

Confident Living

Technology

R N I B

See differently



About this guide

If you have sight loss, and little or no experience with technology, this guide can help you. Read on to discover the basics about computers, tablets and smartphones and how to get online. You'll also be able to learn about DAISY players, magnifiers and the accessibility features of TVs and radios.

Readers who already have some experience of using technology and being online may also find this guide useful, particularly if you're looking for information on the accessibility features of tablets, smartphones and TVs.

We recommend that you visit our website at **rnib.org.uk** if you need specific information on how to continue using technology you were familiar with before your sight loss or if you have a more complex question.

While reading this guide, if you come across anything confusing or if you'd like to learn more about getting online or a product, just call our Helpline and ask to speak to the **Technology for Life team**, who can help you problem solve issues or put you in touch with a local volunteer to assist in your home.

RNIB Helpline

0303 123 9999

helpline@rnib.org.uk

Contents

- 2** About this guide
- 4** Why learn new technology and get online?
- 6** How do I get online?
- 8** What can I do online?
- 11** Computers and tablets
- 16** Telephones, mobile phones and smartphones
- 25** Video magnifiers
- 28** TV and radio
- 34** RNIB Booklet Series

Why learn new technology and get online?

Learning just the basics about new technology can open up a world of possibilities which will enrich your life and enable you to do things independently while living with sight loss.

Technology can help you to:

- keep in touch with family and friends
- make calls and send messages for free, even internationally
- gain the confidence and freedom to go out and use public transport independently
- do your shopping and banking from the comfort of your home at any time of the day.

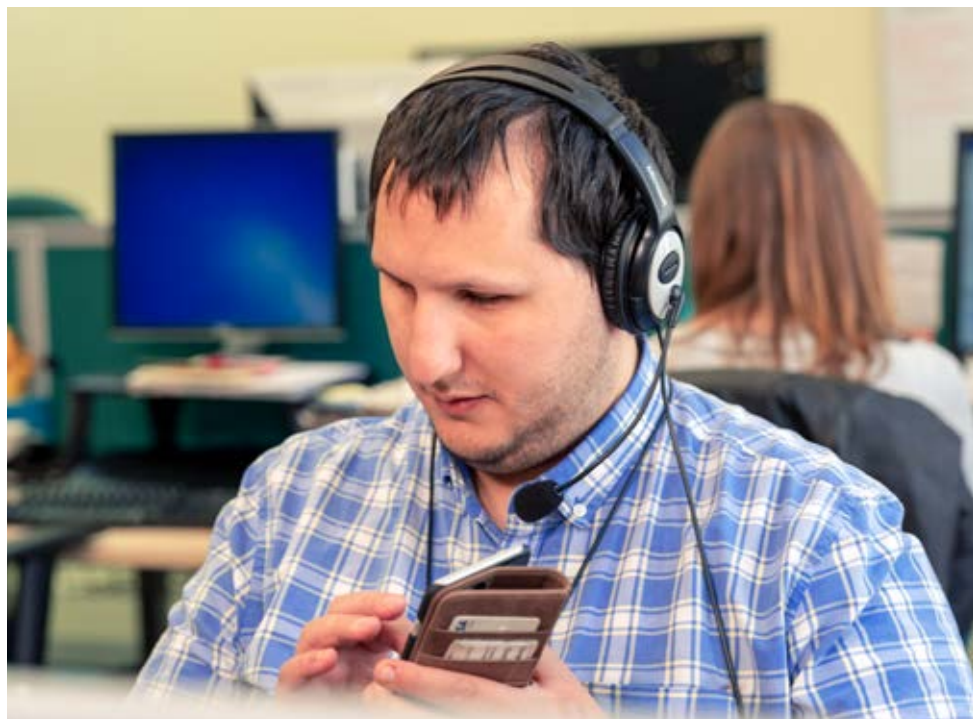
There's also an ever-increasing variety of accessible entertainment and information online, which you can enjoy not just through computers, tablets and smartphones but also through the latest TV models.

Many popular, mainstream products have accessibility features already built in, such as the facility to magnify the screen or have text transformed into speech. To get a demonstration, you can visit your local high street shop and ask to speak to a sales assistant who is familiar with accessibility features. There are a variety of products specifically designed for blind and partially sighted people.

Whatever your needs and preferences, there is something out there that will suit you.

