Mobile Accessibility for the Visually Impaired

RAy

Accessibility For All

RAY VISION User Guide
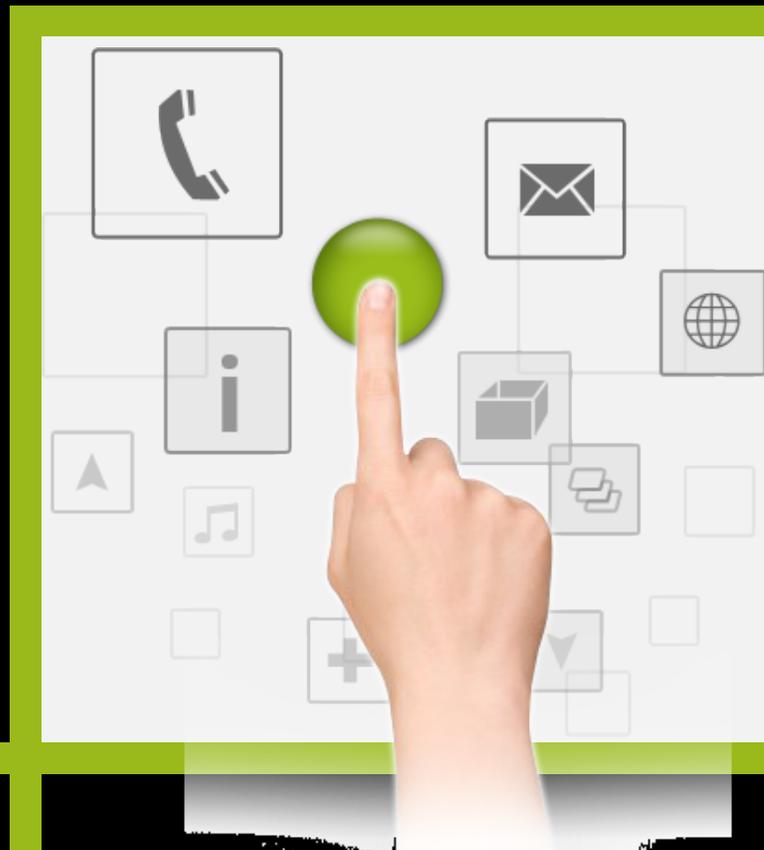
Version 5.0

Important Notice

Support and Contacting Information

For technical support of our products, please contact us at:

Email: support@Project-RAY.com

About This User Guide

Thank you for choosing RAY as your mobility tool. RAY is a Smartphone especially designed for blind and visually impaired users.

This user guide contains the following chapters:

- **Chapter 1, Introducing RAY,** page 7, introduces RAY's functionality, the services that it provides and the Android Smartphone platform on which it runs.

- **Chapter 2, Getting Started with RAY,** page 12, describes how to get started using RAY, make your first call and turn RAY off. This chapter also describes how to access the RAY Wizard which provides various lessons and practice sessions describing how to use RAY.

- **Chapter 3, RAY Interface Basics**, page 25, introduces the basic concepts, finger gestures and screen types of RAY's user interface.

- **Chapter 4, Using RAY,** page 41, describes each of the services available from the **Home** Menu in detail.

- **Chapter 5, Remote Control and Configuration,** page 67, describes how your family and friends can help you control and configure RAY from your personal RAY web page on the Internet.
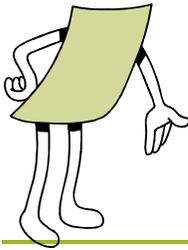
Table of Contents

Blank page for double-sided printing

1

Introducing RAY

This chapter introduces RAY's functionality, the services that it provides and the Android Smartphone platform on which it runs.

What is RAY?

RAY is an integrated portable system designed to assist the community of visually impaired people and their families in their daily life. RAY leverages the latest mobility technologies to increase independence, enrich social life and improve accessibility of essential services for the visually impaired.

The RAY mobile system provides a unique user interface on an Android platform that is especially designed for the visually impaired. Its special design and functionality enable non-sighted users to interact with it by touching its screen, use a built-in or attached keypad, feeling vibrations and listening to sounds.

RAY is available as a standalone application you can download and install on any Android device (OS version 4.2 and above). It is also available on a number of different smartphones models, pre-configured for out-of-a-box experience.

To download and install RAY VISION application, go to Google Play Store and look for 'RAY app for the visually impaired" (https://play.google.com/store/apps/details?id=com.ray.manager).

The RAY devices are available to buy over the Internet at Project Ray web site, Amazon and eBay; or from local distributers as listed on Project Ray website.

For simplicity purpose, all device related examples and descriptions are related to the RAY N5 device which is based on Google Nexus 5. Application capabilities and screen images are similar across all models and devices.

RAY puts the following rich variety of services and applications at your fingertips:

- **Book/Magazine Subscription and Reading Services**
  - Connecting directly to online library services
  - Downloading online audio content
  - Reading audio content with speed control
- **Telephony Services**
  - Dialing numbers in your Contacts List
  - Reading out the name or number of incoming calls (caller ID)
  - Managing contacts directly on RAY or from a website at home
- **Messages:** Receiving, reading and answering out text messages related to SMS messaging, Email, WhatsApp and other social networks.
- **GPS and Location Finder:** Reading out your current location using GPS
- **Device Status:** Reading out the device status, battery usage and network information
- **Remote Support:** Managing and controlling RAY remotely from a PC through the Internet and getting real-time help from a remote mobile application
- **Various Services:** RAY provides access to many helpful applications, such as printed page scanning with read aloud (OCR), Banknotes Reader, Color Detector, Calendar, Scheduler, recording service, tag readers and so on.

For additional and up-to-date information, check out our website at www.project-ray.com.

The RAY Device

A typical RAY phone includes ON/OFF button, Volume Control, Touch screen, Earphone port, Charging port, Speakers and Camera lenses. In addition, several RAY models like the RAY E5 and the RAY L5 includes physical keypads for alphanumeric data entry and navigation keys.

The position of those keys on each device is different.

On the RAY N5 (based on Nexus 5) device -
The Power key is located on the top right side.
The Volume key is located on the top left side.
The Earphone port is on the top side.
The Charging port is at the bottom side of the device.

> Hold the phone in the palm of either hand so that the tip of your index finger is touching the top of the device. The camera lenses hole should be facing your hand on the back of the phone.
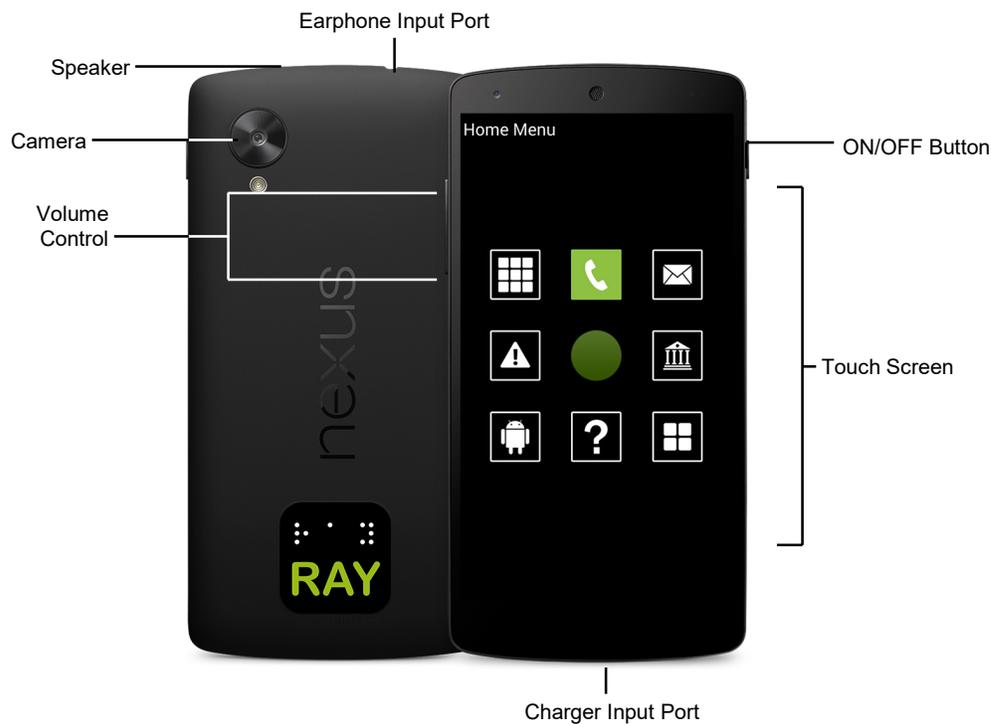
Figure 1: RAY Physical Description of a typical RAY device.

- **ON/OFF Button:** The On/Off button is a small physical key located on the top, right or left side of your device. A short press starts or ends power saving (sleep) mode. A long press displays the Power menu from which you can turn the device off, return to the Home menu, dial an emergency number and more. You may refer to the *Power Menu* section on page 23 for more information.

- **Touch Screen:** The glass surface on the front of RAY reacts to your touch, finger movements and finger gestures, as described in the *Introducing the RAY Interface* section on page 25.

- **Volume Control:** The Volume control is a large physical key with Volume up and Volume down directions, located on the top, right or left side of your device. Press the top of this control to increase volume, or the bottom of this control to decrease volume.

- **Earphone Input Port:** This is on the top, center of the phone.

- **Charger Input Port:** This mini USB connector is standard with all Android based devices and can be connected to a PC or electric outlet. It is found on the side of the device towards the bottom.

