



## **CONTACT**:

Call 800-662-6338 to talk to a Customer Service Representative.

## **HOURS:**

8 AM to 5 PM (V.) Monday through Friday



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## \$01 SAFETY INSTRUCTIONS & INTRO

## 1.1 – SAFETY INSTRUCTIONS & HAZARD WARNINGS

### WARNING WARNING

Parakeet can produce sounds over 100 dB. Please use precautions and use appropriate safety protection

### WARNING **WARNING**

Parakeet uses lithium-ion batteries. Please use the proper protocol when traveling/transporting.

## 1.2 – MANUAL OVERVIEW

This manual describes the operation of the Parakeet Audible Information Device (AID) system.

Upon reading this manual, you will be able to:

- Power the unit on and off
- Calibrate the system's sensor and automated decibel control
- Set the device base volume
- Update the software
- Record audio locally
- Create a text to speech message
- Convert audio to a .WAV file
- How to mount the unit
- Understand the Parakeet's detection zone
- Charge batteries

## 1.3 - FCC GUIDELINES

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 commercial 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.
- Consult the dealer or an experienced radio/TV technician for help.

## 1.4 - INTRODUCTION

Welcome to the PSS instruction manual for Parakeet™ Audible Information Device.

In this manual, we will discuss Parakeet's basic features and functions, how it works, and how to troubleshoot and maintain the device. We have also included all necessary parts lists and schematic drawings.

## 1.5 – TO PARAKEET OPERATORS

All Parakeet operators shall:

- Be trained in Parakeet operations
- Ensure the regular maintenance of Parakeet
- Avoid all hazards that could cause injury or damage

Please contact our technical support department with any further questions at 800-662-6338.

## 1.6 – FUNCTIONS OF PARAKEET

Parakeet's primary functions are:

- Identify incoming pedestrians via motion detection.
- Announce a prerecorded message at a volume 5 dB above the surrounding noise. Parakeet's output sound is gated at 100 dB.



## 2.2 – WHAT COMES WITH PARAKEET

- 1. Parakeet
- 2. SD Card
- 3. Six Rechargeable Lithium-Ion Batteries
- 4. Battery Charger (Not Shown)

- 5. Tamper-Resistant Mounting Bolt
- 6. Tool for Tamper-Resistant Mounting Bolt
- 7. Tool for Tamper-Resistant Housing Bolt
- Washer
- 9. Parakeet Manual QR Card



# **902** PARAKEET OVERVIEW

## 2.2 – KEY PARTS OF PARAKEET

### FRONT:

- Speaker Output Grate
- 2. Motion Sensor
- 3. Ambient Microphone
- 4. Case Latch

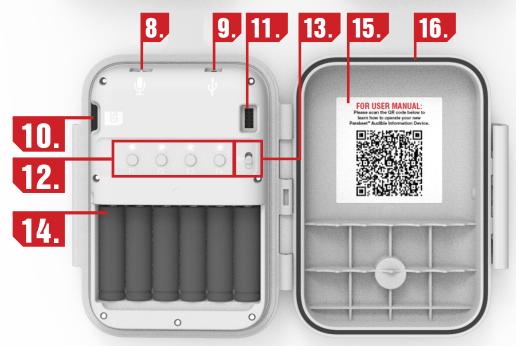
### **BACK:**

- 5. Tamper-Resistant Screw
- 6. Product Label
- 7. Threaded Insert

### INSIDE:

- 8. 3.5 mm Microphone Jack
- 9. Data Jack (Manufacturer Use Only)
- 10. SD Card Port
- 11. Serial Cable Port (Manufacturer Use Only)
- **12**. Function Buttons and Indication Lights (F1 F4)
- 13. On/Off Switch
- 14. Rechargeable 3.7 Volt Lithium-Ion Batteries
- 15. Parakeet Manual QR Label
- 16. Rubber Gasket





# 303 INDICATOR LIGHTS

PARAKEET INDICATOR LIGHT INDEX								
LEDs ACTIVE STATUS	DESCRIPTION	VISUAL INDICATION						
All LEDs Solid Amber	Parakeet is booting up							
All LEDs Flashing Green	Parakeet has booted up and is ready for calibration							
All LEDs Solid Red	Parakeet is recording mic audio							
LED F1 Flashing Amber	Parakeet is calibrating							
LED F1 Flashing Green	Parakeet is active and sensing							
LED F2 Flashing Red	Movement detection deactivated							
LED F3 Flashing Amber	Volume up button pressed when volume adjust button not activated	• • • •						
LED F4 Blinks Once Amber	Volume down button pressed when volume adjust button not activated	• • • *						
LED F2 Flashing Amber	Parakeet is playing audio for volume adjustment	• 🔆 • •						
LED F3 Flashing Green	Volume up button (F3) pressed and volume increased	• • • •						
LED F4 Flashing Green	Volume down button (F4) pressed and volume decreased	• • • •						
LED F4 Flashing Amber	Batteries are low, replace soon	• • • •						
LED F4 Flashing Red	Batteries are critically low, replace immediately	• • • •						
After Pressing And Holding The F2 Button For Four Seconds, LED F4 Flashes Red One To Five Times or Green six to Ten Times	To check Parakeet battery charge, press and hold the F2 button for four seconds. The F4 LED will flash either red or green in increments of 10% according to charge level. When the battery life is at 60% or higher, the F4 LED will flash green a corresponding amount of times, when it is below 60% it will flash red. <b>Example:</b> After holding the F2 button for four seconds, if the Parakeet has a 30% charge, the F4 light will flash red three times.	10% - 50% 1-5x 60% - 100%						

