



Juno™ Portable Handheld
Video Magnifier with
OCR and Touch
User Guide



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Support material and the latest version of this manual is available at <https://www.aph.org/product/Juno/>. If you need further assistance, please contact American Printing House (APH).

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For more information on warranty and repairs, go to www.freedomscientific.com/aph/Juno or see page 109.

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How to Use This Guide

Use this guide in conjunction with the *Quick Start*, which is small enough to carry with Juno. The first section of the *Quick Start* provides directions for using the product the first time. After first use, consider completing the tutorial in this guide to understand Juno's basic features. Ongoing, refer to the *Quick Start* for a summary of Juno's components, menus, and screens. Once you locate features in the *Quick Start*, refer to this guide for step-by-step instructions.






Menus and screens are represented by icons. The names are boldface, such as the **System Settings** menu, and represented by a graphical image, such as the **System Settings**



icon. Buttons on the screen, which are used to perform actions, are also presented



graphically. For example, tap the **Previous** button to return to the previous screen.

Buttons on Juno's hardware are capitalized and represented by graphical images, such as the red Capture button . Use the yellow Zoom In  or Zoom Out  button to change the magnification and use the blue Color Mode Up  or Down  button to change the colors.

To find the information you need, scan the [table of contents](#) at the front of this document.

Juno is a lightweight, handheld video magnifier that offers a touch screen, speech, optical character recognition (OCR), audio tags, and document reading.

What's in the Box?

- Juno portable magnifier with rotating camera barrel
- Zippered padded carrying case with shoulder strap
- Juno User Guide and Juno Quick Start
- Qualcomm Quick Charge™ 3.0 USB-C 110-220 volt AC power adapter
- USB Type C cable
- HDMI to mini-HDMI cable

Note: To update Juno, you must purchase a USB-C flash drive (formatted FAT32). This flash drive can also be used to import/export files from Juno to a computer and download log files. To give you more flexibility, we recommend purchasing a dual flash drive that offers both USB-A and USB-C. Also, a USB-C adapter can be used with a USB-A flash drive.

Product Features

Juno features are described in the following table.

Feature	Description
Magnification	2x to 30x to view items up to 15 feet away
Camera	Rotating, 13 megapixel, auto-focus, HD images with different positions for near, distance, self-view, and writing
Viewing modes	Live, document, handwriting, snapshot
Touch screen	7-inch, full color, touch LCD with pinch to zoom, ability to pan within an image, and touch access to menus and settings
Color modes	True color, grayscale, and 22 high contrast color combinations
Buttons	Power, color modes, snapshot, and magnification
Saved images	Up to 600 images can be stored
Transfers	USB-C port to transfer files between Juno and a computer

Feature	Description
Connections	Analog 3.5mm audio jack for headphones, USB-C port to connect to a computer, and an HDMI mini port to connect to a TV or monitor
LED lights	Three pairs of illumination LED lights for optimal lighting
Charging LED	Light on bottom left of device indicating battery status
Reading lines and masks	Used to quickly locate and maintain your place on the LCD screen while in Live view
Stand	Manually deployed, collapsible stand with easy glide features and image stabilization for reading
Audio	Text recognition and reading is provided in multiple languages and audio recording is available for tagging your saved files

Juno Components



1 Camera: Rotate for multiple purposes

2 Power: Short press to power on or put on standby, and long press to power down

3 & 4 Color mode: Move up or down through color modes

5 Capture: Press to capture or return to Live view


6 & 7 Magnification: Increase or decrease zoom level

8 LCD screen: Touch to select

Power States

You can use Juno continuously for approximately three hours.


Power On

To power on Juno, press and hold the white Power button  for several seconds until you see the splash screen. The battery must be charged to use the device. See “Charging Juno” in the *Quick Start* for instructions.

Battery Status

The battery status is shown in the upper left corner of the menu screens. When the battery needs to be charged, an alert is displayed and a low battery symbol is flashed on the screen. Instructions for charging the battery are in the “Charging Juno” section of the *Quick Start*.


When Juno is connected via the USB-C cable to an outlet using the power adapter, the battery fully charges in about three hours. Charging is slower when you connect Juno to a computer using the USB-C cable.

Note: For a faster charge, put Juno in standby mode by briefly pressing the Power button .


An LED light on the lower left side of Juno indicates status:

- **Solid green:** Battery fully charged; power adapter connected.
- **Solid red:** Battery charging; power adapter connected.
- **Flashing red:** Not enough charge to power on; or indication that temperature is rising so unit temporarily will not charge (no user action required).
- **Off:** Power adapter is not plugged in.

Standby

Press the white Power button  briefly to put Juno in standby mode. The screen darkens and the processor is put in a lower power state. After five minutes of inactivity, Juno automatically goes into standby mode. Press the Power button to wake up the device. See [Standby Time](#) on page 105 to change the number of minutes of inactivity before standby.

Power Down

To power down Juno, press the Power button  until you hear tones signaling shutdown and the screen goes dark (about 10 seconds). Juno never powers down automatically. To save your battery charge, consider powering down Juno. However, Juno takes approximately 30 seconds to start up after being powered down. Juno wakes up from standby much more quickly.

Camera Positions

The live camera can be rotated so you can use it for different purposes, such as reading, handwriting or hobbies, self-viewing, spotting, and distance viewing.

Reading

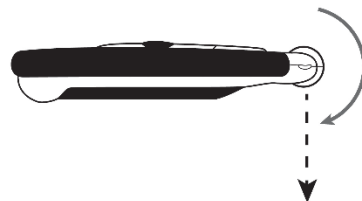
You can use Juno to read printed text or images in magazines, catalogs, menus, paperbacks, textbooks, photographs, and other printed material.

You should lay the document you want to read flat on the desk. Open the stand and place the legs on top of the document. The camera should point straight down. You will need to move Juno over the document as you read it because the visible text is only about the size of a business card.



Text Recognition

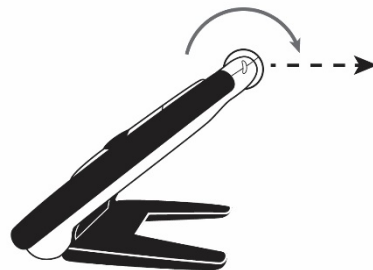
The best way to freeze or capture text is to close the stand and hold the device flat with the screen up. The camera automatically rotates 90 degrees so it is pointing down. Hold Juno over a document to get the best page magnification for magazines, catalogs, menus, photographs, and other printed material.



To capture an 8.5-inch by 11-inch page, lift Juno approximately 8 inches above the document. For more information on capturing text, see [Text Recognition](#) on page 34.

Distance

To view something at a distance, such as a whiteboard, open the stand and rotate the camera so that it is parallel with the stand.



Handwriting or Hobbies

You can use Juno to write by opening the stand and rotating the camera so it is pointed down about halfway. You place paper behind the device, then write on it while watching yourself write on the screen. If you enable [focus lock](#) (see page 28), the camera focuses on the paper instead of your hand. You can work on hobbies that require fine motor skills, such as knitting, in the same manner.

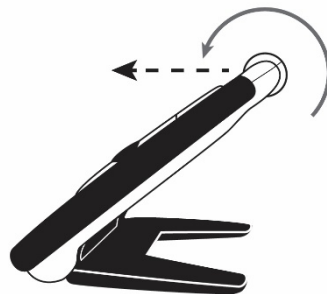


Self-View


To view yourself, position the device so you are looking at the screen. The stand can be open or closed. Rotate the camera until it faces you and you can see yourself on Juno's screen (or the [attached display device](#), see page 82).

When the camera is facing you, the image is flipped so it is like you are looking in a mirror. A capture of your own image, however, is not flipped.

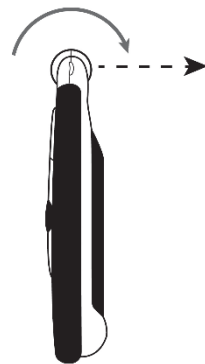
LED lights are off when you enter this mode, but you can turn them back on. For more information on toggling the LED lights on and off, see [Toggling LED Lights](#) on page 33.






Spotting

With the reading stand closed, point the camera at what you want to view. Press the yellow Zoom In **+** or Zoom Out **-** buttons to increase or decrease magnification. To take a snapshot of the image on the screen, press the red Capture button , holding Juno steady until you hear a click.



This is ideal for viewing labels, price tags, receipts, business cards, and more. Press the Capture button  again to return to the Live view.









Explore basic features of Juno and become comfortable with the product by completing the steps of this tutorial. Each section is a bit more advanced as you learn to navigate Juno and become familiar with its customization capabilities.