- **Speaker**

Remote RAY Support

RAY connects to both cellular and Wi-Fi networks just like any other standard Smartphones. RAY must be connected to the Internet in order to provide remote services, including:

- **Your Personal RAY Management Page:** RAY automatically creates a personalized web page for managing the RAY device through the Internet from any computer. You, or any person that you authorize, can then use a user name and password to remotely perform a variety of functions on the RAY device, including the following:
  - Managing your Contacts List
  - Managing your Scheduler
  - Initiating a beeping sound on RAY
  - Displaying the geographic location of RAY
  - Uploading Music Periodicals and Books
  - And more

Your personal RAY management page can be accessed from the RAY web page at www.project-ray.com by selecting the **Login** option (located in the top right corner of the Home page). To enter, you will need unique user name assigned to the device and password which is set by default to be "12345678". The user-id of your device, and your life-long identity in the RAY network, is visible to a sighted person as a string in the form of an email address displayed at the bottom of the HOME MENU. It is also available as a voice announcement in the 'Setting & Information' menu item.

After opening the RAY system for the first time, you will receive a welcome message, including credentials and access links to your email address.

- **Remote Visual Assistance – "Eye-Assist"**: RAY also provides a remote visual assistance service that enables family members and designated sighted people to remotely control the device, locate its position on a map, and view the video stream and camera images for a full remote assistance. To provide the support, a sighted person should download the matching application available in Google Play Store when searching for "RAY Eye Assist" (https://play.google.com/store/apps/details?id=com.ray.remoteassistance).

- **Automatic Backup and Restore:** RAY is registered with your unique user name and password. The system automatically backs up and stores the current state of your RAY device through the Internet every few seconds. This includes all your data, appointments, contacts and settings on your RAY. If something happens to your RAY, you can restore a new RAY device with all your latest information by simply logging in to a new RAY device with your user name and password.

2
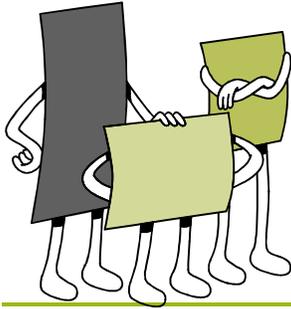
Getting Started with RAY

This chapter describes how to get started using RAY, make your first call and turn RAY off. This chapter also describes how to access the RAY Wizard which provides various lessons and practice sessions describing how to use RAY.

Preparing to Use RAY

Charging RAY

► **To charge RAY's internal battery:**

1   Plug the provided AC power adapter into the charger input port on the bottom of RAY, as shown in ***Error! Reference source not found.***.

2   Plug the AC power charger into a standard power outlet (mains socket). Charging starts immediately.

3   If this is the first time that you are using RAY, then let it charge for a few hours.

> **Note**
>
> When RAY's battery level is low, it says **Low Battery**. You may refer to page 65 for a description of how to check the battery charge level.

Connecting RAY

RAY can connect to a cellular and/or a Wi-Fi network.

In order to enable the remote control of the RAY device and the automatic backup and storage of your RAY data, the RAY requires a connection to a cellular network. This connection is available by simply subscribing to Internet access with your local cell phone provider.

> ### ⬜ Note
>
> Downloading music, periodicals and books from the library may require significant amounts of bandwidth, which may use up your data package. Therefore, RAY requires a Wi-Fi network in order to download books and music. Other on-line connected tools like remote assistance can use Wi-Fi or 3G connections.
> Wi-Fi can be set up using the **Settings** option in the **More** Menu, as described in the *More* section on page 66 or remotely from your personal web page, as described on page 71.

► **To connect RAY to a cellular network:**

1   Insert a valid Micro-SIM card into RAY. The SIM card for RAY N5 (as an example) should be inserted under the Power key on the left side of the device, as shown below:

Figure 2: Inserting a SIM Card

2   Subscribe to a cellular plan that includes voice calls, SMS services and a data plan. A 3 GB per month data package is recommend and sufficient for regular usage.

Device Activation

RAY must be activated within 30 days of the initial use with basic personal information including name, email address and phone number. This will enable on-going remote support and software updates for your RAY device.
The registration is done on the web through your personal web portal. After activation is completed, you will receive a welcoming email containing your personal User ID and password.

Powering On RAY

► **To power on RAY:**

1 Long press the **ON/OFF** button on the top of RAY (shown in **Error! Reference source not found.**) and wait a few seconds. RAY plays the opening sound and the Home Menu appears, as shown below:

2
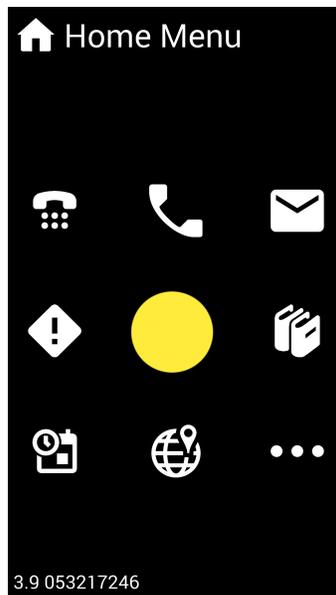
Figure 3: Home Menu

You may refer to *Chapter 4, Using RAY* on page 40 for a description of the options available in the **Home** Menu.

RAY is especially designed for non-sighted users and therefore its interface works differently than a regular Touch-Screen Based, Smartphone device.

The most important thing to learn about RAY is that basic operation is done by putting your finger somewhere in the center of the screen, then slide your finger on the screen in the **direction** of the option that you want to select. RAY then says the name of an option. After hearing the desired option, lift your finger to select and execute that option.

You do not select things by tapping an icon.

Making a Call

In order to familiarize you with RAY's special interface, the following guides you through making your first phone call to someone in your Contacts List. For this purpose, RAY is provided with a single contact person already defined in the Contacts List. For example, the phone number of a directory service or the Library for the Blind.

🗋 Note
To answer an incoming call, short press the ON/OFF button.

🗋 Note
RAY also provides a speed dial option, which is described in the *Speed Dialing* section on page 41. You will be able to use this option after you create Contacts.

► **To make a phone call from the Contacts List:**

1   Go to the **Home** Menu. You can tell whether you are already on the **Home** Menu by touching the screen and holding your finger on it for three seconds until RAY says **Home Menu**.

✓ Tip
If you are not sure where you are on the RAY device, then simply press and hold your finger on its screen (somewhere near the center) for three seconds. The Ray device then says the name of the screen you are in.

✓ Tip
A quick way back to the **Home** Menu is to:
1   On RAY N5 device, long press the ON/OFF button. RAY says **Power Menu**. The HOME screen option is located at key number 4 on the left.
2   On L5 and E5 devices, this function is available in the standard HOME

key of the device.

2   From the **Home** Menu, place your finger somewhere in the middle of the screen. Wherever you put your finger becomes the number 5 on a regular numeric keypad.

3   Slide your finger on the screen (without lifting it) **upwards towards** the number 2 position on this imaginary keypad. When RAY says the word **Telephone**, lift your finger off the screen:

Figure 4: Selecting the Telephone Service

4   RAY says **Telephone Menu** to indicate that you are now in the menu that provides various telephone services.
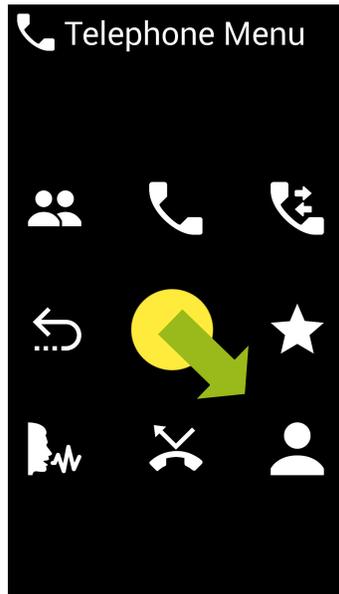
Figure 5: Telephone Menu – Selecting the Contact List

Place your finger in the middle of the screen again on the imaginary number 5, and slide it in the direction of the number 9 (diagonally downwards and to the right). When RAY says "**Call Contacts**", lift your finger off the screen:

Figure 6: Selecting a Contact

RAY says **Contacts List** and says how many items are in the list.

5   Place you finger on the imaginary number 5. RAY then reads out the name of the selected Contact.

You can also slide your finger slightly downwards towards the number 8 until you hear a bell sound. Then, stop moving your finger and leave it on the screen.

Listen while RAY reads out the names in the Contacts List one after another. On a new device, the Contacts List only has a single Contact.

Items in a list are arranged in a circular manner. Therefore, for example, after the last option is read out, the first option is read out, then the second option and so on.

6   When RAY says the preferred Contact name, lift your finger off the screen to select it. RAY will then initiate a telephone call to the selected person and says the name of the person that you are calling.

If the call is answered, a standard 12-key numeric keypad appears, as shown below. This keypad stays open during the entire call.
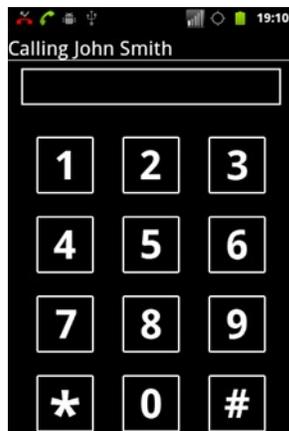
Figure 7 RAY Numeric Keypad

During the call, you can use the keypad to enter DTMF digits, if needed, as described in the *Entering a Number* section below.

7   During a call, you can perform the following:

- To terminate the call, short press the ON/OFF button.
- To toggle the speakerphone on and off, swipe your finger from the middle of the screen downwards.

Entering a Number

The following describes how to enter a number for any reason. For example, to dial a phone number or as a DTMF (meaning to enter numbers in the middle of a call if requested to do so by the callee).

> **☐ Note**
>
> Many of the numbers in the Dialer have additional functionality besides enabling you to type a number, as described on page 21.

To enter a number:

1   When a numeric keypad is open (for example, as described on the previous page), place your finger somewhere near the center of the screen. Wherever you place your finger becomes the center of the 12-key numeric keypad, meaning the number 5.
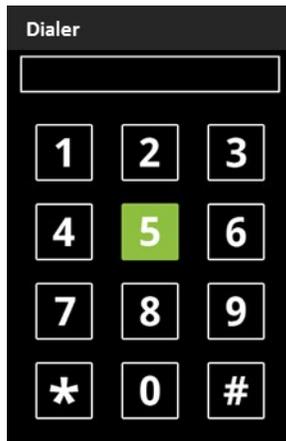
Figure 8: Entering a Number

2   RAY then says **5**. To select the number 5, simply lift your finger off the screen. To select a different digit, slide your finger, without lifting it, in the direction of that number until RAY says the intended number.

