

# A-Minima<sup>®</sup>

## **u s e r ' s   g u i d e**

Basic Instructions

## Table of Contents

• <b>Technical Specifications</b>	3
• <b>Loading</b>	4
Magazine loading	5-16
Install magazine on camera body	17-19
• <b>Control Panel</b>	20
• <b>Camera Wake-up and Switch Off</b>	22
• <b>A-Minima default display</b>	22
• <b>Speed Setting</b>	24
To modify and select a factory preset speed	24
To modify a factory preset speed and choose a specific speed	25
To modify a specific speed added to the preset speed list	26
• <b>Magazine footage setting</b>	26
• <b>ASA setting</b>	27
• <b>TimeCode setting</b>	28
Initializing the camera from its internal clock	28
Programming the internal clock with a new time	29
Initializing the camera with an external device	30
- Using Origin C+	30
- Using external Smppte device	30
• <b>Send ASCII</b>	31
• <b>Video Sync</b>	32
• <b>Intervalometer mode</b>	33
Exit the intervalometer menu	34
• <b>Display Backlight</b>	35
• <b>A-Minima Options</b>	35
Feet & Meter selection	35
Technic / Shutter Mode	36
• <b>Lens Port</b>	37
• <b>Diopter setting</b>	37
• <b>Power</b>	38
• <b>Camera diagrams</b>	39-40-41
• <b>Camera External Measurements</b>	42

**Technical Specifications :**

*Technical specifications and User's guide are subject to change without notice*

- Super16 only, 172,8° \* spinning mirror reflex shutter,
- Around 2 kg (4 Lbs) with on-board battery and film.
- l 245mm, h 140mm, w 110 mm (9.7" x 5.5" x 4.4")
- Time recording by XTRprod compatible AatonCode-II matrixes, accurate to a 1/4 of a frame. The camera can be used as a master-clock too.
- Fiber-optic viewing screen, 1:1.78 (16/9) ratio viewing screen shows markings for wide-screen HDTV and 4:3 aspect ratios, G = x 5.5.
- Frame Rate - 1 to 32 fps with internal Lithium and 50 fps with external 12V battery TBD and stop-frame with built-in intervalometer.
- Nikon or PL mount
- Incident lightmeter -dome- showing T-stop and diff. T-stop, HMI frequency and monitor scan rates on the camera LCD display.
- DistantEye viewfinder "Aaton patent"; the only reflex camera which doesn't fog the film if the eye is not held against the eyecup.
- Built-in Intervalometer
- Back light display
- 200' quick change magazines, 'B' wound rolls in Aaton's ~flexible~ daylight spools (standard metallic 200 spools and 400' reels, NO)

"Temporary casting" is engraved on the initial cameras. This housing will be exchanged when the Video Assist becomes available.

\* Initial cameras (from # 006 to 025) have a 180° shutter. This shutter will be retrofitted in 172,8° when external housing is exchanged.

# 1

# l o a d i n g

The A-Minima spools are supplied by Kodak only : as of July 2000, six emulsions (S16, one side perf), in A-Minima loads, are available : **7245** (EXR 50D), **7246** (Vision 250D), **7248** (EXR 100T) **7274** (Vision 200T) **7277** (Vision 320T) and **7279** (Vision 500T). More codes will be available later.

The A-Minima spools are "daylight friendly". If you load your magazine in daylight configuration, you will exposed both film ends as below :

Loading : 1,70 m -> 5,6 feet (average)

Unloading : 0,60 m ->2 feet (average)

If you need to use the complete spool (200 feet, 61 m) load your magazine in a changing bag or in a dark room.

**Warnings :**

The spools are made to be used 3 or 4 times as take up spool. **DO NOT USE NON-KODAK READY-TO-SHOOT SPOOLS. If you roll up yourself, you do it under your own responsibility.**

Do not forget to notify your processing lab that the A-Minima is running emulsion-out rolls.

## A-Minima - Loading Guide



Shutter post

magazine guiding posts

Door lock



Magazine take-up side with the magazine shutter.  
(in its open position)  
Note the silver spool lock lever.(in the locked position)



Feed side

Take-up side

## A-Minima - Loading Guide

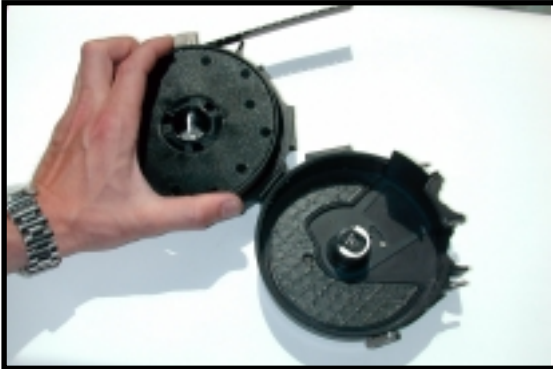


Kodak aminima spool are made of two flexible flanges and one core  
Both flanges clips onto the core  
Both flanges can be installed on either side of the core.



