Flamingo User Manual

Table of Contents

Setting up the Flamingo camera

Product description and components

Flamingo is a high-definition camera used to capture still and video images of surgical and dental procedures. The Flamingo camera set is composed of 9 components, neatly packed in a dedicated case.
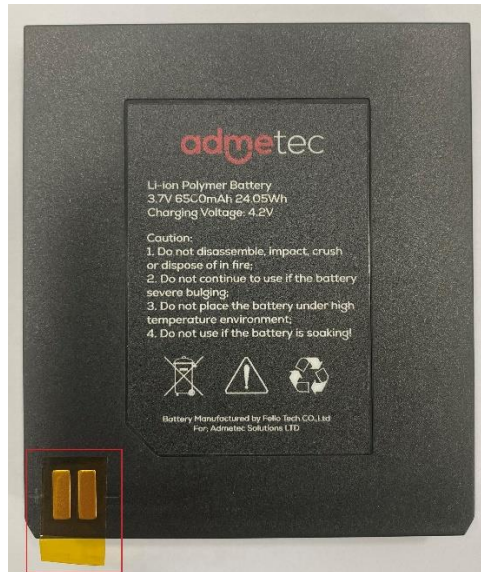
1. Wi-Fi USB dongle

2. Camera module

3. Power cable

4. Charging stand

5. Power pack with 2 batteries

6. AC/DC adapter

7. Wireless pedal

8. Camera cable

9. Screwdriver

Assembling the Flamingo camera

Assembling the Flamingo camera involves 6 steps.

1. Remove the protective foil on the battery terminals.

2. Insert the battery into the power pack with the battery terminal side as illustrated in the image below.

3. Connect the camera cable with the power pack using the Type-C side.

4. Connect the other side of the camera cable, the micro-USB side, with the camera module.

5. Place the camera on the loupes frame and hook the camera cable to the left temple of the frame of the glasses.

6. Lastly, turn on the camera by pressing the "**ON/OFF**" button on the power pack.

If everything is set up as illustrated above, the camera should now be ready to work.

Using the Power Pack

Turning the camera on and off

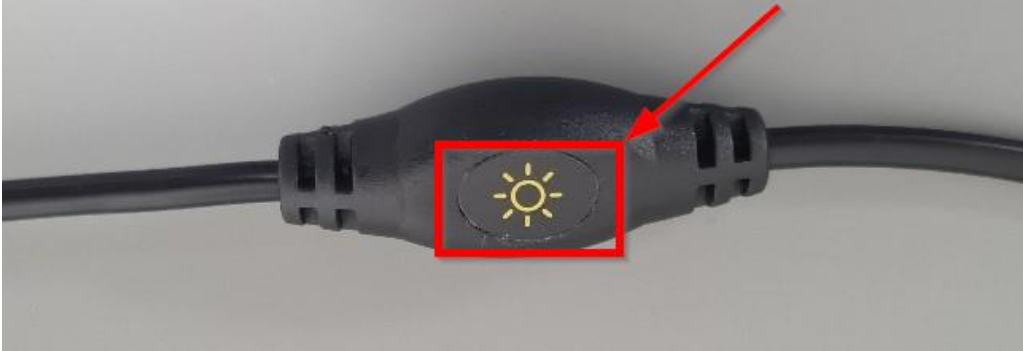1. To turn on the camera, press the "**ON/OFF**" button located in the "Camera" section.

2. Once turned on, the following indicators will appear:

    a. The Flamingo logo will light up in a white color.

    b. A blue light will start flashing.

    c. Once the system has loaded, the blue light will stop flashing and the camera will be ready to connect to the Flamingo software on your PC.

3. To turn the camera off, hold the "**ON/OFF**" button for 3 seconds.

Controlling the light

1. Press the "**ON/OFF**" button in the "Light" section to turn on the light.

2. Use the "**+**" or "**−**" buttons to adjust the light intensity.
3. Press the "**ON/OFF**" button again to turn off the light.
4. The cable also includes a button that allows for convenient control of the light's **"ON/OFF"** function**.**

Checking the battery charge level

1. To check your battery charge level, press the **"Check"** button in the BATTERY section of the power pack. The battery level will be displayed as 5 LED bars, with each LED bar representing approximately 20% of the battery charge.

Charging the battery

The batteries supplied with the Flamingo set are charged at 50-70%. We recommend fully charging them before use.

1. To do this, connect the AC/DC adapter to the charging stand. The blue LED will turn on.
2. Place the battery in the charging stand, as shown in the picture below.

The red light indicates that the battery is charging. Once the battery is fully charged, the light will change to green.

Adjusting the focus and center of vision

The camera-light module is designed as a monobloc, with a 2-degree angle between the camera and light axes. This angle ensures that the camera is looking at the middle of the lighting beam, at a distance of 45-50cm from the camera. Therefore, when working at a regular distance, the camera will be looking into the center of the light beam.

