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'To Care and to Cure'

Hello!

This booklet is intended for individuals living with Motor Neurone Disease (MND), other individuals living with a condition which leads to a loss of voice, as well as their families.

This booklet has 2 sections.

Section 1 provides general information on voice banking, what it is and who it is for. It also provides general steps for voice banking and a summary table of different programs you can use to voice bank.

Section 2 has specific step-by-step instructions of each of the voice banking programs mentioned in the summary table to help you voice bank independently at home.

If you have any questions, please contact a Speech Pathologist for help.

Please note this is the original intellectual property of Stacey Verner-Wren however, this resource is free to be shared amongst patients, carers and health professionals for the purpose of voice banking.

Developed by Stacey Verner-Wren, in collaboration with University of Queensland Students: Peggy Ching, Ellen Cook, Lauren Hose, Roshni Lad, Sarah Moller, Ashlee Spark, Sarah Wong, & Sammie Yip

Voice Banking FAQs

What is Voice Banking?

Voice banking is a way for a person to record and store their own voice to use at a later date when they may have trouble speaking. You record your voice and then the sounds are broken down to create a synthetic version of your natural voice. After a person records their voice, it can be used on a smartphone, tablet, computer or other communication device. These devices are called 'speech generating devices'. When using these devices to communicate, you can type or use pictures to create words and sentences.

Who is Voice Banking for?

Voice banking is for anyone who may experience worsening of their speech. It is an option for people living with MND due to the worsening nature of the condition. Most people's speech and voice will change but it will progress differently and at varying rates, which is why it is important that people know of this process and have the option to get started right away if voice banking is suitable for them.

Unfortunately, some people may already have speech that is too slurred to make a clear recording. If this is the case for you, you may still be able to voice bank however, the end result will sound like your current slurred speech and may be difficult for others to understand. This is why it's best to start voice banking early.

"As soon as you're diagnosed, get as much done as you can!"

There is a list of **voice banking program options** to consider in the table on page 11 of this booklet.

SECTION 1

When should I begin?

It is important to **start as early as possible**, even before you have any speech changes, so the voice you record will sound the most like your own, original voice. It can be very upsetting to think about possibly losing your voice. If you would like to give voice banking a go, try not to wait too long before starting.

What will my recorded voice sound like?

Your recorded voice should sound mostly like your natural voice.

See this video comparing natural voice and a synthetic voice created using a voice banking program: https://www. youtube.com/watch?v=-kF33MYAggs

What will I need to voice bank?



Computer or laptop in a quiet recording space



Internet access using Google Chrome. You can download Google Chrome from this link:

https://www.google. com/intl/en_au/chrome



Good quality microphone headset* (some programs will provide you with this)

- * Specific microphones may be recommended by companies, however these can sometimes be unavailable to purchase in Australia
- # If you are unable to loan a suitable microphone headset you could purchase a high quality pair e.g. Jabra Evolve 40 UC Stereo Headset with USB connection

What are my options if I can't bank my voice?

Voice banking may not be right for every person. Common reasons why someone may not voice bank may be:

- * Your speech is already too slurred to make a clear recording
- You are unable to complete, or you decide you do not wish to voice bank
- * You do not intend on using a speech generating device in the future.

Here are some options to consider if voice banking is not right for you:

- 1. You can use other ways to communicate like using a symbol or picture board, which are called low-tech options. You could also use computers and specialised communication devices which are called high-tech options. These high-tech options usually have a range of good quality voices already stored in them, but they may not sound like you and often do not offer an Australian accent. Apps like these include: Predictable \$169.99, Verbally free and Prologuo2go \$199.99.
- You can have a family member or friend record their voice for you, which may be a closer match than the voices provided in a high-tech app.
- Some voice banking programs can also create a custom voice for you based on only a short amount of recorded speech (e.g. VocaliD – BeSpoke Voice).
- 4. You can consider **message banking**. This is a simpler and quicker option than voice banking and will be an exact recording of your voice.
 - * In message banking, you record important phrases and store them on a speech generating device to play back later.
 - Note: You can only use the phrases you have recorded.
 - *You can get a free service from this link: https://www.tobiidynavox.com/software/web-applications/message-banking-2/

Do I need help from a speech pathologist to voice bank?