Loaded spool delivered by Kodak  
Note that the film is emulsion out.

## A-Minima - Loading Guide



1-Pull the semi-circular lever up in order to release the core lock mechanism

2-pull few inches of film from the Kodak spool (keep the sticker, you will need it to attach the film to the take up spool)

2 - Install the film spool on the feed spindle with its wind clockwise



3 - Press evenly on each side of the spool as shown on the picture.

while doing so, push the semi-circular lock down to lock the spool in place



## A-Minima - Loading Guide



Install one flange on the core  
Using the Kodak sticker, attach the film to  
the core

(On spools previous version, the core was  
equipped with a slot. This slot has been  
removed from the new batch of core  
delivered by Kodak)

Wind on a few turn, clockwise and emulsion  
out.

## A-Minima - Loading Guide



Install the remaining flange on the take-up core



Turn the flange clockwise to lock it on the core

## A-Minima - Loading Guide



Place the take up spool in front of the take up side of the magazine



Place it on the top of the feed spool with its wind clockwise, emulsion out..

## A-Minima - Loading Guide



1

To give the needed twist to the film loop, flip the take-up spool 180° as shown on the pictures  
The flange previously touching the feed spool should now be facing you.



2



3

## A-Minima - Loading Guide



- 1 - Pull the semi-circular lever up in order to release the core lock mechanism
- 2 - Install the film spool on the take-up spindle
- 3 - Press evenly on each side of the spool while doing so, push the semi-circular lock down to lock the spool in place



Close the magazine

## A-Minima - Loading Guide



Close the magazine lock lever by pushing it downward and rotating it counterclockwise.



Close the magazine shutter by pushing the shutter post toward the magazine throat.

## A-Minima - Loading Guide



Adjust the loop length by pulling it to the magazine hinges. The length should approximately be 45 visible frames long.

You are now ready to install the magazine on the camera body

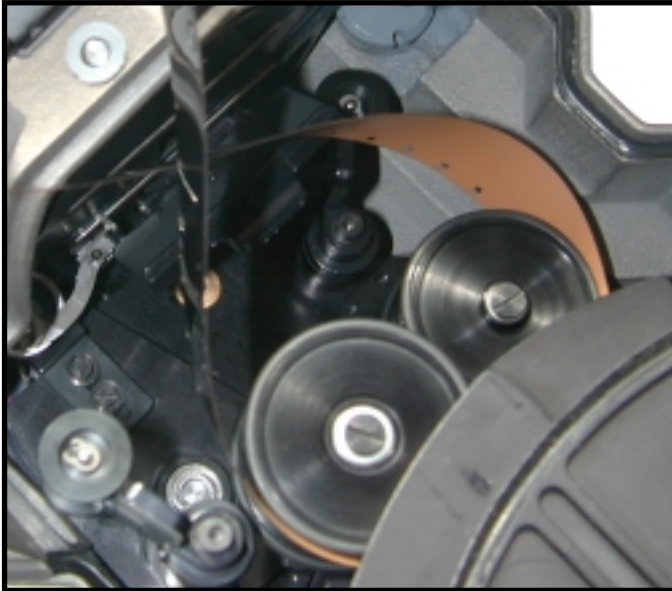
**A-Minima** - Control Panel

PICTURE OF THE CAMERA MAG PLATE





## A-Minima - Loading Guide



1-Thread the film around the lower sprocket and close the lower pinch roller making sure the film's perforations engage the sprocket teeth.

2-Thread the film around the upper sprocket and close the upper pinch roller



## A-Minima - Loading Guide



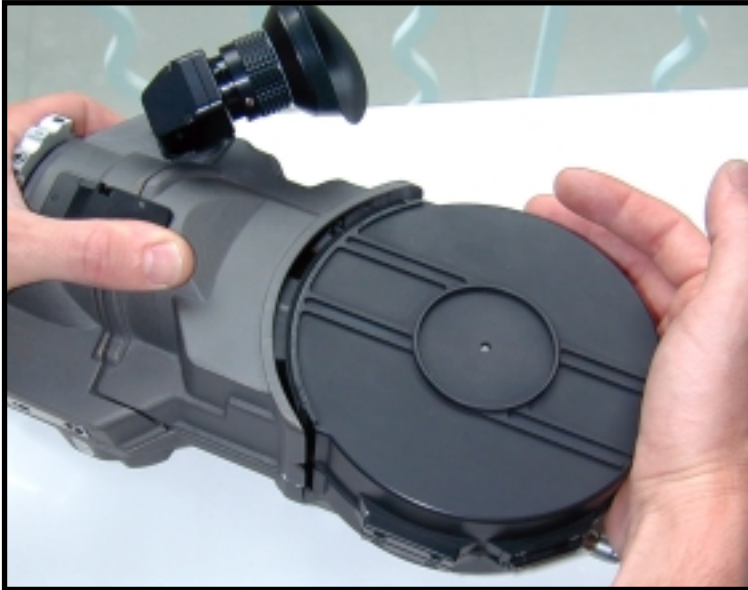
Place the loop on the gate. Be sure that the film is well-maintained under the circular pressure plate / guide barson either side of the film channel.

