



ChronoCam TL

Time-Lapse Camera & Organizer

Mobile Application User Manual

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❖ Introduction about ChronoCam TL

ChronoCam TL is a time-lapse camera application that allows you to record your videos for up to 100 hours with customized options. You can set a custom frame rate between .01 fps and 30 fps and frame size from wide, full, square, or free-form. A collection organizer stores the videos and tracks clip metadata such as the title, elapsed time, viewing time, frames per second, frame dimensions, file size, GPS coordinates, and creation date.

❖ Installing the App

The app is available at Apple App Store and can be accessed from the following link:

<https://apps.apple.com/us/app/chronocam-tl/id1578634400>

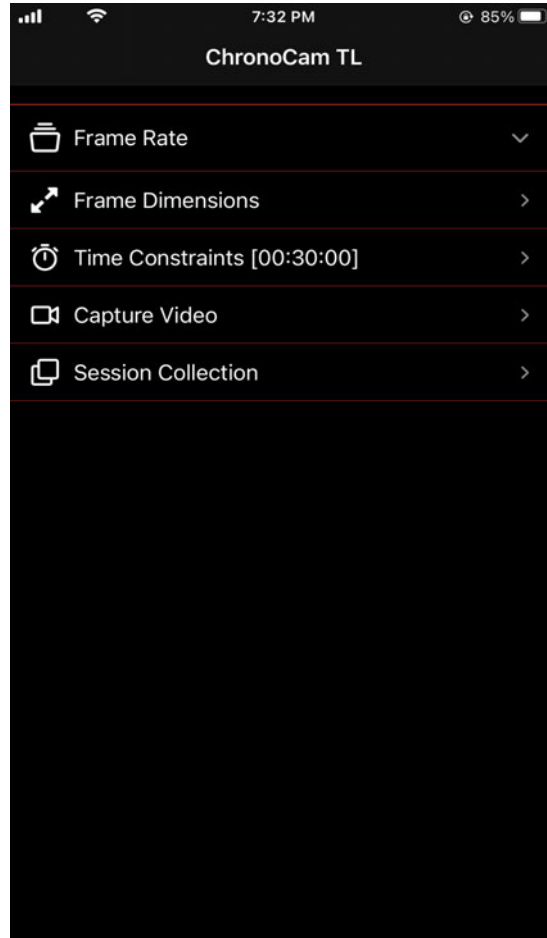
- Open the App Store on your iPhone.
- Search for ChronoCam TL or use the above-given link to open the app directly in App Store.

❖ Compatibility

ChronoCam TL is a user-friendly app and is compatible with some Apple devices. Below is the list of compatible devices and their required OS versions.

- **iPhone**
Requires iOS 13.0 or later.
- **iPod Touch**
Requires iOS 13.0 or later.

Main Screen



- This is the main screen of the application. To record a video, the user can select their customized settings: Frame Rate, Frame Dimensions, and Time Constraint.
- If the user simply clicks on the record video button, it allows recording the video with default settings (explained below).
- All the recorded videos will be stored in Session Collection.