To adjust the focal distance or center of vision, follow these steps:

Adjusting the focus

1. Measure the real working distance of the loupes (using roulette).
2. Place an object at the same distance from the camera.
3. Adjust the focus by rotating the outer ring on the camera until the object looks sharp on the Flamingo software.

Adjusting the center of camera vision (requires assistance)

1. Place the camera on the loupes.
2. Find an object to look at and position it in the center of your field of view.
3. Have an assistant adjust the camera position until the object is in the center of the screen.
4. Tighten the camera mount screw to prevent it from moving freely.

Working with the Flamingo software

Software setup

You can download the Flamingo software by following the link below:
https://www.admetec.com/flamingo/download

The Flamingo software needs to process high-definition videos in real-time and therefore requires a relatively modern PC with the following specifications.

Minimum PC requirements:

- OS: Windows 10 or above.

- CPU: Intel Core I5 or better or AMD Ryzen 5 or better.

- An integrated graphics card.

- RAM: Minimum of 8GB.

- Storage: Minimum of 250GB SSD.

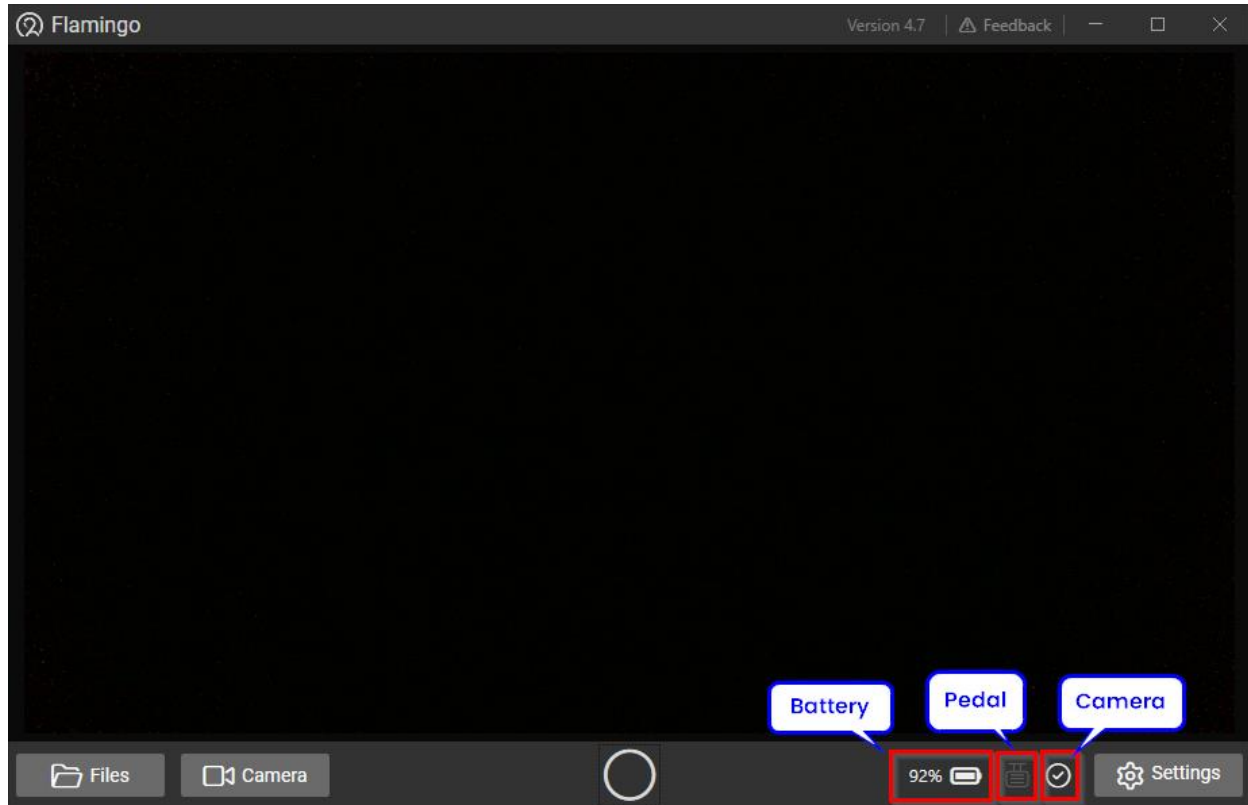- USB: one free USB 2.0/3.0 port.

After installing the Flamingo software, run it by clicking its icon on the desktop or start menu, or search for it in the Windows start menu's search bar.

At startup, Flamingo will check your CPU, RAM, storage and graphics card, and it will alert you if any of the requirements are not met.