PARAKEET INDICATOR LIGHT ERROR INDEX								
LEDs ACTIVE STATUS	DESCRIPTION	POTENTIAL FIX	VISUAL INDICATION					
Upon Booting Parakeet, LED F2 Flashing Red	No SD Card Detected	Check to see if the SD card is inserted and mounted fully	• * • •					
Upon Booting Parakeet, LED F3 Flashing Red	Ambient Microphone Not Detected	Reboot the Parakeet. If the error persists, there is a hardware issue. Contact PSS.	• • *					
Upon Booting Parakeet, LED F4 Flashing Red	Ultrasonic Sensor Not Detected	Reboot the Parakeet. If the error persists, there is a hardware issue. Contact PSS.	• • • *					

## 4.1 – BATTERY LIFE

## **▲ WARNING WARNING ▲**

When traveling by air, whether personally or shipment, the batteries in Parakeet MUST be removed from the unit. If traveling personally with Parakeet, the batteries must be stored in carry-on luggage.

## A NOTICE N

NOTICE A

Upon receiving your Parakeet, the batteries will be uncharged. Please fully charge the batteries before first use.

Parakeet battery life is dependent on volume, frequency of audio playing, temperature, and length of message. The expected battery life is two weeks.

Variables that affect battery life:

- » Temperature Excessive heat or cold can drain the battery quicker than normal.
- Frequency of activation The more activations (the more people approaching the unit), the shorter the battery life will be.
- Length of message The longer the voice message, the more battery drains with each activation.
- » Volume Auto modulates its volume to five decibels over background noise. This conserves battery while ensuring the message is audible.

## 4.2 - LOW BATTERY INDICATOR

The unit will begin playing "Low Battery" when it reaches 20% battery life. See section 10 for more information.

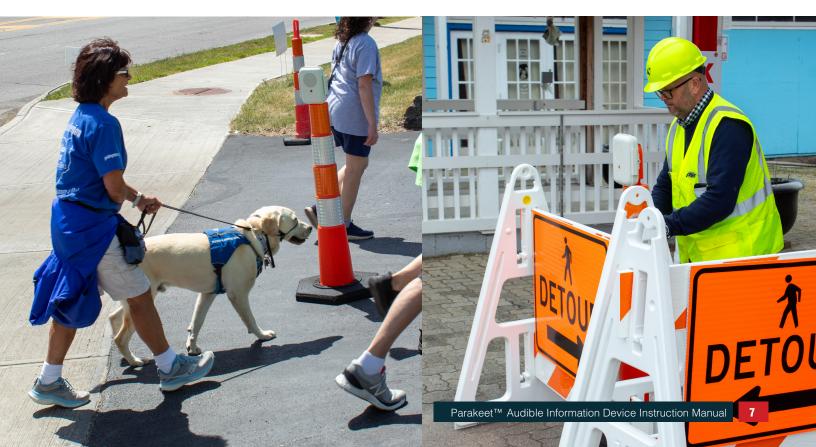
Batteries are removable and rechargeable.

## 4.3 - BATTERY SPECIFICATIONS

Each Parakeet uses six 3.7 Volt 18650 lithium-ion rechargeable batteries (P/N AID-HB06-01). The number 18650 refers to the size—18 mm wide and 65 mm long.

These batteries are not readily available at a local hardware store, to purchase more, contact PSS at 800-662-6338.

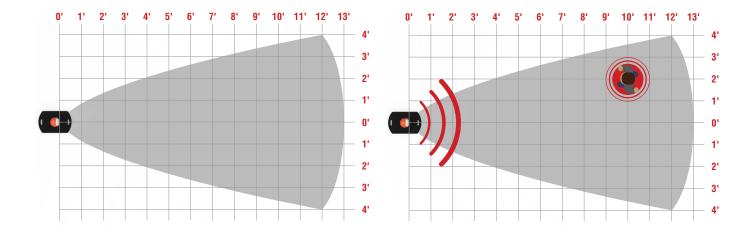
The charger charges six batteries at one time. It takes approximately four hours for the batteries to fully charge.



# \$05 SENSOR DETECTION ZONE

## **5.1 – HORIZONTAL DETECTION**

Pedestrians will be detected up to approximately 13-feet away and up to a 8-foot wide area.



## 5.2 - KEY FEATURES

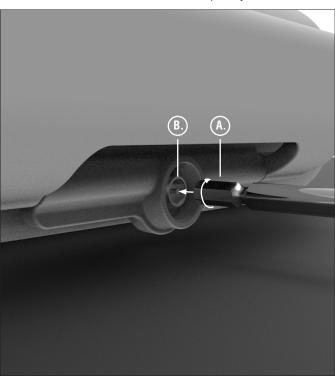
- Detects multiple pedestrians and plays messages accordingly
- Detects pedestrians and plays messages only as they approach the unit, not as they walk away or across
- Detects surrounding sound in the vicinity of the unit and adjusts volume above the base volume accordingly
- Supports local message recording

## 5.3 – SENSOR MAINTENANCE

To ensure that your Parakeet activates when a pedestrian enters the detection zone, the sensor must be clean. To clean the sensor, take a cotton swab and gently clear the debris away from the sensor. Do not use any compressed air or any sharp objects as they may damage the water-resistant seal in the sensor.

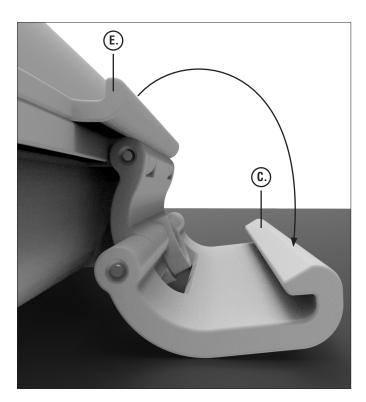
## STEP 1

Use the **tool (A)** provided to open the latch by inserting the bit into the **tamper-resistant screw (B)** and loosening it. **NOTE:** Do not remove the screw completely.



