formal user guides at the following URL:

<http://support.nuance.com/usersguides/?UsersGuidesProduct=naturallyspeaking>

Administrator Guides

The Dragon “Administrator Guide” is a useful guide intended for administrators that deploy and manage installations of Dragon NaturallySpeaking. These are often great sources of information. Since there does not appear to be a single source for these from Nuance, we have collected a bunch of these on our own site and list links to these guides below.

	User Guide	Administrator Guide
Dragon 13	http://www.speechrecsolutions.com/assets/user_guides/dns13_userguide.pdf	http://dragoncontent.nuance.com/support/13/DNS13_AdminGuide.pdf
Dragon 12	http://www.speechrecsolutions.com/assets/user_guides/DNS12_userguide.pdf	http://www.speechrecsolutions.com/assets/admin_guides/DNS12_adminguide.pdf
Dragon 11.5	http://www.speechrecsolutions.com/assets/user_guides/DNS11.5_userguide.pdf	http://www.speechrecsolutions.com/assets/admin_guides/DNS11.5_adminguide.pdf
Dragon 11	http://www.speechrecsolutions.com/assets/user_guides/DNS11_userguide.pdf	http://www.speechrecsolutions.com/assets/admin_guides/DNS11_adminguide.pdf
Dragon 10.1	Not available	http://www.speechrecsolutions.com/assets/admin_guides/DNS%2010.1_adminguide.pdf
Dragon 10	http://www.speechrecsolutions.com/assets/user_guides/DNS10_userguide.pdf	http://www.speechrecsolutions.com/assets/admin_guides/DNS10_adminguide.pdf
DMPE	Not available	http://www.speechrecsolutions.com/assets/admin_guides/DMPE_adminguide.pdf
DMPE2	Not available	http://www.speechrecsolutions.com/assets/admin_guides/DMPE2_adminguide.pdf
Medical Network Edition	http://www.speechrecsolutions.com/assets/user_guides/DMPE_userguide.pdf	http://www.speechrecsolutions.com/assets/admin_guides/DNE10.1_adminguide.pdf
Dragon Medical 360: Direct	(Quick Start Guide) http://www.nuance.com/ucmprod/groups/healthcare/@web-enus/documents/collateral/nc_034153.pdf	http://dragonmedical360direct.nuance.com/StandAlone/Production/InstallationGuide_EN.pdf

Acknowledgements

Even though it's just a simple user guide, creation of this publication was, nonetheless, time-consuming and required the assistance - both directly and indirectly - of many special folks in my life.

Foremost, I need to thank my amazing wife, Karen, who has been kindly putting up with my passion for speech recognition technology for many years now. Even though it has consumed far more of my evenings and weekends than she would have preferred, she has been incredibly patient. I hope she can appreciate that without my use of speech recognition software at work I would probably be coming home an hour or two later every day. To her I promise that someday I will retire not only from my "day job", but also from Speech Recognition Solutions. Then we will travel!

My son-in-law, Tony Fiset, has been a constant source of enthusiasm and advice related to the business over most of the life of Speech Recognition Solutions. In recent years he has shown an amazing ability to understand and provide support in technical aspects of the software, and has been hugely helpful in setting up and maintaining our ecommerce platform. He provided very helpful input in the "hardware recommendations" section of this guide. It was Tony, a year or two ago upon seeing a dramatically shorter and less thorough version of this guide directed to Dragon Medical 10, that encouraged me to turn this into the current guide. He has been a valued business partner and friend. Thank you, Tony!

Finally, my "day job" secretary, Amanda Sanchez was hugely helpful in editing and proofing of this publication ... on her own time. She has the patience of a saint.

Thanks to all of you!

About the author

Jon Wahrenberger is a board-certified internist and cardiologist practicing full-time clinical cardiology at Dartmouth-Hitchcock in Lebanon NH. He is a long time user of Dragon in medical documentation. In addition to his clinical responsibilities, Dr. Wahrenberger has been a long-time champion of speech recognition technology at Dartmouth-Hitchcock. His interest in speech recognition software led to his creation of Speech Recognition Solutions in 2007.

Dr. Wahrenberger can be contacted at jon@speechrecsolutions.com.



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