1. Turn on Juno by pressing the white Power button  until the APH logo is displayed.
2. Hold the device like a tablet to view items both near and far.
3. Adjust the magnification by pressing the yellow Zoom In  or Zoom Out  button.

Note: Since the first press prompts Juno to read you the button name, you must quickly press each button twice to perform the function. The same holds true for tapping buttons on the screen, as well as icons, menus, and options.

4. Press the blue Color Mode Up  or Down  button to try different color combinations.
5. Hold the device in front of you and tap the screen to focus on an item, such as a calendar, receipt, or bill.

6. Press the red Capture button , holding Juno steady until you hear a click, to take a snapshot of the image.
7. In the snapshot, adjust the magnification using the yellow Zoom In  or Zoom Out  button.
8. Use the blue Color Mode Up  or Down  button to try different color combinations. You can use this technique to look at tags while you shop, bottles with tiny print, or other materials that are hard to read.
9. Press the Capture button  to return to Live view.

Text Recognition

1. Hold Juno flat over a document, such as a newspaper. Frame the image on the screen.
2. Press the Capture button  to capture the image.
3. Tap the **Restore** button  in the lower left corner of the screen to display the button bars.

4. Tap the **Recognize Text** button  to recognize the text.




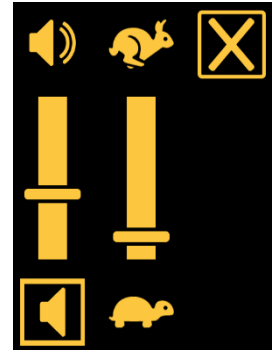
5. Tap the **Play** button  to have Juno read the text to you, then tap the **Pause** button  to stop it.





6. Tap the **Restore** button  in the lower left corner of the screen to display the button bars.



7. Tap the **Volume and speech rate** button  to display the sliders that control how loud and fast Juno speaks. These sliders control both the narration of the user interface information and the device voice that reads aloud after optical character recognition (OCR).





8. Turn up the volume slightly by pushing the left slider up toward the **Volume** symbol .



9. Decrease the speed by pushing the right slider down toward the **Turtle** symbol .

10. Touch the screen to hide the sliders.




11. Tap the **Close** button  in the upper-right corner to close the file without saving it.

12. Toggle the lights off and on by tapping the **Lights Off** button  or **Lights On** button .


13. Rotate the camera toward a coin and increase the magnification so that you can read the print on it.


14. Turn on focus lock by tapping the **Lock Focus** button , which locks the focus at its current position.
15. Place another object, such as a pen, beside the coin. Notice that the coin remains in focus rather than the focus moving to the pen. Turn off focus lock by tapping the **Unlock Focus** button .

Menus

1. Tap the **Main Menu** button  to display the **Main Menu** screen.
2. Tap the **Brightness** button  to display the **Set Brightness** screen. Push the slider to the right for a brighter screen and to the left for a darker screen. The best brightness level varies depending on the lighting in your current environment.
3. Tap the **Previous** button  to return to the **Main Menu**.



4. From the **Main Menu**, tap the **Settings** icon  to display the four menus that enable you to customize Juno's settings.

5. Tap the **Menu Settings** icon  to display options for controlling Juno's user interface. Look at each of the settings to familiarize yourself with the system. This guide provides instructions for setting the options.

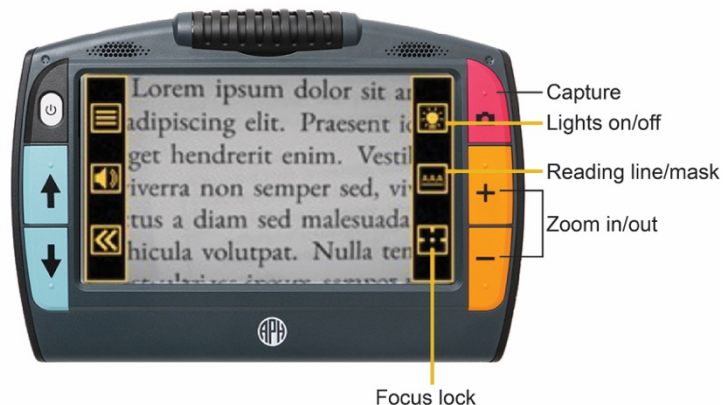
6. Tap the **Previous** button  until you return to the live camera view.

7. Tap the **Hide** button  to no longer display the button bars.



Features available while viewing a live image are magnification, tap to focus, color mode, focus lock, panning, and reading line/mask.

This section also covers taking a snapshot, saving an image, or turning the LED lights on or off.



Magnifying an Image



Press and hold the top yellow Zoom In button **+** or the bottom yellow Zoom Out button **-** on the right side of the Juno body for continuous zoom magnification. Press and release to incrementally increase or decrease magnification. Both continuous and incremental magnification are available for live, frozen, and saved images.

If no motion is detected, the image is frozen so it is easier to view. The camera automatically stabilizes the image when the stand is open, focus lock is disabled, and the camera faces down.

Tap to Focus

In any position, you can tap the screen to focus on one part of the picture. Automatic focus occurs regardless of whether focus lock is on.

Changing the Color Mode



Press the blue Color Mode buttons on the left side of Juno to cycle through true color, grayscale, and your choice of 22 color combinations. Live view supports all color modes.

Color modes can be applied during Live view or after an image has been saved. For more information, see [Color Modes](#) on page 78.


Focus Lock



You can lock the focus at its current position. When you tap the **Focus Lock**



button, it toggles between locked  and unlocked .




The **Focus Lock** button is found on the bottom right button bar. Tap the **Restore** button  in the lower left corner of the screen to display the button bars.

Using a Reading Line or Mask



A reading line or mask orients you and helps keep your place. The **Reading Line and Mask** toggle button, located in the middle of the right button bar, changes when tapped. The displayed button indicates the next line/mask in the cycle.

Tap the **Restore** button  to display the button bars. In Live view, the middle right button toggles:

- Tap the **No Reading Line or Mask** button  to have no line or mask on the screen.
- Tap the **Display Reading Line** button  to display a reading line on your screen. Drag the line to move it.
- Tap the **Display Reading Mask** button  to display a mask that blocks the screen except for a horizontal slice of the image. Drag the boundary to change the size of the masked area.



Panning

You can drag an image to see parts of a snapshot that are outside the boundaries of the screen. If you capture an image of a rose, for example, then you could drag the image up to see the stem or down to see the flower. You can drag the image in any direction until the end of the snapshot.

Taking a Snapshot



Press the upper right button on the Juno body to take a picture of the current image. Press it again to return to Live view.




Taking a snapshot can be useful for reading labels on items on a store shelf. For example, you can move Juno close to items and take a snapshot, then bring Juno close enough for you to read the labels on Juno's LCD screen.

Optionally, press the top yellow Zoom In button **+** to increase magnification, or the bottom yellow Zoom Out button **-** to decrease magnification. You can also change the color mode by pressing either blue Color Mode button **↑** **↓** on the left side of Juno.



Saving an Image

An image is saved with the current magnification and color settings just as displayed on the screen. However, you also can change the magnification level or color mode while viewing a frozen or saved image. To save an image:

1. Press the red Capture button , holding Juno steady until you hear a click, to take a picture. A **Camera** icon  is displayed, followed by a snapshot of the captured image.
2. Tap the **Restore** button  to display the button bars. To the right of the image are the following buttons:



Cancel and return to the Live view







Recognize the text



Save the image



3. Tap the **Save** button  to save the image. The **Add another page?** screen is displayed.
4. Tap **No** to save a single image. The **Save Image?** screen is displayed.
5. Tap **Yes** to save the image as the [default save type](#) (page 91), then tap **OK** to confirm. The **Record Audio Tag?** screen is displayed.
6. To record a name for the file, tap **Yes**. If you tap **No** and do not record a name, Juno gives the file a default name. It may be difficult to keep track of your files if you do not name them.
7. On the **Audio Tag** screen, tap the **Record** button .
button.
8. Say the file name and tap the **Stop** button . If you want to listen to the name you recorded, tap the **Play** button .



Toggling LED Lights



Tap the top button on the right button bar to turn the lights on or off.

Your Juno automatically turns on the lights needed for the best illumination, which depends on both the position of the legs and the camera barrel. In self-view mode, for example, where the barrel is turned toward you and the legs open, the lights are off so they do not shine in your eyes.



To manually toggle your lights on and off, tap the **Restore** button



or **Lights Off** button



When the lights are on, the button bar displays the **Lights On**



button, and vice versa when the lights are off.