You're not alone if you find the prospect of learning how to use a computer, the internet or a smartphone daunting – so many people feel the same way, even when they don't have sight loss. The early learning process can be frustrating, but the rewards are life-changing and there is plenty of help out there. If you get stuck at any point, just call our Helpline.

We hope that this guide will inspire you to take the first steps towards using new technology and getting online.



How do I get online?

Getting online is easier than ever. You can access the internet not only through computers, tablets and smartphones, but also through smart TVs and home assistants.

As well as an internet-enabled device, you'll need an internet connection (in your home, this is often referred to as broadband). It's likely your current telephone, cable or satellite TV provider can offer you a broadband connection as part of a package.

If you're upgrading from an old mobile phone to a smartphone, your mobile network provider will normally offer you a plan that includes a mobile data allowance. This will allow you to connect to the internet even when you're out.

You should try to shop around to compare prices, which are normally based on the speed of your internet connection and how much you plan to use it. If you intend to mainly browse the internet and check your emails, you can make do with a basic plan. However, if you constantly listen to music or watch videos online, you should upgrade to a plan with a bigger data allowance, commonly measured in either megabytes (Mb) or gigabytes (Gb).

With smartphones, you can also opt for a pay-as-you-go service, if you don't want to be

locked into a contract. For further flexibility, you can choose to buy an unlocked phone, which means you won't be tied down to a specific network provider (although this means you will have to pay outright to buy your device).

For home broadband, it's likely that you'll have to sign up for a fixed term contract that lasts at least one year, as is the case with most internet service providers. Make sure that there is a trial period (usually 14 days) so that you can cancel the contract if you're unhappy with the service.

Your home internet service provider will normally supply any extra equipment you'll need to get online, such as a router for your home. Most routers come with wi-fi, a technology that will allow your computer or other internet-enabled device to connect to it wirelessly.

Good to know

If you'd like to get help with using technology – from navigating with a smartphone, sending emails on the go and more – RNIB's Technology for Life team can support you.

To find out more, call our Helpline or visit [rnib.org.uk/technology](https://www.rnib.org.uk/technology)

What can I do online?

Browsing and searching

You'll need a program called an internet browser to use the internet. Most computers, tablets and smartphones will have an internet browser already installed, for example Internet Explorer, Google Chrome or Safari. Simply open up your browser, type what you're searching for and a wealth of information will appear. If you have a favourite website, you can bookmark it so you don't have to search for it again the next time you want to visit it. Most browsers come with accessibility options.

Socialising

There are many ways you can socialise on the internet. You can set up a free email account with Gmail, Outlook and Yahoo! and send messages to your family and friends instantaneously.

Another great way to socialise on the internet is through Skype, a program that allows you to make calls for free, even internationally. If you have usable vision, you can even see the person you're talking to via Skype's video calling function. If you want them to be able to see you too, all you need is a smartphone, computer or tablet with web camera (commonly called a webcam).

Social media platforms, such as; Facebook, Twitter, Instagram and Snap Chat are easy to use and popular ways to stay in touch with friends and family, as these allow you to share and view videos, pictures and updates, and they are all free to set up and use.

Shopping and banking

Shopping online is often easier than going out shopping on the high street because the website will have descriptions of the products along with their prices, and your shopping can be delivered right to your door.

Similarly, banking can be a lot simpler online – you don't have to wait in line at the bank branch, and you can check your account or carry out a payment at any time of the day. Major high street banks should have accessible websites and can provide you with accessible versions of any security devices you need to log on to your bank account online.

For more information about shopping online, you can order a copy of our Confident Living leaflet on Shopping from our Helpline.

Getting out and about independently

A smartphone can give you access to some brilliant navigation and travel aids that can help you get from A to B by yourself, whether on foot or by public transport. Many of these have been specially designed for blind and partially sighted people and will announce directions, landmarks, bus stops and train platforms. They can also give you live travel information such as arrival and departure times for buses and trains. You can read more about smartphones on pages **25-35**.

For information on travel, you can order a copy of our Confident Living leaflet on Travel from our Helpline.

Computers and tablets

Desktops, laptops and **tablets** are all types of computers. The one that will suit you depends on what your needs are.

All computers have an **operating system (OS)** to manage core functions. Common operating systems are Windows by Microsoft, OS X and iOS by Apple and Android by Google.

Desktops need a fair amount of space and remain in one place. They have a separate keyboard, screen and mouse. They may suit you because you can choose the size of your screen and easily connect equipment like a braille embosser or a keyboard with larger keys.

