

Zaurus



SHARP SL-C1000

SL-C3000/3100/3200

Linux Personal Mobile Tool

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Welcome

Thank you for buying the SHARP SL-C1000 / SL-C3000 / SL-C3100 / SL-C3200.

This device is not sold from SHARP out of Japan. It is a Japanese device with English user interface and English keyboard.

If you are mainly interested in a calendar, addressbook, etc., you are perhaps better off with a simple organizer.

But if you are looking for a mobile Linux system with excellent performance, you have made the right choice.

Each device is tested and localised by us in English in most aspects, before it is shipped. So you can start at once, without navigating through Kanji characters.

The Zaurus will start in Japanese after a factory-reset. But do not be afraid, the steps for localisation are described on page 22.

Please note that SHARP Electronics Europe / SHARP USA does not support this device.

For further information, links and questions visit us in the internet at <http://www.trisoft.de>.

The largest german-speaking (sorry) Zaurus-Community is to be found at <http://www.z-portal.info>. Tons of english information is available at <http://externe.net/zaurus/forum/> and on <http://www.zaurususergroup.org>.

In case of technical problems, you can reach us via electronic mail: zaurus@trisoft.de or via telephone: +49 511 94294 0

US customers please contact zaurus@streamlinecpus.com

Credits:

This english version of the quickstart guide was supported by the team of Werner Heuser / Xtops.de, Berlin.

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QT and QTopia are trademarks of Trolltech Inc.

All other products, brand names or in this manual mentioned company names are property and trademark of the particular companies.

The Zaurus SL-C1000/SL-C3000/SL-C3100/SL-C3200

This manual is only for the SL-C1000 / SL-C3000 / SL-C31000 / SL-C3200 models which are different in some important points compared to the previous SL-C series Zauris.

The essential difference is the bigger battery, the included harddrive in the SL-C3x00 models and the USB port with host capability.

Comparison of the SL-C Series Zauris

Attribute	SL-C1000/C3000 SL-C3100/C3200	SL-C750	SL-C760 SL-C860
OS	Lineo uLinux Kernel 2.4.20	Linux OpenPDA	
CPU	Intel Xscale PXA 270, 416 MHz	Intel Xscale PXA255 400 MHz	
Memory	C1000/3100/3200: 128 MB Flash C3000:16 MB Flash 64 MB SDRAM	64 MB Flash 64 MB SDRAM	128 MB Flash 64 MB SDRAM
Harddrive	C3000: 4 GB HD C3100: 4 GB HD C3200: 6 GB HD C1000: not avail.	not available	
Display	SHARP CG Silicon 640x480		
I/O Ports	USB Slave + Host Infrared, Headphone jack, AC adaptor	SHARP I/O-Port , Infrared, Headphone, AC adaptor	
Card slots	1 x SD, 1 x CompactFlash		
Battery included	3,7V Lilon EA-BL11 1800mAh	3,7V Lilon EA-BL06 950mAh	3,7V Lilon EA-BL08 1700mAh
Battery optional	EA-BL08K, EA-BL06	EA-BL08K, EA-BL11	EA-BL06, EA-BL11
Power consumption	C1000: 2.3W C3x00: 3.2W	2.7 W	

Attribute	SL-C1000/C3000 SL-C3100/C3200	SL-C750	SL-C760 SL-C860
Display cover	SL-C1000: Cover : black Body : black SL-C3000: Cover : white Body : white SL-C3100: Cover : anthracite Body : black SL-C3200: aas assa	Cover black	SL-C760: white SL-C860: silver
Dimensions	124 x 87 x 25 mm	120x 83 x 18,6 mm	120x 83 x 23,2 mm
Weight	C1000: Ca. 278 g C3x00: Ca. 298 g	Ca. 225 g	Ca. 250 g

Unpacking

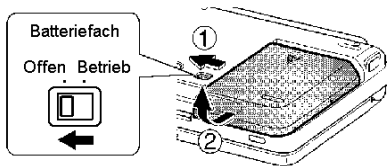
The package should contain the following items:

Item	SL-C1000	SL-C3000	SL-C3100/ SL-C3200
Zaurus with stylus and covers for CF and SD slot	1	1	1
Battery EA-BL11	1	1	1
PC-USB cable (long, black mini USB plug)	1	1	1
ZHost USB host cable (short, white mini USB plug)	1	1	1
Headphones	-	-	1
Zaurus Software CD	1	2	3

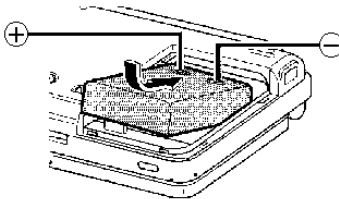
Item	SL-C1000	SL-C3000	SL-C3100/ SL-C3200
Manual (japanese)	1	1	1
This short manual (already found)	1	1	1

Startup

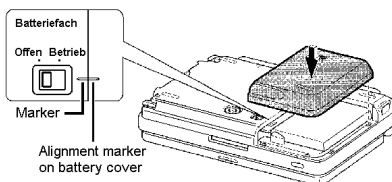
Insert the battery



Unlock the lower cover by sliding the the switch for the interlock of the battery compartment (1) to the left. Detach the cover in direction (2).



Insert the battery as shown in the picture. For the battery to fit tightly, press in direction of the arrow on the end leading to the border of the enclosure.



Put the cover for the battery compartment back onto the device. There is a marking dash at the border for orientation which should be aligned to the border of the compartment. Lock the cover by sliding the switch to the right.