When you turn on the lights or power on the device, the lights gradually brighten over a five-second period.

To avoid glare when viewing reflective surfaces, such as glossy magazines, turn off the lights.

Juno can capture a still image of a document and process the printed words using optical character recognition (OCR). You can then either read the text or have it read aloud to you (text-to-speech or TTS). The voice selected when Juno was set up is used as the reading voice until you change it. The reading voice can be different than the voice that narrates as you move around Juno. For example, you can have Juno read in French if you are studying that language.

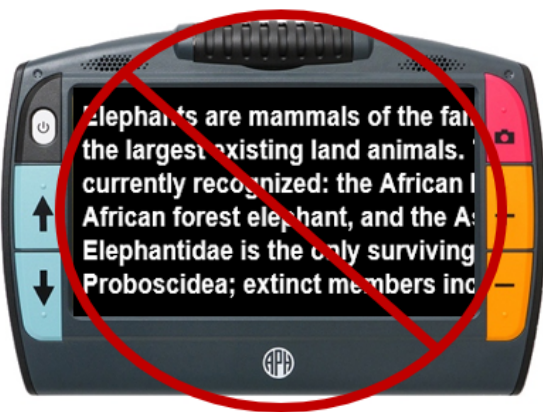
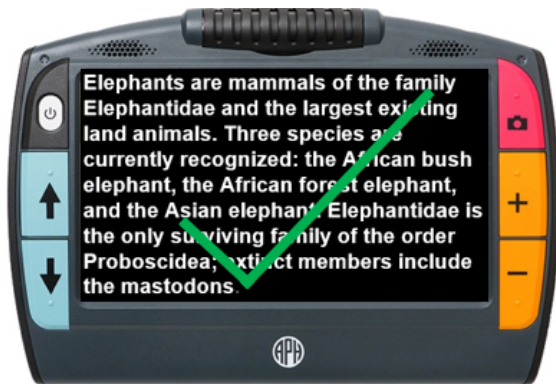
Tips for Successful Text Recognition

Before capturing a page and performing text recognition, set up the environment and position Juno using these tips:

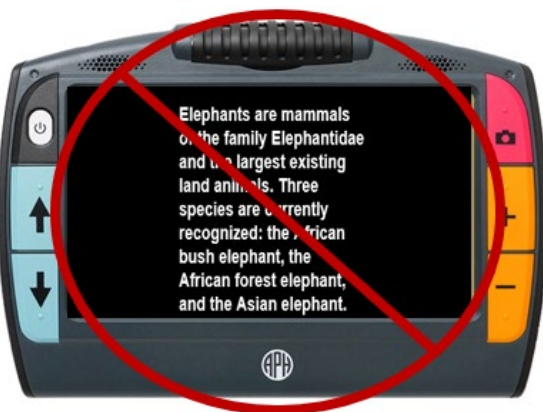
- Ensure the room has adequate ambient lighting and that the light is evenly distributed over your target document. Avoid hot spots. Try turning on or off the reading lights by tapping the **Lights On**  or **Lights Off** button . It may help or hurt depending on the angle and the other lighting on the page. To avoid glare when viewing reflective surfaces, such as glossy magazines, turn off the lights.
- For small targets, such as a business card or letter, place a clean white sheet of paper behind the target to eliminate interference.

- Put the material flat on a desk or table. Flatten out books (especially ones with large spines) or other materials with an observable curvature. Make sure the target material is steady. It might take a few moments for the camera to achieve focus after motion has stopped.
- Hold Juno flat with the screen up horizontally about 8 inches over the page. The camera rotates down. You may want to stand up and look down at the screen.
- Position your material so it fits within the frame in its entirety. You can rotate your target material in any orientation. Try turning the page sideways.
- Try turning Juno to get more text in the frame. Juno supports portrait and landscape captures.
- Tap on the screen to focus on the page. Do a visual check to ensure that the text is crisp and not blurry on the screen.
- Be sure to zoom out to maximize the amount of text that is captured. The next page provides good and bad examples of aligning text in the frame.







The top two images show the importance of fitting all the text in the frame.










The bottom images demonstrate the need to completely fill the frame with text.

Capturing a Page

You can capture a page to either read the page yourself or have Juno read it to you. Review the [Tips for Successful Text Recognition](#) on page 34 before following these steps to capture a page and use text recognition:

1. Close the stand on Juno.
2. Set the material you want to capture flat on a desk or table.
3. Go to live camera view.
4. Hold the device flat with the screen up. The camera rotates down. You may want to stand up so you are looking down at the screen.
5. Hold Juno straight over the page about 8 inches away. Frame the image of the page on the screen. Maximize the amount of content captured by moving around the device or turning the paper until the full page is shown on the screen.
6. Press the red Capture button , holding Juno steady until you hear a click. A **Camera** icon  is displayed until the capture is complete.

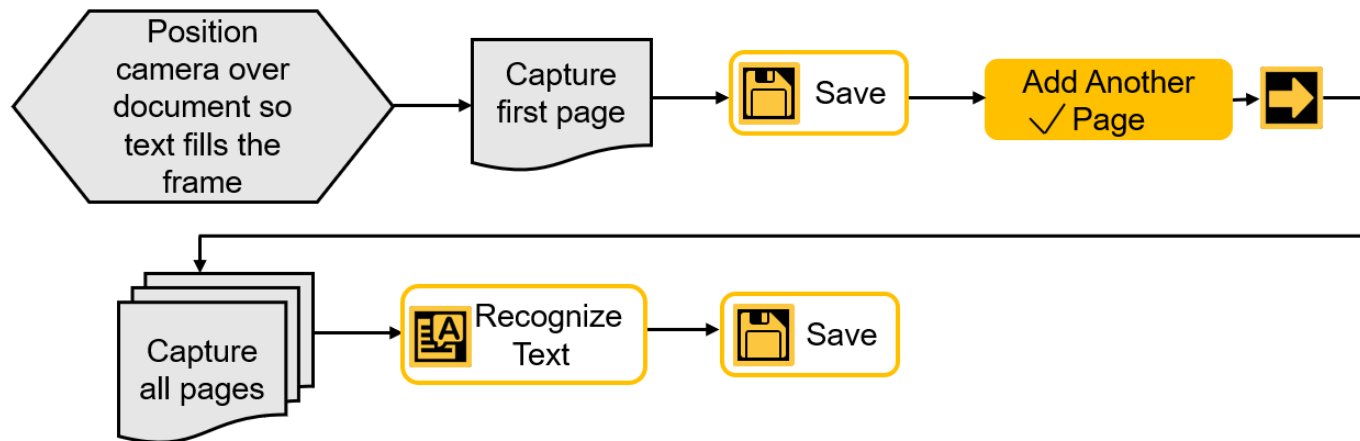


7. Tap the **Restore** button  to display the button bars.
8. Tap the **Recognize Text** button  to scan the document.
9. To listen to the text from the beginning, tap the **Play** button . You can also tap a word or [zone](#) (see page 50) to start reading there. For other options, tap the **Restore** button :
 - To discard the file and return to Live view, tap the **Close** button .
 - To toggle between [viewing modes](#), tap the **Viewing Mode** icon . See page 49 for more information.
 - To save the file, tap the **Save** button . See page 91 for directions on setting the default file type.






Capturing Multiple Pages


If you are capturing a multipage document, it is much faster to scan all the pages before using text recognition. Saving and scanning each page individually is unnecessary and time consuming. You cannot reorder the pages after they are scanned, so be sure to capture the pages in the correct order. The following flowchart provides an overview of the process.




Review the [Tips for Successful Text Recognition](#) on page 34 before following these steps to capture multiple pages and use text recognition:




1. Close the stand on Juno.
2. Set the first page you want to capture flat on a desk or table.
3. Go to live camera view.
4. Hold the device flat with the screen up. The camera rotates down. You may want to stand up so you are looking down at the screen.
5. Hold Juno straight over the page about 8 inches away. Frame the image of the page on the screen. Maximize the amount of content captured by moving around the device or turning the paper until the full page is shown on the screen.
6. Press the red Capture button , holding Juno steady until you hear a click. A **Camera** icon  is displayed until the capture is complete.
7. Tap the **Restore** button  to display the button bars.




8. Tap the **Save** button . The **Save?** screen is displayed.
9. Tap **Add another page?** to indicate that you want to create a multipage document.


10. Tap the **Next** button  to return to Live view and start adding pages. When capturing multiple pages, the following buttons are displayed across the bottom of the screen: **Previous**, **Save**, **Recognize Text**, and **Lights**.






