

INSTALLATION MANUAL

AVANTTM *REM Speech⁺*



MedRx[®]

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#0086



www.medrx-usa.com



1200 Starkey Rd., #105, Largo FL 33771 U.S.A.

Toll Free: (888) 392-1234 • (727) 584-9600

Fax: (727) 584-9602 • Email: medrx@medrx-usa.com



MedRx's Authorized Representative in Europe

(Regulatory affairs only)

Emergo Europe, Molenstraat 15

2513 BH The Hague, The Netherlands

Tel: (31) (0) 70 345-8570 • Fax: (31) (0) 70 346-7299

Getting to Know Your AVANT REM Speech⁺

The AVANT REM Speech⁺ represents a new era of precision in-situ verification for your office. Compact yet rugged, this PC-Based system is USB powered and supports ANSI and IEC Real Ear tests. The software includes targets for **DSL i/o 5.0** and **NAL-NL-1**. A unique feature of the REM Speech⁺ is simultaneous, binaural Live Speech Mapping, MedRx's in-situ method for getting the fitting right the *first* time, *every* time. The following section of this manual will familiarize you with the physical features and accessories of the REM Speech⁺ system.



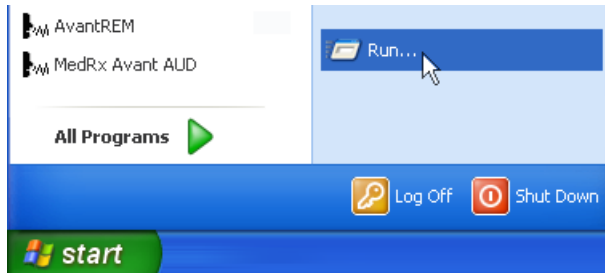
Front View



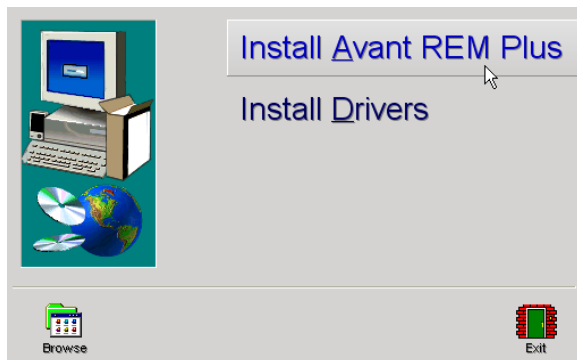
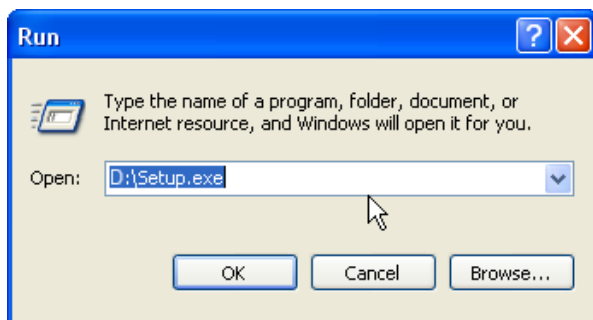
Rear View

Software Installation

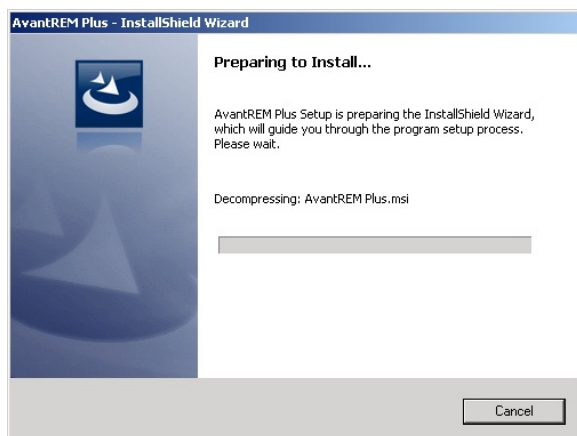
Do Not Plug in the AVANT REM Speech⁺ USB Cable yet!



- Insert the AVANT REM Speech⁺ CD-ROM into the CD drive. Wait until the **Setup program starts**.
- If the Setup program does not automatically start, click:
 - **Start.**
 - **Run.**
 - Type **D:\Setup.exe** in the window where 'D' is the drive letter assigned to the CD ROM drive on your computer.

