Came for DOS readme

HP200LX

Go to the field with HP200LX and Digital-Camera!

Camedos.exe is control utility for digital cameras that use the Fujitsu SparcLite Microprocessor. Came can change the digital camera's configuration, take pictures, and download pictures all from the keyboard of the HP200LX.

Many digital cameras use the SpacLite Microprocessor, and all of them can be controlled with the same commands in Camedos.

Requirements

IBMPC Clone, DOS configuration. DoubleSpeed tuned-up HP200LX is recommended.

Computer Used for Testing

I'm using HP200LX palmtop PC for coding and debugging this program. No other computer has been tested.

The following digital cameras WILL NOT WORK with Came:

Canon, Casio, Fujifilm, Kodak, Konica, NEC, Panasonic, Ricoh, SONY etc.

How to use

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2. "Configure" menu
3. "Download" menu
4. "Take" Picture menu

- Appendix 1 : How to connect camera to HP200LX

- History
- Copyright and Notice

1 Getting Started

Copy Camedos.exe to the folder of your choice. If you want to change flash-memory during operation, you should copy it to **C:**(RAM disk).

To get started using Camedos with your camera you should:

1. Turn off the digital camera and connect it to the COM1 serial port.
2. Turn on the digital camera and set it to the 'take picture' mode.
3. Terminate the HP200LX System Manager and exit to DOS mode.
    Key operation is **[&...] - [Menu] - [A] - [T] - [OK]**.
4. Navigate to the folder where you installed Camedos.exe and type **camedos**.

If the digital camera is properly connected to your computer, then the following configuration menu will appear.

2 Configure Menu

```
                        Batt.100%      came for dos v0.4 copyright(c) tsuruzoh

A: camera i.d.     Union C.G. Tornado ADV E900
B: serial no.      PROTO-#001

C: lcd brightness     4
D: powersave @field   180
E: powersave @pc      120
F: powersave @lcd     240

T: set clock

X: exit / P: previous page / N: next page

enter command ? _
```

After connection is established the camera's current configuration parameters will be transfered. To change a parameter, first press the letter of the key corresponding to the parameter to be changed ("A" to "F" keys as shown above), then type new paramet

At the top of screen the battery level is displayed. If NiMH rechargeable batteries are used the camera will shutdown in a few minutes from the time the battery level gets to "50%." Camedos will be terminated automatically if the battery level g

A: camera i.d.

I.D. of digital camera. I recommend setting the camera's name and your name as above.

B: serial no.

Serial number of digital camera. Default value is '#00000001', I recommend setting this to the actual serial number of the attached camera.

C: lcd brightness

Set Liquid-Crystal-Display brightness. It can set from 1 to 7. The default is 4.

D: power save @field

Sets the time before the camera goes into powersave mode during picture taking. It can set from 0 to 600 seconds by 30 second increments.

E: power save @pc

Sets the time before the camera goes into powersave mode when the camera is connected to the computer. It can set 0 to 600 seconds by 30 second increments.

F: power save @lcd

Sets the time before the camera goes into powersave mode while displaying pictures. It can set form 0 to 1800 seconds by 30 second increments.

T: set clock

Sets the computer clock time to camera clock time.

N,P: next page / previous page

Go to the "Download" menu or the "Take" picture menu.

Note: Compression ratio setting is in the "Take" picture menu.

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3 Download Menu

```
36 pictures taken        Batt. 80%     came for dos v0.4 copyright(c) tsuruzoh

A: baud rate   230400 bps
B: download to 'a:\image\'




E: erase all pictures

S: start download

X: exit / P: previous page / N: next page

enter command ? _
```

pictures taken

Shows how many pictures have been taken during the current session.

A: baud rate

Sets the serial port baudrate (transfer speed). The baudrate is used only for picture downloading. The other operations use 19200bps. In most cases, setting the baudrate to 115200bps will not cause any problems. If you have problems downloading pictur

B: download to

Selects the drive and folder to which pictures will be download. The default is "A:\image".
Under this folder, Camedos creates sub folders using the naming format 'MMDDHHMM' for
each download session.