The purpose of this booklet is to allow people to voice bank at home by themselves, without having to wait for assistance from a speech pathologist.

- Option One: If you're feeling confident and are technology savvy, start right away!
- * Option Two: If you are feeling overwhelmed, do not be afraid to ask for support from the contacts listed below. If you are having difficulty, you may need to find a speech pathologist to help you with some parts. You may benefit from seeing a speech pathologist at the **beginning** and **end** of the process, but you may be able to complete most of the recordings by yourself.

Who can I contact for help?

- 1. Your **doctor** can help you get a referral to a speech pathologist.
- 2. MND and Me for people living in Queensland
 - *This foundation can assist in loaning headsets
 - *Provide \$130.00 in funding if you choose to use ModelTalker as they are a registered provider.
- 3. MND Australia https://www.mndaust.asn.au/Home.aspx
 - *Each state has their own MND association. You can see your state's MND association website for help.
 - *They can refer you to people who can help you with voice banking in the local community, like speech pathologists and can also loan equipment.
 - *Information on funding:
 - https://www.mndaust.asn.au/Find-help/Government-support.aspx

Information About Voice Banking

General steps to Voice Banking

Here is a list of some of the most common steps in voice banking.

- Choose a voice banking service that suits you and your needs. Refer to the Voice Banking Program Options table on page 11 to help you.
- 2 Register with your chosen program and pay any fees.
- A "set up" test will check that the microphone is working well.
- Record some sentences. The program will check that the recording space and that your voice sounds good.
- If the recordings are okay, continue with the rest of the sentences. It may take more than one try to get the best sound when recording, so keep trying if the first time does not work.
- Once recording is done, the program will create your recorded voice.
- You can download this onto a speech generating communication device that allows you to use your recorded voice.

"Don't be put off by the types of sentences you will be saying – it's about the sounds, not the words!"

Tips for a good recording

- For your voice recordings to sound nice and clear, the most important thing is to try and keep each recording session the same as the one before.
- Your voice needs to have the same loudness and speed in all recordings for the best results.
 - Try to use a relaxed voice when recording.
 - Record at the time of day where your voice is strongest (e.g. this might be first thing in the morning before you start to get tired, or before you do a tiring activity).
 - *Take your time! If your voice gets tired or sounds worse, stop the recording session and have a break.
 - *Record in short sessions so that your voice sounds the best.
- * Make sure your microphone is in the same position in each recording session; it should be around 5cm from the corner of your mouth
- Remember to have water before and during the recording session to stay hydrated!

"Don't get frustrated with the process we are all different!"

Tips for a silent recording space

- * You need to record in the exact same space for all of your recording sessions. The best recording space will be somewhere silent or very quiet.
- * Try to record around "soft" surfaces to stop your voice echoing. A room with carpet or curtains will help you get a better recording than a room with lots of hard surfaces like wooden or tiled floors. If you can't find a room with carpet, place blankets around the room when recording.
- Try to remove background noise like appliances, traffic, talking, TV, music etc.
- * Try to record during the quietest time of the day or the quietest area in your house.
- Close any other programs on your computer.

Voice Banking Program Options

On the following page is a table to help you compare the different programs.

- Once you have chosen which program you would like to use for voice banking, we have included in-depth steps on how to do this process in the second part of the booklet: "User Manual for Voice Banking at Home" starting on page 12.
- You might like to share these steps with anybody helping you with the voice banking process.
- * NOTE: For individuals using an online version of this booklet, the titles of each program in the table are linked to their websites. To use these links, hold "Control" and click on each for Microsoft users, and "command" and click for Apple Mac users.

(Please note this information was supplied by voice banking companies in August 2018).

Disclaimer: This booklet focuses on a selection of voice banking programs however there are other options not listed in the booklet.