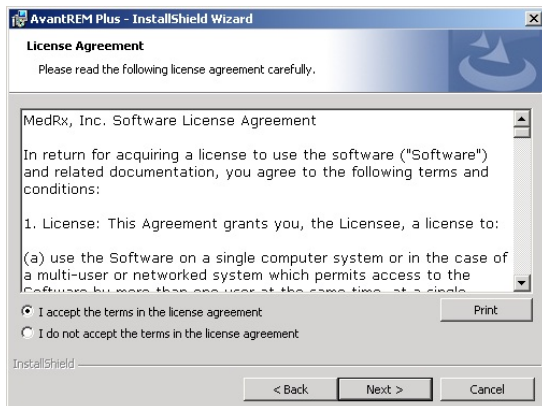


- On the Setup screen, choose **Install AVANT REM Plus**.



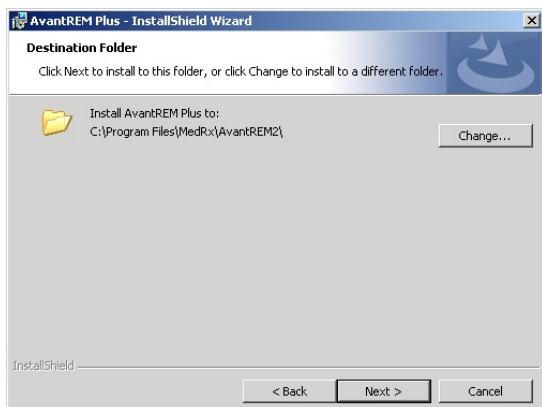


- This is the Welcome screen.
- To continue, Click **Next**.

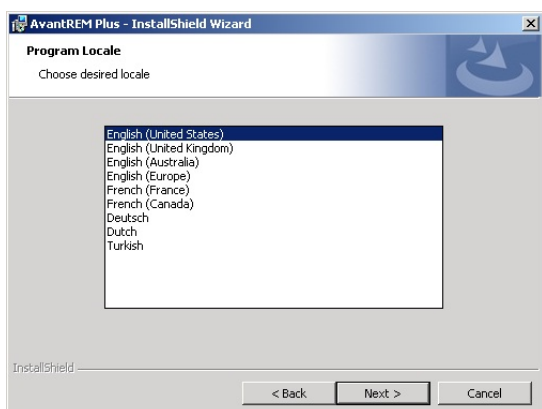


- Read the Software License Agreement. This important document defines the acceptable usage of the REM Speech⁺ software.

After reading the Agreement, click **Next**.

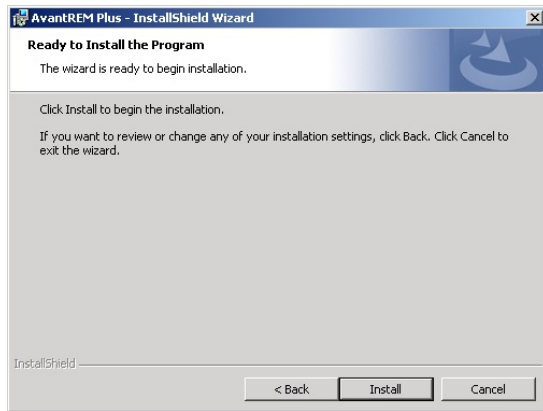


- This screen indicates the location of the program files. The default location is recommended for most users; however, this location can be changed if necessary.
 - To continue with the default settings, click **Next**.
 - To change the location of the files (advanced users or system administrators only) click **Change**.
 - To continue, click **Next**.
 - To make changes, click **Back**.

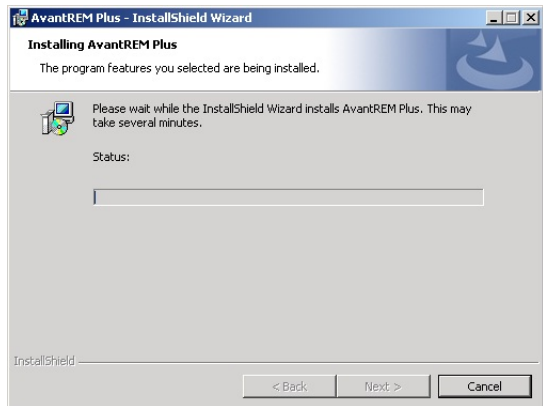


- Select the language and locale you want to use on this screen using the radio buttons.

