

## SpeechMatic USB MultiAdapter

*(1) USB audio card with standard Sound jacks, (2) Speech Equaliser (SQ) and Auto Gain Control (AGC) or Amplifier for professional Speech recognition, Voice or Music recording and Wideband or High Definition (HQ) VoIP with Windows®/MacOS®*

### 1. INTRODUCTION

The release of *Dragon NaturallySpeaking® 12* containing the most powerful speech recognition engine ever --utilising a 22 kHz sampling rate to improve audio quality and recognition accuracy, coincided with the emergence of Wideband or High Definition (HD - 20 kHz) Voice over IP (VoIP) and other 'Unified Communications' accelerating the transition away from conventional low fidelity telephone technology.

SpeechWare aimed to develop a brand new portable microphone to exploit fully the challenge posed by these two nascent developments: **harness the full capability of this remarkable speech engine at long and variable dictation distance (up to an unprecedented 50 cm or 20")**; and **provide unmatched voice clarity for VoIP users**. Moreover, the performance of this unique portable microphone has to be comparable to that of the best very close range professional headsets; freeing users from the need to wear a headset or being physically tethered to a computer, while dictating or communicating over IP.

Welcome to the SpeechMatic USB MultiAdapter, the award-winning model from this family of unique analog audio to USB adapters by SpeechWare. Unlike competing conventional products merely adapted for PC or Mac use; this USB audio card has been designed and engineered with the support of an international advisory committee with unparalleled experience in microphone technology and speech recognition. We also encourage customer feedback.

This truly "**multipurpose**" device features **two different operational modes**. An industry first **Speech Equaliser (SQ) and Auto Gain Control (AGC) or Amplifier mode (Green LED)**, which is optimised for **long and variable** dictation distance (25 cm to 50 cm / 10" to 20") with **LOW ambient noise**, specially for our USB SpeechMatic USB MultiAdapter, and a **Normal or HD VoIP mode (Blue LED)**. This latter setting is ideal for:

- **Close** dictation distance (5 cm to 12 cm / 2" to 5") Speech Recognition with **MODERATE ambient noise**;
- The FlexyMike or most alternative headsets, instead of the mini boom, specially with very **HIGH ambient noise**;
- Full duplex (simultaneous Sound in and out) Wideband or High Definition (HD) 20 kHz Internet telephony (VoIP);
- Full duplex HD Video conferencing;
- HD Podcasting;
- Voice and Music recording.

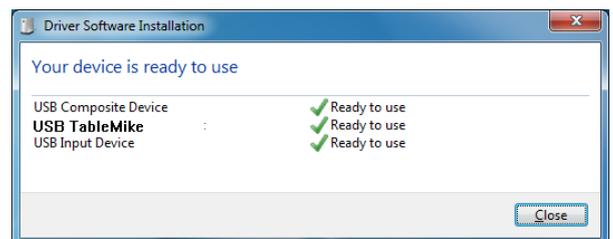
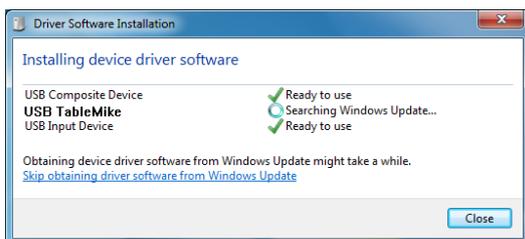
Besides, the SpeechMatic USB MultiAdapter incorporates a couple of standard Sound jacks to connect an external microphone (like the mini gooseneck of the TravelMike), speaker or earset. The card features the same award winning technology than our TableMike desktop microphone, in a smaller USB format, which has been consistently rated as the **Best in Class for Speech recognition with a "5 Dragon"** by Nuance --the editor of *Dragon NaturallySpeaking*, as well as by *MacWorld US*: [http://www.macworld.com/article/163860/2011/12/choose\\_the\\_right\\_mac\\_microphone\\_for\\_speech\\_recognition.html](http://www.macworld.com/article/163860/2011/12/choose_the_right_mac_microphone_for_speech_recognition.html). In Europe, the German publication *MacWelt* explicitly highlighted the excellent accuracy of the TableMike with *Dragon Dictate 3*, along with the freedom of movement during dictation.

The SpeechMatic USB MultiAdapter is fully compatible with *Windows® 8, 7, Vista®, XP®, 2000, MacOS® X* and *Linux®* as well as *Dragon NaturallySpeaking®* and other Speech engines. It is the ideal companion for Notebooks, Ultrabooks and Tablet PCs.