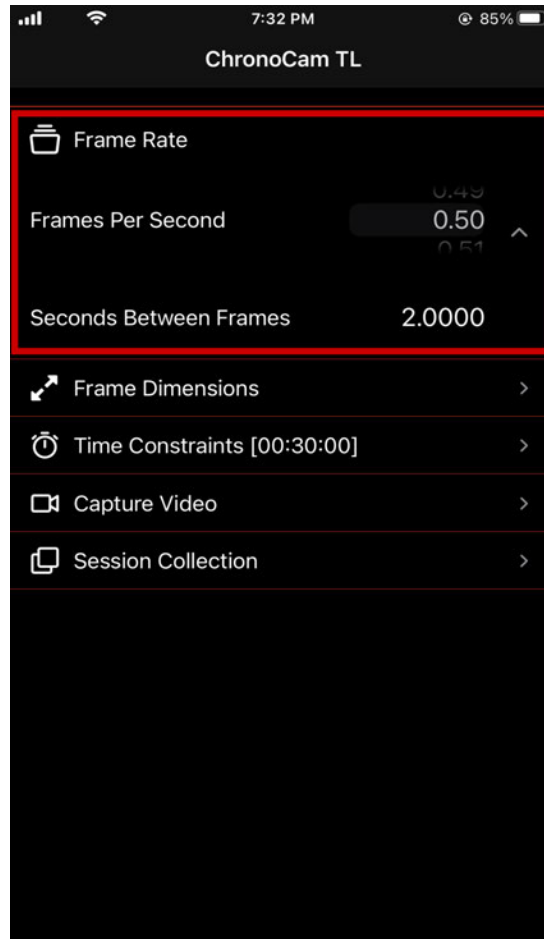
Frame Rate

What is Frame Rate?

Frame rate consists of frames per second (fps) and the reciprocal is also shown as seconds between frames. Frames per second allow you to decide how many frames/images you are capturing per second. Seconds between frames is the delay between those frames. When set to 30 fps, sound is recorded because this is normal, uncompressed recording. At 30 fps, the elapsed/recording time is the same as the viewing time. At any rate below 30 fps, the elapsed time greater than the viewing time.

❖ Selecting Frame Rate

Upon tapping “Frame Rate” from the main screen, the user provided with the ability to set frames per second. Seconds between frames are dependent on frames per second. On setting frames per second, the app automatically derives the value of delay between those frames.



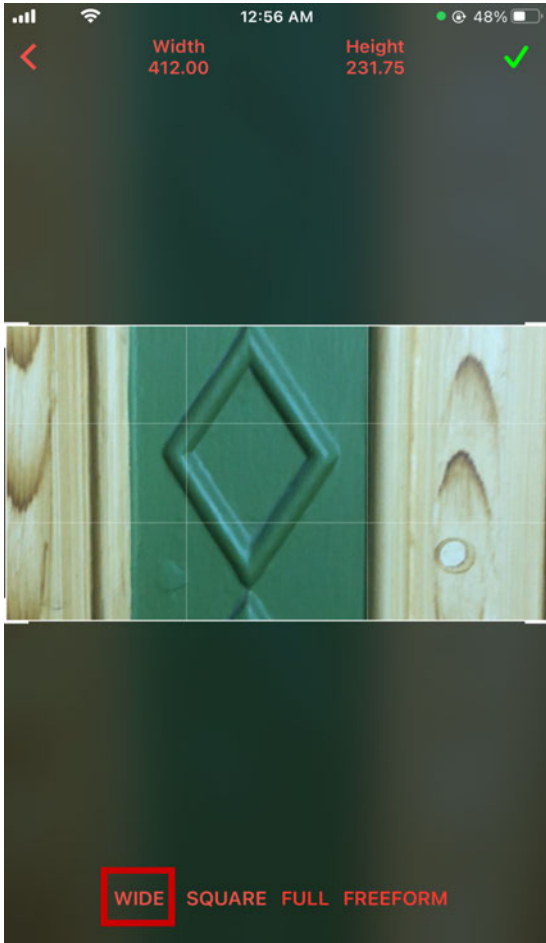
By default, frames per second are set to 0.50, and seconds per frame are automatically derived from it which is 2.000. At this setting, one hour of recording time is compressed into one minute of viewing time.

Frame Dimensions

When the user taps on the “*Frame Dimensions*” button from the main screen, a screen opens up that allows the user to select between different frame sizes. Following are the frame dimensions provided by the app.

