

# **LControl**

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LANC-/5-Pin-Edit-Interface for Amiga Computers  
Version 2.00

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## 1 What is LControl

LControl is a program to control video cameras via a special control hardware. The cameras must have a LANC- (Sony compatible) or 5-Pin-Edit-interface (Panasonic compatible).

For cameras with a LANC-interface there are hardwares for the (internal) parallel and the (internal) serial port of the Amiga. The solution for the serial port needs much less CPU power. The parallel port hardware offers a two camera option – the software can swap between the two connected cameras.

For cameras with a 5-Pin-Edit-interface (Panasonic/Blaupunkt) there is only a parallelport hardware. A two camera option is not available for the 5-Pin-Edit hardware.

You will get the schematics for the hardware, the construction kit or the complete hardware<sup>1</sup> after the registration. See Appendix B [Registering], page 11.

LControl is a commodity and it has an ARexx port. Therefore LControl can work in the background and your camera can be "programmed" via ARexx.

See also Appendix C [IR-Master-Support], page 12.

## 2 Installation

Requirements for LControl:

- Amiga computer
- Amiga-OS 2.04 or better
- a video camera with one of this interfaces:
  - LANC-interface
  - 5-Pin-Edit-interface

Start the installation process by doubleclicking the 'LControl english' icon. The installation script will run automatically.

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<sup>1</sup> For 5-Pin-Edit-cameras we only offer the schematics

## 3 How To Use

### 3.1 Menus

#### 3.1.1 Project

*About...* Gives some information about the authors and the program. In this window you can find the arexx port name, too.

*Hide* Closes the LControl windows. However, LControl stays active.

*Fix position*

Snapshots the current position. The whole configuration is saved in the tooltypes. See Section 3.4 [Tooltypes], page 7.

*Quit* Quits LControl.

#### 3.1.2 Special

*Reset counter*

Resets the counter of the camera.

*Zoom in* Sends "Zoom In" to the camera

*Zoom out* Sends "Zoom Out" to the camera

*Record* Sends "Record" to the camera.

*Eject* Sends "Eject" to the camera.

*Gotomode* In the submenu you can select one of these commands.

0 Play

1 Stop

2 Pause

3 Record

The selected command is sent when a successful "goto" was made.

*Goto* You may enter a counter. Then the tape is winded to this position an the command selected with gotomode is sent.

### 3.1.3 Special-II

*Note:* All the commands in this menu refer directly to standard camera commands. Please look up their meaning in your camera's user manual.

### 3.1.4 Libraries

Via the menu items LANC, EDIT, SLANC, RAPID and DEBUG you can set the actual camera driver. In general you should not change this.

## 3.2 Gadgets

<i>Swap</i>	Swaps to the other camera <sup>2</sup> .
<i>Play</i>	Sends a "Play"-command to the camera.
<i>Stop</i>	Sends a "Stop"-command to the camera.
<i>Pause</i>	Sends a "Pause"-command to the camera.
<i>FREW</i>	Sends a "fast rewind" command to the camera.
<i>FFOR</i>	Sends a "fast forward" to the camera.
<i>PREW</i>	Sends a "picture rewind" to the camera.
<i>PFOR</i>	Sends a "picture forward" to the camera.
--	Sends a "slow motion rewind" to the camera.
-	Sends a "single pic back" to the camera.
+	Sends a "single pic forward" to the camera.
++	Sends a "slow motion forward" to the camera.

## 3.3 ARexx Port

The name of the ARexx port is 'LCONTROL.x' where x is a positive integer. x counts the instances of LControls already running on your system. If LControl is started first, its arexx port is called 'LCONTROL.1'.

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<sup>2</sup> if the hardware supports this

So far, the following commands are supported:

'LC\_QUIT' Quits LControl.

'LC\_SHOW' Opens the LControl windows.

'LC\_HIDE' Closes the LControl windows.

'LC\_ENABLE'

Opens the LControl windows and opens the ARexx port (if closed).

'LC\_DISABLE'

Closes the LControl windows and the ARexx port.