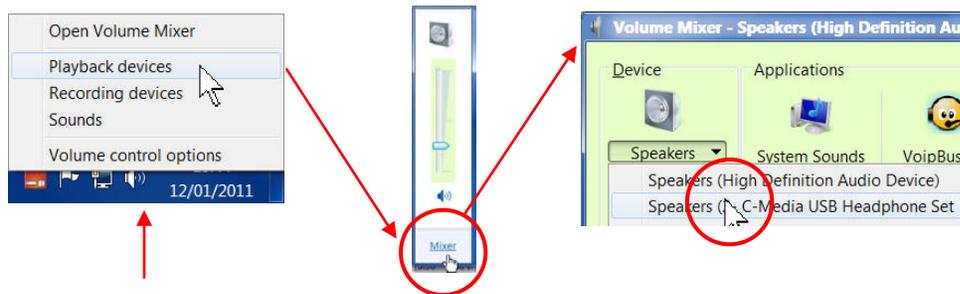
### 2. OPERATING INSTRUCTIONS

#### 2.1. Installation procedures for *Windows® 8, 7, Vista®, XP®, 2000 & Mac OS® X* or higher

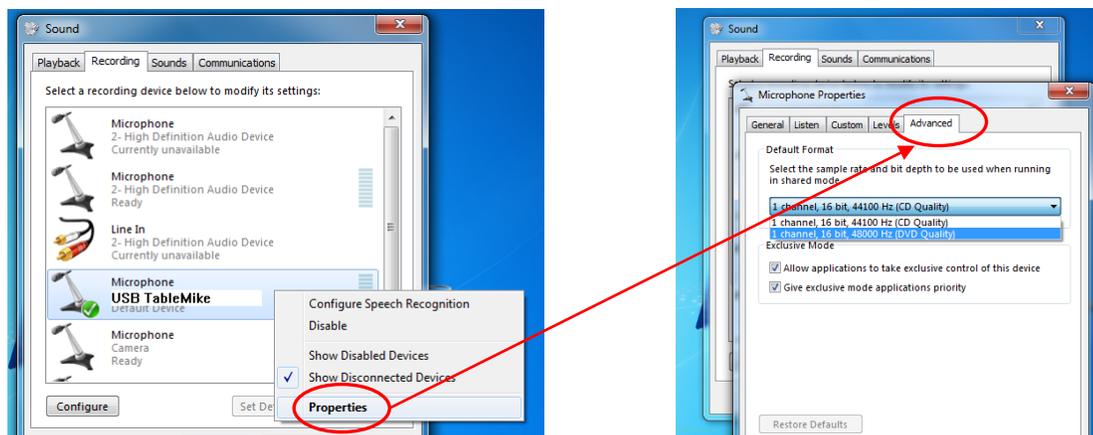
Insert a microphone or headset in the corresponding jack of the SpeechMatic USB MultiAdapter. Directly plug the card to a USB port of the computer with care. A special USB extension cable is provided in case it is needed. However, **DO NOT USE** any multiple USB Splitter or USB Hub device to connect to the computer. The Indicator Light (LED) of the base unit will light up in **Red**. If the unit does not initialise - check that the card is properly inserted in the USB port. Wait a few seconds for *Windows®* to automatically install the corresponding USB sound drivers:



After completion of the installation, *Windows®* will select the '**SpeechMatic USB MultiAdapter**' ('USB TableMike' in the images above) as the Recording and the Playback Device, and will make it the default for **ALL** applications. Hence, **you will not hear any playback if a Speaker, Headset or Earset is not plugged in the Sound out or Headset jack** of the card. To change this setting, with *Windows® 7*, right-click the **Speaker Icon** in the lower right hand corner of the *Windows®* System Tray (Systray) and choose '**Playback devices**'. Click the '**Mixer**' link to open the '**Volume Mixer**'. Select '**Speakers**' and choose another available Device to be used (normally the built-in PC Speaker). The procedure is similar under *Windows® 8, Vista®, XP®* and *2000*.