3   When RAY says the intended number, lift your finger to select it.

For example:

- To select the number **2**, place your finger on the screen and then slide it slightly upwards.
- To select the number **6**, place your finger on the screen and then slide it to the right.

- ▪ To select the number **3**, place your finger on the screen and then slide it diagonally upwards to the top, right of the screen and so on.

  To select an *****, **0** or **#**, slide your finger downwards. On the way, you should hear RAY read out 7, 8 or 9 accordingly.

4 To dial the telephone number, slide your finger from the center of the screen towards the number 6. When your finger reaches 6, RAY says 6. Hold your finger in that place on the screen and after a moment RAY says the word **Dial**. Then, lift your finger off the screen and RAY dials the number.

5 To terminate a call in progress short press the ON/OFF key.

Other Dialer Options

Many of the numbers in the Dialer have additional functionality besides enabling you to type a number.

To access the additional functionality of a number key:

1 Place your finger near the center of the screen, this becomes the number 5.

2 Slide your finger from the center of the screen towards a number. RAY reads out the number of that key and then (after a moment) reads out the function of that number key.

For example, to erase the last digit of the number that you have entered, slide your finger from the center of the screen towards the number 8. When your finger reaches 8, RAY says 8. Hold your finger in that place on the screen and after a moment RAY says the word **Delete**. Then, lift your finger off the screen and RAY deletes the last digit that you entered.

The following are the additional functions provided by each number on the Dialer keypad:

- **4 – Previous:** Returns to the previous screen and leaves the Dialer.
- **2 – Read:** Reads out the entire number that you entered.
- **6 – Dial:** Dials the number that you entered.
- **7 – Delete Number:** Clears the entire number that you entered.
- **8 – Delete Last Digit:** Erases the last digit of the number that you entered.

> **Note**
>
> You can also use RAY's speech recognition options to make a call, as described in the *Calling Using Speech Recognition* section on page 47.

Turning RAY Off

RAY can be powered down completely or it can be in Sleep mode. Sleep mode saves battery while retaining RAY's connection to the cellular and/or Wi-Fi network.

When RAY is completely powered down, it takes a few seconds longer to power back on than when it is in Sleep mode.

Sleep Mode

RAY automatically goes to sleep mode after it is not used for a while. The following also puts RAY in Sleep mode.

▶ **To go to Sleep mode:**

1 Short press the ON/OFF button shown in **Error! Reference source not found.**. RAY plays a special sound.

2 You can power RAY back up by pressing the ON/OFF button. RAY then opens the previously displayed screen.

Powering Off RAY

▶ **To power off RAY:**

1 Long press the ON/OFF button shown in **Error! Reference source not found.**. RAY says **Power Menu**.

2 Place your finger somewhere in the middle of the screen and slide it towards the number 2. When RAY say **Power Down,** lift your finger off the screen.

3 You can power RAY back up with a long press of the ON/OFF button. Hold the ON/OFF button until you feel RAY vibrate. RAY says **Home Menu** when it is ready for you to start using it.

Power Menu

On a few RAY devices, one may get a quick access to the **Power** Menu, which provides eight options, described below, for quick and always available access.

The Power menu is available in the RAY N5 device by a long press on the device power key. It is also available for setting on devices that supports NFC reading (see page 22) and the purchase of special NFC tags.

The Power menu is arranged like a standard Menu type screen (see page 22) where each option is positioned in one of eight directions around the touch point. The following describes the options in the **Power** Menu.

► **To access the RAY Power Menu:**

1   Use the specific invocation method relevant to your own device. RAY says **Power** Menu.
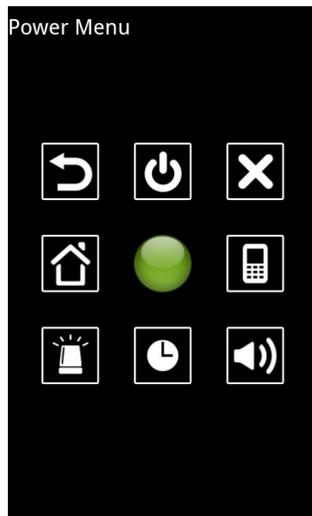
Figure 9: Power Menu

2   Place your finger somewhere in the middle of the screen and slide it in one of the eight directions and then lift your finger when RAY says the desired option.

The following options are arranged in a clockwise direction starting with the number 1 on the top left:

- **1 – Previous Screen:** Returns to the previous screen (meaning the one before the one you were in when you opened the **Power** Menu). You can use this option to go back to the previous screen from anywhere.

- **2 – Power Down:** Powers down the RAY device.

- **3 – Cancel:** Returns back to the screen that you were in when you opened the **Power** Menu.

- **6 – Information:** Displays a menu of information options, such as battery level, storage space, network connection and more, as described on page 73.

- **9 – Vibrate:** Sets the phone to only vibrate or not when there is an incoming call (not to ring). This is a toggle option.

- **8 – Clock:** Says the current day, date and time. This is a configurable option, as described on page 36.

- **7 – Emergency:** Dials an emergency number. The emergency number can be set in the **Information ➔ Emergency** service (as described on page 73) or from your own personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.

- **4 – Back to HOME Menu**: Displays the **Home** Menu, as described in the on page 25. You can use this option to go back to the **HOME** Menu from anywhere.

How Do You Know Whether RAY is on?

Tap the screen. When RAY is on, it plays a tone and vibrates slightly.

If RAY does not vibrate, then it is off.

To turn it on, press the ON/OFF button. A short press may be enough, or you may have to press a bit longer if the device is powered down.
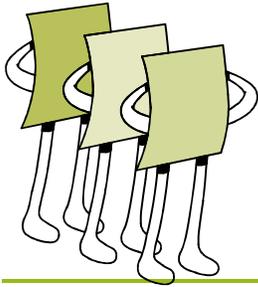
RAY Interface Basics

This chapter introduces the basic concepts, finger gestures and screen types of RAY's user interface.

Introducing the RAY Interface

Basic Interface Concepts

RAY is an advanced computing device that is based on Smartphone technologies. Most of its operation is using finger movements.
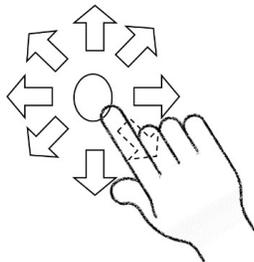
Figure 10: Selecting an Option on RAY's Touch Screen

> ### 🗋 Note
>
> RAY is especially designed for non-sighted users and therefore its interface works differently than a regular Smartphone device.
>
> The most important thing to learn about RAY is that you put your finger somewhere in the middle of the screen, slide your finger on the screen in the **direction** of the option that you want to select. When RAY says the name of the option that you want to select, lift your finger to select that option. You do not select things by tapping an icon.

► **To select options on RAY's touch screen:**

1 Touch anywhere on its screen with your finger. A special tone is sounded for each screen open on the device. RAY also has a distinct vibration for each screen.

If you are touching too far away from the center of the screen, then a special cancellation tone is sounded and your touch is ignored. In this case, simply lift your finger, and place it near the middle of the screen.

2 Slide your finger a little in a specific direction until you hear Ray say the name of the option that you want to select. Then, stop without lifting your finger off the screen.

You should move your finger far enough to hear the name of the desired option, but not too far as to exit the screen.

3 To select the option that RAY reads out, simply lift your finger off the screen. RAY then tells you the next step.

✓ Tip
If you do not want to select the option that you hear, then just keep sliding your finger until it is off the screen. When the device detects that your finger moved off the screen, it sounds a special cancellation tone to indicate that your touch on the screen will be ignored.
✓ Tip
After you place and hold your finger anywhere on the screen for three seconds, RAY enters special help mode. It will first read the basic information about the screen you are on. You than must lift up your finger and touch it again to choose one of the three options available upon sliding your finger to the right – get basic system information including battery status and such; getting extended help information and using guidance; and getting back to the last screen.

Basic Finger Gestures

The following are the basic finger gestures for operating RAY:

- **TOUCH:** RAY is operated by using your fingertip(s) to touch its screen. For best results, try to position your finger approximately in the center of the screen. When you touch the screen, RAY vibrates slightly. If you are touching outside of the touch screen surface (meaning too far away from the center of the screen), then a special cancellation tone is sounded and your touch is ignored. If RAY does not vibrate or beep, then RAY is powered off (in this case, press the ON/OFF button to power it back on).

- **SLIDE:** Sliding means to move your finger a little in any direction and then stop, without lifting your finger off the screen. The slide only needs to be long enough for RAY to recognize the movement, but not too long to go out of the screen area. After you slide your finger far enough, RAY says the name of an option. If you slide your finger too far out of the touch screen area, then you hear a cancellation sound and no selection is made.

- **SELECT:** An item is selected in RAY when you lift your finger off the screen after RAY says the name of the option that you want to select.

KEYPAD and Tactile keys alternative

RAY also supports users interface that is based on physical keys alternative to finger movement on the touch screen. Such alternatives are available as complimentary capabilities on special RAY devices like the L5 and the E5 or by setting an external keyboard device set to work on your Android smartphone.

When working with physical keypads, RAY is using for keys to designate up, down, back and enter functions as follows:

- **UP -** enables moving up in a list of items, the system will read aloud the name of the item or the function in the up position.

- **DOWN -** enables moving down in a list of items, the system will read aloud the name of the item or the function in the down position.

- **BACK –** enables getting back to the previous screen

- **ENTER –** Enables invocation and activation of the item current in focus

RAY Screen Types

RAY's has four screen types especially designed for non-sighted users. All RAY usage is performed in one of these screen types.