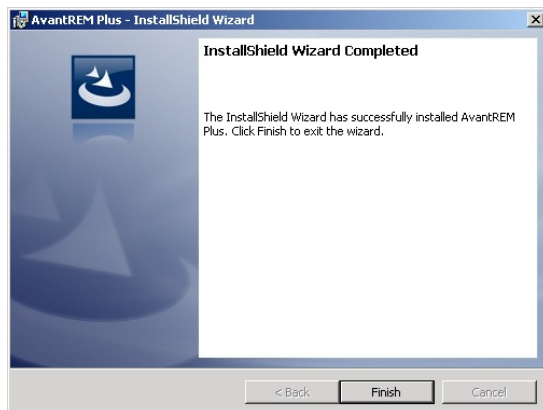
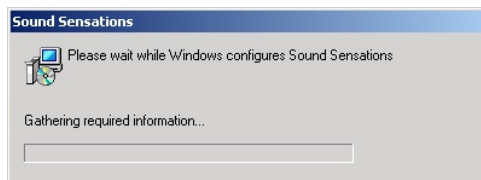
Click **Next**.



- To Start the installation, click **Install**



- Wait for the installations to finish



- When the installation is complete,
- Click **Finish**.

Driver Installation – Windows 7

(see page 12 for Windows XP Driver Installation)

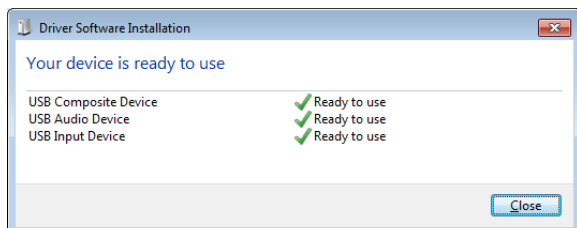
IMPORTANT – PLEASE READ BEFORE PLUGGING USB CABLE INTO YOUR COMPUTER



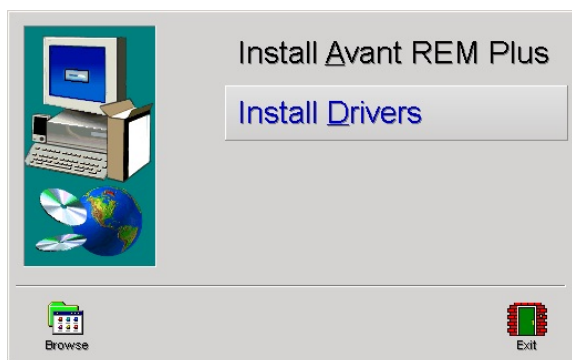
Your AVANT REM Speech+ is powered by a USB cable connection to your computer.

Do not plug the USB cable into a separate multi-port USB HUB. The AVANT REM Speech+ must be plugged into a USB port located on your computer, not a hub.

1. Connect the AVANT REM Speech+™ to your computer as shown above, or use the included USB extension cable between the REM Speech+ and the computer.
2. Wait for the system to copy and install default drivers. During this process, you will see the following screen.



3. When this screen appears and all devices are "Ready to use", click **Close**.



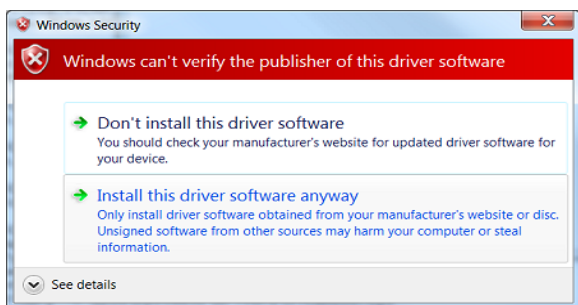
4. On the Avant REM Plus Setup screen, click **Install Drivers**.