Wide — Width(412.00) Height (231.75)

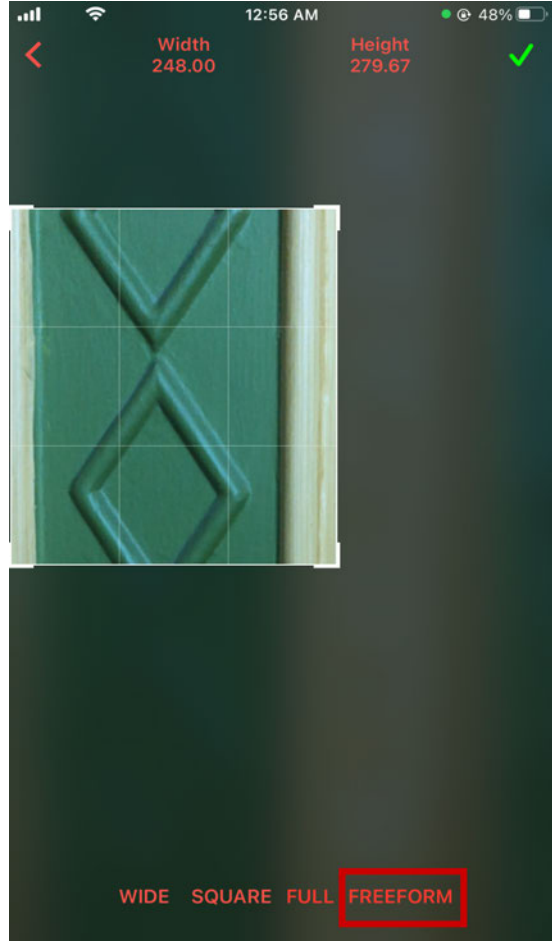
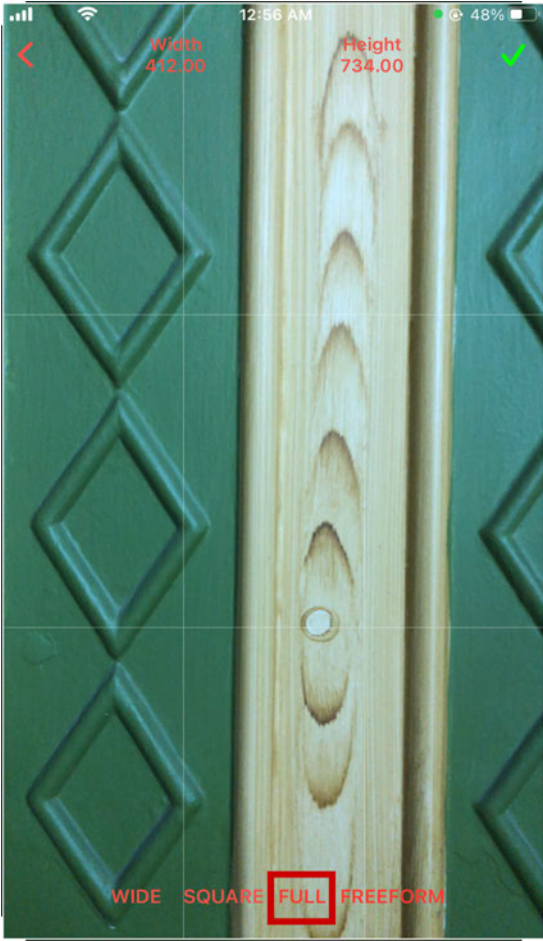
Square — Width(412.00) Height (412.00)