- **RAY Menu Screens,**
- **RAY List Screens,**
- **RAY Management Screens**,
- **RAY Keyboard Screen,**

RAY Menu Screens

RAY Menus enables you to select a specific application out of eight different options. The eight different options are arranged around the point of touching the screen, which becomes the number five key on a 12-key numeric keypad. The first application is available in the number 1 position (which is in the upper left direction), the second option is available in the number 2 direction (which is the upwards direction) and so on.

On devices in which we have a physical keypad, the 8 different options are arranged in a circular list where the order of the items when going in DOWN direction is: key in position 2, 8, 4, 6, 1, 3, 9, 7.

RAY has a few menus, such as the **Home** Menu, shown in **Error! Reference source not found.**. Each operates in the same manner as described below.
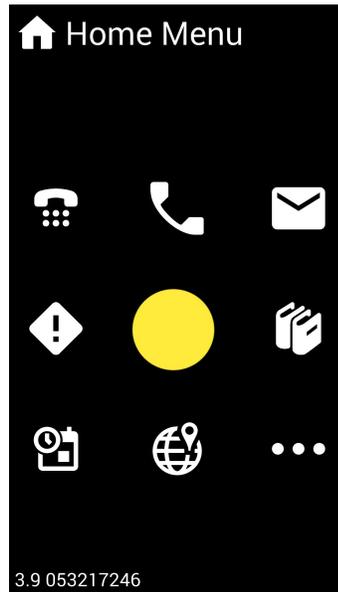
Figure 11: RAY Menu

▶ **To use a RAY Menu:**

1 Touch anywhere on the screen. You will feel RAY vibrate slightly and a tone sounds.

Wherever you touch the screen becomes the middle of the Menu for selection purposes.

You do not have to touch the screen precisely in the middle. Somewhere near the middle is good enough! Anyway, touching too close to the sides of the screen is ignored.

2 Imagine the place you touched the screen is the number 5 on a regular 12-digit numeric keyboard. Clockwise round the area where you placed your finger (which becomes the number 5), there are 8 numbers starting from 1 on the upper left corner, 2 in the upwards direction, 3, 6, 9, 8, 7 and 4.

3 Slide your finger a little on the screen in any of the 8 directions. Each direction represents a RAY function. RAY reads out the name of the service according to the direction of your finger movement.

4 To select the function that RAY reads out, simply lift your finger. RAY then tells you the name of the function that is open so that you know what to do next.

If you slide your finger too much and go off the screen, you will hear a cancellation sound and the current operation is cancelled.

✓ **Tip**

Remember lifting your finger makes a selection. Therefore, if you are not sure what to do, then keep moving your finger until it is off the screen in order to cancel the current operation.

✓ **Tip**

You can go back to the previous screen from any menu (except the **Home** Menu) by sliding your finger from the center of the screen to the number 4.

✓ **Tip**

All Menus have eight different options arranged around your touch point.

📄 **Note**

This user guide describes the various options that are provided by sliding your fingers in each direction. Directions are described in this user guide as if your finger starts from the center of a numeric keyboard on the number 5. For example, in order to select the number 2, slide your finger upwards, in order to select the number 3, slide your finger diagonally to the upper right corner and so on.

📄 **Note**

After you place and hold your finger anywhere on the screen for three seconds, RAY reads out help information, including the name of the screen and positioning information.

RAY List Screens

RAY provides a variety of services that use a RAY List screen. Each List screen operates in the same manner as described below.

A RAY List screen enables you to select one item from a list of items of the same type. For example, to select a Contact from your Contact List, to select a book from a Book list and so on.

When a List screen is first opened, RAY reads out its name (for example Contact List or Book List) and tells you how many items are in the List screen.

Figure 12: RAY List Screens

► **To select an item from a List screen:**

1 Place your finger on the screen. RAY then reads out the name of the first item in the List screen.

2 If this is the item that you want to select, then go to step **3** below. Otherwise, without lifting your finger, slide it either **up** towards the number 2 or **down** towards the number 8. RAY then reads out the names of the items in the List screen one after another.

You only need slide your finger a little and then stop in order to indicate the direction in which to scroll the List screen (up or down).

RAY reads out each item in the List screen in a cyclical fashion, meaning that RAY always scrolls through all the items until it reaches the item that you want.

3 When RAY says the required item name, lift your finger up to select it. When you place your finger on a List screen, you hear RAY's special List screen sound and feel the special List screen vibration.

✓ **Tip**

All Lists are organized as follows:

- The first item in the List is the first item in the downwards direction.
- The first item in the upwards direction is the last item in the List.

✓ **Tip**

Two options are provided for browsing more quickly through lists:

- **Tap to Skip:** You can stop RAY from reading the full name of an item in a List screen in order to skip to the next item more quickly. When RAY starts reading the name of an item (while one finger is still on the screen), tap the screen with another finger. RAY will immediately skip to reading the next item on the list. You can do this repeatedly to go through the list quickly.

- **Two Fingers for Alphabetical Browsing:** In a long list of more than 25 items, you can browse quickly through the List screen by doing the same thing as described above (Step **2** on the previous page), but with keeping two fingers on the screen (not tapping). As long as you keep both fingers are on the screen, RAY reads out the letters of the alphabet. When RAY reaches the preferred letter, lift up one finger to continue browsing through all the items that start with that letter.

- **Special note when Android is configured with TalkBack on:** If your basic Android environment is configured with Accessibility on (talkback is enabled), in order to enable fast move within long list, you must make the first touch on the screen with two fingers. As an

alternative, you may quickly disable the TalkBack on to off by using the quick-key setting of the specific device.

✓ Tip

You can go back to the previous screen from any list by sliding your finger from the center of the screen to the number 4 until RAY says **Previous Screen**.

🗋 Note

After you hold your finger on a List screen for three seconds, RAY reads out the name of the list.

RAY Management Screens

RAY Management screens provide between three and eight different actions that you can choose to perform on the selected item. RAY provides a variety of services that use Management screens. Each operates in the same manner as described below. In RAY, a Management screen enables you to select an operation to perform on the item that you chose. For example, to start reading the selected book.
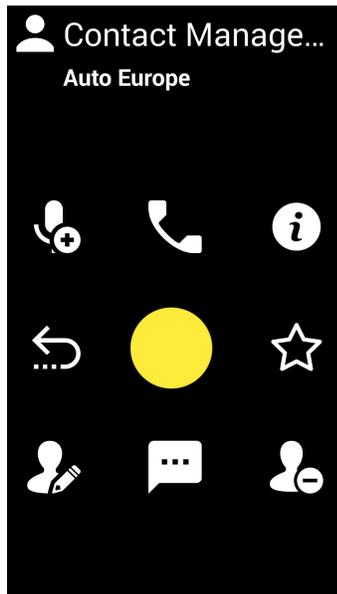
Figure 13: RAY Management Screen

► **Management screen layout:**

The basic layout of a management screen is similar to the one described in MENU screen – meaning eight options arranged around your touch point.

► **To select an operation:**

1 Touch anywhere on the screen. You will feel RAY vibrate slightly and a tone sounds. Wherever you touch the screen becomes the middle of the Menu for selection purposes.

You do not have to touch the screen precisely in the middle. Somewhere near the middle is good enough! Anyway, touching too close to the sides of the screen is ignored.

2   Imagine the place you touched the screen is the number 5 on a regular 12-digit numeric keyboard. Clockwise round the area where you placed your finger (which becomes the number 5), there are 8 numbers starting from 1 on the upper left corner, 2 in the upwards direction, 3, 6, 9, 8, 7 and 4.

3   Slide your finger a little on the screen in any of the 8 directions. Each direction represents a RAY activity. RAY reads out the name of the activity according to the direction of your finger movement. For example, the operations available for a contact management includes the following:

- **4 – Previous Screen:** Returns

- **1 – Record a note:** Record the name of the person or a note instead of getting a vocal reading of the name itself.

- **2 – Call the contact:**

- **3 – Information:** get full information about the contact including name, numbers and recording attached to it.

- **6 – Favorite:** Add or remove the contact from the list of favorite contacts

- **7 – Edit:**

- **8 – Send SMS to contact:**

- **9 – Delete the contact**:

4   To select the activity that RAY reads out, simply lift your finger. RAY then tells you the name of the activity that is open so that you know what to do next.

If you slide your finger too much and go off the screen, you will hear a cancellation sound and the current operation is cancelled.

✓ Tip

You can go back to the previous screen from a management screen by sliding your finger from the center of the screen to the number 4.

✓ Tip

After you hold your finger on a Management screen for three seconds, RAY reads out the name of the screen.

✓ Tip

After you put your finger on a Management screen, RAY reads out the name of the currently selected option in the Management screen. Lift your finger to select it.

On devices in which we have a physical keypad, the 8 different options are arranged in a circular list where the order of the items when going in DOWN direction is: key in position 2, 8, 4, 6, 1, 3, 9, 7.

If a function is left empty, RAY will skip it and move directly to the next item in the list.

RAY Keyboard Screen

RAY provides special screens for the entry of textual information or numbers.

The RAY keyboard is based on a 12-key alphanumeric screen, typically found in simple mobile phones or home telephony devices. Each key represents a number or three or more letters and symbols like a regular telephone device.

When used for numeric functions the keyboard includes only numbers and telephony symbols. When used for Alpha Numeric text entry, the different letters and numbers arranged under a single key in similar fashion to the structure of the regular phone dialers.

RAY keyboard Screen can be used with finger gestures OR speech recognition mode. When the screen appears, it is automatically set to recognize speech inputs. Upon the first touch on the screen, the speech recognition mode is turned off.

Using gesture mode, the finger touch point on the screen always relates to the number 5 on the 12 keys dialpad. By sliding your finger from the touch point to the relative direction of the other keys, you will choose the related number or letter. Lifting your finger when you hear the desired number or letter will make a selection.

Some of the numbers in the Dialer have additional functionality besides enabling you to type a number.

To access the additional functionality of a number key:

1 Place your finger near the center of the screen, this becomes the number 5.

2 Slide your finger from the center of the screen towards a number. RAY reads out the number of that key and then (after a moment) reads out the function of that number key.

