

**brinno**  
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# TimeLapse

HD Video Camera

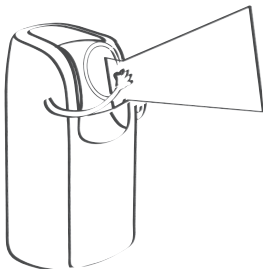
**TLC 200**

## ***User Manual***

[www.brinno.com](http://www.brinno.com)

# WELCOME TO THE **BRINNO** FAMILY!

***Welcome to  
Brinno!!!***



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more information: [www.brinno.com](http://www.brinno.com)

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## Optional Accessories



Weather Resistant Housing  
(ATH110)



Brinno Reader  
(ABR100)



Bike Cam Holder  
(ABH100)



Shutter Line  
(ATS110)



Camera Wall Mount  
(AWM100)



Motion Sensor  
(ATM100)



Pan Lapse  
(ART100)



Pouch  
(ATP100)

## Thank you for purchasing a Brinno TimeLapse Camera!

The Brinno TimeLapse Camera (TLC 200) uses unique Time Lapse and Power Saving technologies to capture images for days, weeks, or even months. You can use it to record your Daily Life, Projects, anything that moves, you can record. The Brinno TimeLapse Camera TLC 200 captures photos and stores them as videos making them easy to view. Turn it on, set the time interval, frame your subject, let it run and you have a time lapse video! No fancy equipment, no intervalometer, no complicated gear setups, no time-controlling, no video-making headaches.

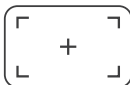
### Time Lapse Camera TLC 200 Features

---



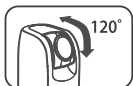
TLC 200 provides you a 1280x720 resolution video, yes, it's HD video.

**Time Lapse Video**



The 1.44" LCD screen, allows you to frame to your subject easily.

**LCD Viewfinder**



The Rotatable lens allows you to adjust the field of view easily!

**Rotatable Lens**



TLC 200 comes with unique Power control technology, 4 AA batteries can capture 270,000 frames.

**Power Saving**



Just turn it on and shoot, the TLC 200 will deliver a time lapse video!

**Simple Solution**



Unique design allows you to attach optional lenses.

**Extension Lens\***

\*Optional accessories.

### TLC 200 Output file format

---

- Video Mode:

Format: AVI.

Resolution: 1280x 720, 640x 480

**Note:** The maximum size of each single AVI file ranges between 8,192 to 20,480 frames, depending on the time interval setting.

- Still Image Mode (**only when using Shutter Line**):

Format: JPEG.

Resolution: 1280x 720, 640x 480

**MENU**  
 AVI Frame Rate  
 < OK >  
**Settings**

**Normal** [Battery Icon]  
**ASAP**  
 OK  
 2013/03/01  
 22:58:32  
 MENU TIME

**TIME** [T.I. Icon]  
**ASAP**  
 < OK >  
**Set the Time Interval**

**AVI Frame Rate**  
 1 FPS / 5 FPS / 10 FPS / 15 FPS / 20 FPS / 30 FPS

**Image Quality**  
 Best / Better / Good

**Custom Exposure**  
 - ···· ···· +

**Time Stamp**  
 Off / On

**Low Light Recording**  
 Off / On

**Scene**  
 Daylight / Night

**Timer**  
 You can set start and stop time.

**Set Date & Time**

**Output Resolution**  
 720P / 480

**LED Display**  
 Off / On

**Band Filter**  
 None / 50 Hz / 60 Hz

**Firmware Version**

**Media Statistic**

**Reset**

**T.Lapse** [Battery Icon]  
**ASAP**  
 OK  
 2013/03/01  
 22:58:32  
 MENU TIME

**Set the Time Interval**  
 ASAP / 1 Sec / 2 Sec / 3 Sec / 5 Sec / 10 Sec / 20 Sec / 30 Sec / 1 Min / 5 Min / 10 Min / 1 Hr / Custom

**T.Lapse** [Battery Icon]  
**ASAP**  
 OK  
 2013/03/01  
 22:58:32  
 MENU TIME

If the screen goes to sleep, press OK to wake up.

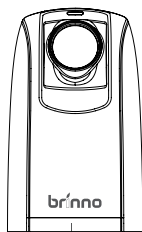
[Sleeping Eyes Icon] [OK START] [Waking Eyes Icon]

[Sleeping Eyes Icon] [Waking Eyes Icon]

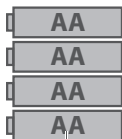
**!**

Subject to change without notice, please refer to [brinno.com/support](http://brinno.com/support) for latest information.