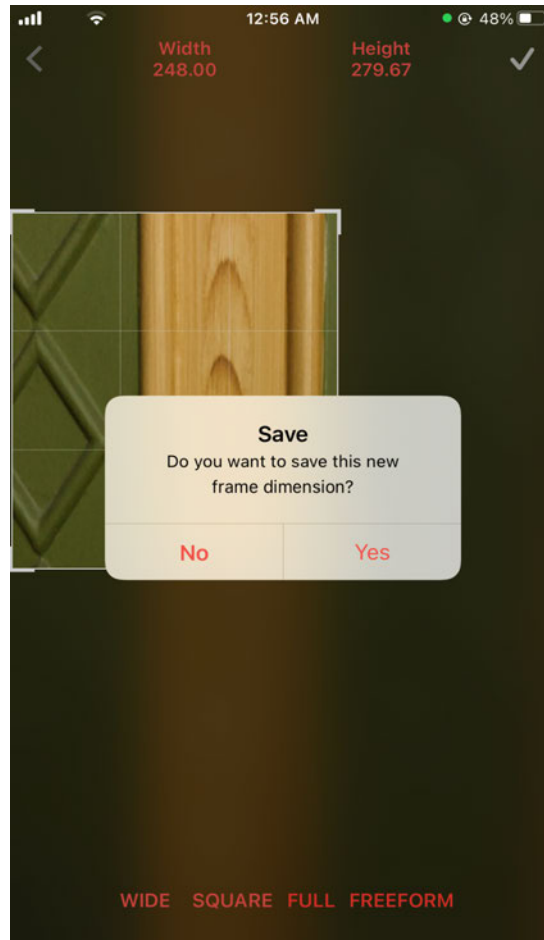
Full — Width(412.00) Height (734.00)



FreeForm — Select your custom frame size



❖ Save Dimension Settings



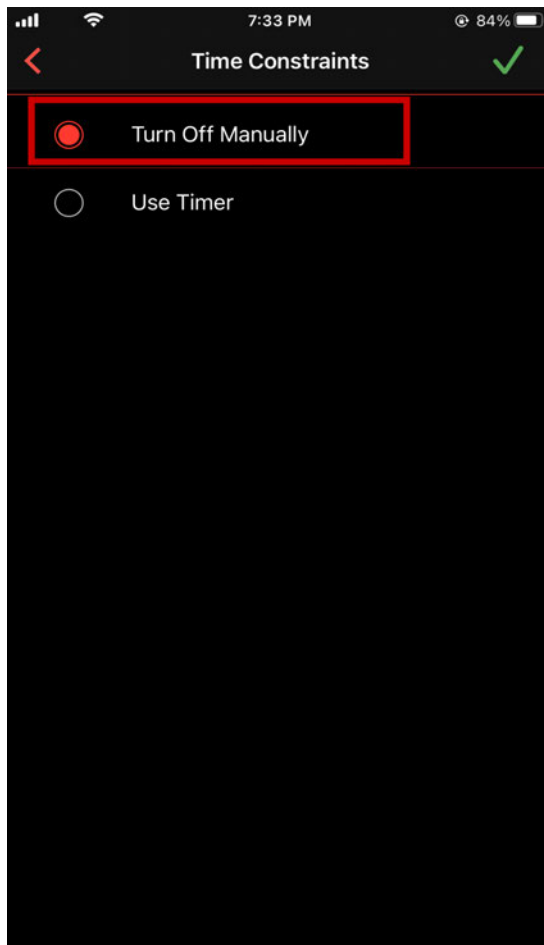
Tap on the check mark ✓ on the top right corner to save the setting. If the user taps on the back arrow <, the app asks the user if they want to save the setting. If the user taps on “Yes,” the settings will be saved and on selecting “No,” the settings will be discarded. After selecting an option from this pop-up, the user is redirected to the main screen.

Time Constraints

On tapping the “Time Constraints” option from the main screen, a screen opens that allows the user to set the timer for the video. There are two options available on the Time Constraints screen: Turn Off Manually and Use Timer. Users can select between these two options.

❖ **Time Constraints Timer - Turn Off Manually**

When the user selects “Turn Off Manually,” there is no limit set to record the video. The user needs to start and stop the recording manually.



This is the screen where the user can select “Turn Off Manually” as a time constraint.