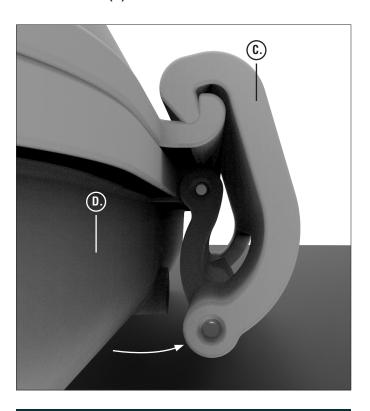
## STEP 3

Then lift the **front cover latch (C)** to the right to release the **front cover (E)**.



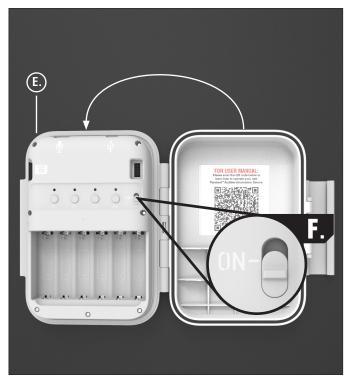
## STEP 2

Pull the bottom of the **front cover latch (C)** away from the **Parakeet case (D)**.



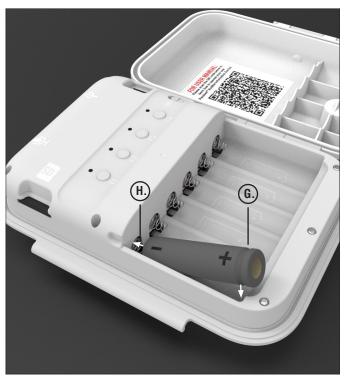
## STEP 4

Open the **front cover (E)**. Ensure the **power switch (F)** is in the off position. Remove the protective tape that is covering the sensor and the SD Card.



## STEP 5

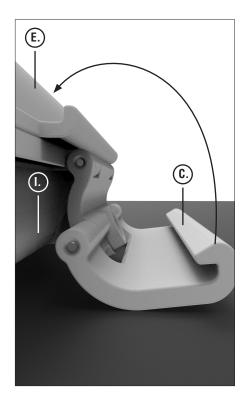
Take the side of the **battery (G)** with the negative contact and push it up against the **spring (H)** located on the top of the battery slot. Push the positive side down making contact with bottom of the battery slot. Repeat for the five other batteries. **NOTE:** Be aware of the battery polarity. Incorrect usage will lower the battery life.

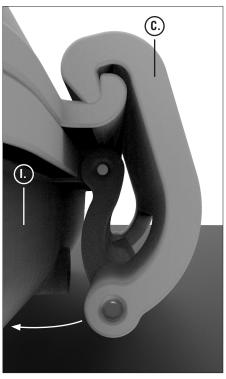


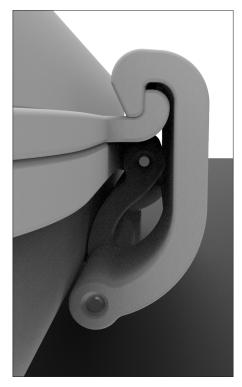


## STEP 6

Pivot the **front cover (E)** to the right making contact with the **back cover (I)**. Lift the **front cover latch (C)** over the lip on the front cover. Push the bottom of the front cover latch towards the back cover, snapping into place.







## STEP 7

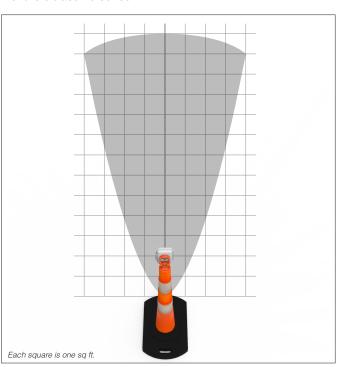
Place the **Parakeet (J)** on the flush side of the **traffic safety device (K)**. Insert the provided **tamper-resistant bolt (L)** through the washer **(M)** and the traffic control device and into the **threaded insert (N)** on the Parakeet and tighten with the provided **tool (O)**.





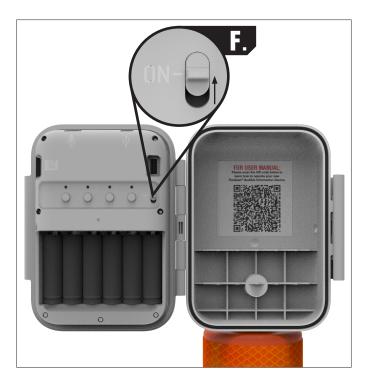
## STEP 8

Place the mounted Parakeet in the work zone where it will be stationed. **NOTE:** Ensure there is an area that is free of moving objects in front of the unit as much as possible. This ensures that the unit has an unobstructed path for calibration of the ultrasonic sensor.



## STEP 9

Open the unit and slide the **power switch (F)** up into the on position.



## STEP 10

Wait approximately 4-5 seconds for the 4 LED lights to flash amber once then green. The F1 light will then begin flashing green. The Parakeet is working from its previous calibration. PSS recommends recalibrating the Parakeet.





**NOTE:** The Parakeet comes with a base message of "Congratulations on activating your new Parakeet audible information device by PSS. For instructions on programming the device, please consult the Parakeet manual by scanning the QR code on the inside of the Parakeet housing.". If a different message is desired, see section 12 for instructions on creating a text to speech message or section 13 to record a message locally.

To enter the calibration mode, press the **F1 button (P)**. When the unit enters calibration mode, the LED light above the F1 button will flash red. Press the F1 button again and the F1 light will flash amber.