11. Frame your next page and press the red Capture button , holding Juno steady until you hear a click. If you are satisfied with the captured image, press the **Next** button . If you are dissatisfied, tap the **Previous** button  to delete it. Repeat this step until you have captured all pages in the document.




12. After you capture all the pages, tap the **Recognize Text** button . The text is displayed with [zones](#) (see page 50). You can begin reading before all the text is recognized.

- To save the book and read it later, tap the **Save** button .

- To listen to the text immediately, tap the **Play** button . To stop, tap the **Pause** button .

- To toggle between [viewing modes](#), tap the **Viewing Mode** icon . See page 48 for more information.





- To navigate between pages, see [Navigation in Multipage Documents](#) on page 43.

- To exit, tap the **Close** button  in the upper-right corner. If you have recognized the text, you have the option of deleting the last page of the file, saving and exiting, or exiting.




Navigation in Multipage Documents





To quickly move around a multipage document, tap the **Page x of x** rectangle at the top of the screen. In the menu that is displayed, you can tap a page number in the scrolling list or tap one of the following icons:

- **Start of Document**  displays the first page of the document.
- **Previous Page**  displays the previous page in the sequence of scanned pages.
- **Furthest Viewed**  displays the furthest location that you have previously viewed. If you have a 10-page document and have viewed the first five pages, for example, then you would jump to page 5.
- **Next Page**  displays the next page in the sequence of scanned pages.




Reading


Options on the **Reading Settings** menu  enable you to change the language and reading voice, as well as the viewing mode. To display the **Reading Settings** menu:






1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings Menu**.
3. Tap the **Reading Settings** icon  to display the **Reading Settings** menu.



4. Tap the **Viewing Modes** icon  to change the default [viewing mode](#) (see page 48).

5. Tap the **Reading Language** icon  to set the default [language and reading voice](#) (see page 46).

You can also alter the way your document looks and how it's read to you without going through the **Main Menu** .





- Magnify using the yellow Zoom In  or Zoom Out  buttons or through pinch to zoom.
- Change the color combination using the blue Color Mode Up  or Down  button.
- Change the volume or speech rate using the **Volume and Speech Rate** icon  on the button bar.

Language and Reading Voice

When Juno reads text aloud, it identifies paragraphs, tables, and bold, italicized, and underlined text. The default is English.

You can set only one language and one voice at a time for reading. If you were studying French, for example, then you would change the reading language to French. When you were ready to switch back to homework in English, you would need to reset the language to English.

To change the reading language:

1. Tap the **Restore** button  to display the button bars, then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings** menu.
3. Tap the **Reading Settings** icon  to display the **Reading Settings** menu.

4. Tap the **Reading Language** icon  to display the **Select Reading Language** screen.

5. Swipe up or down to move through the list, then select the language used for text recognition. You can only select one language at a time.

6. Tap the **Next** button .

7. Tap the name of the voice used to read documents. This voice is separate from the talking menus. Juno responds in the selected voice and the language. The default is the [menu voice](#) (see page 76).


Note: If you do not hear Juno reading to you, check the [volume level](#) (see page 71).






8. Tap the **Next** button .



Viewing Modes

The **Viewing Modes** screen provides toggle buttons for the viewing mode and highlighting. The screen displays a sample of the default mode while the toggle button displays the next mode in

the cycle. Your chosen view is set when you tap the **Previous** button . To change the way recognized text is displayed or highlighted:

1. Tap the **Restore** button  to display the button bars, then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings** menu.
3. Tap the **Reading Settings** icon  to display the **Reading Settings** menu.
4. Tap the **Viewing Modes** icon  to display the **Viewing Modes** screen.

5. Toggle the top right button to select the default viewing mode.



- Snapshot mode shows a full screen of text without high contrast color.



- Teleprompter mode shows text in paragraph form using high contrast color.



- Tickertape mode shows one line of text at a time using high contrast color.

6. Tap the bottom right button to toggle the way text is emphasized as it is read aloud:




- Boxed




- Underlined



Zones

If you open a DOCX or PDF file, or if you open a captured file with recognized text, then the first viewing mode is **Zones** . With zones, the text is separated by highlighted and numbered boxes to help you navigate around the document.

You can choose where you want to begin reading by tapping a zone. If you tap the **Play** button  rather than tapping a zone, then narration starts at the beginning of the document. When narration begins, the default [viewing mode](#) (see page 48) is displayed.

Note: Zones are not available in the **Viewing Modes** screen and cannot be selected as the default mode.

In **Zone** view, the captured image is in full color, but selecting a color mode changes the zone highlighting and numbering.



Managing Files



Juno's file manager enables you to view, store, delete, import, and export files. You can also add or re-record a file's audio tag.



When you tap the **File Manager** icon, the **Files** screen lists the files saved on Juno. Files are sorted by the date captured or last modified, left to right, top to bottom.

Icons represent file types. For files containing images, a small segment of the first image in a file is displayed. The system file name, displayed below the file type, cannot be changed. Tap a file's icon to view more information about it or listen to its audio tag.

Juno supports the following file types: JPEG, PNG, BMP, WEBP, TXT, RTF, PDF, and DOCX. Files that comprise a book are not listed; only the book name is displayed as a VCB (Vispero Compressed Book) file. The **Transfer**







button, used to import and export files, is not displayed until you insert a USB-C flash drive.



Viewing a Saved File

Saved files can be viewed from the **Files** screen. To view a file:

1. Tap the **Restore** button  to display the button bars, then tap the **Main Menu** button  bars, then tap the **Main Menu** button .
2. Tap the **File Manager** icon  to display the **Files** screen.
3. Tap the icon of the file you want to view. The beginning of the file is displayed with its name at the top of the **File Information** screen. You can change the magnification level or color mode of the saved image.
4. Choose from the following actions:



Export file



Record audio tag



Return to previous



Open file




Edit file



Opening a File

When you open a document, you can either listen to it


by tapping the **Play** button  or change the viewing mode to make reading easier. You can also delete the last page of a multipage document. To open a file:

1. Tap the **Restore** button  to display the button



bars, then tap the **Main Menu** button .

2. Tap the **File Manager** icon  to display the **Files** screen.

3. Tap the icon of the file you want to view.

4. Tap the **Open file**  button. The file is first displayed in the Zone view (see page 50) and the button bars are hidden.



5. Tap the **Restore** button  to display the button bars.
6. To improve the image, you may want to toggle the viewing mode (see page 48) by tapping the middle right button.
7. When you are finished, tap the **Close** button  to display the **Exit?** screen. For multipage files, you have the option of deleting the last page of the file. To exit without saving, select **Exit**.







Recording Audio Tags

Audio tags are critical to identifying your saved files on Juno. You can apply an audio tag to any file that you save or import. However, a file exported to a USB-C flash drive or copied to a computer will not keep its audio tag, so the audio tag is only useful on Juno.






You can add an audio tag when you save a captured image or text file, or later, when you open a saved file.

To apply an audio tag:

1. After you save or open a file, tap the **Record** icon .
2. Clearly speak the file name. Think of a description name for the file that will help you remember its contents later.
3. Tap the **Stop** icon . The tag is saved when you tap the **Previous** button .
4. Listen to your recording by tapping the **Play** icon .

Storing Files


You can save up to 600 images (approximately 5 GB). However, storage lessens when additional languages are used for OCR and speech. Keep an eye on the amount of storage available to avoid running out of space—if this occurs, you must delete some files to make room before you can save new ones. To help you manage device storage, review the **Juno Storage** screen. To display this screen:






1. Tap the **Restore** button  to display the button bars, then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings** menu.
3. Tap the **User Settings** icon  to display the **User Settings** menu.
4. Tap the **Storage** icon  to display the **Juno Storage** screen. The top line shows the storage that is available. Try to keep more than 1 MB of available storage.



Editing Files

You can change a file by [viewing](#) it, then tapping the **Edit**

button . On the **Editing** screen, you have four buttons for images (BMP, JPEG, PNG, and WebP files):

-  Mirror the image
-  Rotate the image clockwise 90 degrees
-  Rotate image counterclockwise 90 degrees (bottom graphic shows image with bad rotation)
-  Delete the file after confirming by tapping **Yes**. For documents (TXT, RTF, PDF, and DOCX files), only the **Delete** button  is available.



Deleting Files




If Juno's memory is full, then an error message will display when you attempt to capture an image. You must delete some files before saving new ones.

If you want to back up the files before you delete them, follow the directions in [Exporting Files](#) on page 64 or [Copying Juno Files Onto a Computer](#) on page 68.