Desktops are quite often referred to as PCs – these are computers that run on Windows. Another popular desktop you may have heard of is Mac, a computer by Apple which runs on OS X.

Laptops have an integrated screen, keyboard and mouse. They come with an in-built rechargeable battery, so they don't need to be plugged in all the time. Laptops are small and light enough to rest on your lap, and can be carried around while being capable of doing almost everything a desktop can. However, the screen is smaller than a desktop.

Tablets are portable hand-held computers which are small and light enough to easily fit in your bag, and can be charged with an adaptor. You operate a tablet by touching the screen – it doesn't have a tactile keyboard. Tablets run small programs called **apps**, rather than the full-blown applications that a desktop or laptop runs. The small screen size may be a problem for people with low vision, but many tablets – including the Apple iPad, Samsung Galaxy and others – have excellent in-built accessibility features.

How can I make my computer accessible?

There are many ways to make your desktop, laptop or tablet accessible – below is a quick run through of them. We have also included some information on the products available. For further details, please call our Helpline.

Step 1: In-built options

Always start by investigating the in-built or pre-installed accessibility options on your computer. You can use these to change the size of fonts, the screen resolution and the colour contrast of your screen to make viewing more accessible. You can also turn on your computer's default **screen reader** or **magnifier**. A screen reader can read out the contents of your screen, such as an email or a web page, while a magnifier will let you zoom into an

area of your screen. A couple of example options are VoiceOver, a screen reader which comes with Apple products, and Magnifier, a screen magnifier for computers running Windows.

You can also purchase desktop computers and laptops that already have additional accessibility software installed. This can take away the hassle of having to purchase the computer and software separately.

We sell a range of computers and tablets with preinstalled accessibility software through our Online Shop shop.rnib.org.uk, or you can call our Helpline for more information.



Step 2: Free technology

If the options that come with your computer aren't enough, you can download free screen reading or magnifying software. There are many options available.

Depending on your needs, the free software may be good enough to enable you to write documents, send and receive emails and browse the internet.

Examples of free software that can magnify the whole screen include Desktop Zoom. There are also magnifiers that only enlarge the area you select with your mouse, such as Virtual Magnifying Glass.

If you would like to try a free screen reader with good features, the most popular one is called NVDA.

Step 3: Paid-for technology

If the in-built or free options aren't enough for your needs, there are many types of commercial accessibility products you can purchase. They can cost hundreds of pounds, but tend to have more features and offer better training and support.

Paid-for magnification software has, among other advanced features, high levels of magnification (at least 36x). Well-known options on the market include SuperNova Magnifier, MAGic and ZoomText Magnifier.

Paid-for screen readers have a number of features in common. They support a wide variety of voice synthesizers and braille displays, have a navigation mode for moving around web pages with single key commands, and an editing mode. JAWS is a popular commercial screen reader with a lot of features, but it's also the most costly. Other options are Dolphin Guide and SuperNova Reader.

Synaptic is a piece of software for android phones and tablets which greatly increases the contrast on your device and allows you to use voice commands. You can purchase smartphones and tablets with this software already installed, or you can just buy the software to install on your phone or tablet.

Commercial accessibility hardware includes high visibility keyboards, large monitors, and braille displays which can replace a monitor.

Confused by all these different options, or want to know more about making computers accessible? Just give our Helpline a call.

Good to know

If you're in work or study, you might be entitled to some financial help to pay for both commercial accessibility software and hardware. Find out more from our Helpline.

Telephones, mobile phones and smartphones

There are many accessible telephones, mobiles and smartphones available that have been specifically designed to meet the needs of blind and partially sighted people.

Telephones

Most accessible telephones have large, tactile buttons with contrasting numbers (usually black on white or white on black) that are easy to navigate on the phone pad. They usually include one-touch speed dial buttons for your important contacts. You can also get talking telephones that will announce every button and menu selection you have pressed.

There is a selection of accessible telephones available from our Online Shop.

Mobile phones and smartphones

There are a number of accessible mobile phones on the market, ranging from advanced smartphones costing hundreds of pounds, to simple handsets that can only make calls and send text messages. The one that will suit you depends on what you need your phone to do and your budget.

What is a smartphone?