Connecting to the camera

1. Turn the camera on and wait until the blue light stops flashing.
2. Launch the Flamingo software and check that the battery, pedal, and camera icons are highlighted in white, indicating they are properly connected.
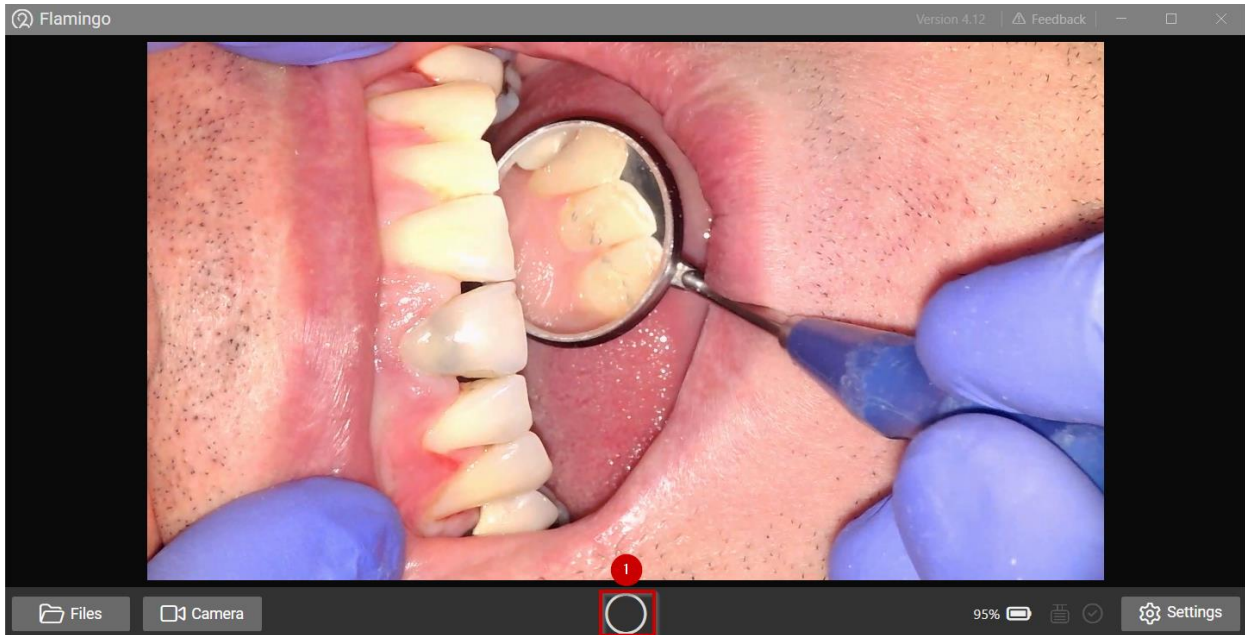

The battery and camera icons indicate that their respective hardware is connected correctly, whereas the grayed out pedal icon indicates the pedal is not connected correctly.

3. Click the "**Camera**" button to initiate the camera video stream.
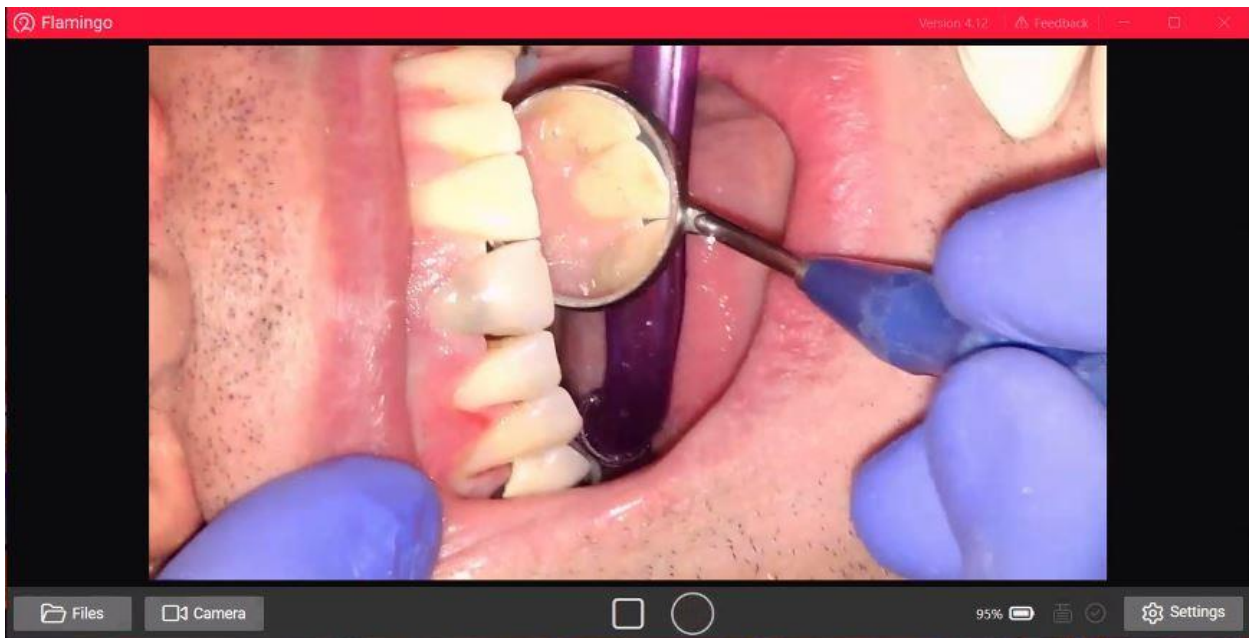
Recording videos