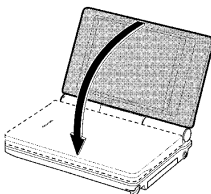
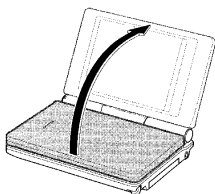
Charging the battery

You should now connect the power supply with the Zaurus (the AC-in is located on the backside of the device).

The Zaurus will be charged and in the upper left corner should glow a yellow charging LED.

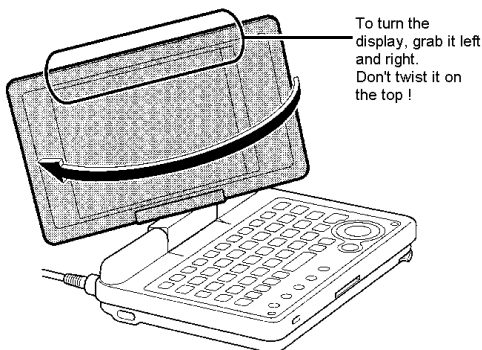
Please charge the Zaurus for some time, before turning it on.

Open and Turn Over Display



The display can be opened and turned nearly horizontal to the keyboard. There it snaps into the maximal possible position.

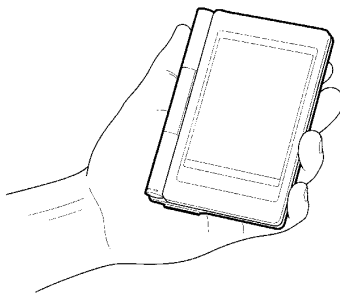
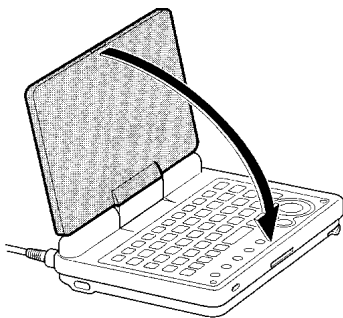
When opened, the display can also be turned clock-wise and overback onto the keyboard:



To turn the display, grab it left and right. Don't twist it on the top!

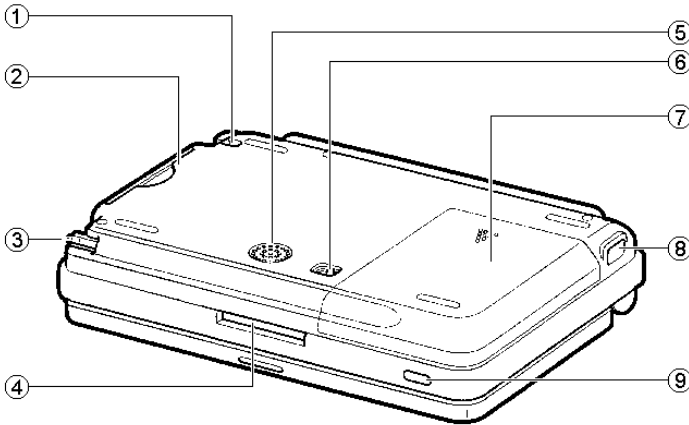
Attention: **NEVER** turn the display using violence or in opposite to the designated direction. Such damages (Zaurus in two parts) are **not** warranted.

Please touch the device at both sides when the display is turned. Do not touch it at the upper border.



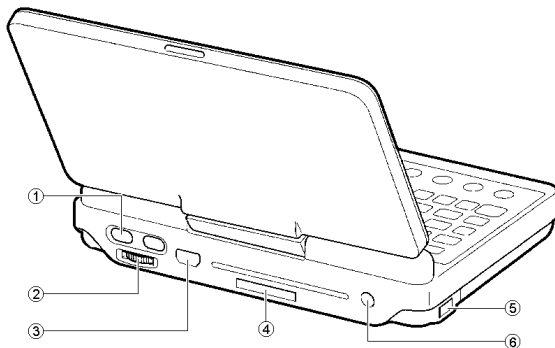
Ports / Controls

Bottom



- 1: Lug for fastening the Zaurus (for instance a chain).
2. Slot for CompactFlash cards with protective cover.
3. Stylus.
4. Slot for SD/MMC cards with protective cover.
5. Speaker.
6. Switch to lock / unlock the battery compartment.
7. Battery cover.
8. Infrared.
9. On- / Off switch.

Device backside



1. OK / Cancel buttons for one-handed use (see next page).
2. Scrollwheel for one-handed use.
3. USB-port (USB-OTG connector for host and client connections).
4. Cover of the SHARP Serviceport, see comment.
5. Infrared.
6. Hookup for power supply (5V)

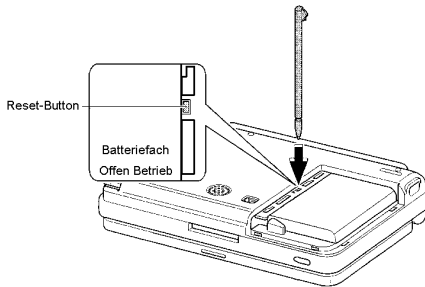
Attention : Only the original power supply from SHARP, model EA-70S, and the car charger MHPower are approved by us. The usage of third-party power supplies can possibly destroy the charging electronics of the Zaurus. "Cheap" power supplies often provide 6V instead of the printed 5V

Comment regarding the Serviceport: Zaurus-enthusiasts will assume that there's the well known SHARP I/O port hidden behind the cover. Wrong ! Behind this cover you will find the same connector as in all previous Zaurus but for the SL-C1000/SL-C3000 there is **NO** longer serial or USB communication supported via this connector. Please leave the cover where it is because now it is only a JTAG interface for service / repair procedures. If you try to remove this cover you risk hard scratches in the body and maybe damage this part of the beautiful Zaurus backside.