E: erase all pictures

Erases all the pictures stored in the digital camera. A dialog box as seen at the right is shown,
click 'Yes' to erase all pictures.

Note: If you're using a large capacity flash memory card the erasing process can take over 30
seconds.

S: start download

Starts downloading. All pictures stored in the digital camera will be download.

Notice: To avoid transfer error, all hardware interruputs are disabled during download. This will
cause a delay in the computer clock time. To correct it, turn the computer off and then on again
after Camedos operation is terminated.

N,P: next page / previous page

Go to "Configure" menu or "Take" picture menu.

---

4 Take picture menu

```
 240 pictures remaining    Batt. 65%      came for dos v0.4 copyright(c) tsuruzoh

 A: quality mode    sxga file          D: color/b&w      color
 B: flash mode      auto               E: digital zoom   off
 C: lens mode       normal             F: bracketing     off

 G: exp. metering   multi-seg.         J: infinity       off
 H: white balance   auto               K: ael/wbl        off
 I: bright/cont.    normal

 T: take picture / L: time lapse shot
 M: time lapse shot with HP power off
 (All the followings captures viewfinder view and need lxpic.com v6.1)
 O: view continuous viewfinder (viewfind.jpg)
 Q: view single viewfinder (viewfind.jpg)
 R: capture movie (vwf00000.jpg)
 S: capture changed view (in camera)

 X: exit / P: previous page / N: next page

 enter command ? _
```

Notes 1: Modes B to K can't be changed or will not appear if your digital camera doesn't support that
particular function.
Notes 2: Some of the digital cameras ignore mode settings by Camedos.exe when the camera is set to
'Manual' picture taking mode (user setting). To avoid this, set the camera to 'Auto' mode.

pictures remaining

Shows how many pictures can still be taken at the current quality mode

A: quality mode

Sets the picture quality mode. When changing this setting the 'Pictures Remaining' figure also changes to match the mode.

B: flash mode

Sets the flash mode. Auto: Automatically activate, On: Flash for all pictures, Off: Flash off, Red Eye: Auto with Red-Eye reduction.

C: lens mode

Set the lens mode to Normal or Macro mode. Some digital cameras can also be set to Wide or Fisheye.

D: color/b&w

Sets the camera to Black & White mode.

E: digital zoom

Digital-Zoom mode. Sets the camera to Digital-Telephoto mode. A portion of the center of the frame (640x480 pixels) is enlarged to full-frame. It is equivalent to 2x zoom. Most digital cameras, if digital-tele mode is on, the Quality setting goes to S

F: bracketing

Takes a set of pictures with exposure bracketing. First choose bracketing mode, then press the **"T"** key as you normally would for capturing pictures. The number of pictures can be set to 3 or 5, the exposure bracketing step can be set to 0

-1.0EV	-0.5EV	0.0EV	+0.5EV	+1.0EV

Notes 1: Backeting won't work with some cameras that use Exif picture format (Nikon, Sanyo etc.).
Notes 2: Flash won't work with bracketing.

G: exposure metering

Sets exposure measuring method. Multi-Seg.: measures multiple areas of the frame and adjusts exposure. Spot: measures only the center of the frame. Center: measures entire frame but weighted to the center.

H: white balance

Sets the white balance adjustment. Auto: automatic, Skylight: sets the camera to sunlight, f.l.: sets the camera to fluorescent light, tungsten: sets the camera to tungsten (incandescent) light, cloudy: sets the camera to overcast conditions.

I: bright/cont.

Set brightness and contrast.

J: infinity

Sets the focus to infinity position.

K: ael/wbl

Locks the Exposure and White balance to the first picture taken after this checkbox is marked. Mainly used for panorama picture taking so that all photos in a set are taken at the same exposure settings.

T: take picture

Press **"T"** key for shutter-release. If the "picture remaining" number is zero, a message is shown. In that case, erase a picture or change the media card.