A smartphone is a mobile phone which can perform many of the functions of a computer. It has internet access, an operating system that runs apps and typically has a touchscreen interface. Most smartphones will also play music and movies, come with an in-built camera which can take pictures or record video, and provide GPS navigation.

Choosing an accessible mobile phone

Popular mainstream mobile and smartphones have in-built accessibility features. In this section, we've rounded up some of the key accessible phones you may want to consider.

Doro phones

Doro mobile phones are designed to be easy to use and have tactile number keypads, a choice of on-screen print sizes and colours, and most are compatible with hearing aids. Doro mobile phones come in different models, from a simple phone that can only make calls and send text messages, to more advanced models that come with smartphone features – such as the Doro 8040 mentioned below.

Doro phones are available through some high street retailers and through our Online Shop.

Doro 8035 8040 smartphone

The Doro 8035 and 8040 are smartphones that have been especially designed to be accessible. They run on an Android platform and have been adapted to have a fully talking interface and a tactile cover that transforms the touchscreen into a keypad layout.

Good to know

We offer telephone support with our Technology for Life team for any smartphone questions or problems. Call our Helpline for further information.

iPhone

Manufactured by Apple, the iPhone is a mainstream touchscreen smartphone with very good accessibility features (it's also a top-of-the-range product with a matching price). The iPhone comes with a screen reader called VoiceOver, and a screen magnifier, called Zoom. They can be used immediately without installing extra software, and can support certain braille displays.



iPhones have a feature called Siri which acts as a voice-activated personal assistant in your pocket. You can ask questions like “What’s the weather like in Manchester today?” and it will provide the answer. You can also ask it to schedule appointments, and to send texts and emails.

iPhones are available for purchase online, from Apple stores and other high-street retailers.

Android smartphones

There are many mainstream smartphones under different brands – Samsung, Google, Sony and Nokia to give a few examples, which run on an Android platform. They vary greatly in size, features and price. The newer versions of Android come with the Talkback screen reader and support refreshable braille displays and screen magnification. Many Android phones include the ability to choose colour settings.

There are many variations of Android smartphone available, so it’s important that you purchase one that best suites your needs. There are many apps available for free on the Google Play store, for android devices, that can help to adjust various aspects of your smartphone to increase accessibilty. It’s best to seek advice so that you can work out which is best for you. Call our Helpline for further information.

Apps

If you're thinking of getting a smartphone or tablet, or already have one, you might be interested in knowing about some amazing apps which have been specifically developed for blind and partially sighted people.

Be My Eyes is a free app that connects a blind or partially sighted person to a sighted volunteer. When the sighted volunteer accepts a call, a live audio-visual connection is established. The person with sight loss can then point their smartphone's camera at something and the sighted volunteer can describe what they see.

KNFBReader is a paid-for screen reader app. Use your phone's camera to capture virtually any printed text and the app will convert it into high quality speech.

Seeing AI uses the device's camera to perform a number of useful functions including reading documents, identifying products based on their barcode and recognising people based on a picture of their face.

LookTel Money Reader is a paid-for app which recognises multiple currencies and reads out the amount back to you, while displaying the amount in large numerals on the screen. The app doesn't require an internet connection to work, and you

don't need to take a photo of the currency notes – the app will recognise them instantly.

Ariadne GPS is a paid-for navigation app which provides spoken directions to help you travel independently. It uses vibration to indicate when you are crossing a road, and it can announce train or bus routes, including turn-by-turn navigation. The app is available in a range of languages and is integrated with Google Maps.

BlindSquare is a paid for app for Apple devices. It describes the environment, announces points of interest, streets and user specified points as you travel. Functions can be accessed through an audio menu using a headset or speaker.

iDentifi is a free app that enables you to click a photo and get an instant description. It can recognise objects, brands, colours, facial expressions, handwriting and text. It then delivers an audio description of the image.

All apps, including the ones mentioned here, can be downloaded from an online app store. The two biggest stores are Google Play and App Store. Some apps are specific to only Apple devices or Android, but many can be used on both.

The apps and the mobile phones we've listed are some of most useful at the time of writing, but new products for blind and partially sighted people are

being created all the time. You can find out about the latest accessibility apps or mobile phones by calling our Helpline.

Voice Assistants

Voice Assistants are smart devices primarily controlled by voice commands. They include the Amazon Echo (Alexa), Google Home and the Apple Home Hub. You simply give your device a wake word such as "Alexa" then give it a command.