> **For example,** to erase the last digit of the number that you have entered, slide your finger from the center of the screen towards the number 8. When your finger reaches 8, RAY says 8. Hold your finger in that place on the screen and after a moment RAY says the word **Delete**. Then, lift your finger off the screen and RAY deletes the last digit that you entered.

The following are the additional functions provided by each number on the Dialer keypad:

- **4 – Previous:** Returns to the previous screen and leaves the Dialer.
- **2 – Read:** Reads out the entire number that you entered.

- **6 – Dial:** Dials the number that you entered.
- **7 – Delete Number:** Clears the entire number that you entered.
- **8 – Delete Last Digit:** Erases the last digit of the number that you entered.

Text Entry Using Speech Recognition

You can use RAY's speech recognition option, as follows:

- When the alphanumeric screen is first displayed, RAY is in speech recognition listening mode until you touch the screen with your fingers.

- You can now say the letters or words (even complete sentences and complete number). Following one second of silence, RAY will translate the vocal impression into textual information and will reads it out.

- Please note that speech recognition requires on-line connectivity to the internet server for accurate translation.

To make a phone call using speech recognition:

1 Open the dialer or keyboard screen

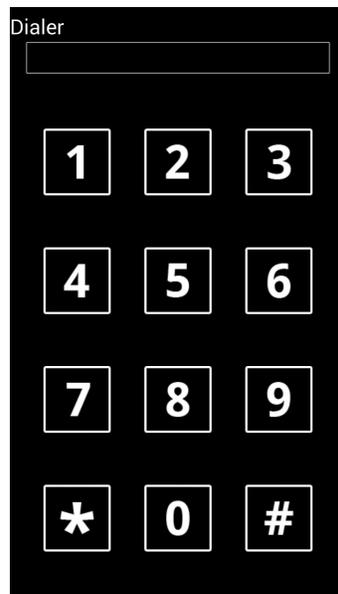RAY says **Dialer or Keyboard** and a 12-key dialing keypad appears, as shown below:

Figure 14: Dialer

2 RAY is now in speech recognition listening mode until you touch the screen with your fingers.

You can now say the digits or the entire number. After a one second of silence, RAY will translate the speech impression into a textual string of numbers and will read it aloud.

3 To call for an action, while you are in a numeric keypad mode (and there is no recognition of words and letters), you can simply say "**RAY"** to dial the call.

Note, when you are in a text entry mode, you can speak a complete sentence and get it registered in the input buffer.

⬚ Note

While in speech recognition mode, you can activate the underlying functions available in the system by saying the following commands:

To enter action mode while speaking a sentence use one of the following words: **RAY, Action, Actions, Done typing, Finish typing, End typing**. You don't need to enter action mode if you are in the dialer screen which recognize only numbers.

- **Back, Previous screen:** Returns to the previous screen and leaves the Dialer. This is under the digit 4.

- **Read:** Reads out the entire number that you entered. This is under the digit 2.

- **Dial, Finish, Finish typing, Send:** Dials the number or send the sentence that you entered. This is under the digit 6.

- **Delete Number, Delete Word:** Clears the entire number that you entered. This is under the digit 7.

- **Delete:** Erases the last digit of the number or the last letter in a word that you entered. This is under the digit 8.

For example, say "**RAY Delete Number**" to clear the entire number that you entered.

⬚ Note

If you opened the Dialer and then accidently ended speech recognition mode by touching the keypad, you can reactivate speech recognition mode by moving your finger to the number 0 and holding it there for a moment.

Configurable Menu Options

RAY lets you configure the functionality of some of the options in its Menu screens, meaning that you can define what a key does instead of its default functionality. The icon shown on the screen is replaced and the action performed by the number key changes according to your definition, as described below.

The following number keys can be configured:

In the **Home** Menu: Items in location 7 & 8

In the **Additional More** Menu: All items

For example, you might prefer to change the **Calendar** key to the **Banknotes** function or to the **Remote Assistance** function (for example) in order to enable easy access to these functions.

▶ **To reconfigure a menu key to perform a different function:**

1   Open the **desired** Menu screen in which you would like to replace the function.

2   Place your finger somewhere in the middle of the screen and slide it to one of the number keys listed above in order to configure it.

3   Hold your finger on that number until RAY says **Select Application**, and then lift your finger. RAY says **Application List** and opens a list of up to more than 20 applications from which you can select, such as Banknotes, Colors, Email and so on.

4   Select an option from this RAY List screen.
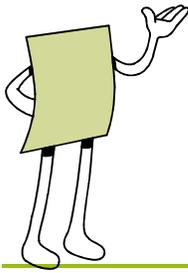
4

Using RAY

This chapter describes each of the services available from the **Home** Menu in detail.
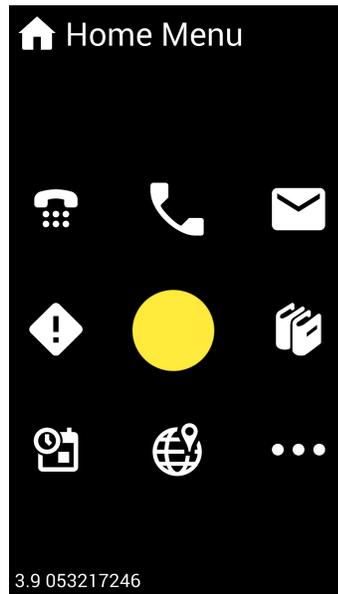
Figure 15: Home Menu

The following **Home** Menu options are provided:

- **Number 1** – **Speed Dial,** page 42, enables you to define and dial up to seven preset numbers.

- **Number 2** – **Telephone,** page 44, provides a variety of telephone services.

- **Number 3** – **Messages,** page 50, provides a variety of message services.

- **Number 6** – **Library,** page 54, provides a variety of library services.
- **Number 9** – **More,** page 59, provides a variety of additional services.
- **Number 8** – **Location,** page **Error! Bookmark not defined.**, provides various lessons and practice sessions describing how to use RAY.
- **Number 7** – **Calendar,** page 59, provides various scheduling options.
- **Number 4** – **Events,** page 61, provides a list of notifications of various system and application events.

Speed Dialing

Home Menu ➔ Number 1

RAY enables you to define and dial up to seven preset numbers for quick dialing in the number key positions 1, 2, 3, 6, 7, 8 and 9.

The **Previous Screen** option is in the number 4 position. This is standard for all Menus.

The same **Speed Dial** Menu is used to define Speed Dial presets and to speed dial, as described below:
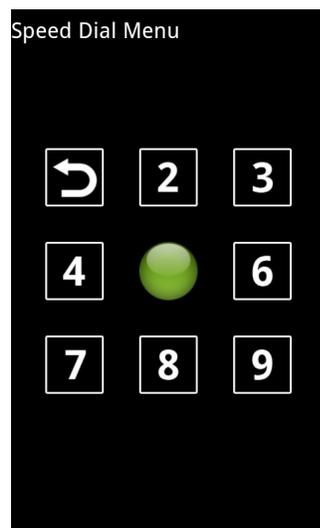
Figure 16: Speed Dial Menu

You can only define speed dial presets after you have added Contacts to your Contact List, as described in the *Entering a New Contact* section on page 49.

▶ **To define a speed dial preset:**

1 Open the **Home** Menu.

2 Place your finger somewhere in the middle of the screen and slide it towards the number 1 until RAY says **Speed Dial**. The **Speed Dial** Menu opens and RAY says **Speed Dial** Menu.

3 Place your finger somewhere in the middle of the screen and slide it towards one of the Speed Dial preset keys in positions 1, 2, 3, 6, 7, 8 or 9.

4 If no Contact was assigned to this preset key, then RAY says **Select Contact** and opens the Contacts List.

If a Contact was already assigned to this preset key, then RAY reads out the name of the Contact assigned to this preset key. To change this Contact, hold your finger on this key until RAY says **Select Contact**. The Contact List is open.

5 Select a Contact by placing your finger in the center of the screen. RAY then reads out the name of the selected Contact. You can also slide your finger downwards so that RAY reads out the names in the Contacts List. Lift your finger to assign the Contact that you hear to this Speed Dial preset key.

▶ **To speed dial:**

1 Open the **Home** Menu.

2 Place your finger somewhere in the middle of the screen and slide it towards the number 1 until RAY says **Speed Dial**. The **Speed Dial** Menu opens and RAY says **Speed Dial** Menu.

3 Place your finger somewhere in the middle of the screen and slide it towards one of the Speed Dial preset keys in positions 1, 2, 3, 6, 7, 8 or 9.

4 RAY reads out the name of the Contact assigned to this preset key. Lift your finger to dial this Contact.

Telephone

Home Menu ➔ Number 2

The following Telephone services are available from the **Home** Menu in the number 2 position:
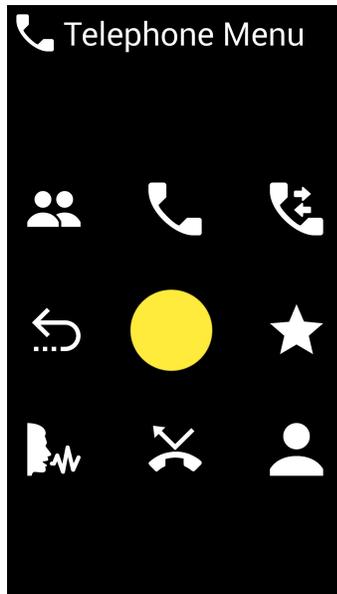
Figure 17: Telephone Menu

- **Number 4** – **Previous Screen**
- **Number 1 – Manage Contacts:** Enables you to fully manage your contact list including add delete and change. Note that you can also manage your contact list from the web (see remote assistance chapter).
- **Number 2** – **Dialer:** See below, enables you to make a call by dialing a telephone number.
- **Number 3** – **Call Log:** Tracks all of the calls on this RAY and initiate follow-up actions including convert a number to a contact person, call back to the person/number, send a message and such.
- **Number 6** – **Call Favorite contact:** See below, enables you to easily call your favorite Contacts.
- **Number 9** – **Call Contact:** See below, enables you to call a Contact.