5. On the Driver Setup screen, click **Install Device A**.

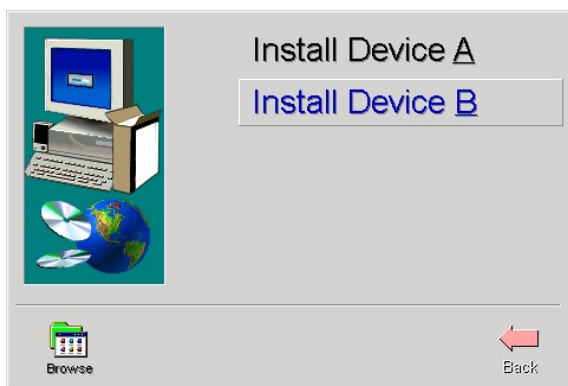


6. When this screen appears, click **Ok**.

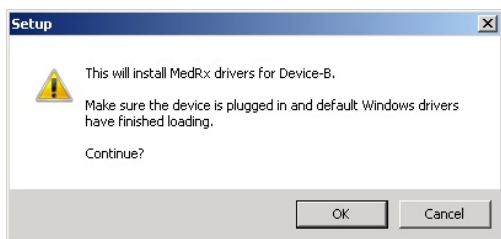


7. If this warning screen appears, click **Install this driver software anyway**.

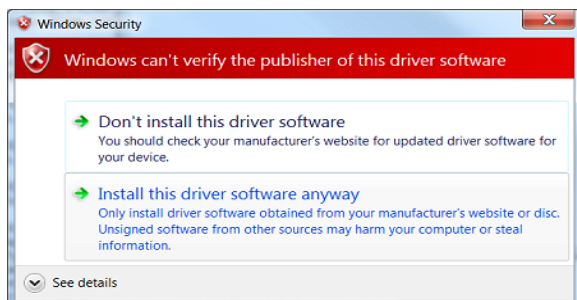
Note, this may take several minutes.



8. On the Driver Setup screen, click **Install Device B**.

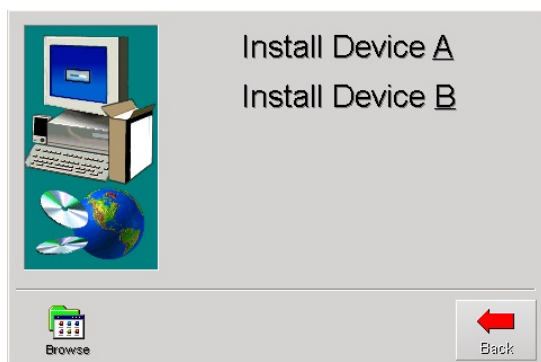


9. When this screen appears, click **Ok**.

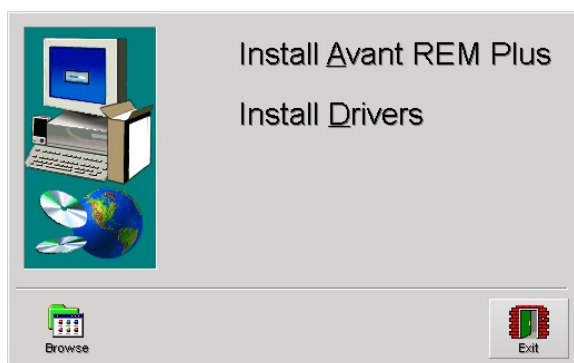


10. If this warning screen appears, click **Install this driver software anyway**.

Note, this may take several minutes.

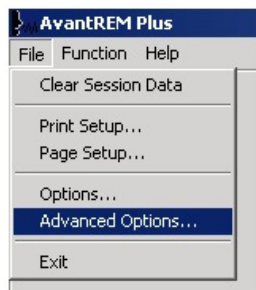


11. When this screen appears, click **Back**.

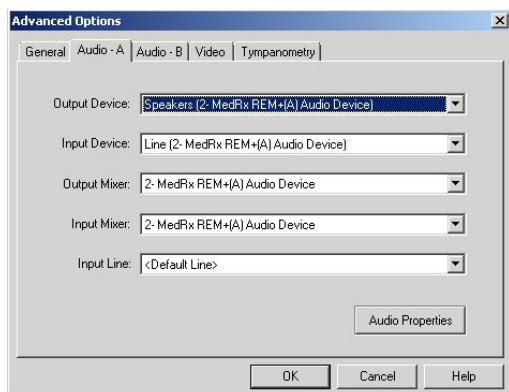


12. On Setup Window click **Exit**

Next you need to set the Default Windows sound card settings. This will route all non-AVANT™ Windows sounds to the internal sound card of your computer. These sounds include event notifications such as new e-mail and error warnings as well as audio and video playback.