Close the pressure plate after positioning the loop over the top and bottom white marks (loop = +/- 10 cm)

If the film is installed in the right position, you have to hear a "clic" sound when you are closing the pressure plate.

Close the door





Close the door and push the magazine toward the front of the camera. This will automatically engage claw in perf (if the camera is powered).

Press the display upper arrow to check if the film is well-installed by pressing the display upper arrow. The film will move forward from one frame

The camera is ready to shoot.

**Warnings :**

The spools are made to be used 3 or 4 times as take up spool. **DO NOT USE NON-KODAK READY-TO-SHOOT SPOOLS. If you roll up yourself, you do it under your own responsibility.**

Do not forget to notify your processing lab that the A-Minima is running emulsion-out rolls.








# 2

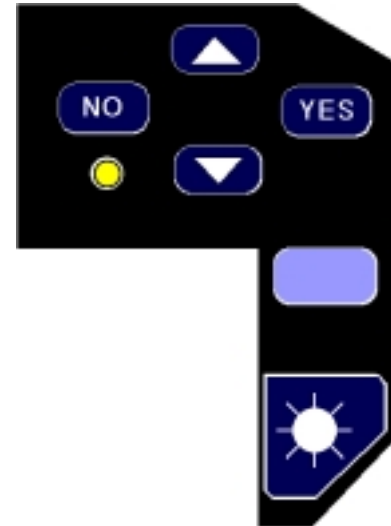
## **control panel**

### Aminima control panel

The aminima control panel consist of an illuminated LCD display, six buttons to access and adjust all operator functions. and a camera status LED.

Each buttons can have a different function, depending on the mode you are in.

-  - Inches the camera by frame when you are in the camera default mode.  
- Allows you to select or change the camera parameters within a menu.
-  - Allows you to view, access and change the camera parameters.
-  - Allows you to enter a selected menu, to change or validate a parameter within a particular menu.
-  - Allows you to cancel a parameter or move a step backward while setting a parameter.
-  - Wakes up the camera  
- Shows battery voltage.  
- Powers down the camera electronics.  
- allows you to return to the camera default mode at any time  
- exit the "TV SYNC" and INTERVALLOMETER" mode.
-  Press on it to view the theoretical lens aperture
-  -This LED conveys camera status information  
Yellow flashing: timecode has been initialized  
Slow red flashing: low battery  
Fast red blinking: camera not running at the selected speed



## A-Minima - Control Panel

### Wake-up and Switch Off the camera

To wake up the camera press the bLUE button



To Switch off the camera press the bLUE button during 5 sec. The display shows "Power Off ??". Press YES, the camera switches off.



> 5s



Note : if left alone, the camera display will automatically shut off after 5 minutes.  
Needless to say that every settings are being kept in the camera internal memory

### Aminima default display

When first powered or after pressing the blue button, the display shows the camera selected speed / timecode status and remaining footage

- If the Aatoncode **has not been initialized**, the display flashes between

24.000  
200 ft

and

NO TIME  
200 ft

Press on the "YES" button to remove the NO TIME message.

- If the aatoncode has been initialized in the camera, either from the aminima internal clock or from an external source, the display flashes between

24.000  
200 ft

and

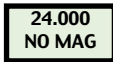
10:00:00  
200 ft

Camera running, the display shows the selected speed and the remaining footage.



24.000  
200 ft

**Note:** If no magazine is installed, the camera will display "NO MAG" in place of the footage



24.000  
NO MAG

**Parameters settings:**

In order to view or to change a camera parameter, use the lower arrows to scroll through the different menus.

## A-Minima - Control Panel

Each menu can be accessed in the following order.

### Speed setting

A-Minima has a selection of preset speed that you can choose from. You can also make your selection of any 0,001 incremented crystal speed between 1.000 and 50.000 fps. When setting the camera to a specific speed, not being part of the preset ones, A-Minima allows you to add or not this particular speed to the factory selected speed list. The added speed can be later removed from the preset speed selection. A factory selected speed cannot be deleted.

The displayed messages can be different if you want to modify a factory preset speed, or if you want to modify a specific speed, added to the preset speed menu.

### To modify and select a factory preset speed:

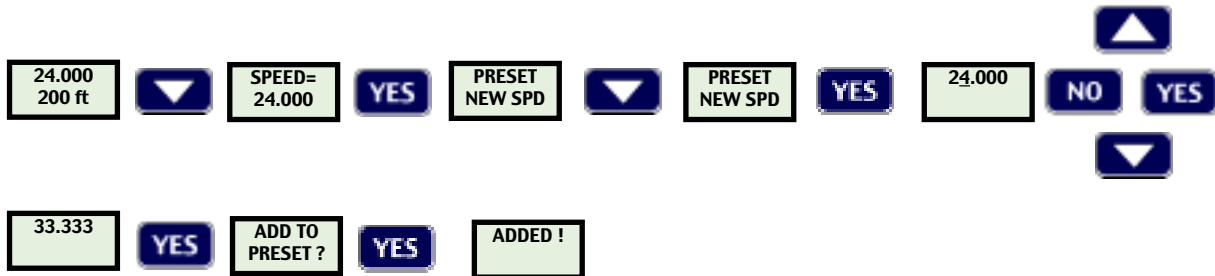
From the camera default display, press YES once to access the speed menu, press YES, PRESET blinks, press YES, then use UP and DOWN to go through the speed selection, press YES to validate your choice.