Hard-Reset

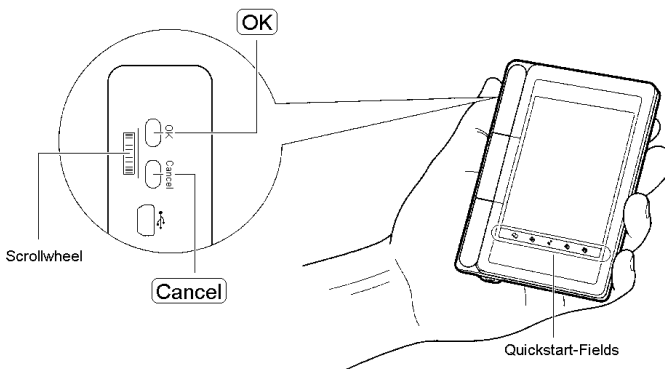
There is a reset button hidden in the battery compartment. Should the device "hang" after intensive Linux sessions you may reset it here.

Remove the battery cover as described on page 9. You will see a small black button in the upper third, left side of the compartment :



Take the stylus and give the button a short prick - Reset done.

One-Handed Use



The controls at the left side offer a fast and convenient navigation, if the display is turned over, onto the keyboard.

Options in the user interface can be chosen by the scroll wheel and they can be confirmed or cancelled with the compensator.

The quickstart fields at the lower border allow you to start often used applications with just a little tip.

Keyboard functions

The SL-C series are equipped with an english “QWERTY” keyboard layout. Using the “Fn” key you get the characters and functions printed on blue above the keys (f.e. display brightness with the “3” and “4” keys).

Special functions and modifications we made during the localisation process are described in this section.

Japanese keys

The two Japanese keys are redefined to "Ctrl" and "Alt" with the help of the applet KeyHelper:

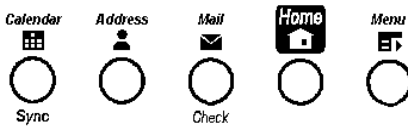


Now you may ask yourself : “Why do i have two Ctrl-keys ??”. Good point ! The previous models missed the Ctrl-key and the actual solution is simple compatible to our previous localisation of the SL-C series. If you have a good idea for a better remapping, please give us a hint or change it by yourself in the file “keyhelper.xml”

This applet can be found in the internet at <http://yakty.s31.xrea.com/linuzau/> . Unfortunately, the help texts are currently only available in Japanese. Key codes can be read or existing mappings can be checked with the applet KeyHelper Control. The key mappings are stored in the files /home/zaurus/Settings/(keyhelper\conf|keyhelper\xml).

Quickstart keys

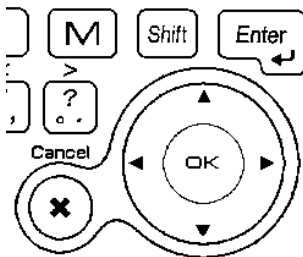
Below the “normal” keyboard there’s a row with 5 keys for instant application access:



What actions or programs are associated with these keys can be set in “Settings” -> “Application Key”. If you would like to start the terminal or the browser with the “Calendar” key, no problem.

OK / Cancel (Esc) / Cursor keys

On the right side of the keyboard you find the OK, Cancel and Cursor keys:



“Cancel” is used to close a dialog. In the terminal Cancel is your **Escape.key** !

With OK dialogs are confirmed. In the terminal OK is working as an additional Enter key.

The ring around the OK key is used for cursor movement.

Umlauts / Euro

You can access the German umlauts and the Euro-currency symbol via the onscreen-keyboard, handwriting and directly over the keyboard (thanks to the KeyHelper applet).

A special “thank you” goes to “biggel” of the Z-Portal (www.z-portal.info), who wrote the needed mappings in the KeyHelper-XML-file.

Addition to the violet printed keyboard-functions, there are the following combinations:

“FN” + “A” gives : ä	“FN” + “Shift” + “A” gives : Ä
“FN” + “O” gives : ö	“FN” + “Shift” + “O” gives : Ö
“FN” + “U” gives : ü	“FN” + “Shift” + “U” gives : Ü
“FN” + “S” gives : ß	“FN” + “Shift” + “E” gives : €
“FN” + “N” gives : {	“FN” + “M” gives : }

The “Shift”-key is in this configuration “sticky”. That means you can press “Shift” alone and the next pressed key will react as pressed with “Shift”.

Please note:

Umlauts, Euro- and other special characters are not implemented in all charsets. If you see only black bordered boxes instead, then you may look on “LCFONT”. Choose “Helvetica” f.e. and all characters are displayed correct.

Screenshots

It's very simple to make a screenshot with the Zaurus. Just press “FN” + “Shift” + “C”. The picture is stored in the “Screen_Files” directory of the Zaurus or on a memory card (if one is inserted).

Software for SL-5500(G)

Most applications offered for SL-5500(G) can be run on SL-C series Zaurus without problems.

The SL-C series recognises these, switches the display to portrait and doubles the output pixels. The application will then be shown optimally, because the SL-C series uses 4 times the resolution of the old device (640x480 instead of 320x240).

Applications which require keyboard input might be better displayed without that switch. Therefore, tip the application's icon with the stylus a little longer and uncheck the option "Display with magnified screen".