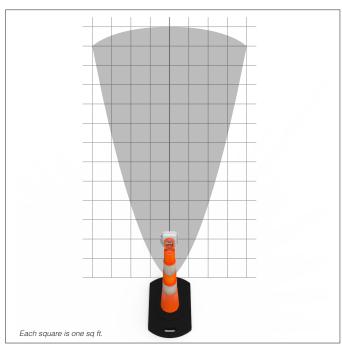
## STEP 3

Once calibration is complete, the unit will play the message "calibration complete".



## STEP 2

Once the F1 amber light is flashing, close the Parakeet housing unit immediately and stand behind the device to allow for a clear path of sensor detection, free of moving objects and pedestrians. Depending on the surrounding area and noise level, calibration will take between 10-30 seconds to complete.



### STEP 4

Once the Parakeet is calibrated, the unit should begin motion detection. To double check, open the unit and check that the LED light above the **F1 button (P)** is flashing green.



## **BASE VOLUME ADJUSTMENT**

NOTE: Parakeet will play at a level 5db above surrounding noise levels, with a base volume pre-set as the lowest level. To adjust the base volume, follow the instructions bellow.

### STEP 1

Press the **F2 button (Q)** to enter volume adjustment mode. This mode will cause the main audio to continuously play, allowing you to adjust the volume accordingly using the F3 and F4 buttons (R and S). As audio is being played the LED above the F2 button will continuously flash red.





## STEP 2

Pressing the F3 button (R) will increase the volume, and the F4 button (S) will decrease the volume. The LED light above the F3 and F4 buttons will flash green when pressed.

NOTE: If the F3 or F4 buttons are pressed before entering the volume adjustment mode, the volume will not change.





# **BASE VOLUME ADJUSTMENT**

## STEP 3

When you are satisfied with the base audio level, press the F2 button (Q) to exit volume adjustment mode. NOTE: Parakeet will auto-adjust to be louder than the ambient noise but no lower than the base volume set by the user.



## STEP 4

Press and hold the F1 button (P) for four seconds to resume detecting from the previous calibration. PSS recommends recalibrating your Parakeet after adjusting the volume. For more information on the calibration process, see section 7.



## 909 PAUSING PARAKEET FUNCTIONS

## STEP 1

In the event that you have repeated authorized motion infront of the Parakeet, users may elect to pause the Parakeet. To pause the functionality of your Parakeet without turning the power off, press the F1 button (P) once. The F1 LED will flash red. In this mode, the Parakeet will not play a message.



## STEP 2

Once you are done in this mode, PSS recommends recalibrating your Parakeet. For more information on the calibration process, see section 7.

To resume from a previous calibration state, press and hold the F1 button (P) for four seconds. The F1 LED will begin flashing green.



To check the battery life of your Parakeet, press and hold the **F2 button (Q)** for four seconds. The F4 LED will flash in increments of 10%. When the battery life is at 50% or lower, the F4 LED will flash red a corresponding amount of times. If the battery life is 60% or above, the F4 LED will flash green a corresponding amount of times. For example: If the battery indication process was initiated by the user and the F4 LED flashes red four times, the battery life is at 40%. Or if the battery indication process was initiated by the user and the F4 LED flashes seven times, the battery life is at 70%.



BATTERY PERCENTAGES										
NUMBER OF FLASHES	1	2	3	4	5	6	7	8	9	10
BATTERY PERCENTAGES	10%	20%	30%	40%	<b>50</b> %	60%	70%	80%	90%	100%





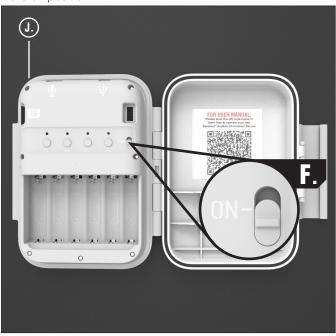
## **11** UPDATING THE SOFTWARE

NOTE: Occasionally, it may be necessary to update your Parakeet's software. To ensure your Parakeet continues to operate on the most recent software update, contact your local PSS regional manager or PSS directly to receive automated software update messages via email. To update your software, you will need an SD card with storage between 4GB – 32GB. PSS recommends using two SD cards for updates, the original SD card that came with your Parakeet preloaded with software files (shown below in green), and another with the new software update on it (shown below in red).

Parakeet can be updated to the latest update without needing to install previous updates.

## STEP 1

Turn the **Parakeet (J)** off by sliding the **power switch (F)** to the off position.



Press on the Original SD Card (V) on the left side of the unit.



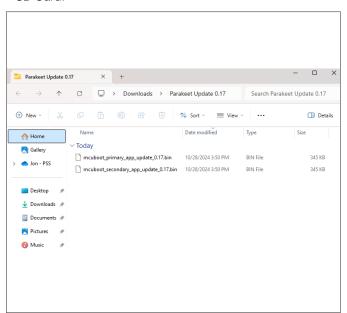
### STEP 3

Once the **Original SD Card (V)** clicks, pinch the edge of the SD Card and pull the card out.



### STEP 4

Download the most recent software update here. After downloading, right click and extract all. In the extracted folder, take the two files out and put them onto an empty SD card. When on the Update SD Card (W), the update files should not be in a folder and should be the only files on the SD Card.



## §11 UPDATING THE SOFTWARE

## STEP 5

Insert the **Update SD Card (W)** with the software update on it. Press on the edge of the Update SD Card until it clicks then release.



## STEP 7

All four LED lights (P, Q, R and S) will light up a steady red. While the LEDs are red, the unit is updating. Do not turn the Parakeet off or press any buttons. F1 and F2 LED lights (P and Q) will then turn a steady red for 15-30 seconds.