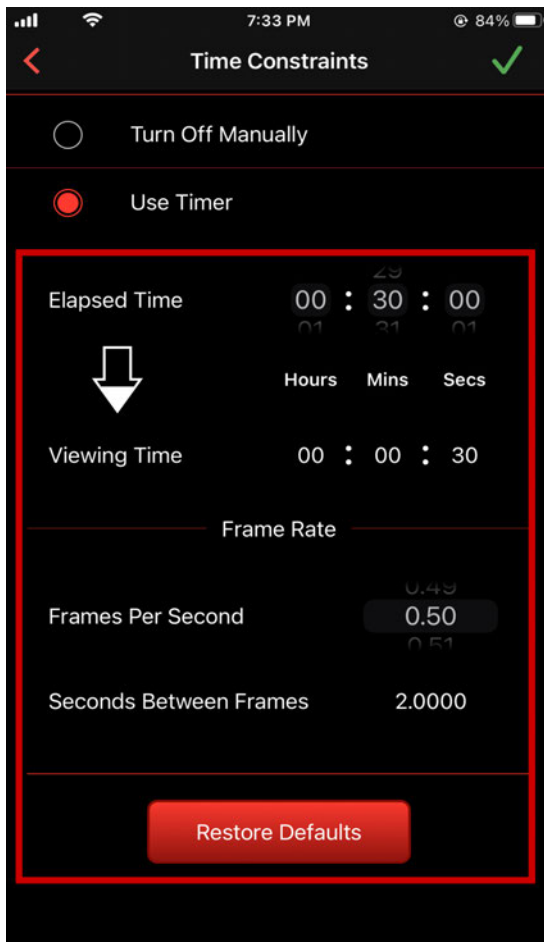


This is the recording session when “Turn Off Manually” is selected as the time constraint.

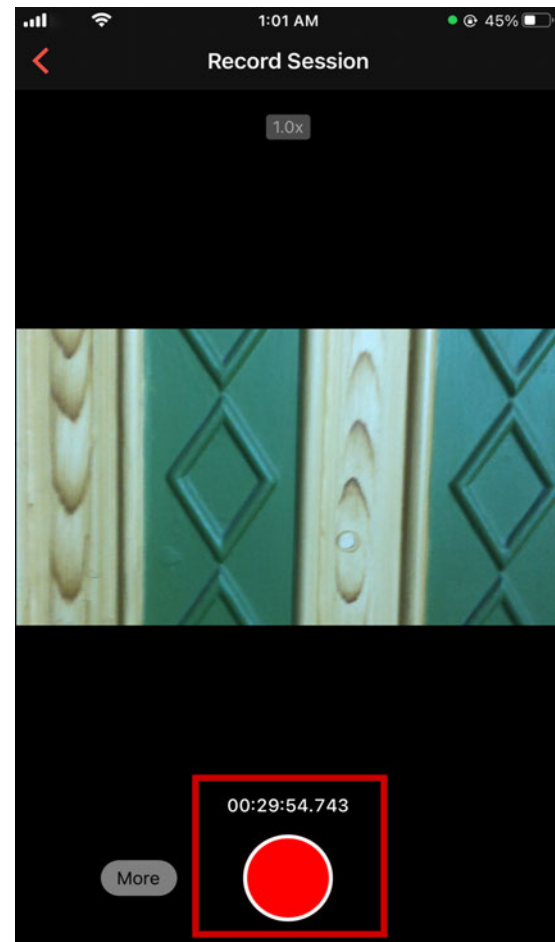
❖ Time Constraints - Use Timer

The “Use Timer” setting allows the user to select the elapsed time for the video. Frames per second can also be updated from this screen. The Viewing time of video depends on the elapsed time and frames per second.

By default 30 minutes of elapsed time is selected along with 0.50 frames per second. This yields 30 seconds of viewing time.



This is the screen where the user can select “Use Timer” as a time constraint.



This is the recording session when “Use Timer” is selected as the time constraint.

❖ Saving Time Constraint

Tap on the tick mark ✓ on the top right corner to save the settings. If the user taps on the back arrow <, the app asks the user if they want to save the settings. If the user taps on “Yes,” the settings will be saved and upon selecting “No,” settings will be discarded. After selecting an option from this pop-up, the user is redirected to the main screen.