## Package Contents



①



②



③

**1** TimeLapseCam (TLC200)

**2** 4 AA Batteries

**3** SD card\*

*\*SD Card may or may not be included, please check the contents list on the package.*

## Camera Components

### Front



### Back



**1** SD Card Cover

**2** Connector for Extension Accessories

*(For ATS110, ATM100)*

**3** Connector for Micro USB cable  
*(For extension power supplier, DC 5V)*

**4** Metal Ring  
*(for ATM100, ATL045)*

**5** Battery Door

**6** Strap Eyelet

**7** LCD Screen

**8** MENU (◀) Button

**9** TIME (▶) Button

**10** OK/ START Button

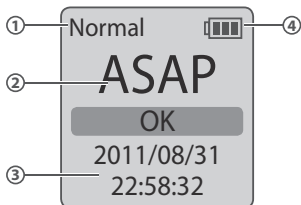
**11** Power Switch

**12** LED Indicator

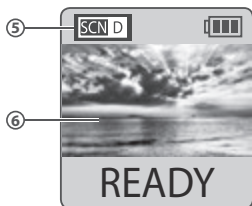
**13** Tripod Screw Hole

# Display Icons

## Set Up screen



## Preview screen



## At Set Up screen

- 1 Capture mode  
**Normal:** Time Lapse mode  
**Shutter:** Shutter Line mode  
**Motion:** Motion Activated mode
- 2 Time interval  
Select the pre-set time interval or customize yourself.
- 3 System date and time
- 4 Battery level

Icon	Description
 (green)	Battery fully charged.
 (green)	Battery partially discharged.
 (yellow)	Low battery. Replace as soon as possible.
 (red)	Out of battery. Replace battery immediately.

## At Preview screen

- 5 Scene mode
- 6 Preview image capture window

## Status icon

- 7 Battery Empty  
Please replace battery immediately.
- 8 SD Card Full  
Please download files to clear SD card space.
- 9 SD Card Error  
Please replace SD card.
- 10 No Card  
Please Insert SD card.



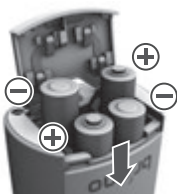
## Initial Step-1

## Install Batteries and SD Card

1



2



3



1 Open battery door.

2 Insert 4 AA batteries.

3 Close battery door.

⚠ Be sure the battery cover is locked into place.

## Initial Step-2

## Install SD Card

1



2



3



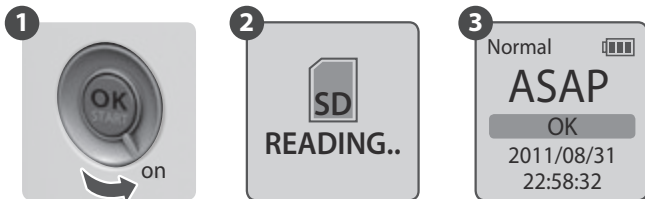
1 Open SD card cover.

2 Insert SD card until it clicks into place.

3 Close SD card cover.

## Initial Step-3

## Turning the Camera on



**1** Rotate the **Power** switch to **ON** position.

**2** Process screen

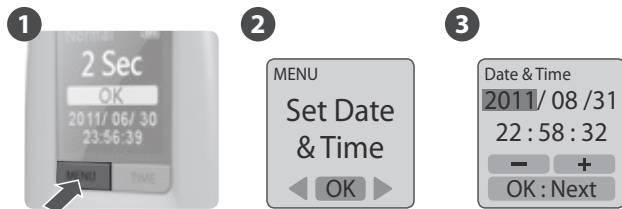
▲ It may display other information on screen, please refer to page 3.

**3** Set Up screen

*Now, you can set Date and Time and Time Interval before you use your TimeLapse Camera!*

## Initial Step-4

## Set Date and Time

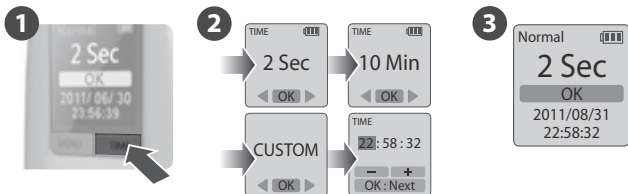


**1** Press **MENU** button.

**2** Press **TIME** (▶) to select **Set Date & Time (MENU 7/13)**, and press **OK**.

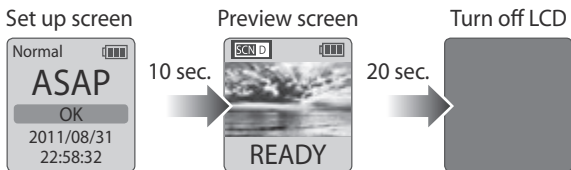
**3** At the highlight field, press **MENU** (—) to decrease value, press **TIME** (+) to increase value, press **OK** to confirm and go to the next field. When finished press **OK** to exit set up.