## STEP 6

Slide the power switch (F) up into the on position. After booting, the updating process will immediately and automatically initiate.



## STEP 8

The F1 and F2 LED lights (P and Q) will then light up a steady green for 15-30 seconds. After the lights turn green, the Parakeet will automatically reboot. Then the Parakeet will repeat the same light sequence again starting with all four LED lights (P, Q, R and S) lighting up a steady red. Once the Parakeet runs the light sequence for a second time, the updating process has been completed.



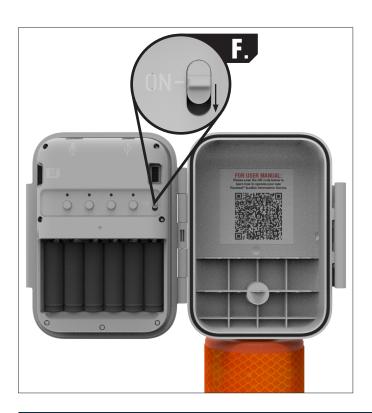
# **11 UPDATING THE SOFTWARE**

## STEP 9

Slide the **power switch (F)** down into the off position.

## **STEP 10**

Press on the **Update SD Card (W)** on the left side of the unit.





## **STEP 11**

Once the Update SD Card (W) clicks, pinch the edge of the Update SD Card and pull the card out.





Insert the **Original SD Card (V)**. Press on the edge of the Original SD Card until it clicks then release.



## STEP 13

The Parakeet will now need to be re-calibrated. To recalibrate the unit, follow the instructions in the section 7.

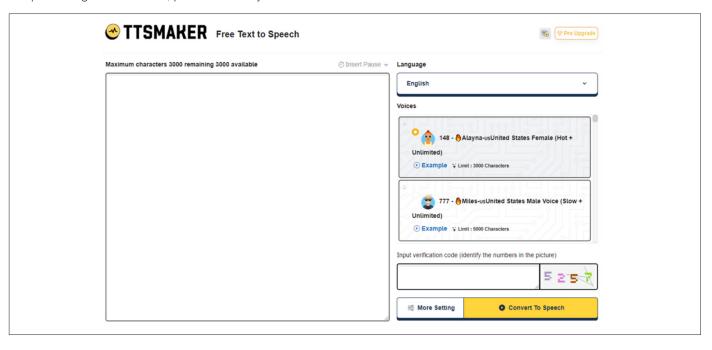


## **12** CREATING TEXT TO SPEECH

NOTE: To create text to speech for your Parakeet you will need the following: computer with Internet access, SD Card Reader (either built-in to the computer or as an external device (not provided)) and the SD Card inside of the Parakeet.

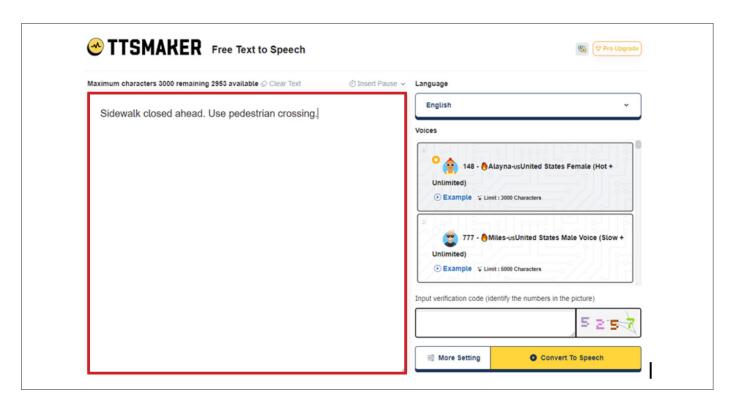
## STEP 1

On your computer, open up your web browser and go to a text to speech program. PSS recommends using www.ttsmaker.com and following these instructions. NOTE: This section may use websites that are blocked on your workplace Internet. If you are experiencing a blocked site, please contact your IT team.

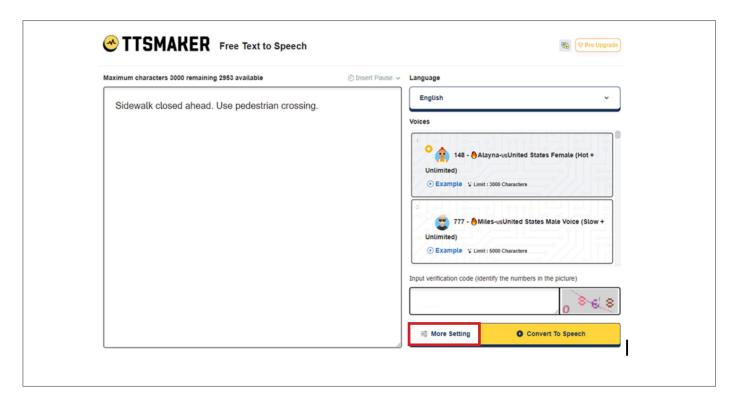


## STEP 2

Type your message into the text box. For example: "Sidewalk closed ahead. Use pedestrian crossing." NOTE: All abbreviations must be spelled out for the text to speech to sound correct. (Example: St. must be Street, Ave. must be Avenue, etc.)