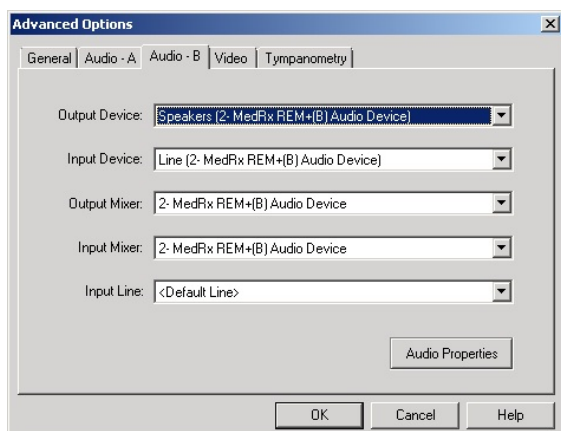


1. Launch the **REM Plus** software.
2. Open the **Advanced Options** from File menu as shown.



3. Open **Audio—A** tab.

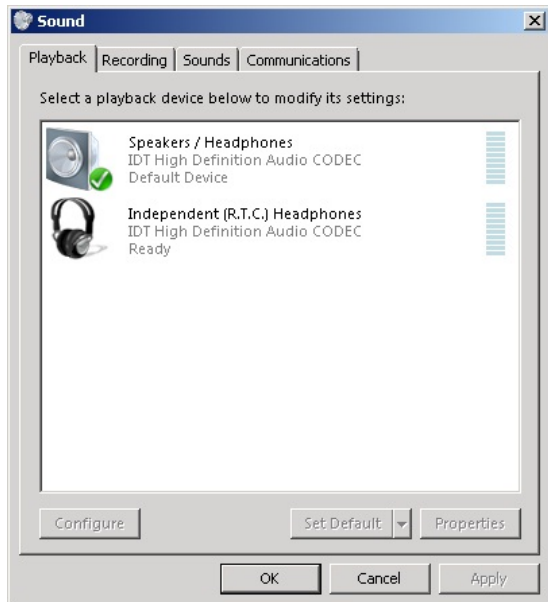
4. When the audio properties are configured properly, during driver installation, the Audio Tab will appear like the image on the left. If not, use the pull-down lists to adjust the settings to match the image.



5. Open **Audio—B** tab.

6. When the audio properties are configured properly, during driver installation, the Audio Tab will appear like the image on the left. If not, use the pull-down lists to adjust the settings to match the image.

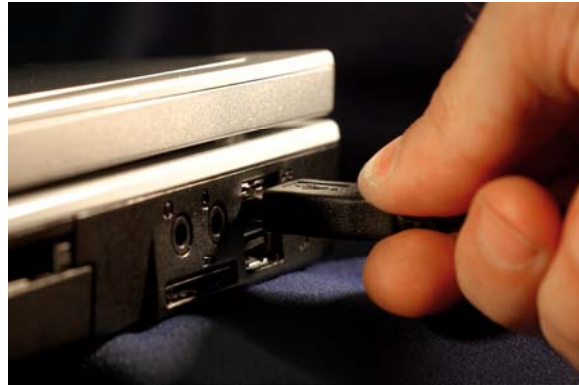
7. Click **Audio Properties**.



8. In Windows Sound control panel, make sure the MedRx Audio Device is not set as default. If it is default, change this by clicking on your system (non-MedRx) audio device and then choose Set Default.

NOTE: The internal sound card on your computer will likely not have the same name as this screen shot. Consult your computer's documentation for the name of the internal sound card and set this control accordingly.