You can either delete one file at a time or all of them at once. You cannot delete an open file.

Delete a Single File

To delete a single closed file:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **File Manager** icon  to display the **Files** screen.








3. Tap the icon representing the file you want to delete. The beginning of the file is displayed, with its title at the top of the screen.
4. Tap the **Edit** button  in the bottom right corner. The **Edit** screen is displayed.
5. Tap the **Delete** button  in the bottom right corner. After you confirm the deletion, the selected file is removed and the updated list of files is displayed.



Delete All Files

To delete all saved files on Juno:



1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings** menu.
3. Tap the **User Settings** icon  to display the **User Settings** menu.
4. Tap the **Storage** icon  to display the **Juno Storage** screen.
5. Tap the **DELETE ALL** button at the bottom of the screen.
6. In the **Delete All Data?** screen, tap **Yes** to confirm deletion of all files on the device.



Importing Files

Juno imports files automatically so you do not need to be familiar with file structures. You can only import a folder (directory) of files—not a single file or subfolders (subdirectories). A [USB-C drive](#) is required to import files. (For instructions on using the USB cable to copy files, see [Copying Juno Files Onto a Computer](#) on page 68.)

To import files onto Juno:



1. Place the file(s) you want to import in a folder on your computer. If you have homework to import, for example, then put your homework files in one folder.
2. Copy the folder of files you want to import onto a USB-C flash drive.
3. Plug the USB-C flash drive into Juno's USB port.
4. Tap the **Restore** button , then tap the **Main Menu** button .

5. Tap the **File Manager** icon  to display the **Files** screen.



6. Tap the **Import/Export** button  in the lower right corner. The **Select Transfer Mode** screen is displayed.



7. Tap the **Import** button . The **Import From** screen displays.
8. Select a drive. If you have a USB hub, then you may have several choices. The second **Import From** screen is displayed.
9. Select the folder that holds the files that you want to import, then tap the **Next** button . A confirmation message is displayed.
10. Tap **Yes**. The files in the folder are imported and available from the **Files** screen.



Exporting Files

Juno exports files automatically so you do not need to be familiar with file structures. However, you must either export all files on Juno at once, or export one Juno file at a time. A [USB-C drive](#) is required to export files. (For instructions on using the USB cable to copy files, see [Copying Files From a Computer onto Juno](#) on page 70.)

Export All Files

To export all files on Juno:

1. Place a flash drive into the USB-C port on Juno.

2. Tap the **Restore** button , then tap the **Main Menu** button .

3. Tap the **File Manager** icon  to display the **Files** screen.



4. Tap the **Transfer** button  in the lower right corner of the screen. The **Select Transfer Mode** screen is displayed.

5. Tap the **Export** button . The **Export To** screen is displayed.

6. Select a drive. If you have a USB hub, you may have several choices. A second **Export To** screen is displayed.

7. Tap the folder (directory) on the USB-C flash drive where you want to export the files, then tap the **Next**

button . A confirmation message is displayed.




8. Tap **YES**, then remove the USB-C drive from Juno and plug it into a USB port on your computer. If the port is not Type C, you will need a USB adapter.

9. Use File Explorer to copy the files from the USB-C drive onto your computer.



Export A Single File

To export a single file:

1. Place a USB-C flash drive into the USB-C port on Juno.
2. Tap the **Restore** button , then tap the **Main Menu** button .
3. Tap the **File Manager** icon  to display the **Files** screen.
4. Tap the icon of the file you want to export. The **File Information** screen is displayed.



5. Tap the **Export** button . The **Export To** screen is displayed.
6. Select a drive. If you have a USB hub, then you may have several choices. The second **Export To** screen is displayed.
7. Tap the folder (directory) on the USB-C flash drive where you want to export the file.
8. Click the **Next** button . A confirmation message is displayed.
9. Tap **YES**, then detach the USB-C flash drive from Juno and attach it to a USB port on your computer. If the port is not Type C, you will need a USB adapter.
10. Use File Explorer to copy the file from the USB-C drive to your computer.

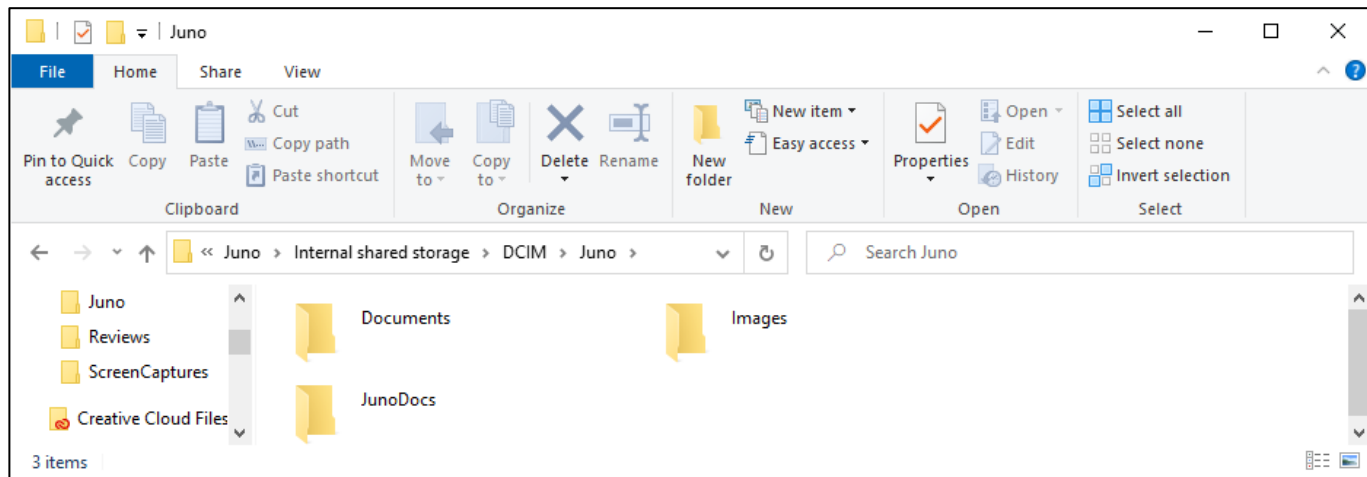


Copying Juno Files onto a Computer

Using a USB-C cable, you can copy files from Juno onto a computer by following these steps:

1. Attach the USB cable to ports on Juno and on your computer.
2. Open File Explorer, where Juno is shown as a media device.
3. Go to **/Juno/Internal Shared Storage/DCIM/Juno/**. Copy the files in the three folders (subdirectories) and paste them onto your computer:
 - The **Documents** folder contains TXT, RTF, PDF, and DOCX files.
 - The **Images** folder contains BMP, JPEG, PNG, and WebP files.

- The **JunoDoc** folder contains VCB (multipage book) files. The files that comprise the VCB are also in the **Documents** and **Images** folders. You can back up these Vispero compressed book files on a computer, but no PC or web applications read this file type. However, this is an easy method for transferring books between Juno devices.



Copying Files from a Computer onto Juno

Using a USB-C cable, you can copy [supported file types](#) onto Juno by following these steps:

1. Attach the USB cable to Juno and your computer.
2. Open File Explorer and copy the files you want to place on Juno.
3. Juno is shown as a media device in File Explorer. Go to **Juno/Internal Shared Storage/DCIM/Juno/** and paste the copied files into the proper folder (subdirectory):
 - Place TXT, RTF, PDF, and DOCX files in the **Documents** folder.
 - Place BMP, JPEG, PNG, and WebP files in the **Images** folder.
4. The copied files are now available from the **Files** screen on Juno.

Note: If the files are not copied to the correct folder, then they will not display on the **Files** screen.









Customizing Juno's Settings

The settings that affect the way you commonly use Juno are described in this section.

Volume and Speech Rate

Adjusting the volume and speech rate affects both the narration of the user interface information and the device voice that reads aloud after text recognition. To change volume and speech rate:

1. Tap the **Restore** button  to display the button bars, then tap the **Sound** button  to display the sliders for system volume and speed.
2. Increase/decrease the volume by moving the left slider up/down. Turn off the sound by tapping the **Unmuted**  or back on by tapping the **Muted**  icon.
3. Increase or decrease how quickly Juno speaks by moving the right slider up for faster toward the rabbit  or down for slower toward the turtle .








Brightness Level



Brightness controls how much light is used to display the screen. Move the slider left for a darker screen and right for a lighter screen.