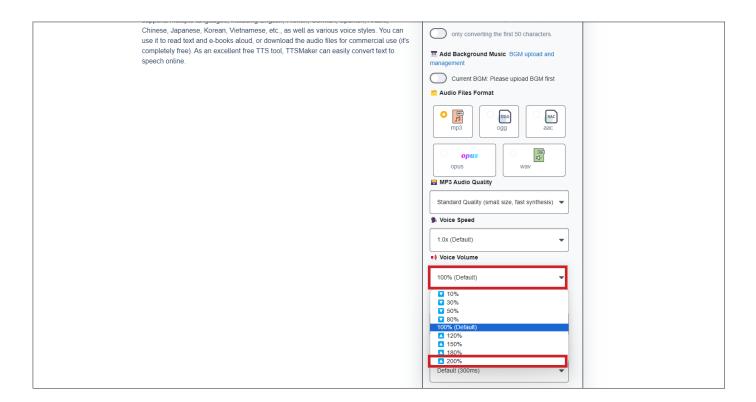


Click on more settings.



## STEP 4

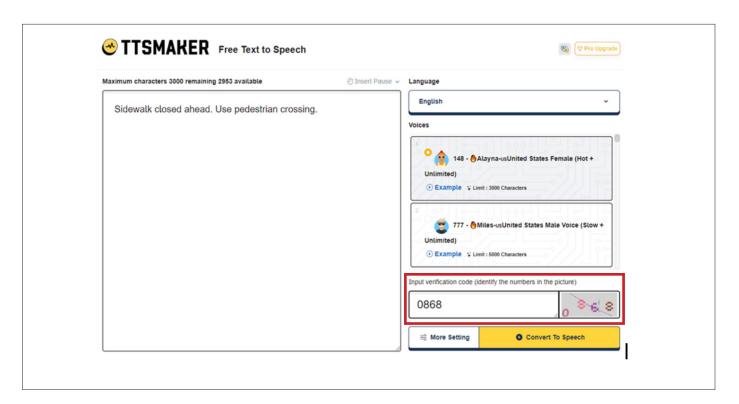
Scroll down to the Voice Volume section and click on it. Select 200% to increase the volume to an optimal level.



# g12 CREATING TEXT TO SPEECH

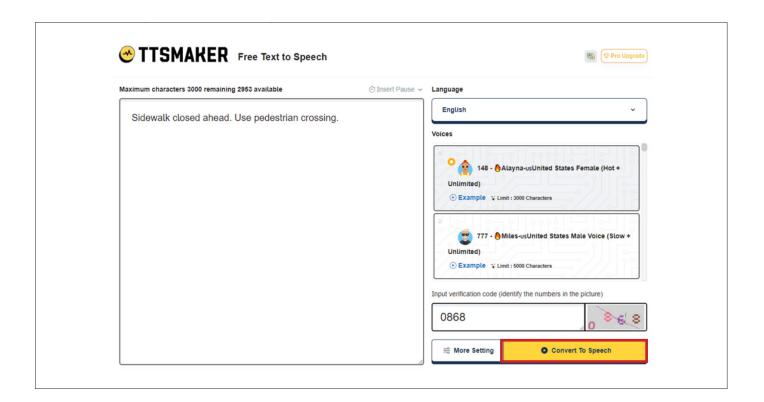
## STEP 5

Fill in the input verification code.

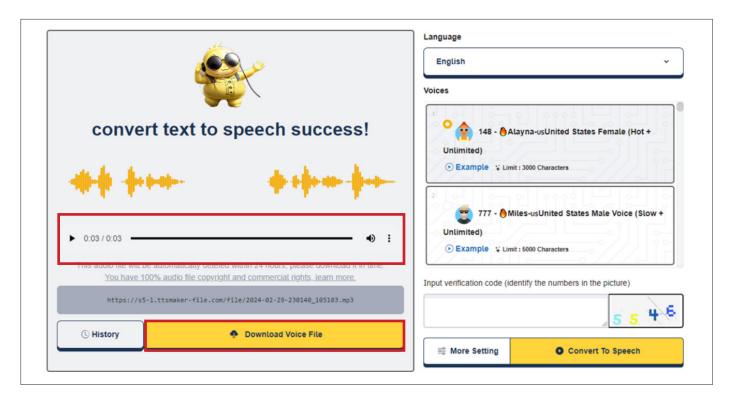


## STEP 6

Then press the convert to speech button.

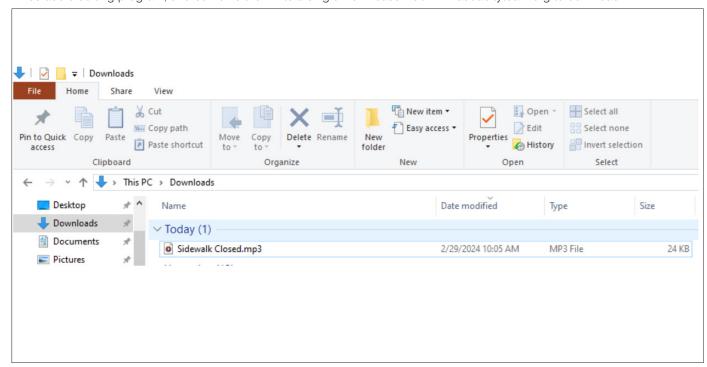


Play the message. Once you have a message you like, click on the "Download Voice File" button.



## STEP 8

Once your file is downloaded, navigate to your downloads in your file folder. Rename your file to something you would remember. It may be helpful to include a job name, purpose of the message or a date in the name. **NOTE:** If your work zone requires a multi-language message, you will need to generate a message in each language. You will then need to import them into Audacity, a free audio editing program, and combine them into a single file. Please visit www.audacityteam.org to download.