What can voice assistants do?

You can get voice assistants to perform a huge array of functions. They can play music, radio stations and games, read the latest news, weather and sports results, and search the internet for answers to your questions. They can also act as a calculator, currency converter, alarm, clock and timer or you can use them to listen to your talking books. Voice Assistants are smart devices, meaning they can be used to control other connected accessories, like heating controls and lights. You need an addon for this, such as a special home heating control or light bulb.

Skills

Functions or applications are called “skills”. New skills to enhance a voice assistant’s capabilities are continually being developed and can be added by speaking to the device or using the associated app. Skills are free and once you purchase the device you can keep adding extra capabilities at no extra cost.

Voice assistants are very accessible and usable. Initially it seems a little odd to speak to an inanimate object but the assistant have a personality to a certain extent. She can even sing to you and tell you jokes.

Video magnifiers

If you have some useful vision and need help to carry on reading printed materials or to do certain tasks, a magnifier might be useful. A traditional magnifier uses shaped glass to make the image bigger. A video magnifier, sometimes called an electronic magnifier, uses a camera and screen to make an image easier to see not just by making it bigger but by changing the colours and contrast.

Before choosing a magnifier, it's a really good idea to have a low vision assessment so you know you're choosing a product that's right for you. For more information on getting a low vision assessment, see our 'Making the most of your sight' leaflet, also part of our Confident Living series.

What can a video magnifier do?

Video magnifiers not only increase the size of the text in various amounts, but usually have options to select different colour and contrast modes. You can then personalise the magnifier and work out what suits you best.

Some magnifiers have the ability to capture text and save it so that you can read it at a later date. Usually the quality of image is better when the image is captured than when you're reading it live through the magnifier. However, this can depend on the make or model of the device.

Desktop video magnifiers

Desktop video magnifiers, or CCTVs as they are sometimes called, are best for using at home as they are quite large and can take up a lot of room on a table. They have bigger screens, so are helpful if you are reading large amounts of text as they have the highest levels of magnification. These devices range in price, depending on the maximum magnification level and what additional features are included.

You can also get desktop magnifiers that have a text-to-speech function, but these models can be even more costly.

Some CCTVs can also share a monitor with a computer screen so you easily switch between what you are magnifying and a computer program you are using at the same time. Other models can flip their camera around to focus on distant objects such as notice boards and classroom boards.

Portable video magnifiers

Portable magnifiers can be used when you're out and about or at home. They vary in weight, size and features, but most magnifiers come with a reading stand, rechargeable batteries, an adaptor and large buttons. Although they are smaller than a desktop magnifier, they have good levels of magnification.

As portable magnifiers run on rechargeable batteries, an adaptor is provided so that it can be charged. The battery life varies once charged, but it can last between two to five hours.

If you are unsure what magnifier would be best for you, contact our Helpline to discuss the options.



TV and radio

This section contains some basic information about TVs and radios which is useful to know when you have sight loss. There's also information on streaming services, such as Amazon Prime and Netflix. For more detailed information about the accessibility features of specific models of TVs or radios, please call our Helpline and we'll do our best to help.

Making your TV accessible

When you have sight loss, a common problem with TVs is navigating their visual menus and programme guides. There are two ways that some manufacturers have made their TVs easier to use: in-built accessibility and companion apps.

In-built accessibility

In-built accessibility involves:

- visual menus and programme guides which have enlarged text, greater colour contrast or a zoom facility which focuses on part of the screen, and/or
- voice guidance through text-to-speech. Text-to-speech is a system which reads out parts of the visual menus and programme guide in synthetic speech.

These features are found in some of the newer TV models by major manufacturers such as Samsung and Panasonic, and are turned on through menu settings.

Both Samsung and Panasonic TVs can read out the information on screen, tell you what programme is currently on and what programme is next.

Companion apps

Companion apps are pieces of software that run on smartphones and tablets to control other devices. Some subscription-based TV services such as Sky and Virgin Media and some set-top boxes have companion apps that allow you to control your set-top box or perform actions such as setting up recordings. As most smartphones and tablets have speech and magnification features built into them, they can provide accessibility for people who are comfortable with using them.

Streaming service

Amazon Prime Video, a paid for monthly film and TV show streaming service, have added accessibility features which can be enabled during video playback. Such features include; subtitles (font size and colour contrast can be edited), alternative tracks, audio descriptions, or a combination of those. The range of supported features will depend on the device you are using to view Prime. To learn more about these features and how they can be activated visit [amazon.co.uk](https://www.amazon.co.uk).