L: time lapse shot

This is for taking "Time Lapse" pictures. Enter interval time and how many pictures will be

taken, then start "Time Lapse". Focusing time and picture writing time are added to actual interval time.

M: time lapse shot with HP power off

This is similar to L except the HP is shut down between shots. This allows time lapse shots spanning days or weeks to be taken on battery power. Notes: Commands O, Q, R, and S require lxpic.com v6.1 or later

O: view continuous viewfinder

Continuously downloads the viewfinder view and displays on HP's screen.

Q: view single viewfinder

Downloads the viewfinder view and display on HP's screen once.

R: capture movie

Continuously downloads the viewfinder view, displays on HP's screen, and saves to vwf00000.jpg... May be made into a movie.
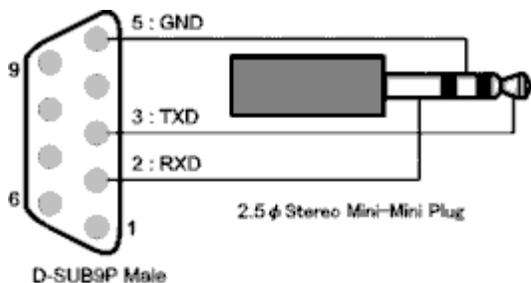
S: capture changed view

Same as O and in addition take picture when scene changed. The binary image is divided into 20 x 15 blocks of 8 x 8 pixels. The intensity of each block is the number of black pixels in each block. Scene is considered to have changed when the sum of all absolute intensity differences of all corresponding blocks between successive scene exceed a user entered threshold.
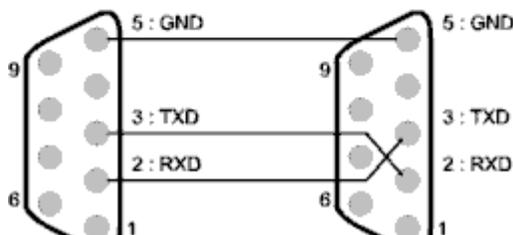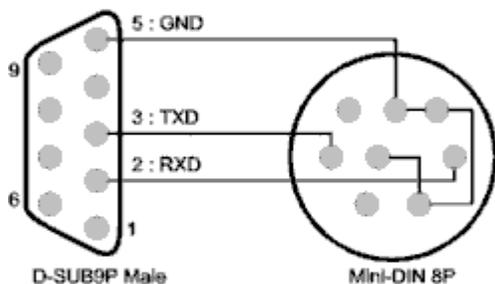
N,P: next page / previous page

Go to "Configure" menu or "Download" menu.

Appendix 1 : How to connect camera to HP200LX

This chapter explains how to connect between genuine serial cable for HP200LX to digital camera, not to connect computer to digital camera directly.

The HP200LX uses a special connector for serial port connections so you can't use the serial cable that came with your digital camera. You will need to make an adapter to convert the factory HP200LX serial cable to the digital camera. The circuit diagram

Some cameras use a special (non-standard) connector for attaching to the camera's serial port outlet and you can't readily get a plug for these types of connectors. In such

D-SUB9P Male   D-SUB9P Male   cases, make an adaptor cable as shown on the bottom of the chart to the left, then

History

V0.4 2000/01/27 - by alfred1520@geocities.com

- Add: Time lapse shot with power off
- Add: Continuous and single fiewfinder view
- Add: Scene changed take
- Add: Reads 'camedos.ini' for default image download directory. Directory must ends in '\'

V0.3 1998/08/11

- Add: Battery level check
- Add: 230400bps transfer for double-speed tuned-up HP200LX

V0.2 1998/07/10

- Add: Bracketing
- Add: 115200bps transfer
- Bug: display disordered at english mode

V0.1 1998/07/05

- first release

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- All trade names mentioned in this document are trademarks or registered trademarks of their respective holders.
- During the development of this software, I referred to Description of the protocol written by Eugene Crosser.

Thanks to Randy @FRCN for helping with the English documentation.

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