**To modify a factory preset speed, and choose a specific speed:**

From the camera default display, press DOWN once to access the speed menu, press YES, PRESET blinks, press DOWN, NEW SPEED blinks, press YES then use YES and NO to select the digit you want to modify, UP and DOWN to modify it. After entering the last digit, you can add it to your preset speed list, press YES to do so or NO if not.



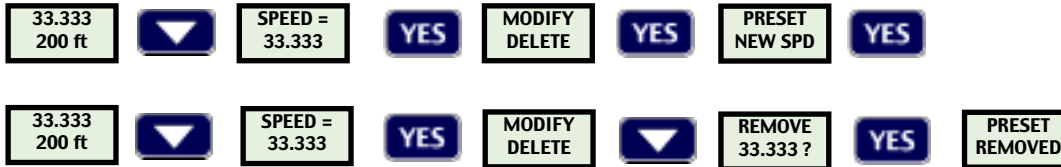
**Note:** when a specific speed is not added to the preset list, a star shows next to the displayed speed. Simply a warning. Not added or part of the preset menu, this speed will be erased of the camera internal memory as soon as you select another speed. (Nevertheless, when powered down, A-Minima keeps it into its internal memory)



## A-Minima - Control Panel

### to modify a specific speed, added to the preset speed list.

A-Minima allows you to modify or delete this speed. If you want to modify it, access the speed menu, then choose "MODIFY" and select a new speed from the PRESET or NEW SPEED menu. If you want to deleted it from your preset list, choose DELETE, then press YES.



### Magazine footage setting

Second on the list, press the lower arrow twice, press YES to access the magazine footage setting. With a fully loaded magazine installed on the camera press YES again (NEW MAG) to reset the control panel to count down a full 200ft load.

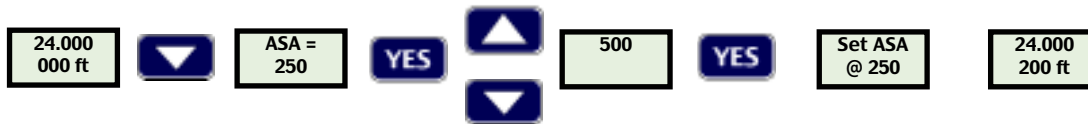
If a short end is being used, press the lower arrow (SET MAG) then YES. Use the UP and DOWN arrows to set the counter to the desired footage, press YES to valid.



**Note:** a magazine needs to be installed, locked in its running position, for you to have access to the magazine footage setting.

### ASA setting

Third on the list, the ASA must be adjusted to the exposure index of the film stock being used. The ISO/ASA selector of the camera provides settings between 25 and 1000 ASA. From the camera default display, press the lower arrow three times to access the ASA setting menu, press YES, then use the UP or DOWN arrow to select the desired ASA. Press YES to validate.



**Note:** for Aatoncode, proper ASA setting will insure that the timecode matrixes recorded in between the film perforations will be exposed at an appropriate and useable level. When using the external camera incident lightmeter, it simply insures that the T stop indication shown on the display is the correct one for a particular film stock. When using the lightmeter, please check the speed setting. The T stop indication takes the camera speed into account.

## A-Minima - Control Panel

### Timecode setting

As a standard feature, the A-Minima is equipped with the capability of recording Aatoncode in camera time. Timecode information is exposed onto the film by means of seven micro diodes located into the gate of the camera, near the camera pulldown claw. These diodes flash rapidly to form the code, as the film pass through the gate between exposures.

Timecode can be quickly initialized from the camera internal clock or can be inputted from an external device.

