3. Depending on ambient light you may want to set the status light to **bright** or **dim**. Setting to **dim** doubles the battery life.
2. Not used.
1. Changes the RECORD button (and auxiliary input) from standard **toggle** operation to button pressed (**logical** LOW) for RECORD. This mode will allow a computer to control the LANC. Note: When enabled you cannot connect other remotes to the LANC or enter BRIDGING mode.

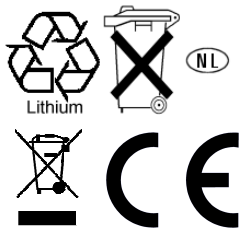
Specification

Power Supply	2 x CR2032 (not supplied) or external supply, absolute maximum 8volts on LANC input.
Battery Life	With the record lights on a branded battery should last 36hours, this doubles if the lights are set to “dim”. Battery duration will decrease if other units (especially with lights) are also connected.
LANC Protocol	The unit generates standard LANC packets with 30mS period, but will operate with Sony (20mS) and Blackmagic (40mS) systems.
Weight	Main Unit 60g, Silicon Cover 31g, Tripod Clamp 27g, USB Power Cable 32g, LANC Cable 19g.

Note
Whilst every effort has been made to ensure operation of this unit we have found that some other products have limitations, e.g. remote controls designed for use with Blackmagic may not work with Sony cameras.

Regulatory
This product has been thoroughly assessed and tested for safety and EMC emissions.

At the end of the products life, you have the right to return it (freight at your expense) for disposal according to the WEEE Directive.



lancDIRECTOR 460

lancDIRECTOR is a LANC based trigger device, designed for use with Atomos products in the studio and on location. Normal LANC equipment only functions with a LANC camera present, but lancDIRECTOR enables correct operation of the LANC interface even with no camera.

Connections
A: Auxiliary switch and LANC input and power.
B: 3 parallel LANC output jacks
C: Optional external supply (USB mini B socket)
D: Internal battery OFF-ON switch
E: Standby / Record button and
Unit status indicator light
On base of Unit in battery compartment:
F: Batteries, 2x CR2032 button cells (Follow instructions on battery compartment to insert)
G: 4 Configuration switches (described later)

Shipped with the unit is a yellow silicon protector, ¼-20 tripod mount, USB Power lead, and 100cm LANC cable.

Powering the lancDIRECTOR
There are 4 options to power the unit, the unit switches automatically:
A: An external supply or LANC signal can be applied here, see section on Advanced Operation – input port.
B: In some LANC modes power can be used from the existing LANC bus
C: USB type mini B socket. Using the supplied cable connect to a USB socket on a computer (not supplied) or wall-wart (not supplied).
D: OFF-ON switch for the internal batteries. Not all configurations require battery power. Batteries are accessed from the rear of the unit. Two CR2032 cells are required, insert into the two compartments +ve side up.

Basic Operation
Connect to a LANC control via one of the three jacks at B. Provide power as described above. When switched on the status light flashes, the unit then identifies if there is a camera on the LANC and then automatically

adopts either CAMERA or REMOTE mode. Press RECORD button E to change between Record and Standby. The status lights at E will be on in record mode and will flash a ‘heartbeat’ when in standby. The light should always be either on or flashing to tell you the unit is operating.

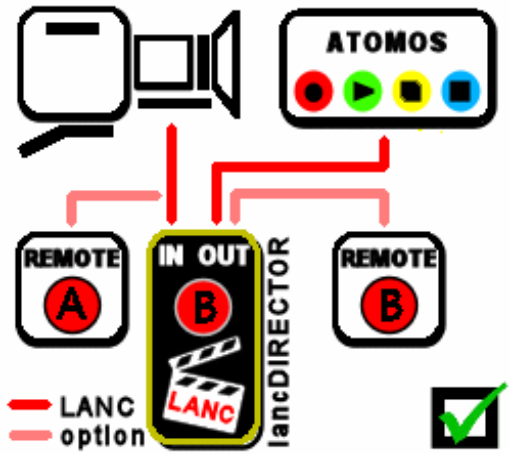
So, if using the unit to trigger Atomos recorders, or as a remote control for a LANC camera this is all that is required.

BRIDGE Operation

In addition to Basic Operation lancDIRECTOR can BRIDGE between 2 separate LANC busses. To enter this mode wire up as for Basic Operation and connect the second LANC bus to INPUT jack A.

In this mode LANC output B behaves as before but any change on LANC bus A is transferred onto bus B. This means changes to LANC bus A change both busses but changes to bus B only change bus B devices.

There are many applications for this mode, detailed on the web page www.gentles.ltd.uk/lancstudio/lancdirectorapps.htm. An example is where you need to select between recording on Atomos recorders only (bus B) or both Atomos and in-camera recording (bus A). BRIDGING allows you to do this without re-cabling during the shoot. Pressing a remote on bus A controls everything, but pressing lancDIRECTOR record, or a remote on bus B only starts the Atomos recorders.



So there are 4 operating modes. The unit will act as a LANC CAMERA taking control of the bus, but if it finds a CAMERA already connected it reverts to REMOTE operation. In both these modes an additional LANC can be connected to A to enable BRIDGING. All modes are automatic so as far as the user is concerned the unit just works.

Status Light

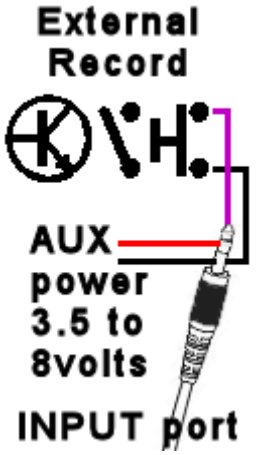
The status light on the RECORD button is used to tell you the unit mode, state, errors, and warnings, these are detailed below.

Mode: Heartbeat in standby (In record the light is always on)		Low battery: alternating lights in both Record and Standby	
Single short	CAMERA Mode. Unit controlling the LANC	none	No LANC device reporting any low battery warning.
Single long	REMOTE Mode. Unit acting as remote control	Slow	lancDIRECTOR, or any other LANC battery low
Double flash	BRIDGING with Unit in CAMERA mode	Fast	lancDIRECTOR battery critically low
Quad flash	BRIDGING with unit in REMOTE mode	Brief flash	every 8 seconds – battery flat – unit wont operate
8 fast flashes	LANC error, disconnect jack or change termination		

Advanced Operation (input port)

The input A has been described as a second LANC input for BRIDGING, but it has these other uses:

EXTERNAL RECORD: An external switch can be added to be used in addition to the internal record switch. This can be a push switch, toggle switch, or an automatic input from other circuitry via an open collector transistor.
AUXILIARY POWER: An additional power supply can also be connected here. (absolute maximum 8 volts.)



Connection is via a standard 2.5mm stereo jack, and both features can be used together with a suitable cable which the user can wire as required.

Advanced Operation (configuration switches)

Inside the battery compartment are 4 small switches that can be adjusted with a pen or small screwdriver:
4: The LANC interface requires a “line termination”. If this is not provided somewhere on the LANC bus lancDIRECTOR will flash an error message – 8 short flashes on the upper light. Switch to **term** to enable the termination.