You can also go to 'Control Panel', 'Sound' and select the 'Playback' tab to achieve the same result. Also, in the 'Sound' window click the 'Recording' tab and check that the 'SpeechMatic USB MultiAdapter' ('USB TableMike' in the image hereby) is the 'Default Device'. Select and click-right on it. Click 'Properties', 'Advanced' and choose '1 channel, 16 bit, 44100 Hz --or 48000 Hz (DVD Quality)':



## 2.2. Additional instructions for Mac OS® X or higher

Go to the Utilities folder in your Applications folder, and launch 'Audio MIDI Setup'. Select 'SpeechMatic USB MultiAdapter' from the list of devices. Click on the 'Input' tab, then choose '41000.0 Hz' and '1ch-16bit' from the Format menu. Quit the Setup.



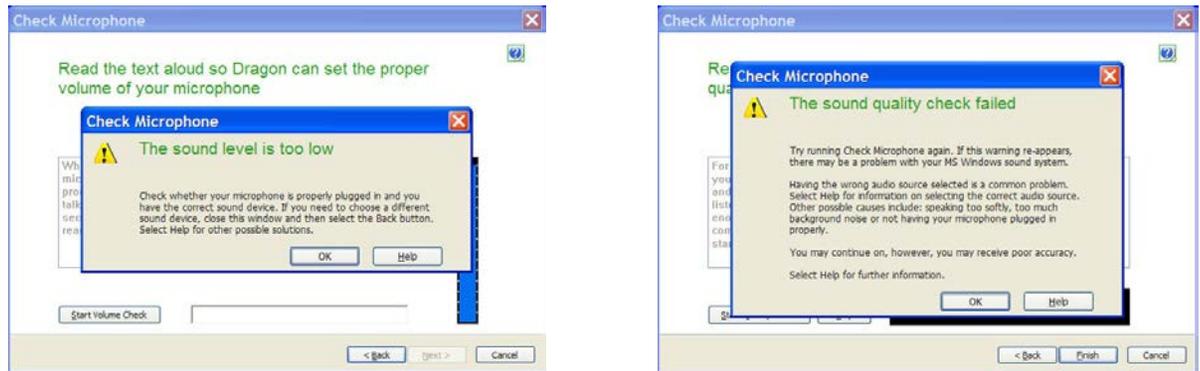
When you use *Dragon Dictate*®, choose **Tools > Microphone Setup** to calibrate the SpeechMatic USB MultiAdapter. When you do this, click on the red icon to enable the microphone, **then wait for about 30 seconds in silence until the gain setting reaches the maximum level of 99**. At this point, start reading the text to have *Dragon Dictate*® adjust the SpeechMatic USB MultiAdapter's volume properly.

## 3. Working with NaturallySpeaking® under Windows® 8, 7, Vista® or XP®

Due to the uniqueness of the built-in Speech Equaliser (SQ) and Auto Gain Control (AGC) or Amplifier for best performance and recognition accuracy at **long dictation distance (25 cm to 50 cm / 10" to 20")** with a microphone gooseneck or a very low sensitivity microphone headset and in an environment with low noise, we strongly recommend you create a NEW Dragon User Profile USB with the **Green LED** operational and **use it for a few hours**, in this way:

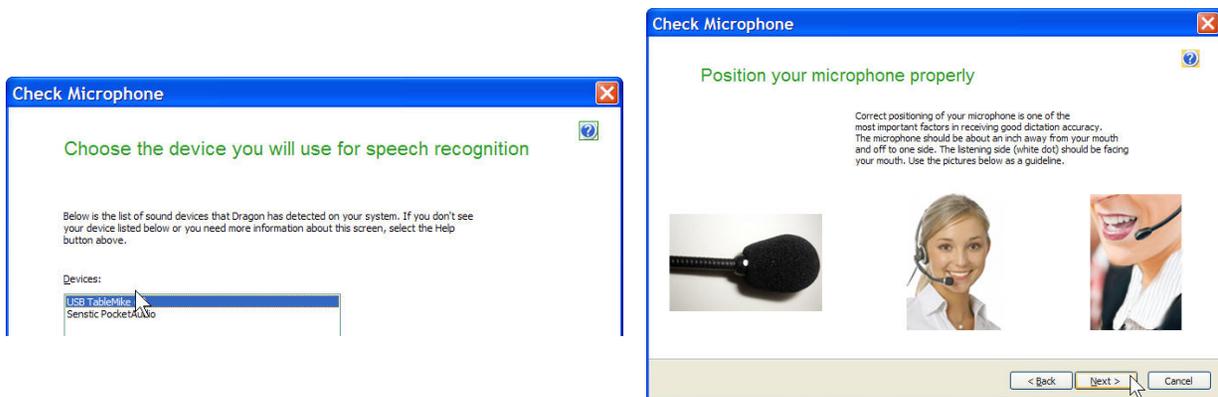
- Press and Hold** the 'Push' button on the body of the SpeechMatic USB MultiAdapter and the **Red LED** will change and remain **Green** - Speech Recognition usage at long and variable range or dictation distance with LOW ambient noise.
- In **Green LED** Mode, the microphone will substantially increase both voice pick-up and noise cancelling levels to deliver high recognition accuracy from 25 cm to 50 cm (10" to 20") range, depending on your voice and ambient noise. Ideally, place and keep yourself at about 25 cm (10") from the microphone element. Note that the Automatic Gain Control (AGC) will automatically adjust the signal output volume depending upon your distance from the microphone element. As the distance increases, the volume output increases. However, this can cause a problem because the AGC is an amplification process and amplifying the output also amplifies any background noise or sounds, which may provoke some 'Please say that again' or '???' messages from NaturallySpeaking®. These messages do not affect accuracy.