To display the **Set Brightness** screen:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Brightness** icon  to display the **Set Brightness** screen.
3. At the bottom of the screen, move the slider left toward the **Darker Screen** symbol  for a darker screen and right toward the **Lighter Screen** symbol  for a lighter screen.







Menu Settings



You can control the way Juno displays and announces its menus and other screen elements through **Menu Settings**.

To display **Menu Settings**:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the Settings icon  to display the **Settings** menu.
3. Tap the **Menu Settings** icon  to display the **Menu Settings** screen, which has four options:



Talking Menus



Dark/Light Color Theme



Select Juno Voice



Font Size




Talking Menus



The **Talking Menus** screen controls whether Juno announces your system location, such as the name of the menu currently displayed or icon that you tapped. It also announces the hardware buttons that you press as you navigate






In the **Talking Menus** screen, move the slider right to **ON** to have Juno announce button names

and other user interface controls as you tap them. When you tap the **Previous** button , for example, the system announces “Previous screen.” Tap it again within two seconds to initiate the action of the button, such as displaying the last screen. The **Talking Menus** slider is on by default.

Tapping a button or menu option while Juno is talking will stop the speech, even when it is the second tap to initiate an action. If the volume is muted or turned down, then you will not hear the menu voice.



To display the **Talking Menus** screen:






1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **Menu Settings** icon  to display **Menu Settings** screen.
3. Tap the **Talking Menus** icon  to display the **Talking Menus** screen.
4. Move the slider right to **ON** to have navigation information narrated to you as you move around the system or left to **OFF** to immediately stop narration.

Voice Selection



Select the voice used when [Talking Menu](#) (see page 74) is on. This voice announces your current location as you move around Juno.

To display the **Select Juno Voice** screen:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **Menu Settings** icon  to display the **Menu Settings** screen.
3. Tap the **Voice Selection** icon  to display the **Select Juno Voice** screen.
4. Select the voice that Juno will use to speak the menu and button names. Only English is available.








Color Theme of Menus



Change the color combination used to display the menus, buttons, icons, and other system images.

To choose a color theme for the user interface:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **Menu Settings** icon  to display the **Menu Settings** screen.
3. Tap the **Color Themes** icon  to display the **Color Theme** screen.
4. Tap to select the color combinations used to display the user interface of the device, including all menus, buttons, and icons.








Font Size



Control the size of the text on Juno's menus using the **Font Size** screen by swiping and selecting a number. Swipe up to select a smaller text size or down to select a larger font.



To select the font size for the user interface:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **Menu Settings** icon  to display the **Menu Settings** screen.
3. Tap the **Font Size** icon  to display the **Font Size** screen. The default font size is 24 points.
4. Scroll down the list and tap your preferred font size.








Color Modes



A color mode is a pre-defined color combination (for example, yellow text on a black background) that you can apply at any time, whether it is a live or saved image.

True color and grayscale are always available. You cycle between them and other color combinations when you press the blue Color Mode buttons  .

Selecting Your Cycled Color Modes

By default, all color combinations are selected. To find your favorite combinations more quickly, you may wish to uncheck some options. To add or remove color modes:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **User Settings** icon  to display the **User Settings Menu**.
3. Tap the **Color Modes** icon  to display the **Color Modes** screen.

4. Color combinations with checkmarks are included in the rotation when you press the Color Mode buttons  . Tap a color combination to check or uncheck it.

Note: Available color combinations are listed in the next section.



Available Color Combinations

True color is the default for viewing images, while grayscale is the default for viewing text. Neither true color nor grayscale can be disabled. By default, the following color combinations are included in the rotation: true color, white on black, black on white, yellow on black, and yellow on blue. You can select additional color modes or deselect those you use infrequently to create your own customized rotation and quickly access your favorite color combinations.

True Color	Grayscale	White on Black
Yellow on Black	Black on Yellow	Black on White
Blue on White	White on Blue	Black on Blue
Green on Black	Black on Green	Blue on Black
Black on Red	Red on Black	Black on Violet
Amber on Black	Black on Amber	Violet on Black
Blue on Yellow	Yellow on Blue	Black on Light Blue
Red on White	White on Red	Light Blue on Black

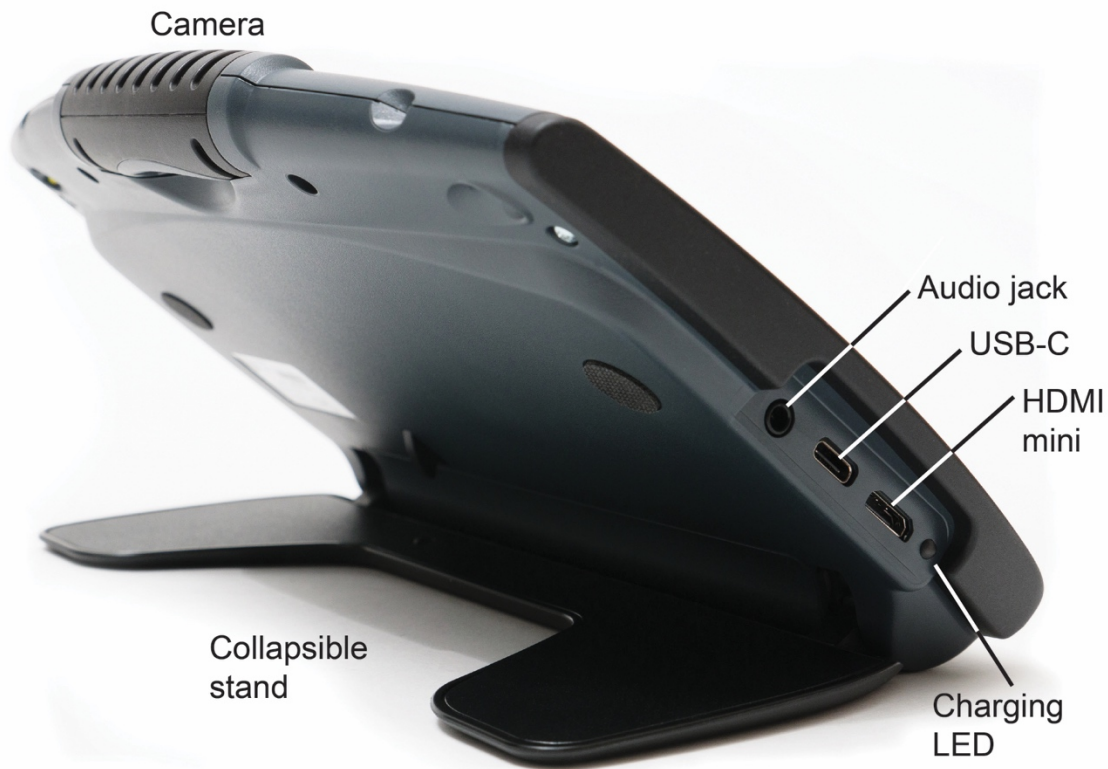
Connecting to Other Devices

To view video on a larger screen, you can [connect the device to an HDTV or monitor](#) using the HDMI mini cable. When you connect, you see the same thing on Juno and on the display of the device.

You can charge Juno by [connecting the USB-C cable to an outlet](#) using the power adapter. You can also charge Juno by [connecting it to a computer](#) using the USB-C cable, although Juno charges more slowly this way. Connecting to a computer also enables you to [copy Juno files onto a computer](#) (see page 68) or [to copy files onto Juno](#) (see page 70). You cannot use the USB-C cable to display Juno screens on a computer.

Note: You use a USB-C flash drive to [import/export](#) files (see pages 61-66).

The audio jack is available for connecting the same type of headphones that you would use with a cell phone. You can use headphones to listen to system narration or use the headphone's microphone to name your saved files.

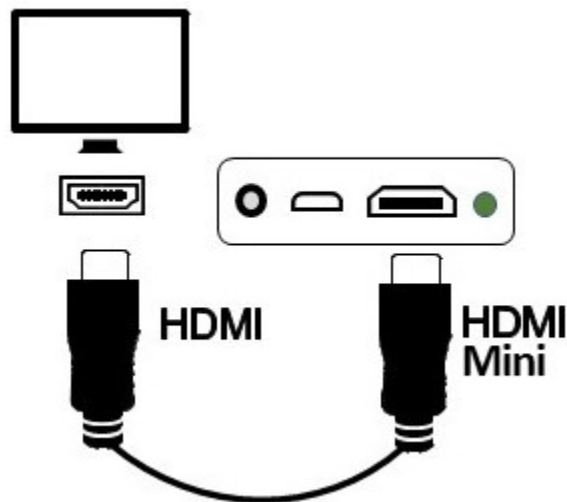


HDMI Connection

When connecting the device to an HDTV or a monitor, you must use the supplied HDMI cable and follow these steps:

1. Plug the cable's HDMI connector into the HDMI Mini port on the side of Juno.
2. Plug the other HDMI connector into the HDMI port on the HDTV or monitor.
3. Power on your HDTV or monitor and change the input source to select the device. Refer to user documentation for the display device for this information.