- **Number 7** – **Voice Dialing:** Enables you to call a person by saying his/her name after the beep sound. This capability is enabled by automatic speech recognition and is subject to errors due to background noises, accent and unclear prompting. To perfect this function, you may have to practice a bit and adjust your pronunciation.

- **Number 8** – **Missed Calls**: Provides a history of missed calls.

Dialing a Number

Home Menu ➔ **Telephone Menu** ➔ **Number 2**

▶ **To make a phone call by dialing a number:**

1 From the **Home** Menu, go to the **Telephone** Menu by placing your finger somewhere in the middle of the screen and sliding it upwards towards the number 2.

RAY says **Dialer** and a 12-key dialing keypad appears, as shown below:
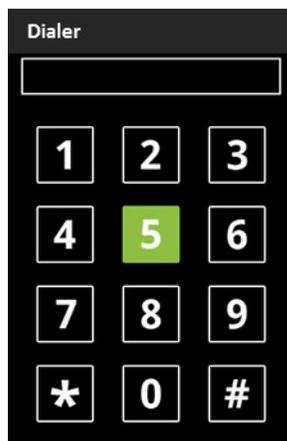
Figure 18: Dialer

2 Enter the phone number to dial, as described in the *Entering a Number* section on page 20.

3 To dial the number that was entered, slide your finger to the number 6 and leave it there until RAY says **Dial** and then lift your finger to dial.

4 In the same way as you can dial the phone number that you entered (as described above in Step **4**) some of the number keys in the Dialer have additional functionality. You can activate this functionality by sliding your finger to that number, leaving your finger on that number until RAY says the name of the function and then lifting your finger to activate it. The following options are available:

- **Number 2 – Read:** To have RAY read the number out to you, slide your finger towards the number 2 and leave it there until RAY says **Read**.

- **Number 8 – Delete Number:** To erase the last digit that you entered, slide your finger towards the number 8 and leave it there until RAY says **Delete Number**.

- **Number 7 – Delete:** To erase the entire number, slide your finger towards the number 7 and leave it there until RAY says **Delete**.

- **Number 1 – Previous Screen:** To return to the previous screen and leave the Dialer, slide your finger towards the number 1 and leave it there until RAY says **Previous Screen**.

5 During a call, you can perform the following:

- To terminate the call, short press the ON/OFF button.

- To toggle the speakerphone on and off, swipe your finger from the middle of the screen downwards.

Answering/Rejecting a Phone Call

Upon receiving an incoming phone call, RAY reads out the name or number of the caller. RAY can only read out the name of the caller if his/her number is in the Contacts List.

► **To answer the call:**

- Short press the ON/OFF button.

► **To reject the call:**

- Press the Volume Down key.

Calling a Contact

► **To make a phone call using the Contacts List screen:**

Refer to the *Making a Call* section on page 15 for a full description.

Calling Using Speech Recognition

Home Menu ➜ Telephone Menu ➜ Number 2

► **To make a phone call using speech recognition:**

1 From the **Home** Menu, go to the **Telephone** Menu by placing your finger somewhere in the middle of the screen and sliding it upwards towards the number 2.

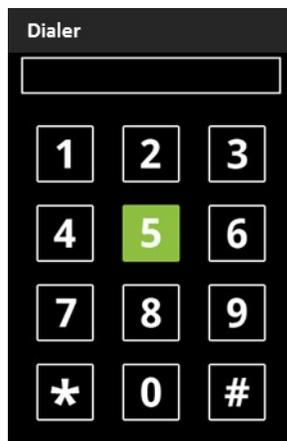RAY says **Dialer** and a 12-key dialing keypad appears, as shown below:

Figure 19: Dialer

2 RAY is now in speech recognition listening mode until you touch the screen with your fingers.

You can now say the digits to dial. After a one second silence, RAY reads out the number.

3 Say the words "**RAY Dial"** to dial the call.

> **Note**
>
> You can activate the underlying function of each digit on the dialer by saying the words "**RAY <command>**". The following are the additional functions provided on the Dialer keypad:
>
> - **Previous:** Returns to the previous screen and leaves the Dialer. This is under the digit 1.
> - **Read:** Reads out the entire number that you entered. This is under the digit 2.
> - **Dial:** Dials the number that you entered. This is under the digit 6.
> - **Delete Number:** Clears the entire number that you entered. This is under the digit 7.
> - **Delete Last Digit:** Erases the last digit of the number that you entered. This is under the digit 8.
>
> For example, say "**RAY Delete Number**" to clear the entire number that you entered.

> **Note**
>
> If you opened the Dialer and then accidently ended speech recognition mode by touching the keypad, you can reactivate speech recognition mode by moving your finger to the number 0 and holding it there for a moment.

Entering a New Contact

After you receive a call or make a call, you can add that number to the Contacts list from the Call Log, Miss Calls, Incoming Calls list or Missed Calls list.

► **To create a new Contact:**

1 Select the call whose number you want to add to the Contacts list.

2 This number is added as the phone number of the new Contact.

   A keyboard screen appears in which you can enter the name of the Contact.
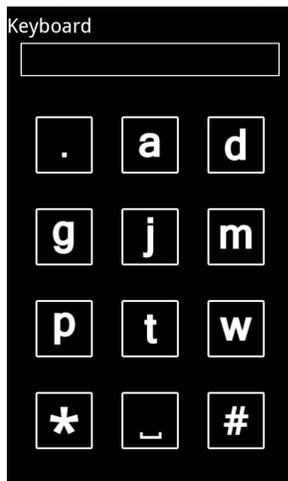
Figure 20: Alphanumeric Screen – Enter a Contact Name

   This RAY keyboard is based on a 12-key alphanumeric screen. Each key represents three or more letters and symbols like a regular telephone device.

3 Select a letter/symbol by moving your finger to the selected key and leaving it there until RAY says the desired letter. Lift your finger to select that letter.

   Alternatively, you can use RAY's speech recognition option, as follows:

   ▪ When the alphanumeric screen is first displayed, RAY is in speech recognition listening mode until you touch the screen with your fingers.

   ▪ You can now say the letters or words (even complete sentences). After a one second silence, RAY reads it out.

> **Note**
>
> Contacts can also be added to your Contact list from your personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.

Favorites

Home Menu ➔ Number 2 (Telephone Menu) ➔ Number 6

The **Favorites** service is available in the direction of the number **6** in the **Telephone** Menu screen.

The Favorites service provides a List screen of your preferred Contacts in order to enable easy access. For each Contact in the List screen, the following operations are provided:

- Calling that Contact
- Recording a verbal note for that Contact
- Listening to a full description of the Contact, including the name, phone number and recorded note
- Deleting a verbal note for that Contact (if one was recorded)

You can also manage your Favorites screen, as described in *Chapter 5, Remote Control and Configuration* on page 68.

Messages

Home Menu ➜ Number 3

The following Messages services are available from the **Home** Menu in the number **3** position:
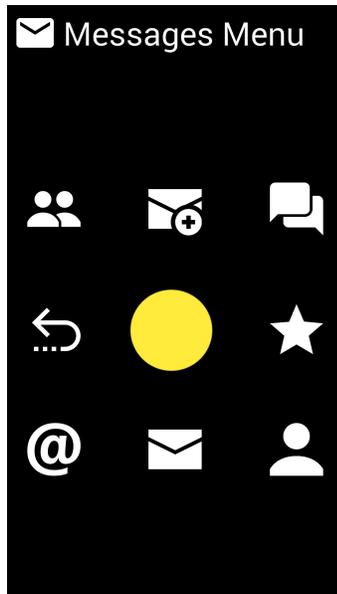
Figure 21: Messages Menu

- **Number 4** – **Previous Screen**
- **Number 1 – Manage Contacts:** Enables you to fully manage your contact list including add delete and change. Note that you can also manage your contact list from the web (see remote assistance chapter).
- **Number 2** – **New Message**: Enables you to write and send a new message, as described in the *Sending a Message* section on page 52.
- **Number 3** – **Messages Log:** Enables you to listen to your incoming and outgoing messages.
- **Number 6** – **Send message to Favorite**: Enables you to easily send a message to your favorite Contact.
- **Number 9** – **Send message to Contact**: Enables you to select a Contact to whom to send a message and then to type in that message.

- **Number 8** – **Unread Messages List:** Enables you to listen to new unread messages.
- **Number 7** – **Email:** Enables you to read and write your emails. RAY only supports Email accounts that are part of the GMAIL network by Google.

Sending a Message

Sending a Message to a Contact

Home Menu ➜ 3 (Messages Menu) ➜ Number 9

► **To send a message to a Contact:**

1 From the **Home** Menu, select number **2** to the **Messages** Menu.

2 Select number **9** to open the Contacts List.

3 Select a Contact in the Contact List. An alphanumeric screen opens.

4 Type in the message in the alphanumeric screen, as described on page 49.

5 Slide you finger to the letter M in the number 6 position and hold it there until RAY says **Finished Typing**. The Dialer opens up.

6 Slide you finger to the number 6 position and hold it there until RAY says **Finished Typing**. The message is then sent.

Sending a Message by Dialing a Number

Home Menu ➜ 3 (Messages Menu) ➜ Number 2

► **To send a message by dialing a number:**

1 From the **Home** Menu, select number **2** to the **Messages** Menu.

2 Select number **2** to create a new message. An alphanumeric screen opens.

3 Type in the message in the alphanumeric screen, as described on page 49.

4 Slide you finger to the letter M in the number 6 position and hold it there until RAY says **Finished Typing**. The Dialer opens up.

5 Slide you finger to the number 6 position and hold it there until RAY says **Finished Typing**. The message is then sent.

Listening to a Message

Home Menu ➜ 3 (Messages Menu) ➜ 3 (Messages List)

► **To listen to a message:**

1   In the **Messages** Menu, slide your finger towards the number **3**. The
Messages List appears. RAY reads out the number or name of the person who
sent the message. The name of the person is only read out if that person was
defined in the Contacts List.

