

USB 3-in-1 TableMike Desktop Microphone

(1) USB interface with Sound Ports, (2) Detachable Boom and (3) Speech Equaliser for Speech recognition, Voice & Music recording, and Wideband or High Definition VoIP

1. INTRODUCTION

The release of *Dragon NaturallySpeaking 11*® 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 desktop microphone to exploit fully the challenge posed by these two nascent developments: **harness the full capability of this speech engine; and provide unmatched voice clarity for VoIP users.** Moreover, the performance of this new desktop microphone **has to be comparable to that of the best professional headsets; freeing users from the need to wear a headset or being physically tethered to a computer, while dictating or talking.**

Welcome to **the multipurpose USB 3-in-1 TableMike**, the basic award-winning model from this family of desktop microphones by SpeechWare. Unlike competing products adapted for PC and Mac use; this microphone has been designed and engineered with the support of an international advisory committee with unparalleled experience in microphone technology and speech recognition. The team comprised of Mr. Lindsay Adam, Mr. Larry Allen, Mr. James Carr, Mr. Peter Maddern, Mr. Lunis Orcutt, Mr. Enrique Padilla, Mr. Chuck Runquist, Mr. Thilo Voelter, Mr. Jon Wahrenberger and Mr. Rüdiger Wilke. We invite feedback from customers on ways that our product can still be improved.

The **multipurpose USB 3-in-1 TableMike** for Speech Recognition, Voice & Music Recording and High Definition (HD) Voice over IP, features **an industry first 'Speech Equaliser'** and is specially suited for: **Speech Recognition.**

Under **'Normal' or HD VoIP mode**, it is ideal for:

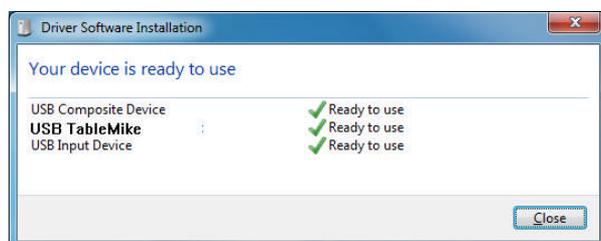
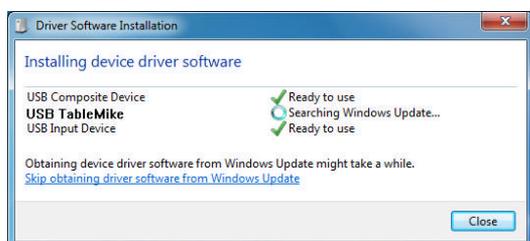
- Voice and Music recording;
- Full duplex (simultaneous Sound in and out) Wideband or High Definition (HD) Internet telephony (VoIP);
- Full duplex HD Video conferencing;
- HD Podcasting.

The TableMike has been rated **Best in Class with a '5 Dragon' award by Nuance**, since its inception 5 years ago. It is full compatible with *Windows*® 7, *Vista*®, *XP*®, *2000*, *MacOS*® X v. 10 and *Linux* as well as *Dragon NaturallySpeaking*®, *Windows*® *Speech Recognition* and other recognition engines.