'LC\_PLAY'

'LC\_STOP'

'LC\_PAUSE'

'LC\_FREW'

'LC\_FFOR'

'LC\_PREW'

'LC\_PFOR'

'LC\_PLUS'

'LC\_MINUS'

'LC\_SLOW'

'LC\_RSLOW'

'LC\_GETCOUNTER'

The current counter will be returned in RESULT.

'LC\_GETSTATUS'

Returns the current status in RESULT:

CAMERA0:<action>

When camera 0 is the active one.

CAMERA1:<action>

When camera 1 is the active one.

*Note:* <action> stands for STOP, PLAY etc. If no camera is connected you will get "CAMERA0:NO CAMERA".

'LC\_RESET'

Resets the counter of the camera.

'LC\_SWAP' Swaps to the other camera<sup>3</sup>.

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<sup>3</sup> Only for LControl/parallel

- ‘LC\_ZOOMIN’  
Zooms in one step.
- ‘LC\_ZOOMOUT’  
Zooms out one step.
- ‘LC\_RECORD’  
Sends Record to the camera.
- ‘LC\_EJECT’  
Sends Eject to the camera.
- ‘LC\_GOTOMODE’  
Expects a number (0,1,2 or 3) as parameter. See Section 3.1.4 [Menus], page 3.
- ‘LC\_GOTO’ Expects a counter as parameter and starts positioning to this counter. Use the tooltypes (FFOROFFSET, OVERRUN, etc.) to optimize the positioning routine. See Section 3.4 [Tooltypes], page 7. For more information about positioning, see Section 3.1.4 [Menus], page 3.
- ‘LC\_WAITFORCOUNTER’  
Parameters are the same as in LC\_GOTO. LC\_WAITFORCOUNTER blocks LControl until the passed counter is reached – without wasting too much CPU resources. To cancel LC\_WAITFORCOUNTER (and LC\_GOTO) send a break to LControl. (If LControl is started from shell you can use the shell command ‘break’ to do this, otherwise you will need a special tool for this.
- ‘LC\_INSAUDIO’
- ‘LC\_INSVIDEO’
- ‘LC\_ASSEMBLE’
- ‘LC\_INSA\_LON’
- ‘LC\_INSA\_LOFF’
- ‘LC\_INSA\_RON’
- ‘LC\_INSA\_ROFF’
- ‘LC\_INSV\_ON’
- ‘LC\_INSV\_OFF’
- ‘LC\_ASSEMBLEON’
- ‘LC\_ASSEMBLEOFF’
- ‘LC\_RAWCOMMAND’  
This command directly sends data to the camera.  
**WARNING:** Use this command only when you really know what you are doing!  
Expects hexadecimal bytes as parameters. Example:  
LC\_Rawcommand ff 10 aa  
This will send 255, 16 and 170 to your camera.

Basic VTR-commands

hex	command
00	CH-1/1
40	CH-2/2
20	CH-3/3
60	CH-4/4
10	CH-5/5
50	CH-6/6
30	CH-7/7
70	CH-8/8
08	CH-9/9
48	CH-10/10
28	CH-11
68	CH-12/CH/ENTER/#
18	CH-13/1-
58	CH-14/2-
38	CH-15
78	CH-16
04	CH-HIGH
44	CH-LOW
14	X3 OR 2X
54	POWER ON/OFF
22	SLOW 2
62	SLOW 3
32	HIGH DOUBLE SPEED
2A	ANT-SW
5A	ANT-VTR
3A	POWER ON
7A	POWER OFF
06	REVERSE
46	FORWARD
09	INDEX WRITE
49	INDEX ERASE
65	INDEX

‘LC\_GETLIBRARY’

Returns in the variable RESULT the currently used camera library. See Section 3.1.4 [Menus], page 3.

‘LC\_CHANGELIBRARY’

Use a positive integer (LANC=0, EDIT=1,...) as parameter to change the current camera library. See also Menus/Libraries, Section 3.1.4 [Menus], page 3.

*Note:* The following commands activate different camera modes. Read your camera manual to get more information.