## **12** CREATING TEXT TO SPEECH

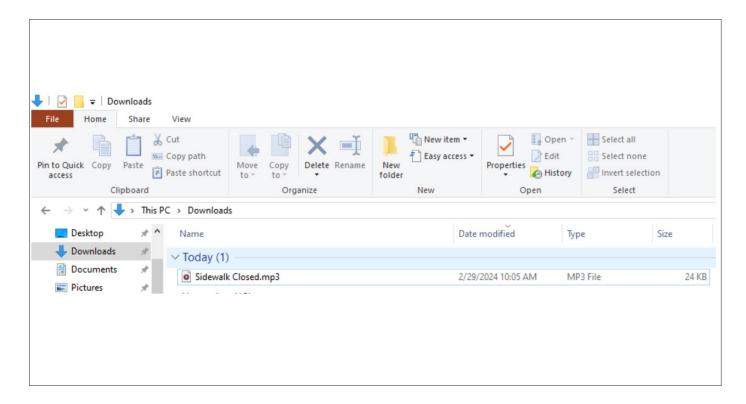
## STEP 9

On your computer, open up your web browser and go to www.onlineaudioconverter.com. **NOTE:** This section may use websites that are blocked on your workplace Internet. If you are experiencing a blocked site, please contact your IT team.

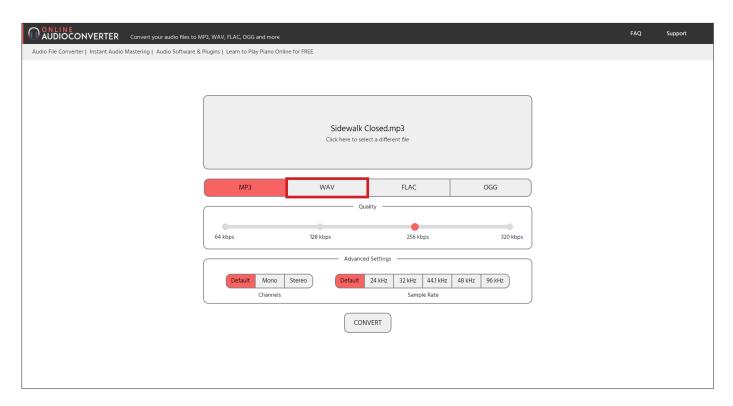


## **STEP 10**

Choose your text to speech file from www.ttsmaker.com or other text to speech website and upload the file by clicking and dragging into your web browser or click on choose file.

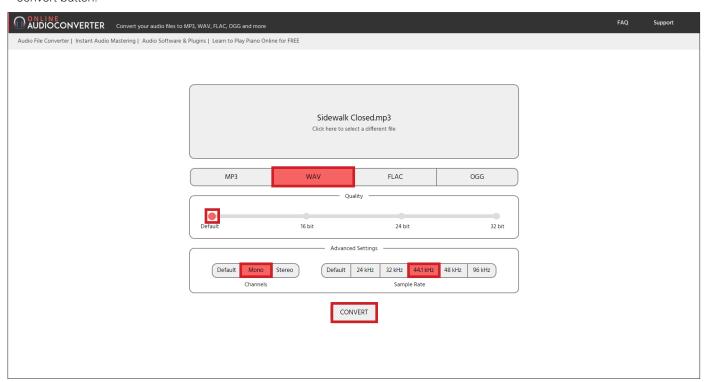


Once the file is uploaded, the file box will show the file name you uploaded. In the bar below the file upload box, select the WAV option to convert the file from an MP3 to a WAV file.



## **STEP 12**

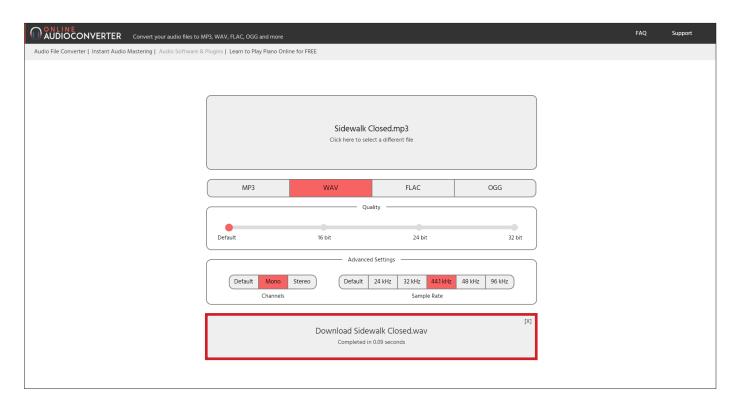
In the bar below the file conversion box, select the default option for the quality of the file. In the Advanced Settings box, select Mono for the channels and click on the 44.1 kHz for the sample rate. Once you have reviewed your selections, click on the convert button.



# **TEXT TO SPEECH**

## **STEP 13**

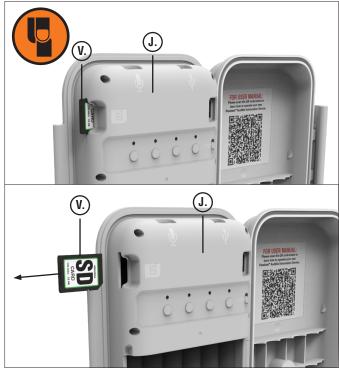
Once the file has been converted, click on the download button



## **STEP 14**

Open the Parakeet (J) and press on the SD Card (V) on the left side of the unit. Once the SD Card clicks, pinch the edge of the SD Card and pull the card out.