1. Click on the circular button to enter recording mode.

2. The software will enter recording mode in a paused state and will not start recording immediately.
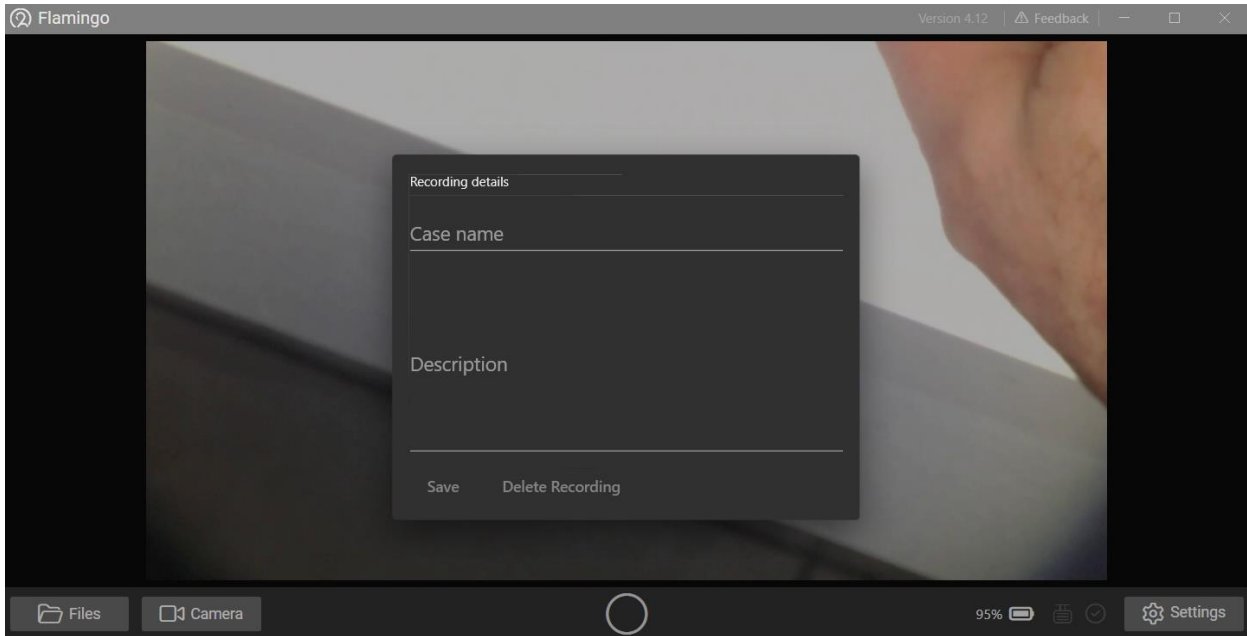

3. Once you are ready to start recording, click on the "**Start/Pause recording**" button. The button will start flashing and the title bar will turn red to indicate recording mode.

- For better convenience, you can also use the pedal to start and pause a recording. To learn how to use the pedal, follow this link .
- During the procedure, you can pause and resume a recording as many times as you need. Just click the "**Start/Pause recording**" button or use the pedal.
4. To finish and save the recording, click the "**Exit Recording Mode**" button.