Software installation (Windows)

USB-Driver

Put the Zaurus CD in your CD Rom drive. In case the Zaurus-CD tries to autostart when it is put into the drive, please interrupt that at once. Apart from the fact, that your Windows probably cannot display Japanese characters correctly, the installation of the offered software there is not necessarily needed.

The USB driver must be installed in the device manager, so that Windows is able to recognise the Zaurus.

It can be found on the CD in the directory <drive>:\USBdrivers\Network.

There should be a new network adapter "SL Series Ver3 (NDIS 5)" in the network configuration after successful installation.

The Zaurus runs a Samba server for communication purposes which answers at 192.168.128.201. Thus, files can be easily exchanged with the Zaurus via the Neighborhood.

IntelliSync

Use the current release of IntelliSync to synchronise with the Windows PC.

It is important to use the English version (currently "Zaurus Manager 3.1") which was developed for model SL-5600. It can be found in the internet at http://community.zaurus.com/project/showfiles.php?group_id=5 filename "5500v31u.zip". The file contains the whole Update CD, adding up to 44 MB. The download of IntelliSync on www.myzaurus.com which is incompatible to the SL-C series.

Only the directory "PCSOFT" is needed from the downloaded file, in which the setup can be called directly. This will install IntelliSync which features the possibility to synchronise

with Microsoft Outlook and the "Zaurus File Transfer". Files can be exchanged between the Zaurus and PC conveniently with that feature.

Note: The site "community.zaurus.com" is down. You may use as alternative download "pcsoft.zip" from www.trisoft.de/download.

Workaround for IntelliSync

The described method in the previous paragraph for installing IntelliSync is correct, but not working :-)

Until we find a brilliant, perfect solution, all we can do actually is providing a simple workaround. For this you need the japanese Version of IntelliSync that is found on CD #1 of the SL-C3000/SL-C3100 CDs (or the one SL-C1000 CD).

A detailed document how to install a working IntelliSync in english is available as zipped RTF-document in our download area:

<http://www.trisoft.de/download/c3000sync.zip>

Communication via Neighborhood

Files can be exchanged easily between Windows via the Neighborhood and the Zaurus which runs the Samba server.

Telnet-Access

The telnet service is opened for configuration purposes and hardcore-users. Reach the Zaurus through USB via telnet to the IP address 192.168.129.201.

The username for telnet logins is "zaurus", without password.

There is no FTP server installed by default!

The Zaurus USB port

The SL-C1000/SL-C3000/SL-C3100 are the first Zauris with a combined USB client / host port. Not only host devices (like PCs) can be connected with the Zaurus, also clients (like USB-sticks, cameras, keyboards) can be used.

The connector on the Zaurus side is a Mini-AB receptacle to be used with Mini-A (Zaurus working as host) or Mini-B (Zaurus is client) plugs following the USB-OTG (On The Go) specification.

USB-OTG color coding

The USB On-The-Go specification defines color codes for the various jacks and plugs. This makes it very easy to see if a port or a cable is a client or a host. The color coding is as follows:

Color	Jack	Plug
white	Device is host	Hostcable
grey	Host / client capable	not invented yet :-)
black	Device is client	Clientcable

Die USB-jack at Zaurus is grey because the Zaurus is capable to be host or client. The client(PC-)cable has a black plug, the hostcable that came with your Zaurus has a white plug.

Access as USB-Mass Storage (Zaurus is client)

The SL-C1000/SL-C3000/SL-C3100 provides a special setting for the PC-Link. you can choose between "PC-Link Setting" and "Storage" Mode. Choosing "Storage" it is possible to grant access to a CF / SD card or the integrated harddisk. The Zaurus communicates to the PC as a USB mass storage device like a USB-stick or a digital camera. With this feature it is easy to transfer files between a card inserted in the Zaurus and a PC without installing any driver first.

Note: While changing the settings in "PC-Link Setting" the USB cable should **not** be connected to the Zaurus. Otherwise you will see the error message "USB-Alert". In this case please pull the USB cable and try it again.

Connecting USB-memory to the Zaurus (Zaurus is Host)

Since January 2005 we preinstalled an auto-mount feature for USB mass storage devices. We would like to thank the user "DreamTheater" from the Zaurususergroup. The two needed scripts `usb-storage` and `usb-storage.off` are located in `/etc/hotplug/usb`.

Should these scripts not recognize your memory, a manual mount works as follows:

Connect the USB-memory with the Zaurus using the Mini-A cable. In "Settings" -> "System Info" the USB storage should be listed in the "USB" area like in the picture:



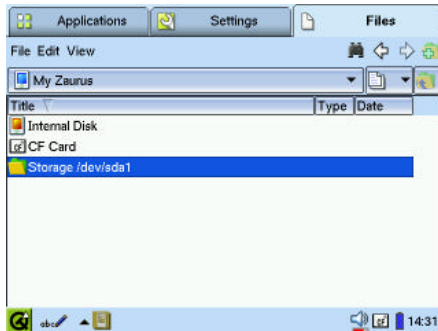
Now start the terminal application and mount the memory:

```
bash-2.05$ su
# mount /dev/sda1 /mnt/usbstorage -o umask=000
```

The memory device should now be listed in the "Files" area:

That's all.

Before you disconnect the memory, please unmount the device:



```
# umount /mnt/usbstorage
```

Attention:

If you perform a factory-reset and restore our localisation backup, you need to create the directory `/mnt/usbhdd` manually. Please check this in case the automount doesn't work.