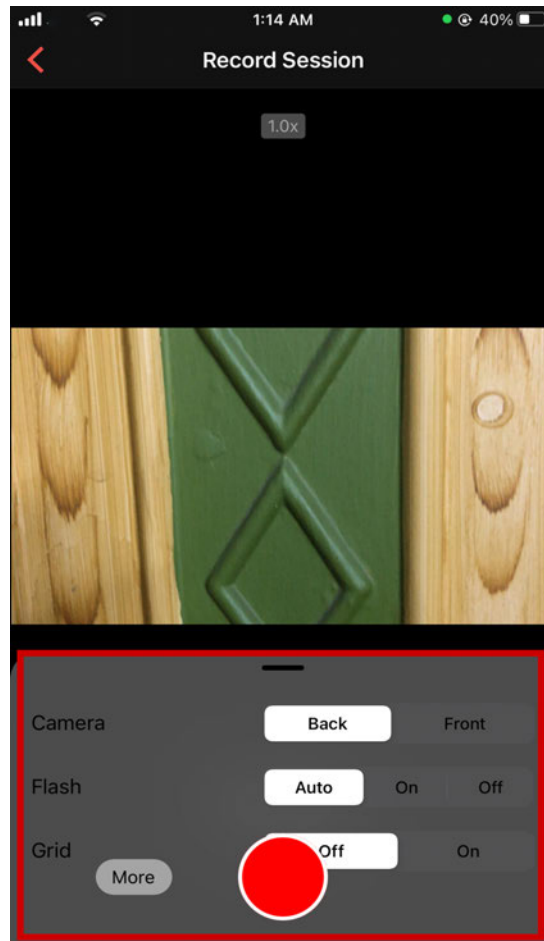
❖ Restore Defaults

This feature allows users to reset all the settings previously updated. All the settings will reset to their default values upon tapping this button.

Capture Video

From the main screen the user tap on the Capture Video button. On the Record Session screen, the user is given the ability to change the following settings by tapping the “More” button.

- **Camera** - Allows selecting between front and back Camera.
- **Flash** - Allows selecting between Auto, On, and Off.
- **Grid** - Allows selecting between turning the grid On or Off.

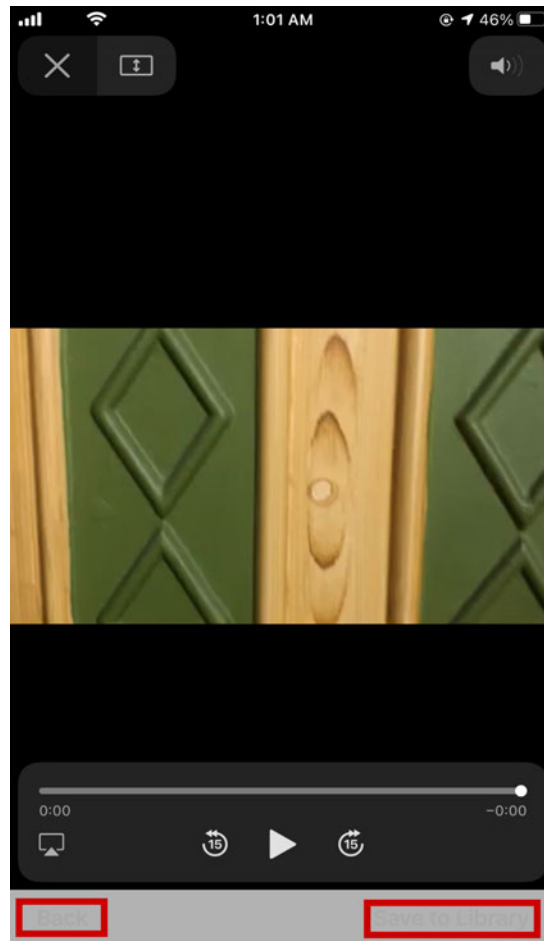


❖ How to record a video

If the user previously selected “Turn Off Manually,” the video recording needs to be manually started by pressing the red round button. The recording must be stopped manually.