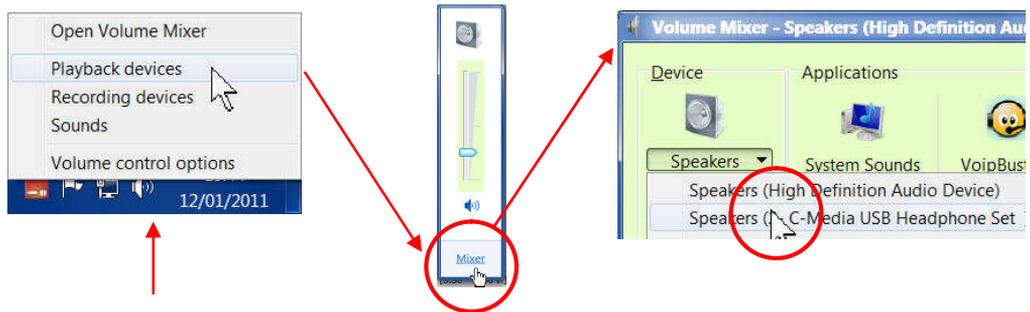
2. OPERATING INSTRUCTIONS

2.1. Installation procedures for *Windows*® 7, *Vista*®, *XP*®, *2000* & *Mac OS*® 10 or higher

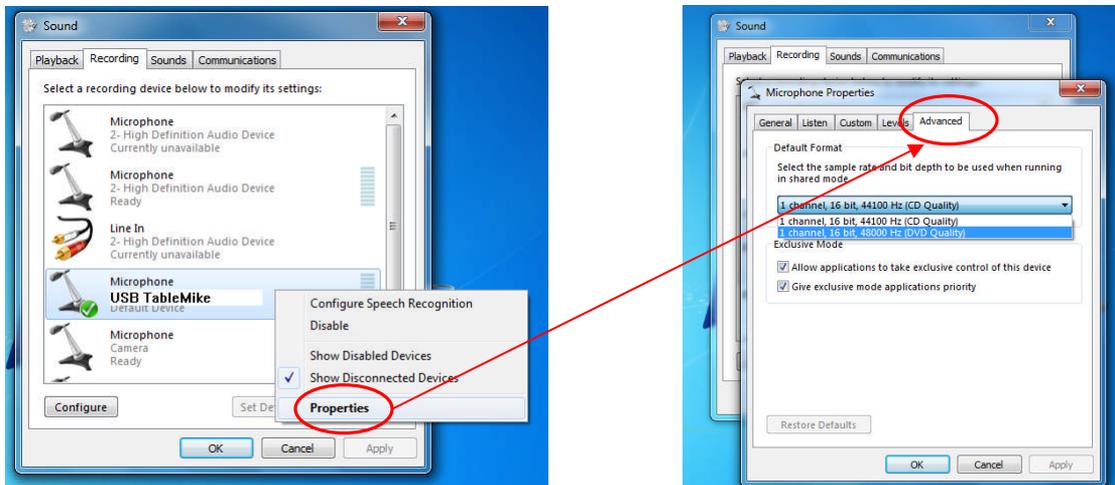
Carefully insert the gooseneck boom into the female mini-XLR connector of the base unit. Cover the microphone element with the windscreen provided to avoid unwanted speech degradation, and to offer it an additional layer of protection from dust and saliva. Plug the specially insulated USB cable to the USB ports of the microphone and the PC. Connect the cable to a **DEDICATED** USB port on the computer. **DO NOT USE** any other USB cable or a multiple USB Splitter or USB Hub device to connect the microphone 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 USB connectors are properly inserted in both ends. Wait a few seconds for *Windows*® to automatically install the corresponding USB sound drivers:



After completion of the installation, *Windows*® 7 will select the **'USB TableMike'** as both the Recording and the Playback Driver or Device of choice, and will make it available for all applications. Hence, **you will not hear any sound or playback if a Speaker or Headset is not plugged in the Sound out port** (rear of the base unit). To change this setting, with *Windows*® 7, click the **Speaker Icon** in the lower right hand corner of the *Windows*® bar and choose **'Playback devices'**. Click the **'Mixer'** link to open the **'Volume Mixer'**. Select **'Speakers'** and choose other available Device to be used (normally the built-in PC Speaker). The procedure is similar under *Windows*® *Vista*®, *XP*® and *2000*:

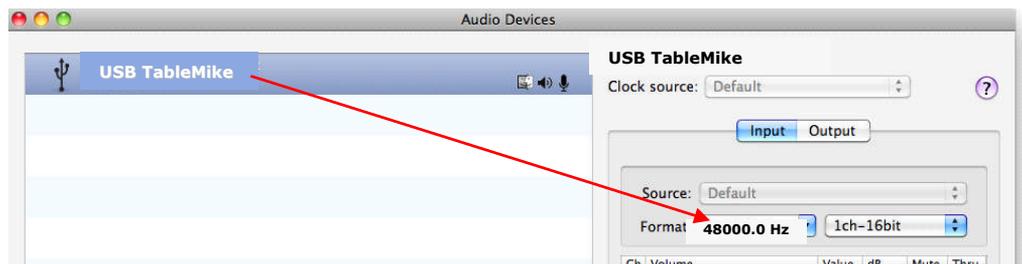


You can also go to '**Control Panels**', '**Sound**' and select the '**Playback**' tab to achieve the same result. Also, in the '**Sound**' window click the '**Recording**' tab and check that the '**USB TableMike**' is the '**Default Device**'. Select and click-right on it. Click '**Properties**', '**Advanced**'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