2   Scroll the list and lift your finger to choose the desired message. At this point
RAY a Management screen appears in which you can select the following
operations:

▪   To listen to an incoming SMS message

▪   To listen to information about the message

▪   To delete the message

Library

Home Menu ➔ Number 6 (Library Menu)

Library services are available in the direction of the number 6 in the **Home** Menu.

RAY enables you to subscribe to magazines, which are then automatically loaded onto RAY as each is published. RAY then notifies you that a new magazine is ready for you, as described in the *Events* section on page 61.

The Library service also enables you to download audio books from your audio library source.

The **Library** Menu opens, as shown below:
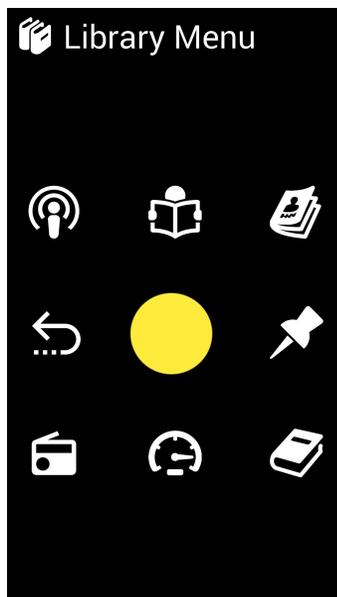
Figure 22: Library Menu

The following services are available from the **Library** Menu:

- **Number 4** – **Previous Screen**
- **Number 1 – Podcast:** Enables you to listen to online podcasts. You can set the list of podcasts available on your personal web page as described in remote assistance chapter.
- **Number 7 - Internet Radio:** Enables you to listen to Internet radio. You can set the list of Internet Radio Station on your personal web page as described in remote assistance chapter.

- **Number 2** – **My Library:** Enables you to access the list of magazines and books that are already saved on your RAY device.

- **Number 3** – **Magazine Catalog:** Enables you to access an online catalog of magazines that you can download to RAY in order to listen to them.

- **Number 6** – **Last**: Opens the last book that you read to the same page.

- **Number 9** – **Books Catalog:** page 58, Enables you to access a menu of options for listening to books.

- **Number 8 – Speed:** Enables you to set the reading speed. Select a speed percentage relative to normal reading speed, as follows: 50%, 75%, 100%, 125%, 150%, 175% and 200%. 50% is the slowest and 200% is the fastest.

My Library

Home Menu ➜ 6 Library Menu ➜ Number 2

The **My Library** Management screen is available in the direction of the number **2** in the **Library** Menu.

This service provides access to the list of magazines and books that are saved on your RAY device. After you choose the magazine or book to which you want to listen, a Management screen opens that includes the following options:

Read: Starts reading.

Information: Reads out information about the current article or chapter, including its name and length.

Articles/Chapters: Reads out a list of articles/chapters in the current magazine or book and enables you to go to any item in the List screen. By default, RAY keeps your last reading position of each magazine stored on the device.

Previous Screen

Pause: Pauses reading.

Next: Goes to the next article/chapter in the magazine/book.

Previous: Goes to the previous article/chapter in the magazine/book.

Speed: Enables you to set the reading speed. Select a speed percentage relative to normal reading speed, as follows: 50%, 75%, 100%, 125%, 150%, 175% and 200%. 50% is the slowest and 200% is the fastest.

✓ **Tip**

RAY keeps track of your last place in each book and magazine, and automatically opens to that place each time you come back to continue reading.

Magazine Catalog

Home Menu ➜ 6 Library Menu ➜ Number 3

The **Magazine Catalog** service is available in the direction of the number 3 in the **Library** Menu.

This service provides access to an online catalog of magazines that you can download to RAY in order to listen to them.

✓ **Tip**

Instead of performing the procedure below, you can subscribe to a magazine on RAY's website, as described in *Chapter 5, Remote Control and Configuration* on page 68. RAY then automatically downloads each magazine issue as soon as it is published. After the download is completed, RAY automatically alerts you with an Event notification. You can then select that Event to listen to the magazine, as described on page 61.

► **To download a magazine issue/book:**

1   Select a magazine/book from the RAY List screen. A RAY List opens listing the issues of the selected magazine.

2   Select the preferred magazine issue from the List screen.

RAY then says the words **Download started** and starts downloading the selected magazine issue or book. You can continue to use RAY for other things while it is downloading.

When the download is completed, RAY alerts you with an Event notification. You can select that event to listen to the magazine/book.

Events are described on page 61. The following options are provided from this Event:

- **Last:** Continue reading the last magazine/book that was read.

- **Magazine,** as described in this section.

- **My Magazines,** as described on page 55.

- **Speed:** Enables you to set the reading speed from the RAY List screen that applies to the entire device. Select the percentage of the speed relative to normal reading speed, as follows: 50%, 75%, 100%, 125%, 150%, 175% and 200%. 50% is the slowest and 200% is the fastest.

- **Manage:** Enables you to delete a magazine issue/book that is stored on RAY.

🗎 **Note**
If RAY's memory card is getting full, then RAY automatically deletes old magazine issues when it needs to make space for new issues. The oldest are deleted first.

Books Catalog

Home Menu ➔ 6 Library Menu ➔ Number 9

The **Books Catalog** Menu provides various options for downloading books, as described below:
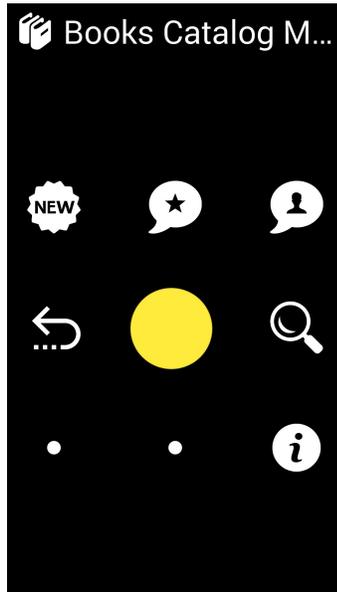

Figure 23: Books Catalog Menu

- **Number 4** – **Previous Screen**

- **Number 1** – **New Books**: Enables you to browse through a list of new books in the library that you can download.

- **Number 2** – **Recommended Books:** Enables to browse through a list of books selected by RAY librarian.

- **Number 3** – **most popular Books:** Enables to browse through a list of books selected by other readers.

- **Number 6** – **Search**: Enables you to type in a term in order to search for books.

- **Number 9** – **Books in download:** Enables you to get a list of books who are in download or waiting to be downloaded to the device. There are cases in which the books found in the library are not yet available on-line for direct download.

- Number 7 & 8 options are empty.

> **▢ Note**
>
> You may also download books from your own personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.

> **▢ Note**
>
> To exit third-party applications, such as IDEAL Group Reader, use the **Power Menu**, as described on page 23.

Calendar

Home Menu ➔ Number 7

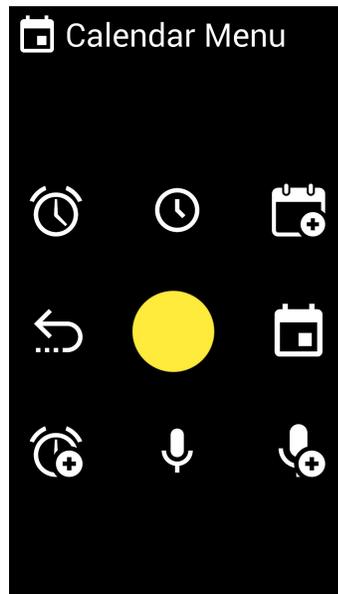The **Calendar** Menu provides various scheduling options.

Figure 24: Calendar Menu

- **Number 4** – **Previous Screen**
- **Number 1** – **Alarm List:** Readers out your alarm list.
- **Number 7** – **Add Alarm:** Enables you to add an clock alarm.

- **Number 2** – **Clock:** Readers out the current time.
- **Number 3** – **Add Appointment:** Enables you to add an appointment.
- **Number 6 – Appointments:** Opens your appointments list.
- **Number 9** – **Add Recording:** Enables you to make a recording.
- **Number 8** – **Recordings List:** Enables you to access the list of recordings that you have made.
-

✓ Tip
You can easily set appointments in your Calendar by sending a Calendar invitation to your RAY email address.

☐ Note
You may also manage your schedule from your own personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.

Location

Home Menu ➔ Number 8

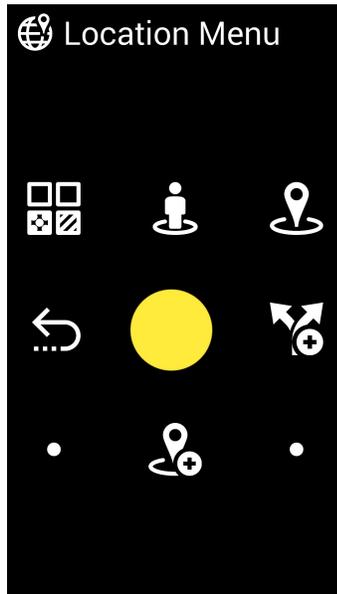The **Location** Menu provides various scheduling options.

Figure 25: Calendar Menu

- **Number 4** – **Previous Screen**
- **Number 1** – **Search by Category:** Search for business type around your current location
- **Number 2** – **My Location:** Reads out your current geographic location. The system is based on a GPS component inside the device. Its accuracy level is determined by the information received by the device. This option requires a connection to the Internet from RAY at the moment this option is used.
- **Number 3** – **Around Me:** Search for businesses around your current location
- **Number 6** – **New Trip:** Enables getting direction information using public transportation (available in selected countries only)

- **Number 8** – **My Places:** Setting of a list of favorite places used for navigation features.

- **Number 7 & 9 are left empty.**

Events

Home Menu ➔ Number 4

The **Events** service provides a List screen of notifications of various system and application events. These types of events are mostly generated from other applications than RAY. The **Events** service is available in the direction of the number **4** in the **Home** Menu.

Events include notifications of:

- A new incoming SMS.
- A missed call.
- A new book or magazine that was loaded to RAY and is ready to read.
- Low battery.
- Under 2GB left in the storage space.