USB-Keyboard (Zaurus is host)

Using the hostcable a USB-keyboard can be used with the Zaurus. Just plug it in and ready to go. We tested this successfully with a KeySonic ACK-610EL.

Annotations about Software

Applications

MoviePlayer

The SHARP Movie Player is able to play .asf-files, encoded with MPEG4 Video V1 and simple MPEG-files.

Also well known is the doublepack mplayer/Kino2. Please remind to download the mplayer version for the C1000/3x00 series models. The former C-series Zauri were equipped with an ATI graphics chip that is no longer used in the 1000/3x00 series. The actual (as of 03/28/06) mplayer version with the needed wmm-extensions would be: "mplayer-bvdd-iwmmxt_1.1.5-1_arm.ipk"

To convert movies in the Zaurus-friendly format you will find a lot of information at: <http://www.double.co.nz/zaurus/>

PIM-Applications (KO/Pi / KA/Pi)

Since January 2005 we preinstall on the SL-C series the PIM applications of the PI-Sync project by Lutz Rogowski.

KOrganizer and KAddressbook are outstanding alternatives to the very simple SHARP original applications. At www.pi-sync.net you will find complete documentation, FAQ and downloads.

TextMaker for Zaurus

The SL-C3x00 models come with a preinstalled 30 day trial version for TextMaker by SoftMaker. For the full version, contact your dealer or visit us in the internet at www.trisoft.de / www.streamlinecpus.com .

More information about TextMaker is to be found at www.softmaker.de .

Localisation after factory-reset

With a special reset procedure it is possible to bring the Zaurus back to factory state. If you played too much with sensitive configuration files this is your best chance to get a working Zaurus back.

Factory state means that the device will talk only japanese with you. With a backup on a memory card the last working state is restored easily.

The data would be lost, if there were no backup. A "Localisation-Backup" can be downloaded from our website <http://www.trissoft.de> and copied onto a memory card.

A recent backup must simply be read back via "Restore". The difficulty lies in the recognition of the correct icons to click, but don't worry : Here comes the easy step-by-step guide with pictures for your short journey through the japanese world of Zaurus.

Attention :

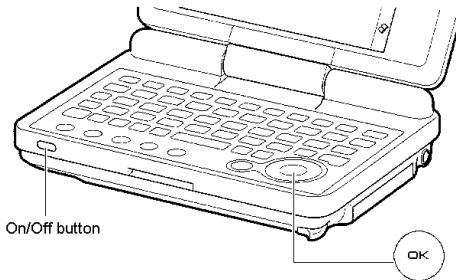
The backup needs to be placed in a subdirectory called "Backup_Files" !
The Zaurus checks **only this directory** for backup sets.

Reset (Flashmenu)

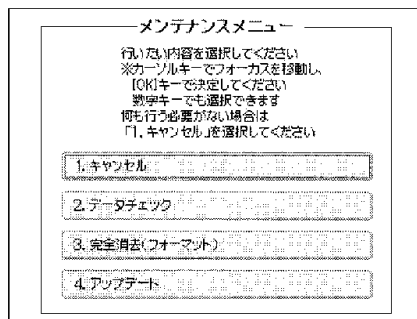
To access the flash menu, the following steps are necessary:

- Turn off the Zaurus, pull out the USB cable or other power supplies.
- Unlock the battery compartment and take out the battery.
- Wait for approx. 5 seconds.
- Tick the reset button (see page 11)
- Reinsert the battery, close the cover and turn the switch back to "Betrieb".
- Connect the power supply and wait until the yellow charging LED lights up (without AC connected, the Zaurus won't start the Reset procedure !).

- Hold the "OK" key on the keyboard and turn on the device with the button "On/Off".



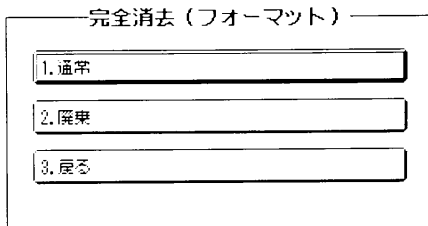
The flash menu appears in Japanese:



The 4 shown menu options mean (from top to bottom):

- Cancel (quit flash menu and boot normally)
- Execute FSCK (filesystem check)
- Reset (reset factory defaults)
Reset also **deletes the data partition** of the harddisk !
- Flash / Update

To reset the device, choose the third option. New for the SL-C3x00 is the following dialog (ignore this for the SL-C1000):



The three options are :

- Normal
- Extended
- Back / abort

Choose the first option, "Normal".

There is a dialog which asks if you are really sure which should be acknowledged with the button "Y" (left).

Attention:

Don't use the second option (Extended). Doing this will result in a VERY extensive harddisk check before recovering. This option may take 1.5 hours or longer !

First start

A nice, red logo from SHARP appears and the Zaurus is reset.

After a minute, the well-known "CG Silicon / Zaurus" screen is visible, which means that there is another exciting minute to wait.

Next, there is a writing, saying "Zaurus", and two lines of Japanese text. Translated they would mean something like "Take the stylus and press the display, so that we can see, if it works".

So, just do it.

Now, the "QT"-QTopia logo is displayed and the user is asked to calibrate the display by tipping its center.

Do one tip in the lower left, lower right, upper right, upper left and in the center.

Afterwards the dialog for Date/Time is presented and the process continues in Japanese:



Confirm with "OK" (upper right).

Skip the next dialog with "OK", too.

Now the QTopia desktop should be visible, advance directly to restore:

Run restore

Insert a CompactFlash or SD card which contains the desired backup into the Zaurus.