	Model Talker	My Own Voice	VocaliD	Lyrebird	CereVoice
Process	Record 1600 sentences (Minimum of 400 sentences)	Record 1500 sentences (Minimum of 350 sentences)	Record 2000 sentences in a story format	Record 30 sentences (up to 300 sentences)	Record 620 sentences
Time taken to record	6 – 7 hours	1.5 – 6 hours	5 – 7 hours	10 minutes – 3 hours	2 – 4 hours
Cost (AUD)	\$130	\$1,392 or \$138/year	\$2,100	Free	\$875
Can I try before buy?	Yes	No	No	Free	No
Equipment needed	 Computer/ laptop Internet connection Google chrome web browser USB headset microphone 	 Computer/ laptop Internet connection Google chrome web browser USB headset microphone 	 Computer/ laptop Internet connection Google chrome web browser USB headset microphone 	 Computer/laptop Internet connection Google chrome web browser USB headset microphone 	 Computer/ laptop Internet connection Google chrome web browser Microphone + headset – included in the cost and will be sent to your home
Constant internet connection required when recording?	Yes, but you do not need internet connection if you download the app.	Yes	Yes	Yes, and you can only use your voice while you are on the website.	Yes
Do I need to know how to read?	Yes, you need to read all sentences	No, you can repeat sentences after the program	Yes, you need to read all sentences	Yes, you need to read all sentences	Yes, you need to read a script

User Manual for Voice Banking at home

Step-by-Step Instructions

Hello!

Welcome to the **User Manual for Voice Banking at Home** section of this booklet. This section will provide step-by-step instructions for the five voice banking programs listed in the table on page 11.

If you have any questions, contact a Speech Pathologist for help.

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ModelTalker

Step-by-Step Instructions

Signing Up

- You need to use the Google Chrome web browser for the program to work (you may need to download Google Chrome if it is not already on your computer, a link can be found in Part A)
- Register online at: https://www.modeltalker.org/register-with-modeltalker/
- Choose the registration category that suits you (i.e. "voice banker")
- Fill in your details to register.

 Note: If you have a Speech Pathologist, you can enter their email address under "CC email" so they can stay up to date with your progress.
- Read and agree to the terms and conditions and click "Register"

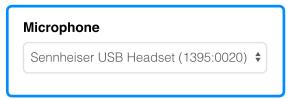
You can now choose to download the ModelTalker application to your computer/laptop to record your voice or use the website.

Website	Application
Requires internet connection while recording	Does not require internet connection while recording
Must be used through Google Chrome	Can be used from desktop
Does not require a download	Requires a download

Note: This will make no difference to the quality of your recorded voice.

6 Select your choice on the page and continue.

Plug in your microphone and make sure it is selected under "Microphone" (Hint: NOT default).



Then click "**measure**" to check the loudness (dB) of your microphone. This should be between -80 and -60. If you have this score, continue. If not, read the information on the page, and try again.

A setup checklist for Mac or Windows computers can be found here if needed: https://www.modeltalker.org/resources/

- Make note of any changes you made to reach the "silence level", and use these each time you record (for "tips for a silent recording space", see part A)
- If there are no problems, click "continue" and move on to recording the trial sentences.

Follow the steps on screen to record a test sentence.

Recording the trial sentences

- (1) 'Settings' will open on its own.
- Type 'Screen' under 'inventory'



- Check that your USB microphone is chosen under "Microphone"
- Click "Measure" to measure your microphone silence. Click "Listen" to check silence (make sure you can't hear any noise). Once this is done, click "start".

Note: You must do this each time you start a new recording session

SECTION 2

- The first sentence will appear on screen and will be read to you. If you need to hear the sentence \ C in, click the replay button
- Click and say the sentence out loud. Try to say it the same way as the recording.

Note: Make sure you don't speak too quietly. The recording will stop on its own when you stop speaking.

You will be given a rating for "peak amplitude" (loudness), "speech rate" (speed), and "pronunciation" (how clearly you say the words). Aim for green and yellow ratings.







Note: ModelTalker is an American program, so because of your Australian accent you may not be able to get a green rating for pronunciation every time.