#### Initializing the camera from its internal clock

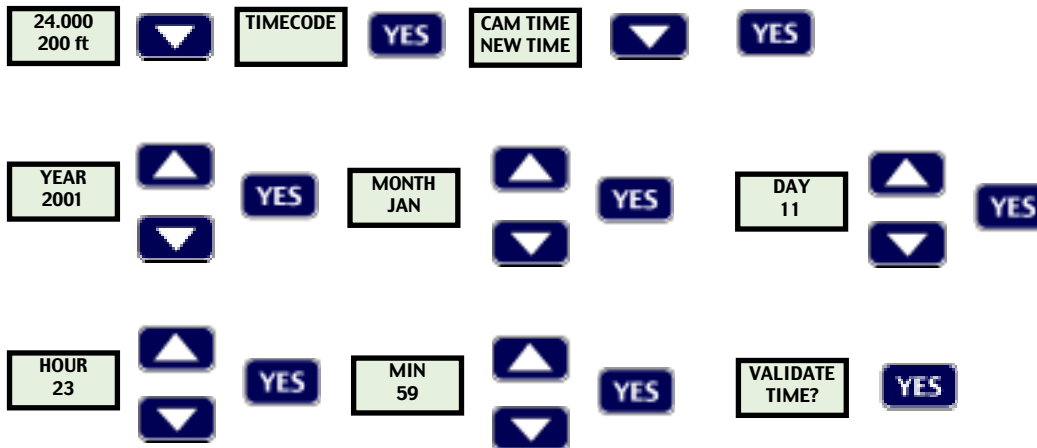
Pressing the DOWN arrow four times will take you to the timecode menu of the A-Minima. Press YES to enter, select CAM TIME with the up or down arrow, press YES again. The display will show you the camera internal time and date for few seconds, the yellow LED will start flashing. The camera is now initialized and will keep accurate time (within half a frame) for eight hours.



**Note:** The Yellow blinking LED is the garanty that timecode has been initialized and that the camera is running an accurate time. The camera internal clock is not accurate and timecode will not be recorded onto the film if it has not been first initialized. The camera internal clock does not need the camera to be powered to keep the time. The timecode generator does. Get into the habit of having a fresh battery near by when replacing an exhausted one. An internal camera capacitor allows a full minute for battery replacement before timecode is lost.

**Programming the internal clock with a new time.**

You can change the camera internal time within the timecode menu. Access the timecode menu, then press YES. Select NEW TIME with the down arrow then press YES. First select the year with the up or down arrow, press YES to validate, aminima will take you to each timecode field. After each fields are set as desired (the NO button allows you to move backward one field at a time) and that you have reached the seconds, press YES, then press YES again to validate the time. Aminima displays this new time for few seconds, the yellow LED will start flashing. The camera is now initialized and will keep accurate time (within half a frame) for eight hours.



## A-Minima - Control Panel

### Initializing the camera with an external device

The preferred method is by means of the OriginC+ which inputs timecode in ASCII form. It is also possible for the camera to receive information in SMPTE form, directly from a SMPTE device such as a TC audio recorder.

**Using the OriginC+:** (please refer to the OC+ manual in order to program it)

Make sure the camera is powered. Connect the OriginC+ to the lemo5 receptacle located at the rear of the camera, above the lemo6 receptacle.

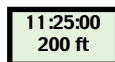
Press \* on the OriginC+ to send the timecode information. The camera display will show the timecode and the small yellow LED located to the right of the display will start to blink.



### Using an external SMPTE device

Make sure the camera is powered. Connect the cable from the SMPTE output of the timecode device to the lemo5 receptacle of the camera.

The display will show "LTC IN PROGRESS" then show the time, the small yellow LED located to the right of the display will start to blink.



### SEND ASCII ?

A-Minima can be use to initialize another ASCII device.

From the camera default display, access this option by pressing the DOWN arrow five time (if the timecode has not been initialized, this option will not show on the camera display) Connect the camera to the timecode device, using the proper cable. Most likely, this would be a Lemo5 to Lemo5 cable. Please contact your Aaton representative or rental house for further information concerning cables wiring.

The following procedure has to be followed when initializing a Nagra equipped with a Q5IA circuit, or an audio recorder or other timecode device wich is driven by an Aaton GMT.

With the Lemo5 to Lemo5 cable, connect the Aminima to the GMT, another camera or recorder. Go to the "SEND ASCII" display and press YES to send the timecode information. The camera will display GOOD 00.0 after the timecode has been successfully accepted by the device. If the GMT or audio device is not powered, or if the cable is faulty the camera will display NO ANSWER and RELOAD ?



A-Minima can be used to monitor timecode after it has been initialized in another device. Using the lemo5 to lemo5 cable, connect the camera to the other device. Access the "SEND ASCII" menu then press YES. The camera will display GOOD, FAIR , BAD or dif time followed by the amount of drift in tenth of a frame.

The A-Minima is comparing the timecode running in this machine to the one running on its own display.

## A-Minima - Control Panel

### Video Sync

When used in conjunction with the small **Aaton Power Base**, this option allows you to automatically synchronize the camera to a source signal such as a computer/video monitor. In that mode, **the UP or DOWN arrows can phase the camera**, programming the relationship between the camera shutter and the source signal. After this one time adjustment, the phase relationship remains identical every time the camera is turned on. The video connector installed on the Aaton power base accepts a video composite, sinus wave or square wave 2 ppf signal. The video sync menu simply allows you to film a monitor or computer screen with the roll bar adjusted just out of view.

Listed after the camera timecode options, press YES to set the camera in video sync mode. Without a magazine installed, **run** the camera. Look through the camera viewfinder at the monitor screen and press the UP or DOWN arrows until the bar is out of view. Stop the camera and then install a magazine. The relationship between the camera shutter and monitor remains identical.