Driver Installation – Windows XP



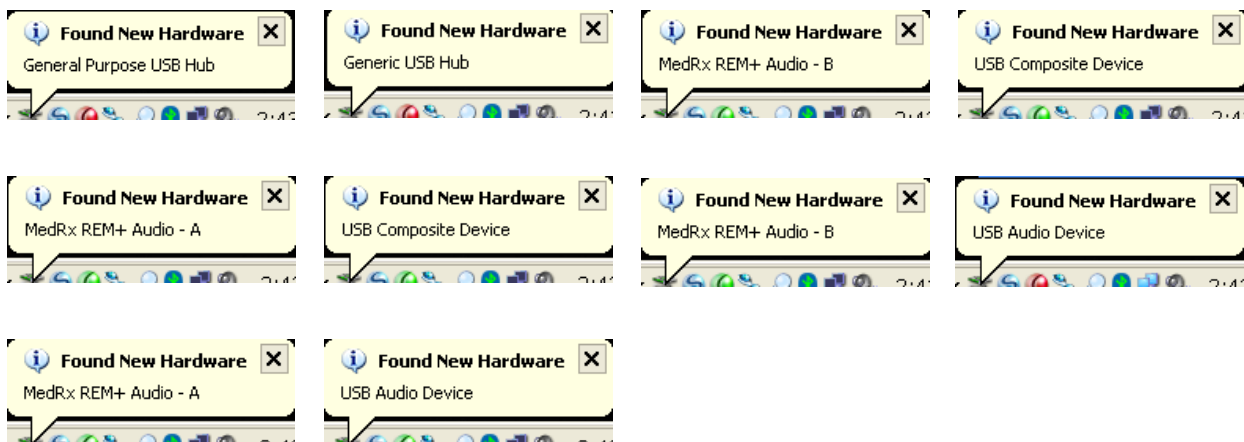
Connect the USB cable from the AVANT REM Speech⁺ to your computer as shown below.

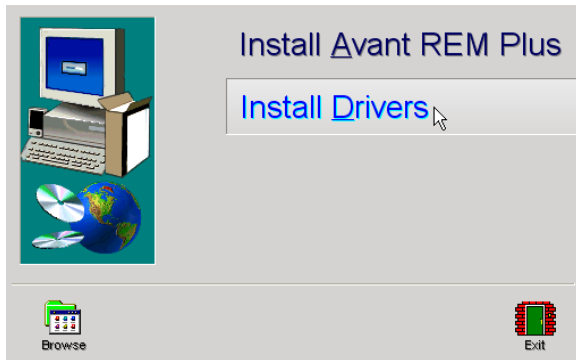
IMPORTANT – PLEASE READ BEFORE PLUGGING USB CABLE INTO YOUR COMPUTER

Your AVANT REM Speech⁺ is powered by a USB cable connection to your computer.

Do not plug the USB cable into a separate multi-port USB HUB. The AVANT REM Speech⁺ must be plugged into a USB port located on your computer, not a hub.

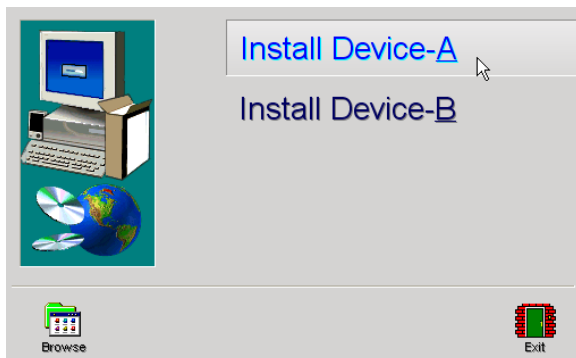
Wait for the system to copy and install default drivers. During this process, you will see the following prompts in your system tray (lower right corner of the screen).





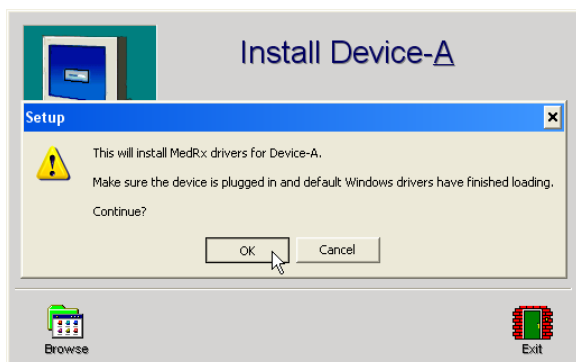
1. After the default drivers have been installed.

- Click **Install Drivers**.



2. When this screen appears,

- Click **Install Device-A**.



3. When this screen appears,

- Click **OK**.