Note: A backup image is downloadable from our website <http://www.trisoft.de>, if needed. Use **only** the matching backup for your Zaurus. Please **don't** try to restore a backup from another model in your SL-C1000 or SL-C3x00.

Please remind that the backup needs to be placed in the subdir "**Backup_Files**" of the memory card (see note on page 22).

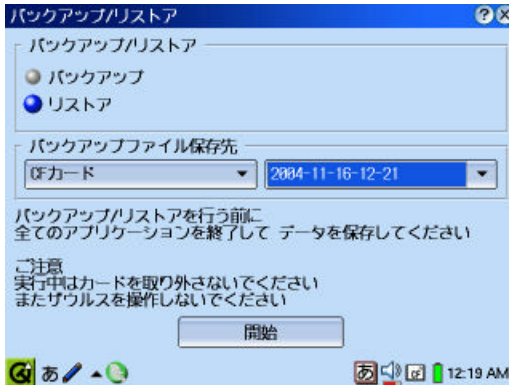
Please activate the tab with the wrench in the upper bar:



There select the green icon which represents a sheet of paper with two horizontal arrows:



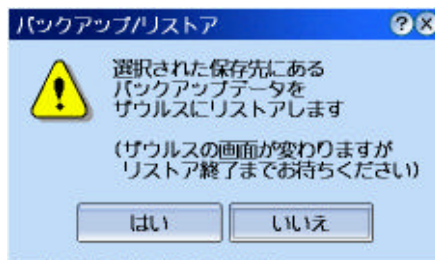
Now it is nearly done, the "Backup/Restore" dialog should be visible:



The upper selection handles "Backup", the lower "Restore". Therefore, set the blue sphere in front of the second line. The frame below selects the source of the backup (CompactFlash, SD or in case for the SL-C3x00 also the HD).

Next choose the backup set to be restored in the right dropdown box.

Push the middle button at the bottom, when the desired backup can be seen in the selection to the right. Another dialog appears and asks for confirmation (Yes, you are sure):



Click the left button and the time of Kanji on the Zaurus will be over for the time being.

While restoring the backup, the "CG-Silicon" screen appears for a moment, then a progress bar, which hopefully will reach 100%.

Afterwards the Zaurus restarts and it is done!

Alternative Roms

We ship our Zauri with a heavily modified and extended SHARP original system. In internet forums this system is often called "TRIsoft Rom".

The term "Rom" does not mean a real ROM-chip. It's the usual description for the system that is located in the flash memory or (for the 3x00 models) on a partition of the harddisk.

Options

The table below is just for a quick reference and in no way complete. There are more different distributions and also forks of the listed Roms.

Name	What's this ?	Internet link
TRIsoft Rom	Shipping state, QT-based with 2.4.20 kernel. English	www.trisoft.de (D/E)
SHARP Rom	Standard system QT-based with 2.4.20 Kernel. Japanese	www.ezaurus.com
OpenZaurus / OpenEmbedded	QT or GTK based alternative. OpenEmbedded comes with kernel 2.6	openzaurus.org oe.handhelds.org
OpenBSD	OpenBSD for the Zauri.	www.openbsd.org/zaurus.html
Debian	The name says it all	http://pocketworkstation.org/ http://www.eleves.ens.fr/home/leurent/zaurus.html
pdaXRom	X-Window system.	http://www.pdaxrom.org/
Cacko Rom	Heavily modified and extended original sytem	http://my-zaurus.narod.ru/

Rom-Image for which dog ?

Yes, no typo, you've read right. If you are looking for a different system you first need to know which dog you're using. All Zaurus models are known under the following nicknames:

Modell	Name
SL-5000(D) SL-5500(G)	Collie
SL-5600	Poodle
SL-6000	Tosa
SL-C700	Corgi
SL-C750	Shepherd
SL-C760	Husky
SL-C860	Boxer
SL-C1000	Akita
SL-C3000	Spitz
SL-C3100	Borzoi
SL-C3200	Terrier

For the SL-C3000 you will need an image from the "Spitz" feed, an SL-C1000 would require a system from an "Akita" feed etc.

SL-C1000 / SL-C3100/3200: Before experimenting with other systems you should first create a normal backup and additionally a NAND-backup (see page 31). So you have a comfortable way back if you want to return to the SHARP Rom.

Back to the SHARP ROM

SL-C1000 / SL-C3100/3200: To get back to the SHARP Rom you need to perform a NAND-restore.

This is done in the Zaurus service menu. All steps are explained at page 34.

SL-C3000: The SL-C3000 "Rom" is located on a harddisk partition. So you have to restore the partition table and the partitions contents, a NAND-restore won't help you.

Restoring the harddisk (3x00 models):

Most other systems change the partition scheme of the harddisk or (for the SL-C3000) overwrite the SHARP original system data.

To restore to the original state you need to re-set the partition table and place the proper files and directories in the system partition(s). To make this easy and comfortable, we provide all necessary informations for the models SL-C3000, 3100 and 3200 in our download area.

Please find the data and informations for the system partitions here:

<http://www.trisoft.de/download/SLC3000SYSPART.zip>

<http://www.trisoft.de/download/SLC3100SYSPART.zip>

<http://www.trisoft.de/download/SLC3200SYSPART.zip>

Every file contains a Readme with all informations. You need to boot the Zaurus in command line mode (see page 35) to perform the partition / format actions.

Diag / service menu

Like all Zauri, the SL-C1000 / SL-C3x00 series has a diagnostic mode, too. Normally, that mode is not necessary, but for the sake of completeness, the diagnose functions are explained here.