**Note:** If the source signal is faulty, the camera will run at 1fps, the camera display showing a "NO TV SYNC" message.





**Intervalometer mode**

A-Minima makes time lapse photography easy, it offers different intervals from 1 to 80 seconds (in one second increment) as well as the possibility of taking 1 to 99 frames in between intervals (frame bursts).

In the intervalometer mode, the A-Minima operates at a constant rate of 2 frames per second. The shutter opening being a fixed 172,8 degrees, it makes for an approximately 1/4 of a second exposure time for each frames.

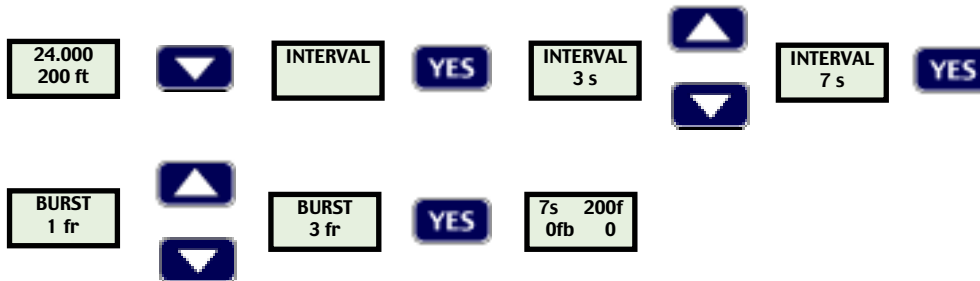
From the camera default display, press the DOWN arrow then press YES to access the intervalometer function. First set the desired interval length with the UP or DOWN arrows then press YES to validate.

Set the number of frame burst with the UP or DOWN arrows, press YES to validate and enter the intervalometer control screen.

The upper line of the display shows the interval set and the total footage available in your magazine.

The lower line displays the number of frame already taken (at right) and the current frame burst. You can reset the frame count to zero by pressing the DOWN arrow.

You are now ready to start the camera and go for a well deserved beer at your local bar.



## A-Minima - Control Panel

**Note:** With a 172,8° shutter, each exposure is 0,24s instead of 0,25s if you had a 180 degrees shutter.

In 16mm, a full 200 feet roll contains 8000 frames. When viewed at 24 frames per second, a roll last approx 5 minutes and 30 seconds.

The following formula gives you the actual time T1 i(n seconds) the event will be filmed in according to the interval, frame burst chosen and the total number of frame to be taken.

$$T1 = \left( \text{interval} + \frac{\text{frame burst}}{2} \right) \times \frac{\text{total Nb of frame}}{\text{frame burst}}$$

### Exit the Intervalometer menu

To exit the intervalometer menu, press the BLUE key during 3 seconds, the display shows “exit ?”, press YES, the display shows the default information.



**Display Backlight**

In order to preserve battery power, the A-Minima backlight display can be switched on or off.

From the camera default display pressing DOWN arrow seven times will take you to the display light menu of the A-Minima. Press YES to enter, select ON or OFF with the UP or DOWN arrow, press YES again.



**A-Minima options**

**Feet & Meter**

A-Minima footage can be displayed in both meter or foot. From the camera default display pressing DOWN arrow height times will take you to the Options menu of the A-Minima. Press YES to enter, select "COUNTER", press YES again, select Feet or Meter with the UP or DOWN arrow, press YES again to validate.

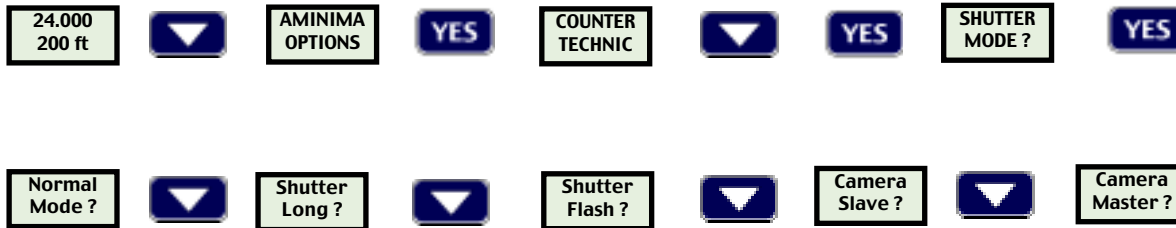


## A-Minima - Control Panel

### Technic / Shutter Mode

A-Minima can run a capping shutter when using Intervalometer mode.

From the camera default display pressing DOWN arrow height times will take you to the "Options" menu of the A-Minima. Press YES to enter, press DOWN arrow to select "Technic". Press YES. The display shows you "Shutter Mode?". Press YES. Then A-Minima offers you five different modes (you can scroll from one mode to the other by using UP or DOWN arrows): "Normal Mode?" - "Shutter Long?" - "Shutter Flash?" - "Camera Slave" or "Camera Master?". Press YES to choose one of those.