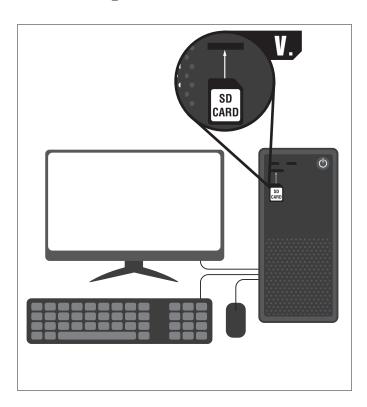




# \$12 CREATING TEXT TO SPEECH

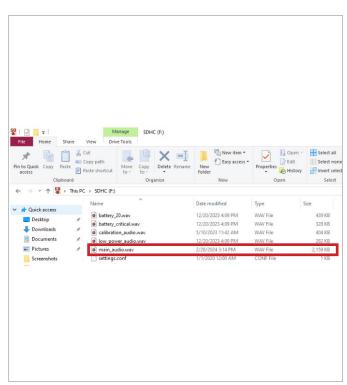
## **STEP 15**

Insert the SD Card (V) into your computer. Delete the existing file named main\_audio.wav file on the SD Card.



## **STEP 16**

Copy from your download folder the new main audio.way to the SD Card. Eject the SD Card from your computer.



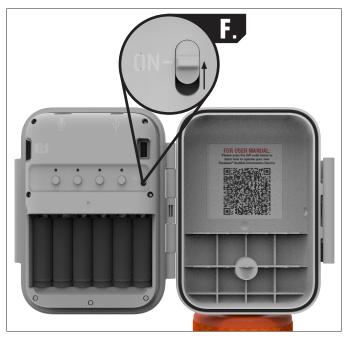
## **STEP 17**

Ensure that your Parakeet is powered off. Insert the SD Card (V). Press on the edge of the SD Card until it clicks then release.



## **STEP 18**

Slide the power switch up into the on position. Your new message on your Parakeet is ready for use. You will need to start the calibration process in section 7 once your Parakeet is in position. Once calibration is complete, your new message will play once the Parakeet is triggered. To raise or lower the base volume, see section 8.



## **13** LOCAL RECORDING

NOTE: Some states have specified the use of text to speech recordings and/or standardized messaging on AIDs. Defer to your local agency's standards. For optimal message clarity, PSS recommends using text-to-speech message recordings. For on-site reprogramming of the SD Card, refer to the Parakeet Manual or click here. Quality of local device recordings can vary greatly based on microphone used, background noise, individual voice of person recording, and other factors. For optimal local recording message clarity, record your message indoors or in a quiet location. Microphone is not included.

### STEP 1

Plug the microphone (T) into the 3.5 mm microphone jack (U) on the top of the open unit.



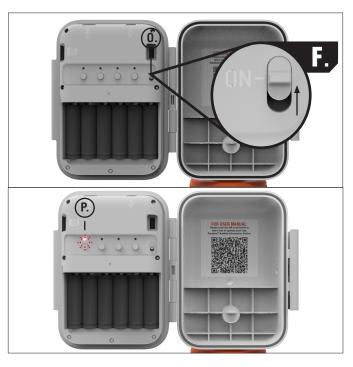
## STEP 3

Press and hold the F3 and F4 buttons (R and S) simultaneously and wait for all LEDs to turn a steady red. Start speaking clearly and audibly into the microphone (T).



## STEP 2

Slide the **power switch (F)** upwards to turn the Parakeet on. Press the **F1 Button (P)**. The LED light above will flash red.



## STEP 4

Once you are done recording your message, press the F4 button (S) to stop recording.



Parakeet will play the message back and the F1 LED will flash red.



## STEP 6

If you wish to rerecord your message, press and hold the **F3** and **F4 buttons (R and S)** simultaneously.



## STEP 7

Once you are satisfied with your recording, press the **F1 button (P)** to save the recording and recalibrate the Parakeet. The F1 LED wilf flash red.

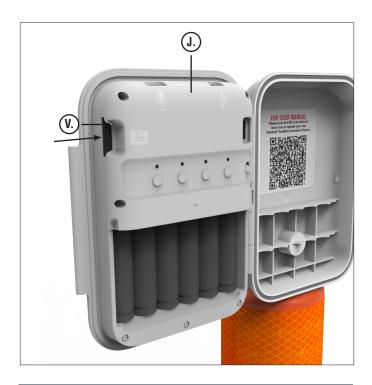


## # TROUBLESHOOTING

If your Parakeet becomes unresponsive, talks in a slow or fast cadence, or plays static, your SD Card may be corrupt. Please follow the directions below to fix this issue.

## STEP 1

Open your Parakeet (J). Make sure your Parakeet is powered off. Remove the SD Card (V) from the side of the unit. (See page 18 for more information).



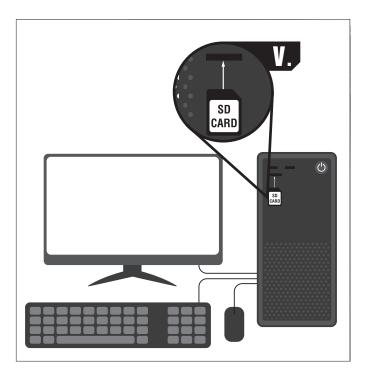


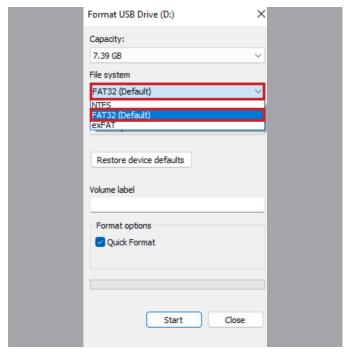
## STEP 2

Insert the SD Card (V) into the SD Card Reader on your computer.



Reformat your SD Card so that the file system is FAT-32. This step will vary between operating systems.





Contact PSS Customer Service at 800-662-6339 to obtain the original Parakeet files. Download the files then copy and paste them onto the newly restored SD Card. Eject the **SD Card (V)** and remove the SD Card from the SD Card Reader. Your SD Card is repaired. This has completely reset the SD Card to factory settings and will play the default message. To change the message, please see section 12 for creating a text to speech message or section 13 to record a message locally.