5. The system will prompt you to provide a name and description for your recording.
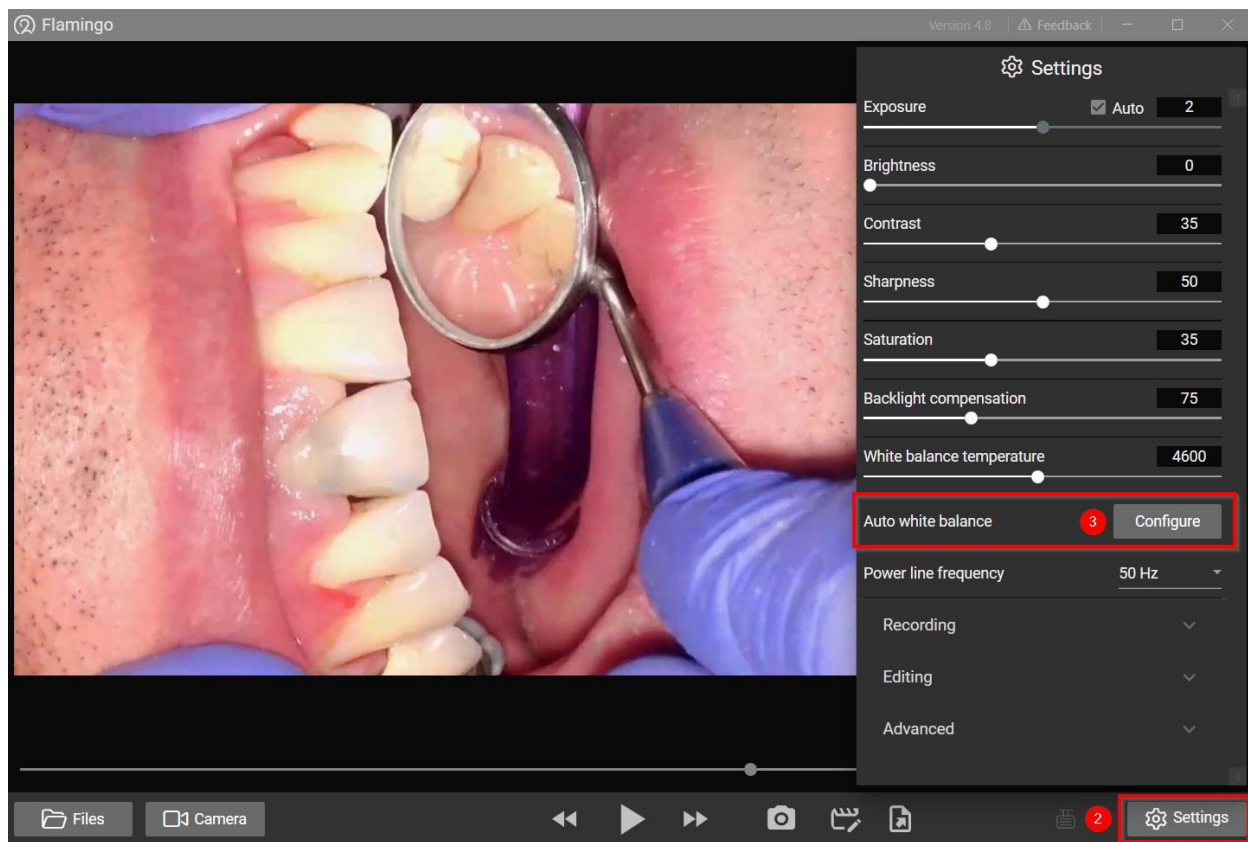

Your recording will now be stored in the Flamingo repository. You can access and view your recording in the Files section, as demonstrated in Playing recordings, or edit it, as indicated in Editing recordings.

In case the camera gets disconnected while in recording mode, the software will automatically stop the recording and prompt you to provide details of the recording, just as if you had clicked the "**Exit recording mode**" button.

If the software crashes while recording, the recording will be saved in the repository under the name "**active recording**."

Adjusting white balance

The camera generally has an accurate white balance setting, although there may be times when it's off. If white objects appear not white on the screen, you'll need to adjust the white balance by following next steps:

1. Aim the camera at a white background, such as a sheet of paper or a white wall.

2. Click the "**Settings**" button on the Flamingo interface.

3. On the settings panel, click the "**Configure**" button in the **Auto white balance** section.

4. Keep the camera pointed at the white background for a duration of 3 seconds during which the while balance will automatically adjust itself.
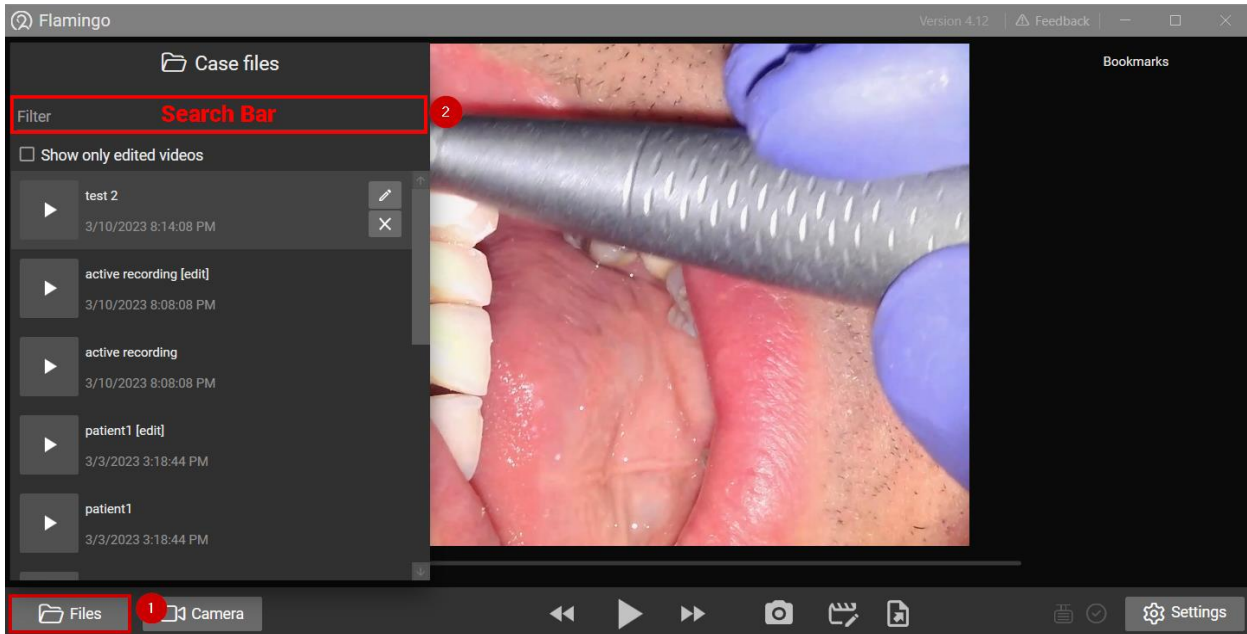
Using the pedal

It might be difficult to use the PC while conducting the procedure. Therefore, it is advisable to use the pedal to pause and resume the recording. The Flamingo camera will play a sound when the recording starts or pauses, so you can keep track of the current state of the recording without looking at the screen.