Attention :

It is possible to delete the Flash ROM of the Zaurus completely in the service menu (NAND FLASH FULL ERASE). Also for the SL-C3x00 you're able to format the harddisk. The Zaurus would be **transformed into a noble paperweight, without any function**, if this was done. The warranty would become invalid and the device would possibly be a total loss.

Once again, Attention:

Apart from the key combination "DM", explained later, there exists another combinations "D+" which causes a reaction by the Zaurus. There are no exciting functions to discover, besides from operating modes you do not really want (except for the Command-line, see page 35).

Accessing the service menu:

Set the battery switch to "Offen", remove the battery and wait a couple of seconds. Re-insert the battery, press and hold the "D"+"M" keys. Connect the AC adapter, tick the reset button and flip the battery switch back to "Betrieb".

Here upon, the Zaurus shows the first page of the service menu in the format portrait:

SERVICE(1/3)		SL-C3000
Page down		Page up
1.COM ADJ setting		
2.LCD Phase Setting		
3.SUM MENU		
4.Touch Panel(UGA)		
5.LCD+LED		
6.IrDA		
7.Keyboard		
8.Sound		
9.		
10.Update MENU		
NAND DIAG Ver.1.01		
BootFlg:----	U:0021	
BT-AD : 213	CF CD:High	
BT-TAM: 127	SD C/W:H L	
JK-UAD: 0	SW-A/B:L L	
Tablet: 0	CPU U:1.35	
COM :117	CPU C:208	
PHASE : 4	CHARGE:OFF	

Navigation within the menu is possible with the stylus, the arrow keys or the scroll wheel.

A function is selected by "OK" and getting back from anywhere is accomplished by pressing "Cancel".

Quit service menu:

To leave the service mode, please perform a hard-reset (see page 11). After the reset is done, the Zaurus should boot normal after powering on.

Backup with service menu:

If you are asking yourself, why we mention the service menu although we discourage its usage, well, here is the explanation:

The service mode makes it possible to create a 1:1 backup (NAND backup) of the whole ROM, resp. to restore a backup. This is the last straw, if the ROM was modified or a ROM was used which was not really mature.

If this has just happened and you are looking into this manual, but now: Don't Panic! We offer a recent NAND backup for every Zaurus model in condititon upon delivery for download on our server.

A CompactFlash card with at least 134 MB for the SL-C1000 / SL-C3100 / SL-C3200 is needed to create a backup. The backup is that huge, because a complete image, without any compression, including administrative information, will be built.

Note for SL-C3000: For the former SL-C models making a "NAND backup" was the simplest way to create a complete memory image of the whole Zaurus. Recovering a Zaurus by restoring such a "NAND backup" was simple and convinient. But the SL-C3000 is different because in the 16 MB NAND area there's only the Bootloader, service menu and the updaters stored.

The SL-C3000 now provides a menu option "Backup Menu" where backups of the NAND and HD can be created and restored.

It is senseless to create a backup of the harddisk. This would take hours and you will need a CF card > 4GB. The contents of the harddisk can be quick and easily restored if you use the file <http://www.trisoft.de/download/SLC3000SYSPART.zip> from our download area.



Go to the third page of the service menu.

Choose the option “BACKUP RESTORE MENU” and press the OK key.

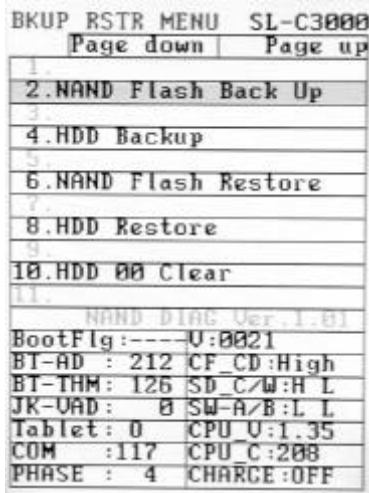
Now you should see the menu as in the right picture (options 4, 8 and 10 are available on the SL-C3x00 only):

Note for SL-C3x00: With option 4 you may create a backup of the harddisk. Let’s say it again: It’s useless, you won’t need it !

Keep your hands off option 10 “HDD 00 Clear”. That’s a really bad idea because you would erase the harddrive and may use your Zaurus as a beautiful doorstop.

During the backup a green progress bar will show up. If the backup process is complete, press “Cancel” to get back to the menu screen.

The created NAND backup will have the filename systc100.dbk for the SL-C1000, systc300.dbk for the SL-C3000, systc310.dbk for the SL-C3100 and systc320.dbk for the SL-C3200.



Restore with service menu:

The restore function, named "NAND Flash Restore", is to be found on the third page of the service menu as well.

A CompactFlash card with a valid file "systc100.dbk" for the SL-C1000, a "systc3x0.dbk" for the SL-C3x00 is needed. Such an image can also be found on our website, if there is no other backup at hand.

After pressing "OK", a valid .dbk-file is searched and written into the Flash memory.

Note: We actually don't provide a backup of the harddrive. We're sure nobody wants to download a > 4 GB file over the internet.

Attention (1):

It is imperative to use a power source to run the restore process.

Attention (2):

Never ever try to restore a NAND-Backup from a different model. Only the restore of the appropriate backup set will result in a working Zaurus.

Boot to command-line

In addition to the Diag / Service menu (see page 31) there is a boot option for the "classic" Login-Prompt. This may be useful for emergency recovery.