Selecting an Event opens the relevant Management screen.

✓ Tip
If RAY is in Sleep mode, then a tone sounds when a new notification arrives. You may want to check the Events List screen from time to time if you have been using Ray continuously.

✓ Tip
RAY keeps track of your last place in each book and magazine, and automatically opens to that place each time you come back to continue reading.

More

Home Menu ➔ Number 9

The **More** option opens a Menu of additional application services. It is available in the direction of the number 9 in the **Home** Menu.
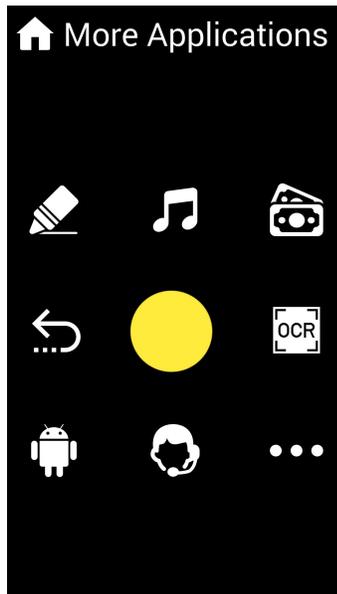

Figure 26: More Menu

The following options are provided in the **More** Menu:

- **Number 4** – **Previous Screen**
- **Number 1 – Colors:** Enables you to use RAY to identify a color. Point RAY at the object and then tap the screen. RAY reads out the color.
- **Number 2 – Music:** Opens a list of music that you have on the device or loaded from your personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.
- **Number 3 – Banknotes:** Enables you to use RAY to identify the value of bill. Point RAY at the bill and then tap the screen. RAY then reads out the bill value.

- **Number 6 –** OCR: Enables you to read aloud a printed page. You must hold your device above the printed page with the camera pointing to it and press on the screen to initate the process. There are special device holders you can buy seperatly to enable a stable and accurate image taking.

- **Number 7** – **Exit to Android:** Enables you to exit to the Android environment. You can set Android to operate with TalkBack on or off in the Setting menu.

- **Number 8** – Remote Assistance: Enables the invocation of a set of remote assistance capabilities described later in the manual.

- **Number 9** –**2nd More:** Opens another menu of additional applications such as bill identifier, color identifier and more. This application is interfaced differently than the other parts of the system and requires separate learning and training.
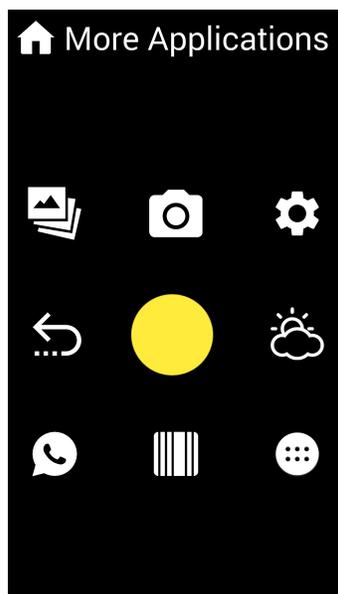

**Figure 27: Additional More Menu**

- **Number 4 – Previous Screen**
- **Number 1 – Gallery:** Open native Android application to see the gallery of pictures stored in the device. This application is not accessible to people with no vision. To get back from it use the standard Android BACK key of the device.

- **Number 2 – Camera:** Open the native Android Camera application that enables taking pictures in the device. This application is not fully accessible to people with no vision. To get back from it use the standard Android BACK key of the device.

- **Number 3** – **Information and setting:** Opens a list of status related options that enables you to perform the following

  - **Battery Level:** Reads out information about the battery level. We recommend downloading files and recordings to RAY at night time while it is not being used. Beforehand, you should either plug in RAY to charge or at least check that RAY has enough battery to operate while downloading.

  - **Network Connectivity:** Reads out information about the type of data connection currently active in the system only a Cellular connection or Wi-Fi can be connected at once.

  - **Storage Space:** Reads out information about the remaining storage space on RAY. If the remaining storage space goes under 2GB, a warning is sounded and you will be asked to manually delete old recordings.

  - **Version:** Reads out information about RAY's device type and software version.

  - **Guide:** Opens a recording of the RAY user guide (the one you are reading now).

  - **Settings:** Opens a list of settings that can be changed in the device such as Emergency number (Panic), System Language, Keyboard Language, Wi-Fi Configuration, Airplane Mode and Accessibility Mode.

    The Wi-Fi Configuration option enables/disables connection to a Wi-Fi network. This option requires the help of a sighted person in order to type in the necessary password.

    Most options can be configured from your personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.

    You may contact the RAY support if you need help defining any of these settings.

  - **Number 6 – Weather:** provides local weather information. You may set the metrics used in the readout (Celsius or Fahrenheit) in the information and setting screen.

- **Number 7 – WhatsApp messaging:** Invoke WhatsApp messenger application. You can set this menu option to invoke the standard WhatsApp version and operate it fully with TalkBack set to on. You can also set it up to open a special RAY version of the app that enables users control over it using the standard RAY interface concept (related to the capabilities of each device, not all of the options available in the standard WhatsApp app are available in RAY version of it.)

- **Number 8 – Tag Reader:** This function is available in devices that support NFC communication. It enables the setting of special NFC tags (available for purchase separately) to identify special objects (medicine for example) by reading a recorded message associated with it; or invoke special system functions like invoking frequently used apps or menus.

- **Number 9 – Application List:** Lists more than 20 applications that you can select and run.

5
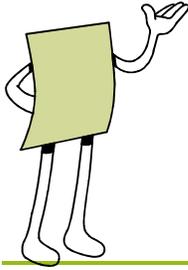
Remote Control and Configuration

This chapter describes how your family and friends can help you control and configure RAY from your personal RAY web page on the Internet.

Introduction

RAY provides you with a personalized web page in which you, or a designated sighted user, can manage your RAY device through the Internet from any computer or web browser application.

You, or any person that you authorize, can then use your personal user name and password to remotely perform a variety of functions on the RAY device, including the following:

- Managing your Contacts List
- Managing your Schedule
- Initiating a beeping sound on RAY to help you find it, if you misplaced it
- Displaying the geographic location of the RAY device
- Uploading Music Periodicals and Books
- Sharing the device screen on the remote browser. If RAY VISION is running on a RAY device, one can also get a full remote access and control on the device over the WEB.

Accessing Your RAY Web Page

Your personal RAY management page is designed for sighted people to help you from a remote location.

▶ **To access your RAY web page:**

1   Go to www.project-ray.com and select the **Users Login** option in the top right corner of the page.

2   Enter the user name and password you received by e-mail during the sign-up process.

• Products   • Buy   • Users   • Resellers   • About   • Contact

🔒 Change password

👤➕ Update Personal Details

⚙ Upload Music

⚙ Device Management: Huawei(U8815 - 0.991)

📄 Library: Periodicals

RAY Web Page Options

The following options are available from your personal RAY web page. The information displayed in these pages reflects the information in your RAY device and the configuration that you set in these web pages is automatically updated in your RAY device.

Some settings are automatically and immediately implemented on the RAY device. However, it may take a short while for some changes to appear on the RAY. For example, music downloaded to the RAY website may take a short while to download to the device. After the download is completed, an event notification appears in the RAY Event List, as described on page 61.

> **Note**
>
> There is no need to reset the RAY device after you update settings on the web page.

Change Password

This option enables you to change the password for accessing the remote control configuration web page described in this chapter. This password is also used to load all your latest RAY setting to a new RAY device (for example, to replace a lost RAY device).

Update Personal Details

This option enables you to enter/modify your personal details and your password for accessing various magazine/book libraries.

Upload Music

This option enables you to load music to RAY. You can listen to this music using the Music option that is available in the 2nd More Menu. This option is described on page 73.

RAY then notifies you that new music is ready for you, as described in the *Events* section on page 61.

Device Management

This option enables you to perform the following actions:

- Make phone ring
- Show phone location
- Edit Wi-Fi Settings
- Remote Control enables you to remotely control the Ray device through the web page. For example, you can see all the information on the RAY device, add a contact to it or dial a phone number from it.

Library Periodicals/ Library Books

This option enables you to subscribe to, download (to RAY) and browse through various periodicals / books.

RAY then notifies you that a new periodical/book is ready for you, as described in the *Events* section on page 61.

Contacts

This option enables you to add, edit and delete Contacts on RAY.

Calendar

This option enables you to manage your schedule on RAY.

RAY Remote Visual Assistance

RAY also provide a special mobile application for sighted people from which they can remotely control and help a visually impaired person.

To download the remote assistance application, go to Google Play Store and search for "RAY Eye Assist" (https://play.google.com/store/apps/details?id=com.ray.remoteassistance) .

For initial setup, you should fill the phone number of the remote assisting device in Eye-Assist application.

You should do the same in the Remote Assistance application on the RAY device. And set the phone number of the designated assisting device from RAY's contact list.

To initiate a remote assistance session, the visually impaired person should initiate a phone call to the supporting person. Upon receiving this phone call, Eye-Assist app pops-up on the sighted person device and enable a remote visual control of the RAY device including:

1. See the geographic location of the RAY device on a map.

2. Take snapshot pictures from RAY device and transfer it for view in Eye-Assist.

3. Grab a one-way video stream from RAY and see it in Eye-Assist.

4. The above options are in parallel to the phone call between the two devices that enables a complete interactive session between the visually impaired person and the support person.

Blank page for double-sided printing

-
    - **Number 3 – Clock:** Reads out the current day, date and time.
- **Number 7 – Clock:** Reads out the current day, date and time.
- **Number 4 – Calendar:** Provides various calendar options, as described on page 59.

-
- **Number 2** – **Emergency:** Dials an emergency number. The emergency number can be set in the **Information ➔ Emergency** service (as described on page 66) or from your personal RAY web page on the Internet available at the RAY website, as described in *Chapter 5, Remote Control and Configuration* on page 68.