The pedal can only be used to pause and resume recordings while the Flamingo software is in recording mode. Entering or exiting recording mode must be done through the software, it cannot be done using the pedal.
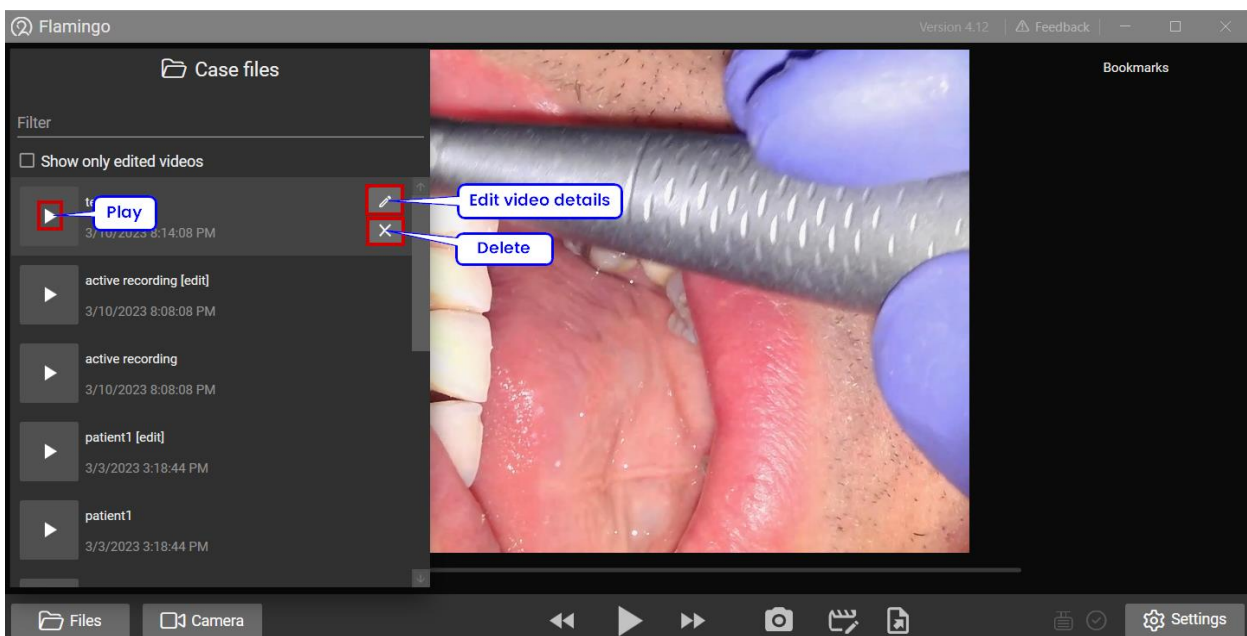
Playing recordings

Flamingo stores all the recordings on the PC's hard drive. To access them, follow next steps:
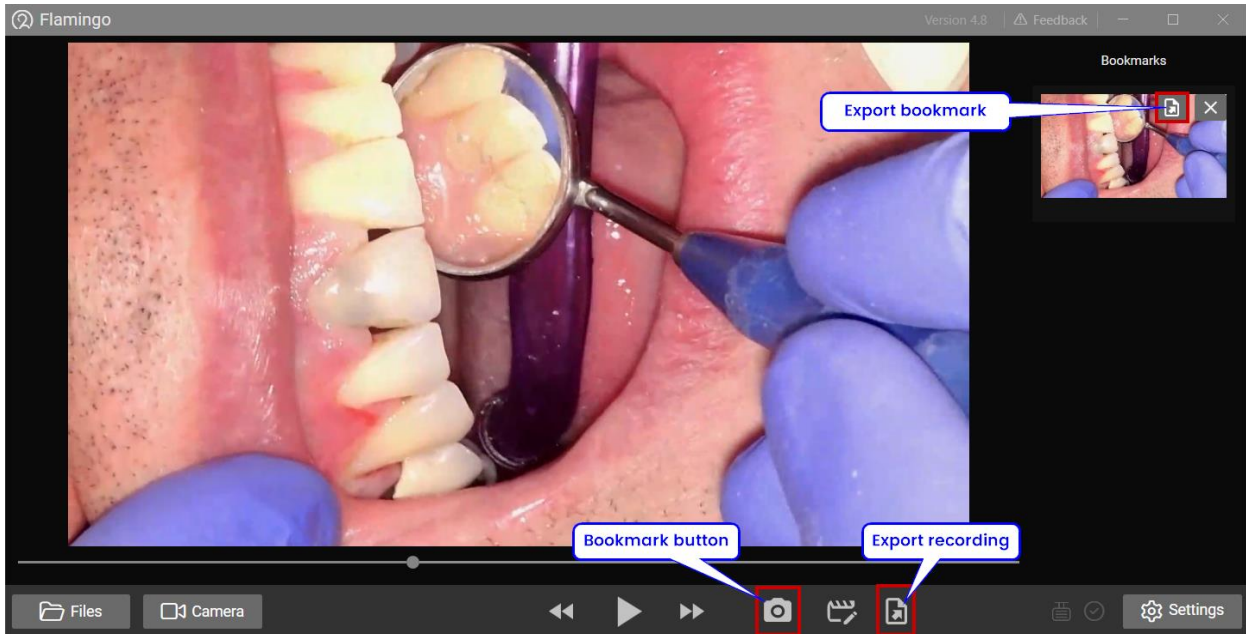
1. Click the "**Files**" button to display a list of all recordings. The Case Files panel will appear, providing a chronological list of all the recordings.