If the user added a specified timer from the “Use Timer” setting, video recording needs to be started manually but will automatically stop once the timer is finished. Right after the recording is stopped, the timelapse video is brought up to be viewed according to the viewing time shown in “Time Constraint”.

❖ View Video



- The “Save to Library” button at the below right corner of the screen saves the video to the user’s phone library.
- “Back” and “X” buttons redirect the user to the Record Session screen.
- The Play button along with the viewing time of the video is displayed on the screen, and the user can replay the video and also go forward/reverse through the video.
- Other options of the video player: Zoom, Volume Control, AirPlay are also displayed on this screen.

Session Collection

Once the video recording is complete, all the videos are stored in “Session Collection.” On tapping “Session Collection” button from the main screen, the user can see the list of sessions. The session collection screen shows the list of sessions in tabular form.

Session ID	Title	Elapsed Time	View
jmUOMN	Session on 01-Sep-21	00:09	
VT0IZR	Session on 01-Sep-21	00:03	
67X21b	Session on 01-Sep-21	00:32	
bWBf5y	Session on 31-Aug-21	00:01	
WyRoBi	Session on 31-Aug-21	00:03	
z3KnKO	Session on 31-Aug-21	00:01	
QQLPEU	Session on 31-Aug-21	00:01	
uULMqh	Session on 31-Aug-21	00:08	
gahyaB	Session on 31-Aug-21	00:04	
yxHubw	Session on 31-Aug-21	00:05	
IXrdB9	Session on 30-Aug-21	00:10	
ISFD15	Session on 30-Aug-21	00:01	
GTS1Q1	Session on 30-Aug-21	00:10	

Timestamp	Created	Report	Delete Session
M	1-Sep-21	View	Delete
M	1-Sep-21	View	Delete
M	1-Sep-21	View	Delete
M	31-Aug-21	View	Delete
.M	31-Aug-21	View	Delete
.M	31-Aug-21	View	Delete
.M	31-Aug-21	View	Delete
M	31-Aug-21	View	Delete
V	31-Aug-21	View	Delete
M	31-Aug-21	View	Delete
M	30-Aug-21	View	Delete
M	30-Aug-21	View	Delete
V	30-Aug-21	View	Delete

The following information is displayed on the Session Collection screen:

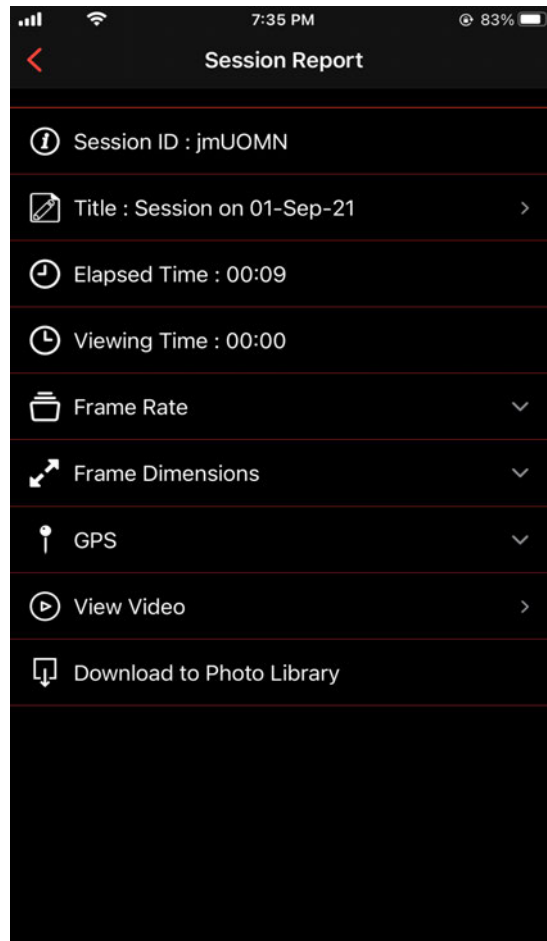
- Session ID - *Automatically generated*
- Title - *Shows the date as the title of the session. For example, "Session on 31-August-21"*
- Elapsed time
- Viewing Time
- Frames per second
- Seconds between frames
- Frame Width
- Frame Height
- Video Size
- GPS
- GPS timestamp
- Creation Date
- Report - *Action button to view the session report*
- Delete Session - *Action button to delete the session*