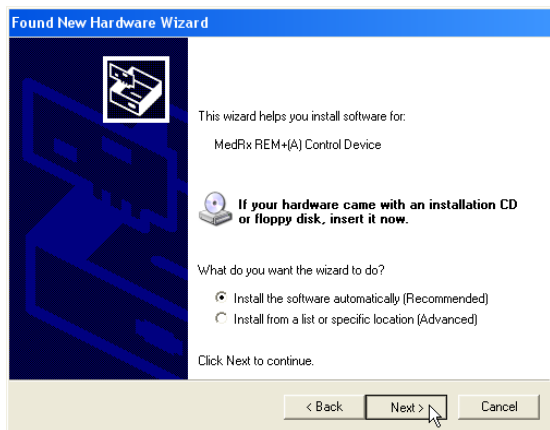


4. When the driver signature check screen appears,

- Click '**Continue Anyway**'.



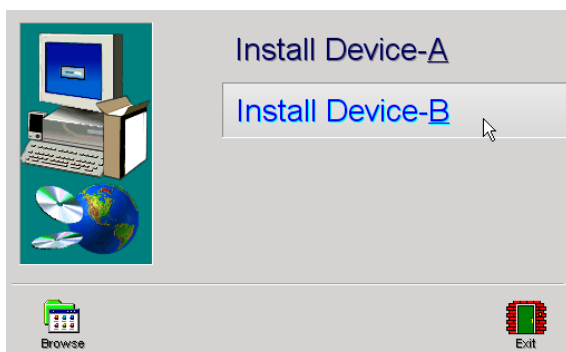
5. When this window appears,
 - Select **“No, not this time”**.
 - Click **Next**.



6. When this screen appears,
 - Select **“Install the software automatically (recommended)”**.
 - Click **Next**.



7. When the driver installation is complete, this screen will appear.
 - Click **Finish**.



8.
 - Click **Install Device-B**.
 - Repeat steps 2 through 7 above for Device B.
9. Exit the Setup screen when the driver installation is finished.

EMC Precautions

The Avant REM Speech + needs special precautions regarding EMC and needs to be installed and put into service according to the following EMC information.

List of all cables and maximum lengths of cables, transducers and accessories:


Transducer / Accessories	Maximum Cable length
USB Cable	2,9 meters
REM Probe	2,9 meters
All Headsets	2,9 meters
All Speakers	2,9 meters

Warnings!

- The use of accessories, transducers and cables other than those specified, with the exception of transducers and cables sold by the manufacturer of the Avant REM Speech + as replacement parts for internal components, may result in increased emissions or decreased immunity of the Avant REM Speech +.
- The Avant REM Speech + should not be used adjacent to or stacked with other equipment and if adjacent or stacked use is necessary, the Avant REM Speech + should be observed to verify normal operation in the configuration in which it will be used.
- The Avant REM Speech + may be interfered with by other equipment, even if that other equipment complies with CISPR emission requirements.
- The Avant REM Speech + does not have life supporting function
- Portable and mobile RF communications equipment can affect the Avant REM Speech +.

Guidance and manufacturer's declaration – electromagnetic emissions		
The Avant REM Speech + is intended for use in electromagnetic environment specific below. The customer or the user of the Avant REM Speech + should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Avant REM Speech + uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Avant REM Speech + is suitable for use in all establishments, including domestic establishments and those directly connected to the public low - voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Non applicable	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Non applicable	

Guidance and manufacturer's declaration – electromagnetic immunity			
The Avant REM Speech + is intended for use in electromagnetic environment specific below. The customer or the user of the Avant REM Speech + should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	+/- 6 kV contact +/- 8 kV air	+/- 6 kV contact +/- 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient / burst IEC 61000-4-4	+/- 2 kV for power supply lines +/- 1 kV for input / output lines	+/- 2 kV for power supply lines +/- 1 kV for input / output lines	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50/60 Hz) Magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.