- The next sentence will appear. Repeat these steps (4-6) for each sentence.
- Listen to some of your recordings as you go to check how they sound.
 - Do this by clicking next to the recorded sentence.
 - # If you are not happy with the recording, click the sentence to record it again.
 - * This can be done at any time during the recording process, if you wish to check any recordings.
- Once you have recorded all sentences and are happy with how they sound, follow the steps to submit your sentences.

It may take a few tries for your recordings to be approved, do not give up! In a few days, ModelTalker will email to let you know if your trial recording is okay or if you need to retry. When your recordings are approved you can begin recording the main sentences.

Recording the main sentences

- Log in to Model Talker at: https://www.modeltalker.org/login/
- Click "recording" then "online recorder".
 Settings will open.



- In the box marked "**inventory**," type the name of the sentence set that you will be recording (ModelTalker will email this to you). Measure your microphone silence levels. Then click "**start**".
- You can now record each sentence, the same way you recorded the trial sentences
- The sentence will appear on screen and will be read to you. If you need to hear the sentence again, click the replay button
- Click and say the sentence aloud. It will then move on to the next sentence.

Note: You will receive a rating the same way as the trial sentences

- You should review some of the recordings as you go by clicking next to the recorded sentence.
 - *Click the sentence if you wish to re-record.
 - ☆Click when you are ready to move on.

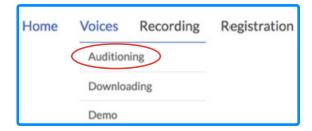
Note: Recording will take around 6-7 hours so make sure you take breaks and do not aim to record in one day.

Once you have recorded the main sentences, follow the steps to submit them to ModelTalker, so they can make your synthetic voice. If you wish to create some of your own key phrases and sentences, follow the steps to continue recording.

Choosing your synthetic voice

In a few days, ModelTalker will email to let you know that some options for your voice have been made for you to choose from.

- Go to https://www.modeltalker.org
- In the top right corner click "voices" and then "auditioning". Read all instructions.



You can now hear some voice options and apply effects to them, so you are happy with the sound of your voice.

These are:

- *Rate of speech (speed): you can increase the speed at which your synthetic voice produces speech. This can be changed on a sliding scale from slow to fast.
- *Synthesised Intonation and Synthesised Syllable
 Timing: These can make your voice sound more natural.
 You can turn them on or off.

- Listen to a couple of trial sentences of your voice with and without each effect and change the rate of speech. Choose the effects and rate of speech you wish to use and select them. These will be used on your voice for the next step.
- You will now be played 30 sentences. Each sentence will be played twice, using a different voice option each time. Pick the sentence that sounds the best to you. The website will then make two voices based on your choices.
- You will have one last chance to listen to two voices, and then choose the one you like best. You can also change the effects mentioned above.
- You will now be required to pay with credit card. The price is US\$100 (roughly AU\$130). If you are not happy with your voice at this point, you can choose not to make the payment.
- Once the payment is confirmed, ModelTalker will prepare a full voice for you. You will be emailed when this is ready to download.
- You can then download and use your voice on the devices you wish or save it for future use on devices.

Speech Generating Device (SGD) apps that support ModelTalker

Windows and Mac-based devices, and iOS and Android mobile devices.

- Predictable app (\$249.99 text based communication)
- ChatAble app (\$159.99 picture based communication)

You can also use your mobile phone to play your recorded voice.

Extra Features

- Allows you to hear the synthetic voice before paying for the service.
- * You can hear your synthetic voice while recording and stop at any point if you can't continue, but the more sentences you record, the better your voice will sound.
- * Model talker allows you to record a "**custom inventory**" of names of people, places and things that are important to you so that these are said correctly. These will usually sound just like your recorded voice. To do this use the "Custom Inventory Tool" (see model talker FAQ's for more information).