Sessions can be sorted in ascending and descending order by tapping on the a column header. For example, tapping on “Created” toggles the sorting selection.



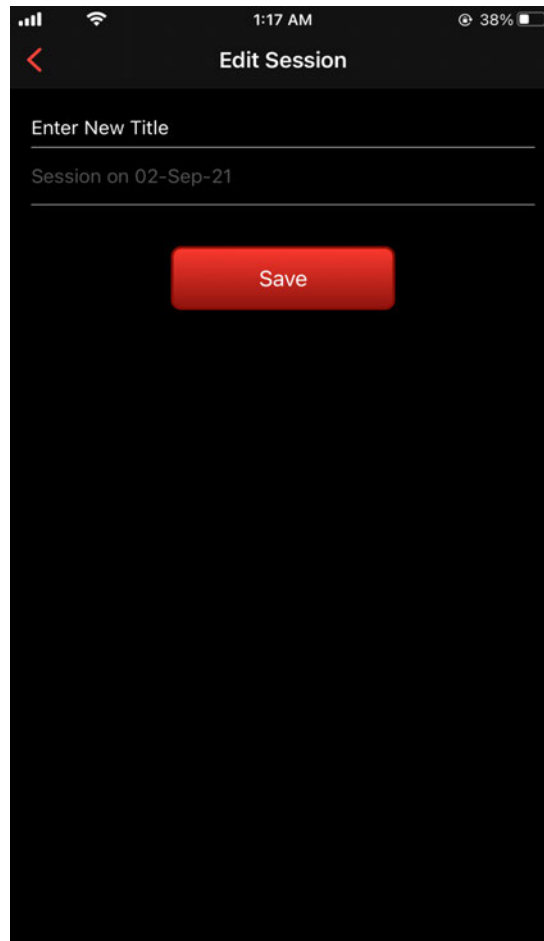
❖ View Report

Upon tapping the “View” button under the Report column on the Session Collection screen, a screen is displayed where the user can view details about the session.



- **Session ID**
A unique identifier that is randomly generated by the app is displayed on the Session Report screen. Users can only view Session ID and cannot update it.

- **Title**
The session title is being displayed. On tapping it, a screen is displayed where the user can update the session title.



Upon tapping the “Save” button, a newly added title is saved. If the user taps the back arrow < button, the app will navigate the user to the Session Report screen without saving the new name.

- **Elapsed Time**
Elapsed time shows the total recording time of the video is being displayed.
- **Viewing Time**
Viewing time shows the total time for viewing the time-lapse video.
- **Frame Rate**
Shows the values of frames per second and seconds between frames.
- **Frame Dimensions**
Shows the values of frame dimensions.
- **GPS**
GPS coordinates and timestamp information is displayed.
- **View Video**

On tapping View Video, the “View Video” screen opens. [Click here](#) to view details about the View Video Screen.

- **Download to Photo Library**

On tapping it, the video gets downloaded in the phone library.

- ❖ **Delete Session**

The Delete button under the “Delete Session” column shows a pop-up on tapping it. Pop-up asks, “Are you sure you want to delete it?”.

If the user taps “Yes,” the session is deleted. Upon tapping “No,” the session is not deleted, and the user is navigated to the Session Collection screen.