2. You can find a recording by scrolling through the list or entering the patient's name in the search bar.

3. To play a recording, click the "**Play**" icon. You can also rename a recording or edit the description by clicking the "**Edit video details**" icon, which will pop-up an edit screen. You can also delete a recording by clicking the "**Delete**" icon.

4. When viewing a recording, you can use standard video controls to pause, rewind, or skip to a particular section of the recording.

5. You can also save a frame from the current video position as an image.
   - Click the "**Bookmark**" button.
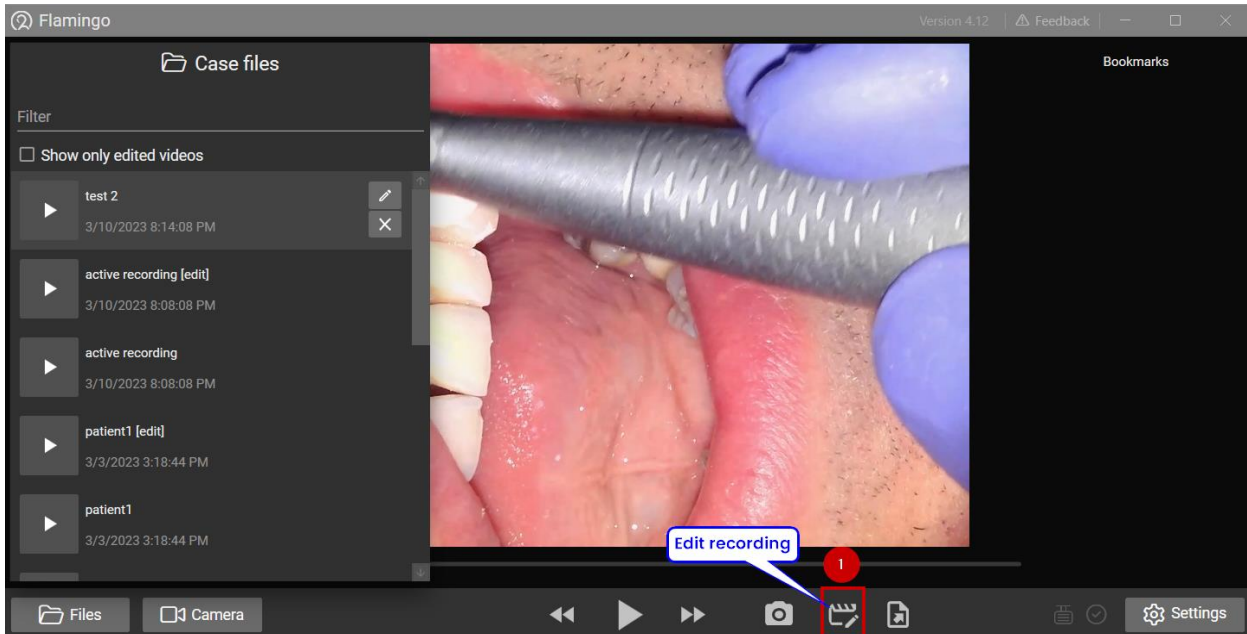   - The image will be displayed on the bookmark panel.

6. You can save the procedure video or the bookmark image to a new location using the "**Export recording**" or "**Export bookmark**" buttons, respectively.

Editing recordings

Flamingo enables users to perform simple video editing procedures within the software itself.