## A-Minima - Control Panel

### Lens port

The A-Minima camera can fit Arri PL and Nikon mounts. As the A-Minima is a Super 16 camera only, it is very easy to install and remove lens port (no optical axis adjustment).

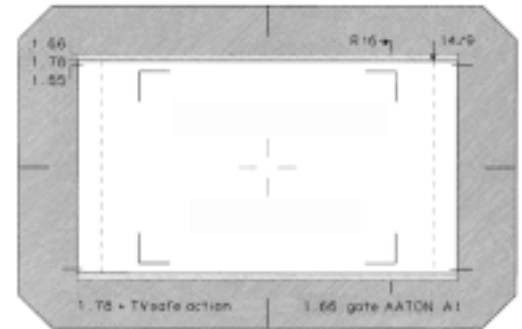
#### Installing the lens (PL mount)

To install the lens on the camera body, turn outer locking ring counter-clockwise until it reaches its stop. Align the four protruding flanges on the lens with the four corresponding cutaways in the locking ring and insert the lens into the camera port so that its flanges rest evenly against the lens seat. Tighten the locking ring by turning clockwise until the lens is secured in place and the lock ring is firmly set.

### Dioptric setting

The dioptric setting is adjusted by turning the diopter ring on the viewfinder. It is recommended that, for easiest setting, this adjustment be performed with the port cover off and no lens on the camera. Look through the viewfinder, rotate the diopter setting ring until the edge of the cross-hair is at its sharpest point and retighten the knob.

A-Minima viewing screen



## A-Minima - Control Panel



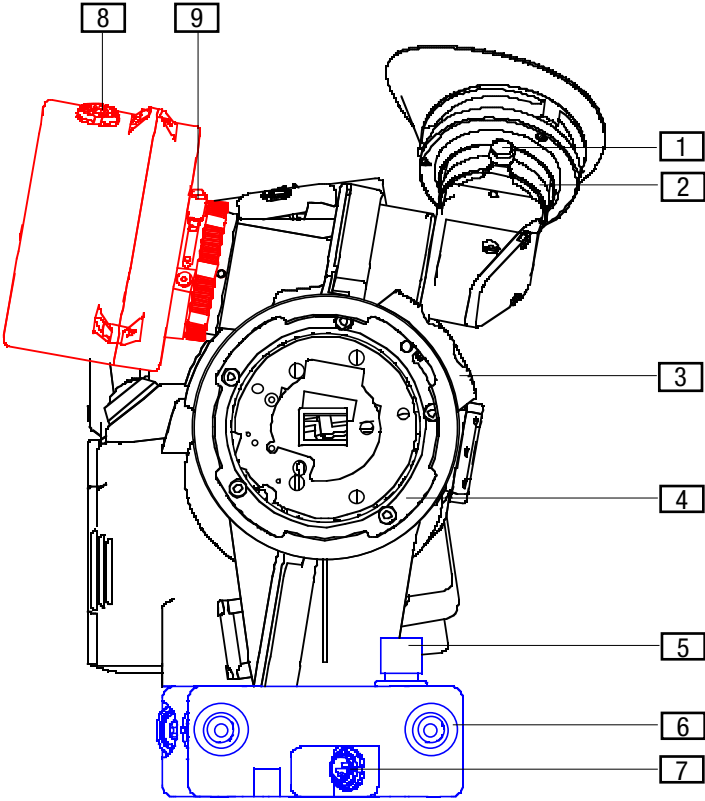
### Power

The current consumption of the A-Minima with 12 volts power supply ( 4 x 3 Volts batteries) is from 0,45 to 0,7 Amps (at + 20°C and - 10°C respectively). The voltage tolerance is from 10 to 14 V. In case of power overload or polarity reversal, there is a fuse protection on the battery holder. The four small 3 V batts drives the camera for one hour @ 24 fps (approximately 8-10 mags).

If the camera is not going to be used for a long period of time or if the camera is powered from the base plate (and the base plate clip-on battery), it is recommended to remove the four small 3 V batts.

If you are using an external power supply (12 V batt) plugged on the Lemo 6 plug, remove the 4 x 3 Volts batteries and move the switch from **Batt.** to **Alim.Ext**