‘LC\_INSAUDIO’

"insert audio"

‘LC\_INSVVIDEO’

"insert video"

```

'LC_ASSEMBLE'
    "assemble"
'LC_INSA_LON'
    "insert audio left on"
'LC_INSA_LOFF'
    "insert audio left off"
'LC_INSA_RON'
    "insert audio right on"
'LC_INSA_ROFF'
    "insert audio right off"
'LC_INSV_ON'
    "insert video on"
'LC_INSV_OFF'
    "insert video off"
'LC_ASSEMBLEON'
    "assemble on"
'LC_ASSEMBLEOFF'
    "assemble off"

```

### 3.4 Tooltypes

The following tooltypes are recognized:

**CX\_POPKEY=**

Hotkey for LControl e.g.: `lshift f10`  $\mapsto$  left shift-key + F10. By pressing the hotkey all LControl windows are opened.

Default: `lcommand esc`.

**PUBSCREEN=name**

If specified, LControl tries to open its gui on the publicscreen named '**name**'.

**GOTOMODE=**

Expects a decimal number (0,1,2 or 3) as parameter. See Section 3.1.4 [Menus], page 3, gotomode. You can specify the default command which should be sent when positioning with the goto-function.

**LIBRARY=**

Here you can specify the library name which should be used.

**LANC**        For the parallelport hardware for LANC-cameras.

SLANC For the serialport hardware for LANC-cameras.  
EDIT For the parallelport hardware for 5-Pin-Edit-cameras.  
DEBUG Just fakes a camera.

FASTAT=

If the distance between the current counter and the target is more than the specified value in seconds for a goto, LControl should use FFOR/FFREW for positioning.

PLAY\_AT=

If the distance between the current counter and the target is less than the specified value in seconds for a goto, LControl should use only PLAY for positioning.

SAVEPLAY=

If the distance between the current counter and the target is even less than <saveplay> seconds for a goto, LControl should rewind first.

FFOR\_OFFSET=

FREW\_OFFSET=

PFOR\_OFFSET=

PREW\_OFFSET=

If the camera is in FFOR, FREW, PFOR or PREW mode and a STOP is sent, then the xxxx\_OFFSET is the difference between the counter where the STOP was sent and the counter where the camera really stops. This value is used to improve the positioning routine.

OVERRUN=

The overrun value is also used to improve the positioning routine. The value is given in frames. It forces LControl to position this values earlier. E.g. after sending PAUSE you camera still rolls 5 frames. Set OVERRUN=5 in the tooltypes and the position routine will stop exactly at the given counter.

COUNTERWINDOW=

Expects YES or NO. The counter window is either opened or not opened on startup.

COUNTERLEFT=

Give the coordinates of the counter window.

COUNTERFONTNAME=

This is used to specify a different counter font e.g. "courier.font". Even proportional fonts can be used but the window can be trashed then. It is better to use monospaced fonts only.

COUNTERFONTSIZE=

Specify the font size for the counter.

MAINWINDOW=

MAINLEFT=

MAINTOP=

MAINWIDTH=  
MAINHEIGHT=  
INFOWINDOW=  
INFOLEFT=  
INFOTOP=  
INFOWIDTH=  
INFOHEIGHT=

Like the values for the counter window you can specify size and coordinates for the other windows.

INFOQUEUELENGTH=

This value determines the number of messages to be remembered in the infowindow.

## Appendix A Support & Bugreports

### A.1 Support

You may simply send a disk and enough stamps to one of the following addresses to get the newest software version of LControl:

Michael Watzl  
Haunstetterstr. 95/11  
86161 Augsburg  
Tel.: +49 821 576857  
Germany

or Jürgen Frank  
Wittelsbacherweg 7  
86609 Donauwörth  
Tel.: +49 906 1057  
Germany

If you own a modem you can download the most recent versions of IR-Master, LControl etc. in the Amiga Box Sinning (ABS) (+49 8435 920021). You will find the archives in the board 'IR-Master'.

### A.2 Bugreports

Bugreports or suggestions are welcome and should be sent to one of the addresses above mentioned.

Please include a brief description of your computer and its configuration — this will help us to reproduce the bugs.

Bugreports and suggestions may also be sent to Michael Watzl via e-mail ([indy@abs.gun.de](mailto:indy@abs.gun.de)).