To edit a recording, follow next steps:

1. Click the "**Edit recording**" button to enter editing mode.
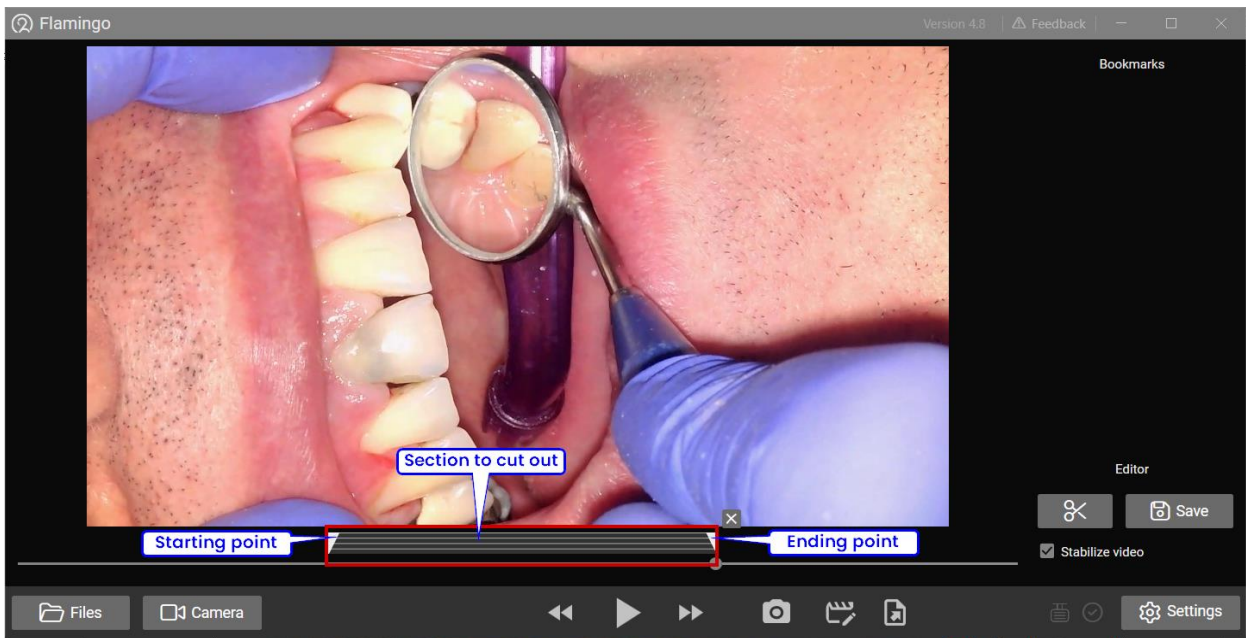

2. The editor screen enables you to cut out section from a recording.

   - Click the "**Scissors**" button.

   - Highlight the section you want to cut out using your mouse by clicking and dragging the starting point or ending point.

- You can add multiple sections.

- Click the "**Play**" button to preview the edited video.

- To delete a section, click on it and then click on the "**Delete**" button.

3. Once you're satisfied with the edited video, click the "**Save**" button to save it. The edited video will be saved as a new recording with the same name as the original, but with the suffix [edit].

4. When you finish editing a recording, click the "**Edit Recording**" button to exit editing mode.

You can make additional modifications to already edited recordings. Flamingo software retains the editing configuration, enabling users to pause and resume the editing process at their convenience, without the need to complete all edits in one sitting. The editing configurations are preserved even after the user saves the edited recording.

If you wish to remove the original recording to free up space, you can manually delete it as illustrated in the Playing recordings section.
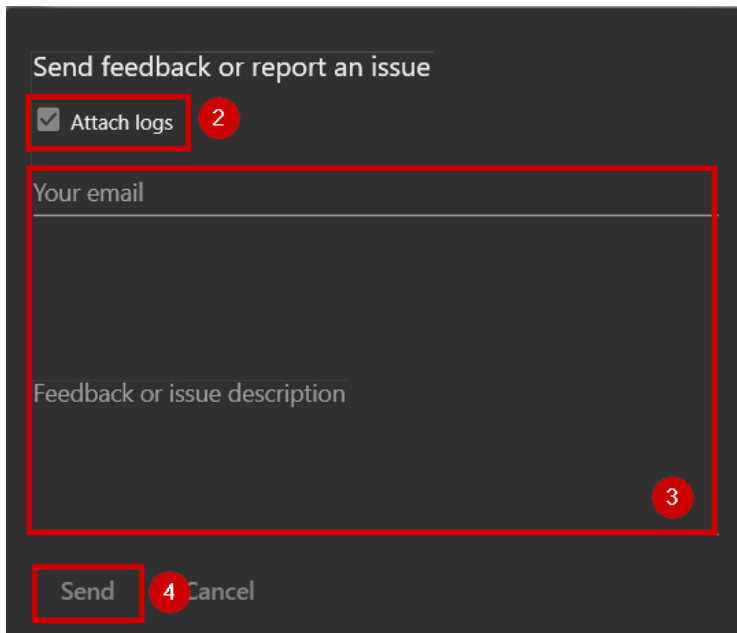
Reporting issues

If you encounter any issues or challenges while using the Flamingo software, please report them to our technical support team. This helps us identify and resolve the issue as fast as possible.

To report an issue, follow these steps:

1. Click the "**Feedback"** button on the navigation bar.

2. Keep the "Attach logs" check box checked to include logs.

3. Fill out your email and provide a description of the error you're experiencing.
4. Click the "**Send**" button.