## Initial Step-5 Set Time Interval



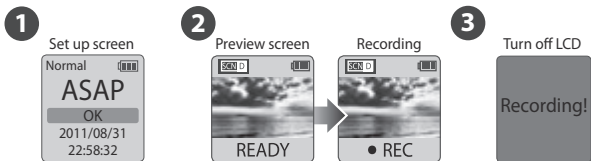
- 1 Press **TIME** button to enter time interval set up.
- 2 Press MENU (◀) and TIME (▶) to select a pre-set time interval or customize it by yourself. When complete, press the OK Button to confirm and return to the Set up screen.
- 3 Back to the Set up screen  
**Now, you are ready to go to Preview screen and start recording your Time Lapse Videos.**

## ⚠ About Power Saving



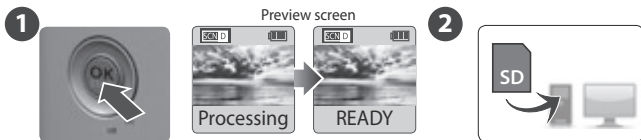
- 1 **At Set Up Screen**  
After **10** seconds without activity on the set up screen, the camera will go to Preview screen automatically. You can press the **MENU** or **TIME** button to go back to the set up screen.
- 2 **At Preview Screen**  
After **30** seconds without activity on the set up or preview screen, the LCD screen will turn off automatically to save power. You can press the **OK** button to wake up the camera.

## Start Recording



- 1 After selecting the time interval, press OK to proceed to the **Preview Screen**.
- 2 On the Preview screen, hold the OK button for 2 seconds to start recording. Preview Screen will show REC at the bottom bar.
- 3 During the recording period, the LCD panel will turn off to save power.

## Stop Recording



- 1 While recording, hold the **OK** button until the LCD light turns on and shows the text "**Processing**", it means the camera is processing the file. When completed the processing it will display the text "Ready" This indicates the recording session is complete.
- 2 Remove the SD card from the camera, and insert it into your computer or laptop to enjoy your amazing Time Lapse Videos!

## LED Indicator



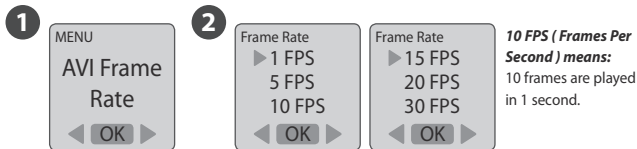
### Green LED light: indicates Image capture in process

When the Green LED flashes, the Time Lapse Camera (TLC 200) is capturing photos.

### Red LED light: Low battery level, Low recording space on your SD card

## AVI Playback Frame Rate

You can change the videos FPS (frames per second) playback with this setting.



**1** Select **AVI Frame Rate**.

**2** What frame rate should I use?

Generally, 10 FPS is suitable for Time Lapse video.

**1 FPS:** If the video plays at 1 frame per second, the video will not look smooth, and the video length will be longer.

**30 FPS:** If the video plays at 30 frames per second, the video will look smooth, and the video length will be shorter.

## Image Quality

Set the image quality for your camera.



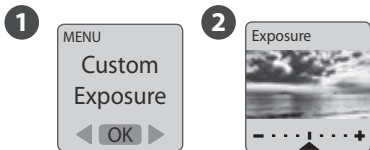
**1** Select **Image Quality**

**2** There are three options you can select: **Best, Better, Good**

## Custom Exposure

---

Increase or decrease the exposure.

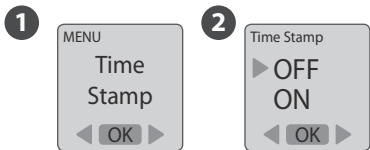


- 1 Select **Custom Exposure**
- 2 press MENU (←) and TIME (→) to increase (+) or decrease (−) the exposure and press **OK** to exit.

## Time Stamp

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You can choose if you want to show the time stamp at bottom of your video.

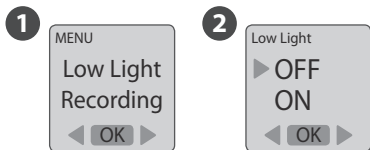


- 1 Select **Time Stamp**.
- 2 Select OFF or ON.

## Low Light Recording

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You can choose to enable your camera to keep recording video in a low light environment (< 5 Lux).