- c) Note that *NaturallySpeaking*® may also display the following Error messages if the aforementioned ranges and conditions are not observed. Occasionally, you may need to place yourself closer to the microphone during the 'Audio Check' to pass the Audio Setup Wizard which is tuned for headsets -- then dictate at the recommended distance:

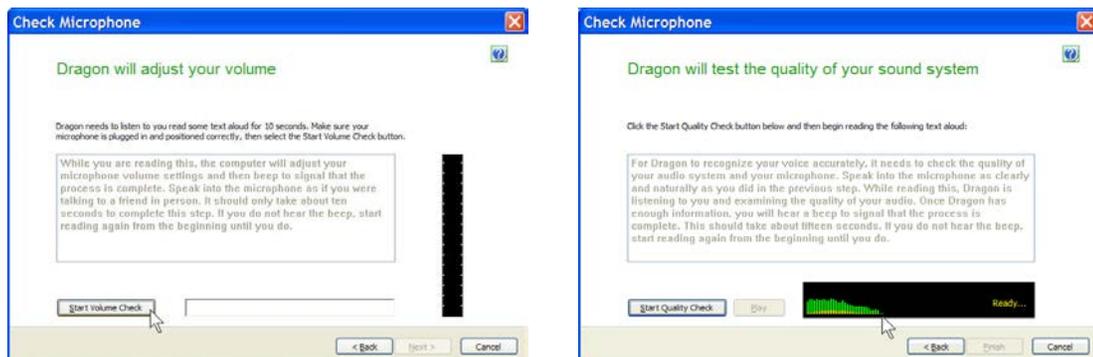


In case of **MODERATE** ambient noise (as well as VoIP use) or **with most common normal sensitivity headset microphones you are recommended to switch to Blue LED mode and shorten the dictation distance (to about 2.5 cm / 1")**. The latter is available when **pressing and holding** again the 'Push' button on the body of the card (the LED turns **Blue**). In this case, simply **calibrate the microphone** (open the existing User Profile, click in the 'Audio' menu and then select 'Check Microphone...'). Whatever procedure you choose *NaturallySpeaking*® will present you with the following windows:

- a) First, *NaturallySpeaking*® will check your sound devices. If you only have one in your PC, you will not get the first window because you do not need to make a selection. If you have more than one soundcard installed, it will ask you to choose which one you wish to utilise. Select '**SpeechMatic USB MultiAdapter**' ('USB TableMike' in the image hereby) and click 'Next' in the first window. Position yourself within the recommended distance from the SpeechMatic USB MultiAdapter microphone capsule depending on your LED color mode and ambient noise. Click 'Next' again:



- b) Click the 'Start Volume Check' button and read the text until it turns grey. **Read at your normal pace and voice level, making short pauses (3 to 5 seconds) at each punctuation sign**. In this way, both your voice and pauses (silence) will be sampled. **DO NOT SHOUT OR YELL** if the 'Gain' bar at the right hand side of the first window does not move or moves very little. After the text turns grey again, click 'Next'. Repeat the previously outlined process in the second window by clicking 'Start Quality Check' and then 'Finish':



To ensure that you get the most optimal signal-to-noise ratio, run the 'Check Microphone' process in the environment in which you will be dictating. That is, if you are going to be dictating into a low or moderate noise environment, **be sure that you run it under those conditions**. If your background environment changes during the course of the day, always rerun it again. Also, it is recommended that you rerun the process **periodically** if you are continuously dictating for long

periods of time because both your environment and voice tend to change. This will ensure that your audio setup remains optimal. Occasionally, you may need to place yourself a bit closer to the microphone element during the 'Check Microphone' to pass the Audio Setup Wizard, which is tuned for headset microphones -- then dictate at the recommended distance. With **MODERATE** ambient noise change to **Blue LED**. You are recommended to use our unique FlexyMikes Single or Dual Ear which are optimised for maximum performance with this card (<http://www.tablemike.com/en/flexymike-single-best-headset-speech-recognition.php> or either <http://www.tablemike.com/en/flexymike-dual-best-headset-speech-recognition.php>) for **HIGH** ambient noise.