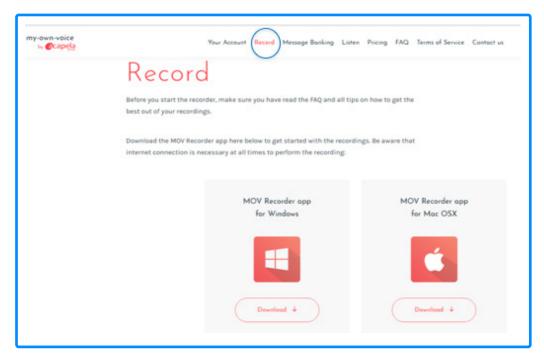
3

My Own Voice

Step-by-Step Instructions

Signing Up

- Fill in the contact form at https://mov.acapela-group.com/start-now/
- Log in details will be emailed to you, log in at: https://mov.acapela.group.com/
- Go to the record tab and download MOV recorder



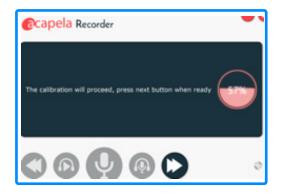
Install MOV recorder and log in using details as above.

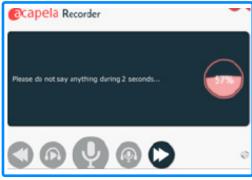


Recording sentences

Once you log in, select 'Headset' as your recording and playback device and click calibrate and follow the onscreen instructions.

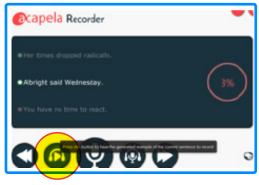
Calibrate before EACH session.



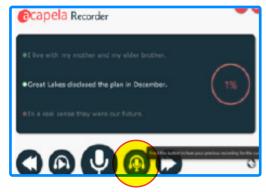


Click the record button and read the sentence. Click record to stop. Do this for each sentence. You may click to hear an example.

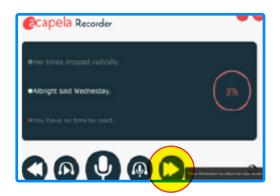




Click 'playback' to check your recording.

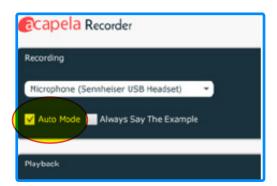


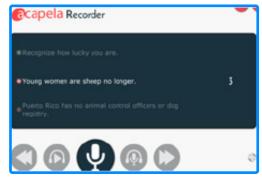
7 Click next to move on to the next sentence.



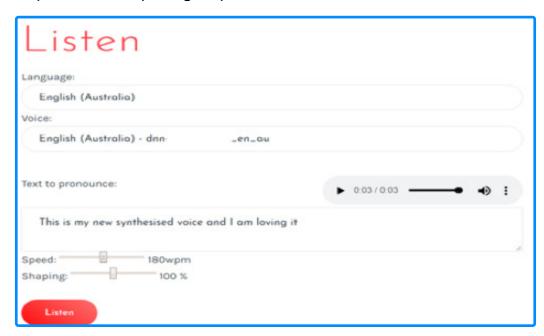
"Don't be put off by what you record, it's about the sounds you record, you just have to be patient."

You can also click 'automatic mode' for the sentences to run in order without stopping





Test your voice in the '**listen**' tab on my-own-voice webpage: https://mov.acapela-group.com



Speech Generating Devices (SGD) & Apps that support My Own Voice

- * Assistive communication device manufacturers:
 - NOVA Chat Series
 - * Jabbla
 - ★ Tobii Dynavox I Series & M- Series
 - ☆ Grid 3
- Proloquo4Text App on Apple Store (\$179.99)

Extra Features

- * Can be used in 13 languages.
- Can be used on both Speech Generating Devices and computer software.
- Message Banking
 - *My Own Voice can create a recorded version of your voice from a past recording and written text of that recording. This may be useful for someone who is unable to voice bank but has previously stored many recordings. Please refer to My Own Voice website for further details.