2.2. Additional instructions for MacOS® X v. 10 or higher

Open up '**Audio MIDI Setup**' located in '**Utilities**' under '**Applications**'. Select now the '**USB TableMike**' from the list of devices, if you have more than one. Select the '**Input**' tab and choose '**48000.0 Hz**' and '**1ch – 16 bits**' from the pull-down menus under '**Format**'. Adjust the **Volume slider** as needed:



3. Working with NaturallySpeaking® 11 under Windows 7®, Vista® or XP®

Due to the uniqueness of the built-in '**Speech Equaliser**' for best performance and recognition accuracy under low to moderate noise with *NaturallySpeaking®* **we strongly recommend you create a NEW USB User Profile with the Green LED on**. To do this:

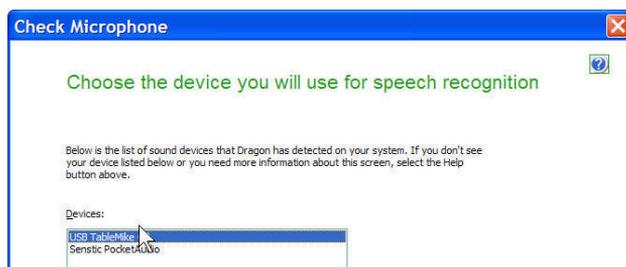
- Check the **Push Button** microphone DIP switch under the base of the microphone. It has three different settings: '**Always On**', '**Push to Talk**' and '**Push to Lock**'. The second is selected by default. Press the '**Push**' button and the Red colour LED in the base will change and remain Green - recommended Speech Recognition usage.
- In this special mode, the microphone will substantially increase both voice pick-up and noise cancelling levels ('signal to noise ratio' to deliver extremely high transcription accuracy from 10 cm up to an amazing 50 cm (4"-20") range, depending on your voice and ambient noise, comparable to that of the best headsets. **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 *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®* when making hitting noises near the microphone. This will not affect accuracy.

- c) Note that *NaturallySpeaking*® may also display the following Error messages **if the aforementioned ranges and conditions are not observed**:

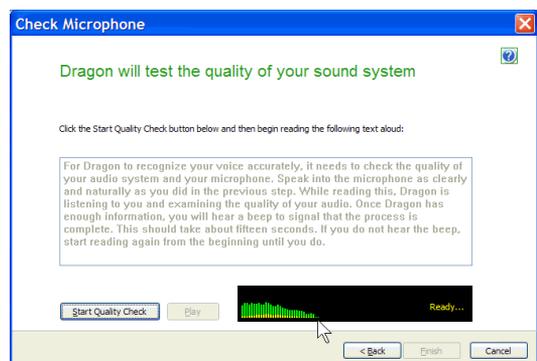


Note that you may also use **your existing User Profile with the other 'Normal' or HD VoIP mode**, available when pressing the **Normal / Sp. Rec. EQ** button again (the LED turns Blue). In such a case, you must not only **Calibrate but also Rerun General Training for maximum accuracy**. Open the existing User Profile, click in the **'Audio'** menu and then select **'Check microphone...'**. Whatever procedure you choose, *NaturallySpeaking*® will present you with the following sequence of windows. Proceed like this:

- a) First, *NaturallySpeaking*® will check your soundcards. 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 **'USB TableMike'** and click **'Next'** in the first window. Position yourself within the recommended distance from the *TableMike* microphone capsule (25 cm or 10") depending on your voice 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 volume, making short pauses (3 to 5 seconds) at each punctuation sign**. In this way, both your voice and pauses (silence) will be properly 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 be sure that you get the most optimal signal-to-noise ratio, run the Check Microphone process in the environment in which you will be dictating by dictating **'Check Audio'**. 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.