## Appendix B Registering (2.00)

NAME: -----  
 STREET: -----  
 ZIP-CODE: ----- CITY: -----  
 COUNTRY: ----- TEL: -----

I want to become registerd user of LControl, therefore I

- o include a cheque
- o include a money order
- o include cash

Please send me:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>o newest version + schematics<br/>                     (par/ser for LANC-cameras)<br/>                     for \$12 / DM 20</li> </ul> | <ul style="list-style-type: none"> <li>o newest version + schematics<br/>                     (par for 5-Pin-Edit hardware)<br/>                     for \$12 / DM 20</li> </ul> |
|---|--|

- newest version + construction kit
- o serial LANC/Control-L hardware
- o parallel LANC/Control-L hardware  
 for \$18 / DM 30

- newest version + complete hardware
- o for serial port LANC/Control-L
- o for parallel port LANC/Control-L  
 for \$30 / DM 40

----- Optional [for construction kit LANC/Control-L] -----  
 o two-camera-set [allows connection of two cameras to LControl hardware]  
 plus \$3 / DM 5

----- Optional [for complete hardware, parallel LANC/Control-L] -----  
 o two-camera-set [allows connection of two cameras to LControl hardware]  
 plus \$6 / DM 10

-----  
 Together ----- \$ / Mark

-----  
 locality, date

-----  
 sign

## Appendix C IR-Master-Support

Taken from "IR-Master.guide":

"The IR-Master package consists of two software parts and a control hardware which is plugged to the joystickport of your Amiga. With this equipment almost any device shipped with an IR remote can be controlled by your Amiga.

At first you edit a virtual IR remote with the IR-Editor. Then this project is saved to disk and launched with the IR-Runner. The number of active IR-Runners is not limited.

You can use the IR-Runner either interactively or control it via ARexx from other applications or even program it using ARexx scripts.

There are also some optional (send-only) hardware:

One is connected to the (internal) parallel port of the Amiga and carries up to eight IR senders. This eight channels can be selectively used by the IR-Master.

Another optional hardware is designed for the audio-port. Here, the sending of IR commands uses DMA<sup>1</sup> with the advantage not to block the system for a moment.

With IR-Master 3.20 a new hardware for the (internal) serial port of the Amiga is introduced.

LControl and other applications to control video cameras and players are supported directly since version 2.5 of the IR-Master."

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<sup>1</sup> direct memory access – does not stress the CPU

## Appendix D History

- V1.00  
first Release
- V1.01
- arexx-command: GETSTATUS added
  - fixed some minor bugs
- V1.02
- Support for 2 cameras added [Switch]
  - minor bugfixes
- V1.05
- Zoom in/Zoom out added
  - Record added
- V1.1
- Goto added
  - Better SWAP implementation
- V1.2  
[never released]
- V1.3
- Now LControl uses a library (LANC.library)
  - goto added (automatic positioning)
  - many other minor bugfixes an features
- V1.4
- localized
- V1.50
- pos-routine improved
  - camera parameters can be modified to optimize pos-routine
  - multiple configurations supported via project icons
- V1.51
- calling pause in status record did send rubbish to the player

## V1.52

- bug fixed: LControl activates gadgets when starting with an active player connected
- bug fixed: No more crashes when quitting during a camera check
- bug fixed: under some circumstances a goto could not be broken
- bug fixed: LControl won't crash no more if no camera is connected and a command is sent to the arexx port
- bug fixed: ARExx command LC\_getstatus returns now correct values (CHANGED A LITTLE BIT!)
- New ARExx command: LC\_WAITFORCOUNTER, waits (non busy) until a certain counter is reached

## V1.53

- bug fixed: player was trapped in TAPE-TOP or TAPE-END status

## V2.00

- LControl has now 3 windows: counter-window, status-window and control-window
- conterfont configurable
- switching between different camera-libraries
- new AREXX-Commands:
  - LC\_GETLIBRARY
  - LC\_CHANGELIBRARY
- Portname has changed (LCONTROL.x) x=1,2,3...
- window sizable

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