VocaliD

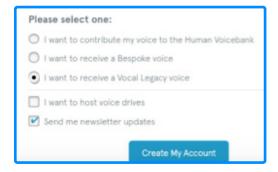
Step-by-Step Instructions

Signing Up

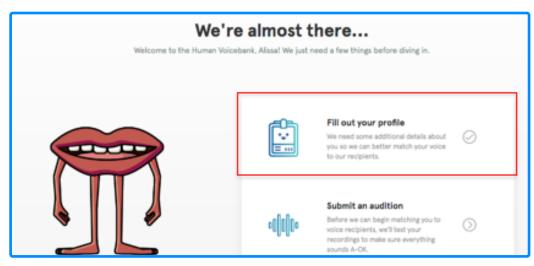
For video instructions, visit https://youtube/1zzH9oVevuU

- Open Google Chrome and type in the search bar: www.vocalid.co
- Press the red start recording button.
- * You will be given two options. Click on the option that applies to you.
- Fill in the required information and click the circle beside the "I want to receive a Vocal Legacy Voice". Then click "Create My Account".





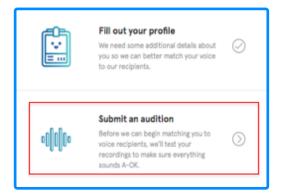
Click on the "Fill out your profile" option. Enter your details and then click "Save and continue".



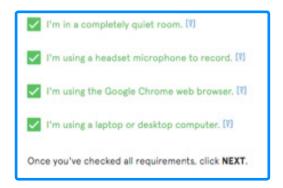
SECTION 2

Recording the main sentences

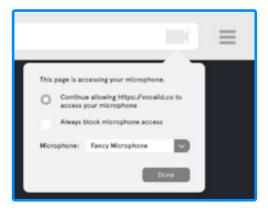
Click the "Submit an audition" button. Click the button in the bottom right corner to continue.



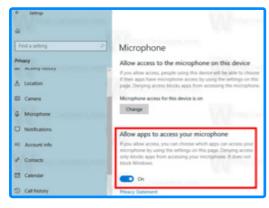
Read each of the options and click the boxes. If you need more information, hover the mouse over the [?] option. Click



Next, click "allow" and then click to give VocaliD access to your microphone.

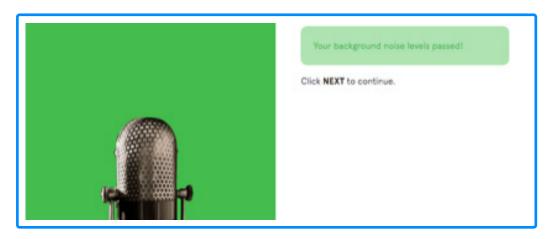


Mac Computer



Windows Computer

Click the button to check the background noise levels.
Remain silent as the timer counts down. Once you pass, the screen will look like this. You can now start recording.



- Make sure your headset microphone is about 5cms away from the corner of your mouth. Press the button and say "ahh" for 3 seconds. Then click
- Click on at least 3 of the options that best apply to you.



Click on the line above which reading level you are most comfortable with. Then click



Read the sentences out loud naturally. Press the button when you're ready to read. When you've finished recording, press the stop button.

You can listen to your recording by pressing . When you're happy with your recording, press

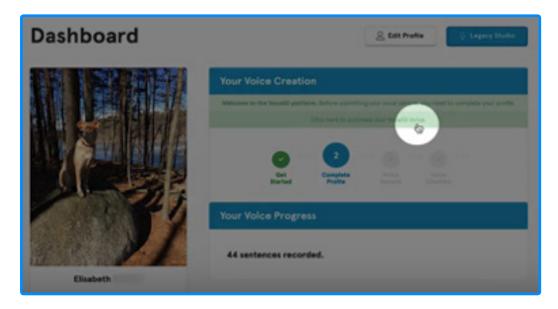
NOTE: Recordings may take 24-48 hours to review. If you're successful, you will get access to the full human voicebank. If not, VocaliD will guide you through what to improve.

Click on a story. Read the sentences word for word. Press when you're ready.

> Press to check your recording is clear. If you need to redo a recording, press and read the sentence aloud again.

Press when ready to move on.

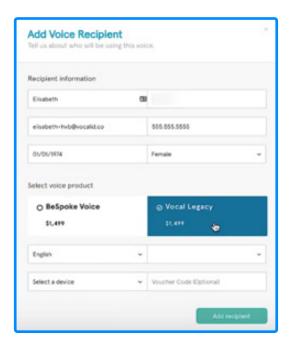
To purchase your VocaliD voice go to your dashboard and click 10 "purchase your VocaliD voice".