Netflix, a paid for monthly film and TV show streaming service, provides accessibility features such as audio description and subtitles. To sign up or learn more about the service visit [Netflix.com](https://www.netflix.com).

Audio description on TVs

If you have sight loss, you will find that audio description (AD) is a very useful feature when watching TV. AD is commentary that describes body language, expressions and movements, making a programme clear through sound. Legally, all broadcasters have to provide audio description for at least 10 per cent of their content. Major broadcasters such as the BBC and Sky audio describe up to 20 per cent of their content.

The method for turning audio description on and off is different for different TVs, but if there is an audio description button on the remote, then it should be labelled AD.

Audio description is available on Sky, Virgin Media and almost all Freeview TVs and is a requirement for any TVs displaying the Freeview HD logo.

Good to know

You can get a 50 per cent reduction on your TV Licence fee if you're registered blind or severely sight impaired. Call our Helpline to find out more.

Radio

There are two types of radio broadcast: **analogue** and **digital**.

Analogue radio is the name for FM, AM and LW radio stations. Many analogue radios with their traditional tactile dials and buttons are just as easy to use for people with sight loss as for sighted people.

The term digital radio covers digital audio broadcast (DAB) radios, internet radio and radio stations delivered through a TV signal.

DAB radio offers a wider choice of programmes from national, local and regional radio stations, catering for all kinds of interests and groups of people. It is also free of white noise and many DAB radios will show text information about the channel. However, DAB radios often rely on visual displays, so you will need to choose a model that is recommended for people with sight loss. Our Helpline can tell you more about this.

With internet radio, you can listen to all kinds of music and programmes from radio stations all over the world. In the UK, most internet stations can be accessed through the Radioplayer service. Radioplayer has been developed in partnership between the BBC and UK Commercial Radio and is available as a website or as an app for smartphones.

Many internet radio stations offer the advantage of catch-up services, which allow you to listen to your favourite programme at a later time if you miss the scheduled broadcast.

You can also listen to radio stations through the TV, although there aren't as many stations available compared to DAB or internet radio.

Good to know

RNIB Connect Radio broadcasts 24 hours a day, communicating the needs, interests and aspirations of blind and partially sighted people throughout the UK. Listen to RNIB Connect Radio on Freeview channel 730, online at insightradio.co.uk or in Glasgow on 101FM.

RNIB Booklet Series

About the Starting Out Series

The Starting Out series aims to give people who are losing or have recently lost their sight essential information about living with sight loss. Titles include:

- Benefits, Concessions and Registration
- Emotional Support
- Employment
- Help from Social Services
- Making the Most of Your Sight

About the Confident Living Series

The Confident Living series is for people who are losing or have recently lost their sight and are trying to build their confidence to continue to lead full and independent lives. Titles include:

- Leisure
- Reading
- Shopping
- Travel
- Technology

About the Understanding Series

The Understanding series is designed to help you, your friends and family understand a little bit more about your eye condition. Titles include:

- Age Related Macular Degeneration
- Cataracts
- Charles Bonnet Syndrome
- Dry Eye
- Eye Conditions Related to Diabetes
- Glaucoma
- Nystagmus
- Retinal Detachment
- Retinal Pigmentosa
- Posterior Vitreous Detachment

All these leaflets are available in audio, print and braille formats. To order please contact our Helpline on **0303 123 9999** (all calls charged at local rate), email **helpline@rnib.org.uk** or visit **shop.rnib.org.uk**

For a full list of the information sources used in any of these titles please contact **ckit@rnib.org.uk**

To provide feedback on the Starting Out and Confident Living Series, please email **ckit@rnib.org.uk**

To provide feedback on the Understanding Series, please email **eyehealth@rnib.org.uk**

RNIB

If you or someone you know is living with sight loss, we're here to help.

**RNIB Helpline
0303 123 9999
helpline@rnib.org.uk**

Ask RNIB is the simple and easy way to find the answers to your questions online – try it today at rnib.org.uk/ask

**Produced September 2020
Review date September 2021**

**PR12368P
ISBN 978-1-4445-012-2
Ed 2**

©RNIB reg charity in England and Wales (226227), Scotland (SC039316), Isle of Man (1226). Also operating in Northern Ireland.