If you wish to use the *USB TableMike* as a **high quality voice recorder and instead of a digital one to automatically transcribe your recordings**, download a free recording application such as the *Audacity* (<http://audacity.sourceforge.net>) and save your recording in a standard sound format such as: wav, MP3 or wma providing at least 16 bits, 11,025 Hz, mono --22,000 Hz will be better with *NaturallySpeaking® 11*. You may also want to download and try for 30 days our *Transcription Aid to transcribe and edit those recordings with many more useful options than NaturallySpeaking®* from: <http://transcriptionaid.net/download/index.php>

Download and install a free 15 day trial of *SpeechControl for TableMike (SCT)*, incorporating software exclusively developed by PCByVoice for SpeechWare, an application to start or restart (if it is locked up) *NaturallySpeaking®*, as well as switching on the microphone from the off state (red icon) and other amazing features, all by voice from: www.tablemike.com/speechcontrol

4. Optional recommended accessories to complement your working experience with the TableMike

- The Fix-to-table or Wall-Mount-Adapter for safety and greater practicality.
- The industry first 38-55 cm (15"-19") Telescopic microphone boom for more flexibility and range.
- A special 25 cm (10") long Hypercardioid shotgun mic for maximum ambient or background noise rejection.
- The FlexyMike: one of the lightest and most comfortable headset in the market to connect in the back of the microphone www.speechware.be/en/hardwareFlexyMike.php

Specifications (*major innovations highlighted in blue*)

- USB interface (v.1 and 2.0 compliant) with audio output **and input Sound ports**
- **Detachable boom** with professional **hi-fi mini-XLR connectors** for easier removal, portability and storage
- **Speech Equaliser** for optimum Speech recognition performance (**like a headset!**) and **Normal or HD VoIP mode**

Operating System: Windows® 7 / Vista® / XP® / 2000 / MacOS® X v. 10 or higher / Linux without USB Sound drivers

Compatible voice applications: *Dragon NaturallySpeaking®*, *Microsoft Speech for Windows®*, *ViaVoice®*, etc.

Capsule type: Back Electret Condenser with Cardioid Polar Pattern

Control Panel: **Digital buttons to avoid unwanted noise 'clicks'**

Push Button modes: **Always On / Press to Lock / Press to Talk**

Sensitivity: -47 dB@1kHz, SPL=1Pa

ADC sample resolution and rates: 16 bit mono and up to an **exceptional 48 kHz for both Recording and Playback** (maximum of 22 kHz in the best competing devices!)

ADC SNR: an exceptional 92 dB@ fs=48kHz, 1kHz at 1 Pa

ADC THD: an exceptional 0.003% @ fs=48kHz, 1kHz at 1 Pa

Frequency response and Output Impedance: 80 - 20,000 Hz and 1700 ohms

Sound ports: Standard 3.5 mm mono mic-in and 3.5 mm stereo out with 2 Watts

Power supply: from the USB port of the PC (no need for batteries!)

Other unique features: Automatic Gain Control (AGC), High and Low Pass filters, Digital Signal Process (DSP)

Dictating distance (in Speech Equaliser mode): from a minimum of 10 cm up to 50 cm (4"-20") and more, depending on your voice and ambient noise (*NaturallySpeaking®* will warn in case of a weak signal). Optimal distance 25 cm or 10"

The screenshot shows the 'Support' page for TableMike, specifically the 'Hardware Compatibility List'. The page is divided into a left sidebar with navigation links and a main content area titled 'Evaluation Report'. The sidebar includes links for 'Support', 'Overview', 'Phone Technical Support', 'E-mail Technical Support', 'Free Online Support', 'Knowledge Base', 'Downloads', 'User's Guides', 'Hardware Compatibility List', 'Product Activation', 'Product Registration', and a 'Register online' link. The main content area displays technical details for the 'USB 3-in-1 TableMike' model, including the manufacturer 'Speech Recognition Ware', device category 'Desktop Microphones', an accuracy scale of four red stars, and a 'Nuance Certified' compatibility category. A red circle highlights the 'Manufacturer' and 'Model' fields. The 'Summary' section provides a detailed description of the microphone's features and performance, such as its unidirectional design, flexible boom, and various control buttons.

For the latest version of this document, check: www.tablemike.com/support/