When you connect, Juno's screen is shown on the HDTV or monitor. You see the same thing both places.



USB Connection

You can use the supplied USB-C cable to connect to your computer and charge Juno. However, it will not charge as quickly as connecting it to an outlet using the AC power adapter.

You can also use the USB-C cable to [copy files from Juno to a computer](#) (see page 68) and to [copy files from a computer to Juno](#) (see page 70).

Connect to a Computer

To connect a USB-C cable to a computer:

1. Plug the USB-C cable into the USB-C port on the left side of Juno.
2. Plug the other end of the USB-C cable into a USB port on the computer. If the port is not Type C, you will need a USB adapter.



Connect to an Outlet

To connect a USB-C cable to an outlet:

1. Plug the USB-C cable into the USB-C port on the left side of Juno.
2. Plug the other end of the USB-C cable into the AC power adapter.
3. Plug the power adapter into the outlet.



Audio Connection

Juno has an internal speaker and microphone, but you can optionally connect headphones via an analog 3.5mm audio jack.

System Settings




You can set the time and date and change the default file using the **System Settings** menu. You can also update Juno or reset the device.

To display the **System Settings** menu 

1. Tap the **Restore** button , then tap the **Main Menu** button .

2. Tap the **Settings** icon  to display the **Settings Menu**.



3. Tap the **System Settings** icon  to display the **System Settings** screen, which has four options:



Time and Date



Default Save Types



Update Juno



Reset to Defaults





Time and Date



Set the date and time that the system displays in the upper right corner. If the battery fully discharges, then you will need to reset the date and time.

To reset the date and time:

1. In the [System Settings](#) screen (page 87), tap the **Time and Date** icon . The **Time & Date** screen is displayed.
2. Tap the **Edit** button  to the right of the date or time field to display the **Select Date** screen or **Select Time** screen.



3. Modify the date or time swiping up or down in each column until the correct value is selected.



Default Save Types



Select the default file type used when capturing pictures and the default file type used when capturing text.


To change the default file types used when you save images or document files:

1. In the [System Settings](#) screen (page 87), tap the **Default Save Types** icon .

2. On the **Default Save Types** screen, tap the left



Picture icon to select the default file type for pictures. Available file types are BMP, JPEG, PNG, and WebP. The default is JPEG.

3. Tap the right **Text** icon  to select the default file type for text documents. Available file types are RTF, TXT, PDF, and DOCX.



Update Juno



Update Juno with the latest software and firmware. You must download the latest Juno software onto a USB-C flash drive to perform this procedure. However, you can use the same flash drive to update multiple Juno devices.


The **Update Device** screen steps you through the software and firmware update process. This process keeps your system working properly and adds any enhancements to Juno since the last release.

Note: To update Juno, you must purchase a USB-C flash drive. This same flash drive can also be used to import and export files from Juno to a computer, as well as to download log files. To give you more flexibility, we recommend purchasing a dual flash drive that provides both USB-A and USB-C capabilities. Many computers have a USB-A port, while Juno has a USB-C port.

To perform the update:

1. Ensure you have a minimum of 50 percent battery power. Optimally, have full battery power.

2. Tap the **Restore** button , then tap the **Main Menu** button .


3. Tap the **Information** icon  to display the **About** screen (sample data in graphic). Check the App Version number.

4. On your computer, go to the following URL and note the number of the latest update:
<https://www.aph.org/product/juno/>.

5. If the latest update is numerically higher than the version on the device, download the update file, which ends in **.vhu**.

6. Copy the update to a USB-C flash drive. The update file needs to be placed on the root/top-level directory of the USB drive. Do not place it within any folder.


7. Insert the USB-C flash drive with the Juno updates into Juno's USB-C port.

8. In the [System Settings](#) screen (page 87), tap the **Update Juno** icon . The **Update Device** screen is displayed.



9. Select the **.vhu** file. After a moment, the **UPDATE** button is displayed.
10. Tap the **UPDATE** button to start the update. The progress of the update is displayed in the middle of the screen.



Note: If you remove the USB drive before the next step, you will exit the update process and return to the **System Settings** menu .

11. Read the screen and tap **OK** to proceed with the update. Do not use Juno during the update process. Juno will restart at least once without any action on your part during the update. The status of the update is displayed.

Note: If you restart the system during an update, the **Update Device** screen displays each time you restart until the update is complete.






12. If the update completes successfully, a success message is displayed. Otherwise, a failure notification is displayed, and you must repeat this procedure. Tap **OK** to clear the message.

Reset to Defaults



Reset the device to the values defined in [Teacher Settings](#) (see page 97). All customized settings are lost, including the volume, speech rate, brightness level, and voice selection. However, the menu voice, date, and time are saved.

To reset Juno's user settings:





1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **System Settings** icon  to display the **System Settings** screen.
3. Tap the **Reset** icon . The **Reset All Settings?** screen is displayed.
4. Reset the user settings by tapping **YES**, then confirming. The settings are restored to the values defined in [Teacher Settings](#) (see page 97).



Teacher Settings

The **Teacher Settings** screen provides instructors with time-limited controls designed to allow a student to use the Juno magnifier during a testing situation. It is recommended that you change the settings to lock Juno before an exam, then return them to their default values after the exam. You can set the amount of time that Juno is locked, or you can manually unlock it to return the values to their previous settings.


The **Teacher Settings** screen is available only through the button combination found in the steps below. No feedback is provided during the process to make it more difficult for students to deduce. To lock Juno before giving an exam:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **System Settings** icon  to display the **System Settings** screen.
3. Tap the battery indicator in the upper left corner seven times in less than three seconds.

4. Press the red Capture button . The Teacher Settings screen is displayed.



Note: If Juno is locked, you are prompted to enter a previously set lock code. When you display this screen and enter the pin code, restrictions are automatically disabled.

Press the **Previous** button  to exit the menu without applying any settings.

5. Scroll through this screen and tap the settings to reflect how you want Juno to work while a student takes an exam:

Setting	Description
Maximum Volume	Default is 100 percent. Push the slider to lower or raise the maximum volume level, where 0 is no volume and 100 is full volume. It will keep users from turning up the volume any higher than you set as the maximum level.
Disallow Transfer to USB	Defaults to Off . When On , files cannot be exported.
Disallow Transfer from USB	Defaults to Off . When On , files cannot be imported.
Disallow File Open	Defaults to Off . When On , files cannot be opened.
Disallow File Save	Defaults to Off . When On , files cannot be saved.
Disallow Capture	Defaults to Off . When On , files cannot be captured.
Disallow Recognition	Defaults to Off . When On , text recognition is disabled. Does not apply to Adobe Acrobat (PDF) files.

Setting	Description
Disallow Reading	Defaults to Off . When On , Juno cannot read aloud text in documents.
Allowable Recognition Languages	All languages are recognized by default. Tap this setting to display a screen of languages. To disable a language so Juno will not recognize it, deselect its checkbox. English cannot be disabled so it is not on an option.
Expire Settings	Default is 4 hours and 15 minutes . Tap to display the Teacher Settings Expiration screen, where you can set the amount of time that these settings will be in place. Swipe up or down in each column to select the number of hours and minutes (from 15 minutes to 10 hours in 15-minute increments) that Juno will use these settings. When the time is up, the settings will return to their defaults with no action on your part.
Reset Teacher Settings	Tap Yes to restore the settings on this screen to their default values. Confirmation required.

Setting	Description
Reset to Factory Settings	Tap to reboot Juno and restore all settings to their default values, including these teacher settings. Requires you to reset the voice used by Juno and the time/date as described in the <i>Juno Quick Start</i> .

6. Tap the **Next** button . The **Enter Lock Code** screen is displayed. A pin code is required to activate exam settings.

7. Swipe up or down in each column to select a five-digit code that you will use to enable and disable the restrictions.







8. Tap the **Lock** button . Juno is locked for the time specified in the **Expire Settings** field.

Note: To unlock Juno before the time has expired, see the next procedure. Teacher settings are retained so you can easily lock Juno the next time.