Fill in your details and click "Add recipient".

Press continue and enter in your payment details. Then click "Place Order".

You will then receive an email from VocaliD with your order confirmation.



Extra steps if you need more help



If you would like to skip a story click "Skip this Story" you will be given a new option.

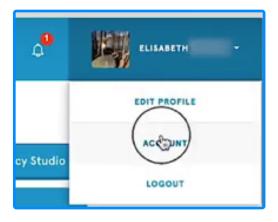


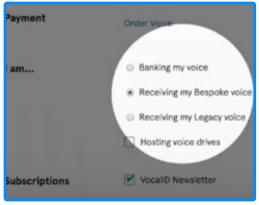
To change the reading level, click the arrow and then "story preferences".

Choose your favourite categories, press next and then select your new reading level.



To change your voice banking role, click "account" under your name and choose the new option.





Speech Generating Devices (SGD) & Apps that support **VocaliD**

- MyVocaliD app for iOS and Android and windows devices.
- Assistive communication device manufacturers:
 - * Tobii Dynavox, PRC, Smartbox Grid3, LC Technologies etc.

Extra Features

***** BeSpoke Voice

You can record a small amount of speech and VocaliD can match your unique vocal identity with a voice from the Human Voicebank. They will blend your recording with someone else's to build you a unique voice.



Lyrebird

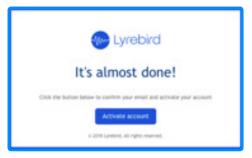
Step-by-Step Instructions

Signing Up

- Open Google Chrome and type in the search bar https://lyrebird.ai/
- Click on the signup in the top right hand corner of the page.
- Enter in your email address, name and password of your choice.



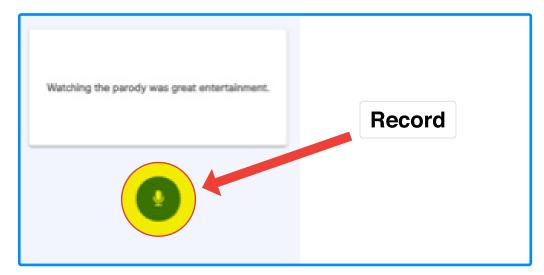
Then click "sign up". This will send an email to the address you have entered to activate your account.
Open your email and click "activate my account".



This will take you back to the log in page. Enter your email and password to "log in".

Recording sentences

Click "record" and read aloud the sentence.



Read and record 30 or more sentences. You will be told how many recordings you have done.

Example

Record your voice to be able to create your Lyrebird Avatar. You currently have 4 valid recordings and need 26 more to be able to create your digital voice.

If the recording is "not valid" a text box at the bottom of the page will appear. This box will allow you to "listen" back to your recorded sentence to improve it.



- To listen back to your recording click the button.
- Read and record the sentence again.
- Once you have recorded 30 sentences, you will be told which sentences you need to rerecord.
- To rerecord each sentence click C button next to it.

Once you have 30 valid recordings, this box will appear. Click "create my digital voice".

You have now enough recordings to create your digital voice, although more recordings will improve quality.

CREATE MY DIGITAL VOICE

You will the see this box appear whilst your digital voice is being created. Please wait until the loading bar is finished.

Your digital voice is being created. This will take a few minutes.

Note: Your digital voice will be unavailable while this process completes, but you may continue to record yourself if you wish.

When it has finished loading, you will be given the option to "try your digital voice" or "recreate your digital voice". Click "try my digital voice".

You already have a vocal avatar, but you can train a new avatar including your recent recordings by clicking "Recreate my digital voice".

RECREATE MY DIGITAL VOICE OR TRY MY DIGITAL VOICE

You will then be sent to a new page with your new digital voice.



- Type in what you would like to say in the text box and click generate.
- Click "play" to the listen back to your generated sentence.