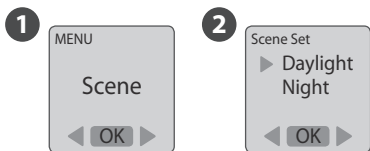
1 Select **Low Light Recording**.

2 ON: Allows your camera to record video in a low light environment.  
OFF: Your camera will go to **sleep** in a low light environment.

## Scene



---

Select the scene to fit your Photographic needs.



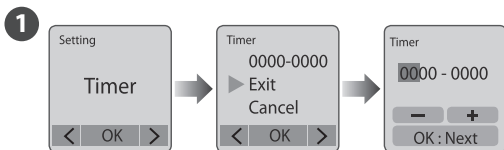
1 Select **Scene**.

2 There are two options you can select: **Daylight, Night**.

Option		Description
	Daylight	For any <b>Daytime</b> photography.
	Night	Special setting for <b>Nighttime</b> photography shooting. Low ISO setting, long exposure time.

## Timer

The Timer will allow you to pre-set a recording period. ( eg. 8 am – 5 pm )



- 1 Set the start recording time (A area), then set the stop recording time (B area). The time is set in **15** minutes increments. Press **MENU** to lower the number, press **TIME** to increase the number and press **OK** to next column. Or you may select **Cancel** to disable Timer setting.

e.g.

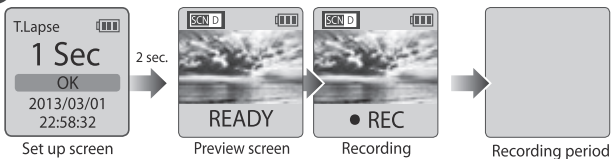
**0600 - 1600** morning to afternoon

**1600 - 2330** afternoon to night

**2345 - 0500** overnight

0000 - 0000  
**A** **B**

2



- 2 After setting up the time, go back to the set up screen then press the **OK** button to move to the preview screen. Hold the **OK** button for 2 seconds to start recording. The LCD panel will show REC then turn off to save power. The camera will automatically activate at the start recording time you selected.



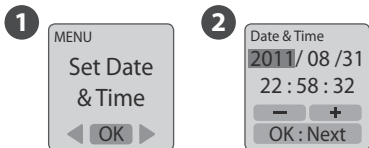
**ONCE YOU ACTIVATE TIMER, YOUR TIME LAPSE CAMERA WILL ONLY WORK AT THE TIMER SETTING PERIOD.**



## Set Date and Time

---

Set the correct date and time for your camera.



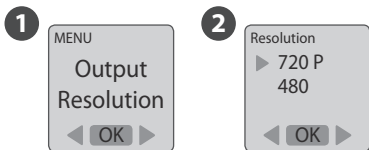
**1** Select **Set Date & Time**.

**2** At the highlight field, press **MENU** (—) to decrease the value, press **TIME** (+) to increase the value, press OK to confirm and go to the next field. When finished, press OK to exit set up.

## Output Resolution

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You can change video resolution with this setting.



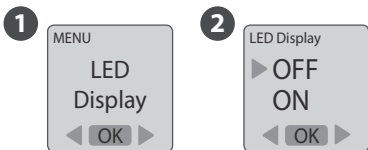
**1** Select **Output Resolution**.

**2** There are two options you can select: **720P, 480**.

## LED Display

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You can choose if the LED indicator will flash while capturing each frame, or not flash at all.



**1** Select **LED Display**.

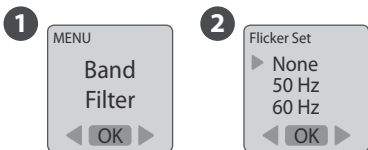
**2** OFF: During capture period the LED indicator will not flash .

ON: When the camera is capturing a frame, the LED indicator will flash once.

## Band Filter

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Select the correct fluorescent lighting frequency to match your indoor lighting frequency.



**1** Select **Band Filter**.

**2** **None**: For outdoor environment.

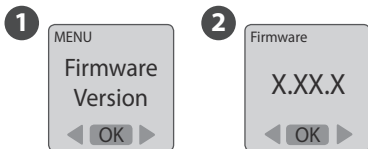
**50 Hz**: Europe

**60 Hz**: USA

## ***Firmware Version***

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Display the current firmware version of camera.

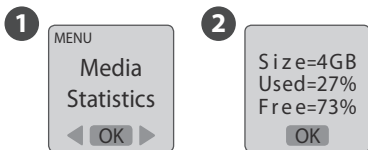


- 1** Select **Firmware Version**.
- 2** Display the firmware version for 30 seconds, or press the OK button to exit.