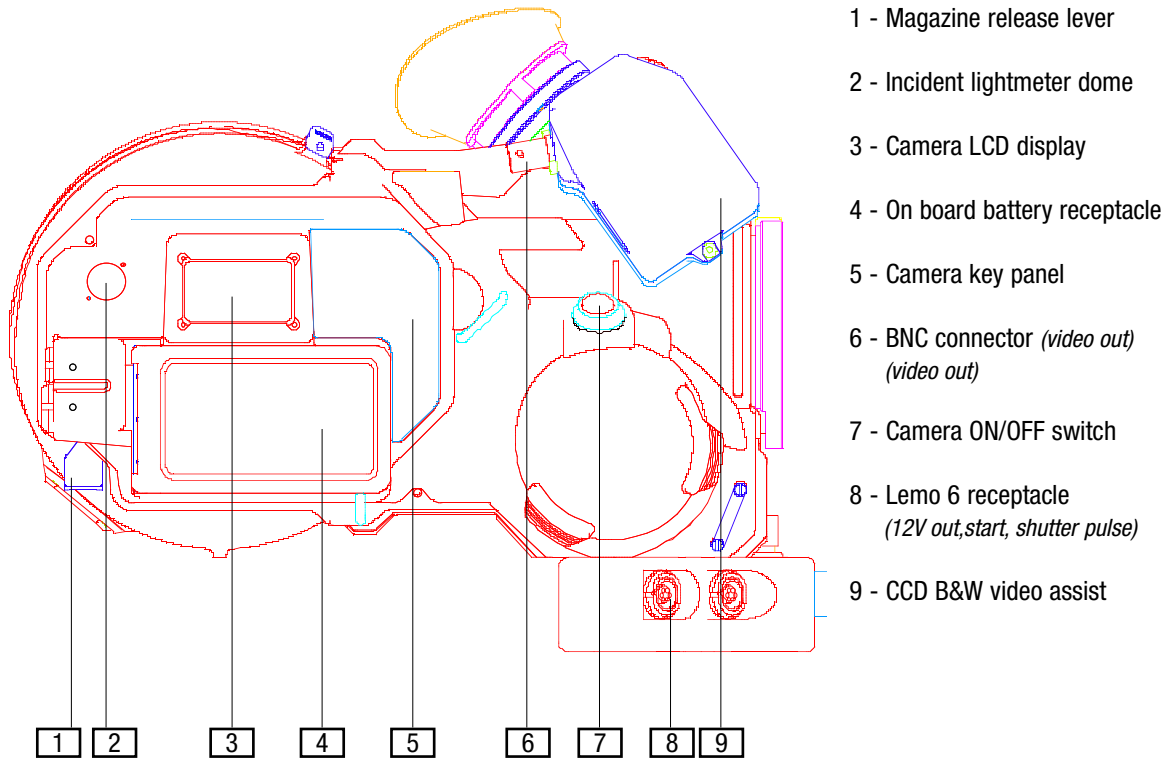
**A-Minima - Control Panel**



- 1 - Diopter locking knob
- 2 - Diopter ring
- 3 - Lens port locking ring
- 4 - PL lens port
- 5 - Power base fuse (5 Amps)
- 6 - Front rods threaded insert
- 7 - Lemo 2 receptacle  
*(camera remote ON/OFF)*
- 8 - Fisher 4 receptacle  
*(connection for LCD mini monitor)*
- 9 - Video iris control

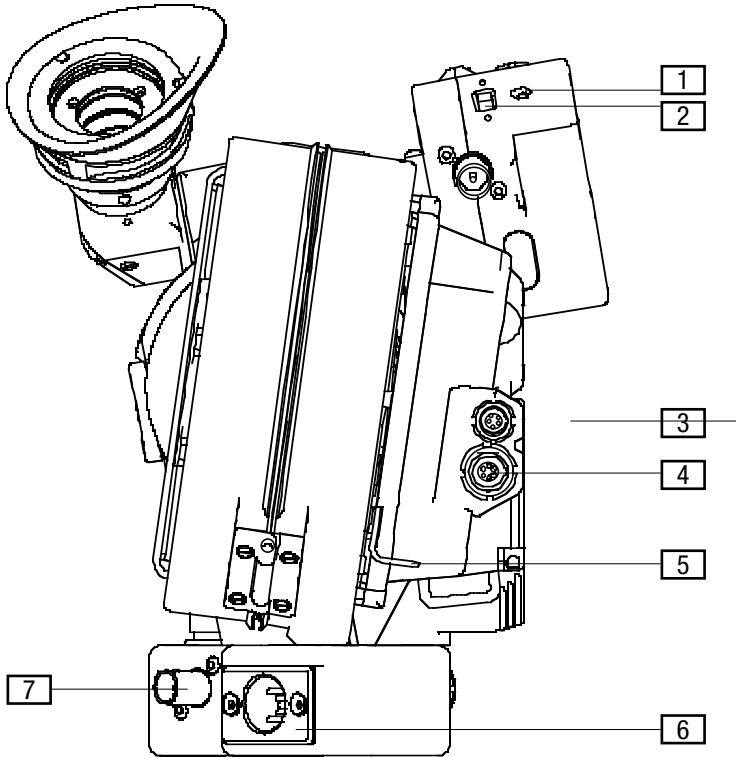
**FRONT**

## A-Minima - Control Panel





**A-Minima - Control Panel**



- 1 - Video LED  
*(indicator for video on)*
- 2 - Video ON/OFF switch
- 3 - Lemo 5 receptacle  
*(ASCII in/out, LTC in)*
- 4 - Lemo 6 receptacle  
*(12 Volts out, start, shutter pulse)*
- 5 - magazine release lever
- 6 - XLR 4 receptacle  
*(12 Volts in)*
- 7 - BNC connector  
*(external sync in)*

## A-Minima external measurements