If you wish to use the SpeechMatic USB MultiAdapter under **Green LED** and **LOW** ambient noise with your current User Profile, **you MUST ALWAYS perform an additional Extended Training**. This is because the audio characteristics of the SpeechMatic USB MultiAdapter are significantly different from any other type of USB microphone, as you can easily hear when playing back your dictation. In principle, it may happen that the overall accuracy degrades slightly from what you were getting with your previous microphone and current Profile. It is also important to understand that it may take a little time for your current Profile to adjust to your previous performance and accuracy. In addition, each user is different and some may not require this Extended Training and period of use, while others may. However, **DO NOT OVER TRAIN**. Otherwise, your Profile can become excessively large which can effect overall performance (i.e., increase latency) and will not gain you any improvement in accuracy. **DO NOT SHOUT OR YELL** either when training or dictating...

If you wish to use the SpeechMatic USB MultiAdapter as a high quality voice recorder; instead of a digital one, to automatically transcribe your recordings, configure it under Normal mode (**Blue LED**) for close dictation and download our free and forthcoming *TableMike Recorder* application or any other from the web. Save your recording in a standard sound format such as: wav, MP3 or wma with at least 16 bits, 11,025 Hz, mono. *NaturallySpeaking® 12* or higher will transcribe more effectively recordings made with a 22,000 Hz sampling rate. Save your recording in a standard sound format such as: wav, MP3 or wma with at least 16 bits, 11,025 Hz, mono. You may also want to download and evaluate our demo *QuickTypist* application to transcribe and edit your recordings, as well as our free *QuickDicta Notes for iPhone, Android and BlackBerry*. **The former application contains enhanced transcription traits to complement NaturallySpeaking®:** <http://www.quicktypist.com>

#### 4. Summary of recommendations for best use and performance of the SpeechMatic USB MultiAdapter

Usage	Recommendation	Comments
1. Speech Recognition with a <b>New</b> User Profile and <b>LOW</b> sensitivity headset - <b>LOW</b> ambient noise	<ul style="list-style-type: none"> <li>Set the LONG-RANGE Mode [<b>Green LED</b>]</li> <li>Calibrate and always run a General and Extended Trainings</li> </ul>	Keep the dictation distance between 2.5 to 5 cm [1" to 2"] for maximum accuracy. Occasionally, you may need to place yourself closer to the microphone during the 'Check Microphone' to pass the Audio Setup. Train...
2. Speech Recognition with an <b>Existing</b> User Profile and normal sensitivity headset - <b>LOW to MODERATE</b> noise	<ul style="list-style-type: none"> <li>Set the NORMAL/VOIP Mode [<b>Blue LED</b>]</li> <li>Calibrate Microphone and Run an additional Extended Training with the current Profile</li> </ul>	Keep the dictation distance at 5 cm to 12 cm [2" to 5"] for maximum accuracy
3. Telephony and HD Voice over IP, as well as Voice recording	Set the NORMAL/VOIP Mode [ <b>Blue LED</b> ] and keep the unit at the recommended 5 cm to 12 cm [2" to 5"]	Using the LONG-RANGE Mode [ <b>Green LED</b> ] for this purpose may generate undesirable echo!

#### 5. Optional recommended accessories to complement your working experience with the SpeechMatic USB MultiAdapter

- Optional 90° elbow fixed and 180° pivoting USB connectors, as well as small mini gooseneck boom (18 cm or 7"), to become the industry first USB TravelMike (the latter connector under development)
- Optional thumb sized, smaller and pivoting microphone boom, ideal for Voice over IP (VoIP) or Internet telephony (under development)
- Optional USB base or docking station offering two additional USB ports and universal Flash memory reader (easier transfer of digital recordings for transcription)
- Optional USB speaker for the base (under development)
- SpeechWare FlexyMikes: the lightest and most comfortable microphone headset range in the market to connect into the built-in Sound out jack for very noisy environments