## ***Media Statistics***

---

In this mode, the LCD will display the SD card capacity, so you will know how much free space remains on the SD card.

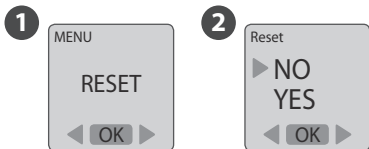


- 1** Select **Media Statistics**.
- 2** Display the SD card storage status.

## Reset

---

You can reset your camera back to the default setting.



- 1 Select **Reset**.
- 2 Select **YES** and press the OK button to reset your camera.

### Default Settings:

Function	Setting
AVI Frame Rate	<b>10 FPS</b>
Image Quality	<b>Better</b>
Time Stamp	<b>On</b>
Low Light Recording	<b>On</b>
Scene	<b>Daylight</b>
Output Resolution	<b>1280x720</b>
LED Display	<b>On</b>
Band Filter	<b>None</b>
Time Interval	<b>2 Seconds</b>

## What Size SD Card Should I Use

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SD card size	Stored photos
4 GB SD Card	30,000
8 GB SD Card	60,000
16 GB SD Card	120,000
32 GB SD Card	240,000

 Based on a selected image quality setting of “Good”

## What Settings Should I Use

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Subject	Description	Time Interval	Time Lapse Frame Rate
<b>Daily Life</b>	Recording kids, pets all parts of daily life	1~ 30 seconds	10~30
<b>Party</b>	Recording family parties, public events, and happy times all around	1~10 seconds	10~30
<b>Traveling</b>	Recording your trips, short and long	2 sec~ 1 min	10~30
<b>Plant</b>	Recording Flowers growing, or gardening over a period of time	1~30 min	15~30
<b>Construction</b>	Recording a building being built or any construction project	30 min~ 1 hr	15~30
<b>Biking</b>	Recording a bike ride or trip	1 sec	10~30
<b>Face time lapse</b>	You're the leading character in your time lapse videos	Shutter line	5

## ***Length of Battery Usage***

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<b>Time Interval</b>	<b>Capture Frames</b>	<b>Battery Life</b>
<b>ASAP</b>	270000	2.2 Days
<b>1 Second</b>	245000	2.8 Days
<b>5 Seconds</b>	228000	13 Days
<b>10 Seconds</b>	197800	23 Days
<b>20 Seconds</b>	137400	32 Days
<b>30 Seconds</b>	105200	36 Days
<b>1 Minute</b>	61800	43 Days
<b>5 Minutes</b>	14300	50 Days
<b>10 Minutes</b>	9180	64 Days
<b>30 Minutes</b>	3700	78 Days
<b>1 Hour</b>	1800	
<b>4 Hours</b>	460	
<b>24 Hours</b>	78	

# Specifications

## Camera

<b>Model</b>	TLC200
<b>LCD Screen</b>	1.44" TFT LCD
<b>Lens Rotating Angle</b>	120°
<b>Waterproof</b>	Optional, (In use with Weather Resistant Housing (ATH 110))

## Capture Mode

<b>Time Lapse</b>	Auto generate Time Lapse video
<b>Stop Motion</b>	Optional, (In use with Shutter Line (ATS 110))
<b>Motion Activated</b>	Optional, (In use with Motion Sensor (ATM 100))

## Optics Lens

<b>Field of View</b>	59°
<b>Focal Length</b>	36 mm (35 mm equivalent)
<b>Focus Distance</b>	75 cm (Minimum)

## Recording

<b>Time Lapse Video</b>	Format: AVI Resolution: 1280 x 720, 640 x 480
<b>Still Image</b>	Format: JPEG (only for using Shutter Line) Resolution: 1280 x 720, 640 x 480
<b>Memory Storage</b>	SD Card (Supported up to 32 GB)

## Time Interval

<b>ASAP</b>	1~4 photos per second
<b>Custom</b>	From 1 second to 24 hours

## Power

<b>Power source</b>	Battery: 4 AA Batteries DC IN: 5V (Micro USB connector)
<b>Battery Life</b>	2.2 Days, at ASAP time interval, captures 270,000 frames 78 Days, at 24 hours time interval, captures 78 frames

## Dimension

<b>Size (DxWxH)</b>	64 x 46 x 106 mm
<b>Weight</b>	120 g (without batteries)

# Package Contents

<b>TimeLapse Camera (TLC200)</b> .....	1	<b>4GB SD card*</b> .....	1
<b>AA Battery</b> .....	4	<b>User Manual</b> .....	1

\*SD Card may or may not be included, please check the contents list on the package.

**brinno**  
*www.brinno.com*

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