Unlock Juno

If you need to reset the default values sooner than the time allotted in the **Expire Settings** field, then you will need to unlock Juno by following these steps:




1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon , then tap the **System Settings** icon  to display the **System Settings** screen.
3. Tap the battery indicator in the upper left corner seven times in less than three seconds.
4. Press the red Capture button . The **Enter Lock Code** screen is displayed.
5. Swipe up or down in each column to select the five-digit code that unlocks this screen, then tap the **Unlock** button . The Teacher Settings screen is displayed, and restrictions are automatically disabled.

About Menu




Displays version information about Juno, provides technical support contact information, and provides a link to this guide.

To display the **About** screen:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Information** icon  to display the **About** screen (sample data in graphic):
 - **App Version:** Version of application
 - **OCR Version:** Version of optical character recognition (OCR)
 - **TTS Version:** Version of text-to-speech (TTS)
 - **Platform:** Version of platform used by the application, OCR, and TTS
 - **Serial:** Unique number assigned to the device




Support

Tap the **Support** icon  on the **About** screen to display information for contacting Customer Support. You can also find support information at <https://www.aph.org/product/juno/>.

If you need to export the log files for troubleshooting, insert a USB-C drive into Juno's USB-C




port and tap the **Export Data** icon . Customer Support will provide additional instructions for emailing the log files. Alternately, you can copy the log files onto a computer. Connect Juno with a computer using the USB cable, and then use File Explorer's copy function. Juno is shown as a media device, and support logs are found in **Juno/Internal Shared Storage/DCIM/Support**. (DCIM stands for digital camera image management.)

Manual






Tap the **Manual** icon  on the **About** screen to display this guide.

Acknowledgements

Tap the **Acknowledgements** icon  on the **About** screen to display information about third-party software used to develop Juno.

Standby Time

By default, Juno automatically goes into standby after 30 minutes of inactivity. Tap any button or touch the screen to wake up the device. To adjust this setting:

1. Tap the **Restore** button , then tap the **Main Menu** button .
2. Tap the **Settings** icon  to display the **Settings Menu**.
3. Tap the **User Settings** icon  to display the **User Settings** screen.
4. Tap the **Standby Time** icon  to display the **Standby Time** screen.
5. Swipe up or down and select the number of minutes that you want the system to remain idle before going into standby mode. The default is **5 minutes**.



Product Specifications

Touch LCD screen: 7-inch (178 mm) matte with touch capability; brightness 600 cd/m², contrast 500:1, viewing angle 75/75/70/75 degrees; touch screen offers pinch to zoom and access to menus and settings

Image resolution: 800 x 480 pixels with viewing angle of 75/75/70/75 degrees, video out 720p 60fps scaled, sensor 13 MP (4224x3136)

Body size: Length 210 mm, width 145 mm, thickness 30 mm, weight 22 oz

Reading stand: Built-in collapsible reading stand, tilts approximately 40 degrees when open

Color modes: Choice of true color, grayscale, and 22 high contrast color combinations

Magnification range: 2x to 30x

Maximum saved images: Approximately 600 images, 4 GB total storage

Response time: 25 ms

Color: 24-bit, contrast 500:1, brightness 500 cd/m²

Camera: 13 MP HD auto-focus camera module; rotates to support multiple camera positions (reading, text recognition, handwriting/hobbies, self-view, and spotting); angle of view 80 degrees, F No. 2.2, effective focal lens 3.462 – 80 deg, dimensions 8.5x8.5x4.58 mm, minimum focus distance 80 mm

Battery: Lithium-ion rechargeable 3.6v battery with 6500mAh capacity, approximately three hours of typical use, charges in approximately three hours when Juno is connected via the USB-C cable to an outlet using the AC power adapter

Architecture: Processor 8x A53 Arm@2GHz, RAM 2 GB DDR3, flash 16 GB, Android OS, internal storage 5 GB

Connections: Port 1: USB Type C port for charging the Juno or transferring files to a USB memory stick or a cable to computer's USB port. This port can provide 5V @ 500 mA and is not designed for use with unpowered USB hubs. Port 2: HDMI mini connector, providing 720p 60 fps video output. Port 3: Analog 3.5mm audio jack with CTIA-compatible pinout (all connections on left side of the device)

Audio: Internal speakers and microphones, supports headphone use via an analog 3.5mm audio jack

Accessories: Padded carrying case with shoulder strap, *Juno User Guide*, *Juno Quick Start*, Qualcomm Quick Charge™ power adapter, USB-C cable (1 meter), HDMI mini cable (1 meter)

Service and Support

Support material is available on our web page at <https://www.aph.org/product/juno/>. If you need further assistance, please contact American Printing House (APH):

Phone: 1-800-223-1839 or 1-502-995-2405

Email: cs@aph.org

Hours: 8 A.M. to 8 P.M. EST

When you call, please provide the following information:

- Product name and serial number (see the [About](#) menu on page 103)
- What you were doing when the problem occurred
- How you tried to solve the problem

On the call, Customer Support may request more information that you can download from the [Support](#) screen. See page 104 for instructions.

Repairs

If Customer Support indicates that you need to return Juno for repairs, then please call Vispero (Freedom Scientific) at 1-727-803-8600 weekdays between 8:30 A.M. and 7:00 P.M. EST to request a Return Materials Authorization (RMA) number before shipping your device. This RMA number must be referenced on the outside of the package containing your returned device. Your Juno will then be exchanged or repaired. For more information on repairs, go to www.freedomscientific.com/aph/juno.

Warranty

Juno has a two-year warranty against manufacturing defects. This device has no user-serviceable components. Any unauthorized attempt to service or replace internal components will void the product warranty. For more information on your product warranty, go to www.freedomscientific.com/aph/juno.

Product Updates

For the latest product updates, please visit <https://www.aph.org/product/juno/>. You can also find the latest version of this guide on the web page.

Directions for [updating Juno](#) are found on page 92.

Safety and Maintenance

To keep Juno in good condition and to ensure safe usage, observe the following guidelines:

- Do not stare at the operating illumination LEDs as they may be harmful to the eyes.
- Do not attempt to repair the device or open its case. This product contains no user serviceable parts. Any unauthorized attempt to service or replace internal components will void the product warranty.
- Only use the supplied power adapter to charge the device's battery. Other adapters may cause damage. Do not remove the battery, which can only be serviced by Freedom Scientific.
- Keep Juno away from wet areas, rain, and other sources of liquids. Do not submerge the device. Juno has no protection against ingress of water.
- Always operate the device in a place where the temperature is between 0° to 40° C (32° to 104° F), 20% to 80% RH non-condensing.
- Always store the device in a place where the temperature is between -20° and 60° C (-4° and 140° F), 10% to 95% RH non-condensing. Do not store in places subject to temperature extremes such as a parked car.
- Do not force any connector into the device's power port. The power connector fits easily into the port.
- Do not read prescription labels using Juno's text recognition or text-to-speech capabilities due to potential inaccuracies.

Cleaning the LCD Screen

- Power off and unplug the device before cleaning the LCD screen.
- Always use a clean microfiber cloth. **Do not** use a paper towel to clean the LCD screen.
- Very gently wipe the cloth across the screen. Do not press hard on the cloth or screen.
- **Do not** spray any cleaning solutions directly on the LCD screen.
- **Do not** use a cleanser that contains acetone, ethyl alcohol, ethyl acid, ammonia, or methyl chloride.
- If you use a cleaning liquid, use an appropriate LCD cleaning liquid. You can also use distilled water, isopropyl alcohol, or vinegar mixed with water at a concentration of no more than 10 percent vinegar. Tap or mineral water may cause spotting on the screen. Do not leave any liquid on the screen. Repeat this procedure for hard to remove smudges.

Cleaning the Juno Body

Make sure the device is unplugged. Use a lightly dampened, soft, clean cloth with water or mild detergent. Do not use alcohol, solvents, abrasives, or aerosol sprays.

Regulatory Information

Juno is tested by a recognized body and independent laboratory for safety and regulatory compliance.

Description	Requirement
FCC / EMC	47 CFR Part 15 FCC Class B Declaration of Conformity
Safety	UL/EN/CSA 62638-1:2014 Safety Certification
Safety (Battery)	IEC62133-2:2017 CB report
CE / EMC	EN 55022:2010 Declaration of Conformity
ICC	CAN/CSA-CISPR22-10 Declaration of Conformity
Environmental	Consumer Product Safety Improvement Act of 2008
Environmental	FDA/OSHA/EPA Regulations for toxic substances
Environmental	California Proposition 65
Transportation (Battery)	UN38.3 6 th revision, amend 1 /CNAS/SDS

Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada (IC) Notice

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



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