SECTION 2

3

CereVoice Me Step-by-Step Instructions

Signing Up

- Create an account on the website: https://www.cereproc.com/en/user/register
- Once logged in, purchase the program by following the link: https://www.cereproc.com/en/storeclone

(The headset and microphone needed are included in the price and will be sent to you).

Recording trial sentences

- Start recording by going to your account on the CereProc website and clicking the CereVoice Me tab.
- This section helps you to become familiar with the recording process, the buttons, how to play your recordings back and how to upload your recordings.
- You will need to record 10 training sentences which will be uploaded and reviewed by staff at CereProc. If there are any issues with the recordings, CereProc staff will contact you to help make them better.
- After the training sentences have been checked, you will receive an email which will tell you that the training is finished and that you can continue to the main recording section.

Recording main sentences

- You will read from a script shown on screen. There are 620 sentences to record.
- CereVoice Me users can stop recording at any point and continue at a later time.
- Once all 620 sentences have been recorded, the voice will be built by CereProc.
- Download your voice! Your voice will work on Windows computers with any speech generating application and most Windows-based speech generating devices.

Note

If the voice is needed for use on an Apple computer, contact CereVoice Me before you purchase the program.

Extra Features

You can stop the program early if unable to continue with the recording.

Troubleshooting

Computer/laptop has frozen or has crashed.

If your computer or laptop crashes, freezes or displays a blue error screen, you will not be able to move the mouse or use the keyboard to shut down. You will have to manually reboot the system.

- 1. Press and hold the power button. Hold the power button down for 5 seconds or until the computer's power is off. The computer monitor will go black.
- 2. Wait 30 seconds.
- 3. Press the power button to start the computer. Once the computer begins to power up, wait until the home screen has loaded before continuing to access your chosen voice bank program.

Microphones

If you are using a different microphone that what the program suggests, make sure it is a good quality microphone. If you are unsure check with the service provider (eg. Model Talker) to check if it is suitable and if you have any issues with it.

Additional Support

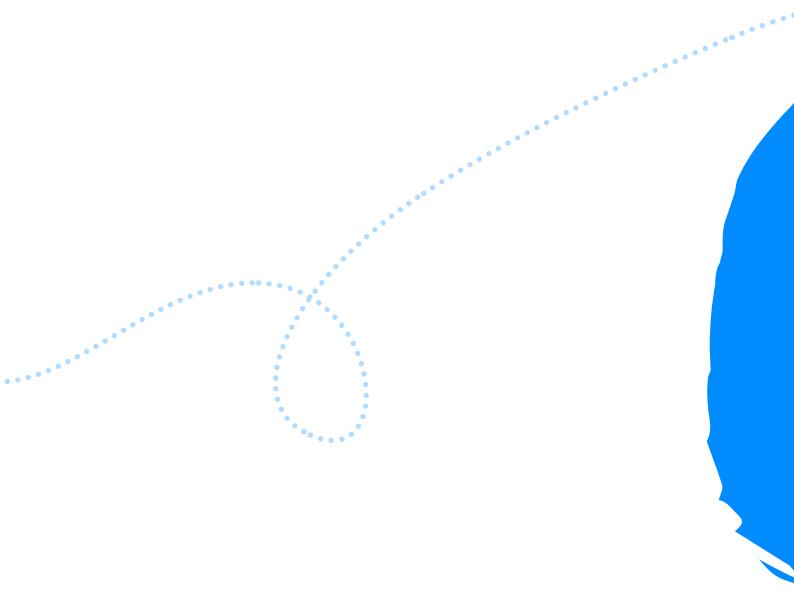
If you are having trouble recording your voice and require help, please contact a speech pathologist or MND & ME for further assistance.

Or contact LifeTec

https://lifetec.org.au/get-touch

LifeTec offers:

- Support with voice banking and message banking through private **services** – which you will have to pay for. LifeTec will support you in exploring different voice banking and message banking programs that are best suited to your voice and budget. This service will also help you with the technology and calibrating your microphone to ensure you are creating the best sounding voice.
- Support for individuals living with MND to explore, trial, obtain and implement AAC systems with which your voice may be used on.





For further assistance, contact us on

¢ 07 3394 5333