Guidance and manufacturer's declaration – electromagnetic immunity			
The Avant REM Speech + is intended for use in electromagnetic environment specific below. The customer or the user of the Avant REM Speech + should assure that it is used in such an environment.			
Immunity test	IEC 60601- test level	Compliance level	Electromagnetic environment - guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the Avant REM Speech +, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance:
Conducted RF IEC 61000-4-6	3 V _{eff}	3 V _{eff}	$d = 1,17 \times \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 1,17 \times \sqrt{P}$ 80 to 800 MHz $d = 2,33 \times \sqrt{P}$ 800 MHz to 2,5 GHz
			<p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^a, should be less than the compliance level in each frequency range ^b.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency ranges applies.	
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.	
a	Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Avant REM Speech + is used exceeds the applicable RF compliance level above, the Avant REM Speech + should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Avant REM Speech +.
b	Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between Portable and mobile RF communications equipment and the Avant REM Speech +			
The Avant REM Speech + is intended to use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Avant REM Speech + can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Avant REM Speech + as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter meters		
	150 kHz to 80 MHz $d = 1,17 \times \sqrt{P}$	80 MHz to 800 MHz $d = 1,17 \times \sqrt{P}$	800 MHz to 2,5 GHz $d = 2,33 \times \sqrt{P}$
0,01	0,12	0,12	0,233
0,1	0,37	0,37	0,74
1	1,17	1,17	2,33
10	3,7	3,7	7,40
100	11,7	11,7	23,3
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Safety

Regarding electrical safety, this device is to be used only by professionals in the hearing healthcare industry.

It is Class II Medical Electrical (ME) equipment that is part of an ME system.  Power is supplied by the USB cable connected to a computer. The USB computer power must be able to supply at least 400mA at the standard USB voltage. An in-line optical isolator with medical power supply is recommended to achieve optimum safety. A medical grade computer is recommended and a medical grade isolation transformer will help minimize ground current. It is recommended that powered speakers are connected to an isolation transformer. The use environment should be between 10°C and 35°C, humidity within 30% to 90%. All components with patient contact are made of bio-compatible materials. The device warm-up time is less than 2 minutes.

The colored lights on the device conform to the standard color designations for audiology. They signify that either the left (blue) channel is active or the right (red) channel is active, or no channel is active (green). The colors do not signify any dangerous or faulty condition. Mild soapy water is the preferred cleaning solution.

All repairs should be sent to Medrx for evaluation and / or repair.

Symbols that may be used:



Read the instruction manuals for safe usage of the device. (operating instructions)



or **SN** Indicates that the device serial number will follow.



Type B applied part.



Manufacturer (Medrx)



Authorized Representative in Europe

Congratulations

Your MedRx system is now set up and ready for use. Please consult the Training Manual and the Interactive Help Files within the software for instructions and procedures. The Training Manual is available in PDF format on CD and at www.medrx-usa.com in our Download Section.

Limited Warranty

MedRx, Inc warrants this product to be free from defects in material and workmanship for one year from the time of purchase. If this system fails to perform as specified during this period, the purchaser is responsible for calling MedRx at (888) 392-1234 or (727) 584-9600. The company's representative will advise the owner to either return specific components or the entire system to:

MedRx, Inc.
1200 Starkey Road #105
Largo, FL 33771 USA

MedRx will repair or replace any defective devices, fully test the system and/or components and ship the system promptly back to the owner. There is no cost for the repair or return shipping, provided the system is one year old or less and has not been misused, abused or damaged. Such damage includes, but is not limited to, dropping, exposure to excessive heat greater than 100°F and water/liquid damage.

Repair or replacement of the system as provided under this warranty is the sole and exclusive remedy of the purchaser. MedRx shall not be liable for any consequential or incidental damages or for breach of any express or implied warranty. Except to the extent of applicable law, any implied warranty, merchantability or fitness of this product is limited to the duration of this warranty.

MedRx will, at its discretion, service and repair out of warranty products at the purchaser's request, charging for parts and labor as necessary.

The limited warranty is deemed void if software or hardware is installed on this product which is not pre-approved by MedRx, Inc. Approved software includes NOAH™ and HIMSA approved hearing aid manufacturer programming modules for fitting hearing aids.

MedRx, Inc is not responsible for problems resulting from installation of unapproved software or hardware. In the event of unapproved software or hardware installed on the system causing a conflict, MedRx will service the product for a fee to be determined at the time of service.

Any extension of this warranty past the initial one-year warranty is subject to the following (where applicable).

1. A \$300 deductible per repair.
2. Extended warranty does not include cables, connectors or peripherals.
3. Extended warranty of the Video Otoscope covers optics only.



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