The procedure is similar to the Diag / Service mode instead you have to press the keys "DB". So, here we go:

- Flip the battery switch to "Offen" and pull the battery out
- wait appr. 1 minute
- Press and hold "D" + "B" keys.
- Re-insert the battery
- Flip the switch back to "Betrieb"
- Tick the "Reset" button
- Continue holding "D" + "B" pressed and power the Zaurus on

Now you should see the white bootscreen with the red SHARP-Logo. But this time the screen should scroll up, revealing the following lines:

```
INIT: version 2.78 booting
INIT: Entering runlevel: 4
```

```
INIT: Sending processes the TERM signal
```

```
Lineo uLinux
Kernel 2.4.20 on armv5tel
```

```
zaurus login :
```

You may now login as "zaurus" or "root". In this mode the Zaurus won't react on the power switch, so you're unable to turn the device off. End the session with "reboot" to boot back to the QTopia desktop.

Note:

We encountered Zauris which needed up to 1 hour without a battery to accept the "DB"-trick. If your Zaurus won't react as described below, don't worry and try it again with a longer "batteryless" time.

The harddrive (SL-C3x00 models):

Yes, there's a 4 GB MicroDrive made by Hitachi integrated in the Zaurus SL-C3000/3100 series and the 6 GB type in the SL-C3200. **NO**, it's not a good idea to open the Zaurus to look where it is and play with it. Also please don't open an SL-C1000 and try to add a MicroDrive (it's not possible, really not!).

OK, serious: The harddisk is not removable or replaceable for the user. If you expect a technical problem with your harddrive, please send your Zaurus to your dealer or contact us direct: +49 511/ 94294-0.

Helpful links:

www.trissoft.de

Our homepage with information about and downloads for the SHARP Zaurus series

www.xtops.de

Homepage of Xtops / Berlin. Specialists for Linux on mobile computers.

www.streamlinecpus.com

Our partner for the US market.

Zaurus portals

www.z-portal.info

Largest german-speaking Zaurus-Community

www.myzaurus.com

SHARP USA's homepage for the Zaurus

www.zaurususergroup.org

Large english-speaking Zaurus-Community

<http://externe.net/zaurus/forum/>

Great english forum, mainly for SL-C models.

Software

www.elsix.org

The Zaurus-Software-index with hundreds of applications for all Zaurus models. This should be the first try when you look for software.

www.pi-sync.net

Homepage for the PIM/Sync applications.

yakty.s31.xrea.com/linuzau/

Author of the KeyHelper applet for redefining the Zaurus keys (Japanese)

www.double.co.nz/zaurus/

Manual for transcoding videos into the format of the Zaurus MoviePlayer

Accessories for your Zaurus

There is a big supply of accessories for your Zaurus to extend its application. The following list does not claim to be complete. But all listed articles are tested by us and thus work smoothly with your device:

SHARP accessories

EA-70S	Power supply 5V
CE-BC21	Battery charger for EA-BL06
EA-BL08K	Lilon battery 3.7V, 1700 mAh. This item contains a black bottom cover for use in SL-C750
EA-BL11	Lilon battery 3.7V, 1800 mAh,
CE-AG06	CompactFlash camera card
CE-RH2	Stereo-headset and remote control for the MP-3 player
ZPEN	Extra stylus

Third party accessories

BIL-10BT	CompactFlash 10 BaseT network adaptor
BIL-M56G	CompactFlash 56K analog modem
BIL-GPS	CompactFlash GPS-module
DCF-660W	CompactFlash WLAN adaptor by D-Link
MHPower	Zaurus car adaptor by Serial IO
ZHost	Zaurus USB host cable
ZXGACF	I/O-Data XGA-card in CF format. With ZXGACF it's possible to present up to SVGA-images with the Zaurus. Includes an I/R remote control in creditcard size.

Declaration of conformity

The company

///TRIssoft
Fischer & Stephan OHG
Rathausplatz 4

D - 30966 Hemmingen

explains in sole liability, that the product

SHARP SL-C1000 / SL-C3000 / SL-C3100 / SL-C3200

which is referred to in this declaration, conforms to the following norms and directives:

EMV-Richtlinie 89/336/EWG, modified by RL 92/31/EWG and RL 93/68/EWG.

EN 61000-6-3	EN 55022: 1998+A1 2000 EN 55014 EN 61000-3-2 EN 61000-3-3	Funkstöreigenschaften diskont. Störungen Oberschwingungen Flicker
EN 61000-6-1	EN 55024: 1998+A1: 2001 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11	Störfestigkeitseigenschaften ESD HF-Feld Burst Surge HF-Injekt. Magnetfeld Dips + Variation

We keep the required documentation ready for insight.

Hemmingen, den 5.4.2006

Marc Stephan + Robert Fischer

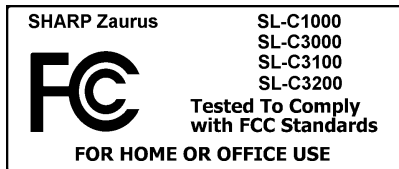
Notes about the operational environment:

The forementioned norms define limiting values for the appliance in living, working and business areas, whereby the usage of the device is designed for these areas.

All these areas of appliance are connected to the public low voltage supply. The usage in an environment with a stronger electromagnetic disturbance, as, for instance, a typically industrial environment, can lead to problems with an insufficient interference resistance of the product.

In the USA:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



Responsible party:

StreamlineCPUs
26406 79th Dr. East
Myakka City, FL 34251

WARNING - FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Environmental notice / Recycling

Notice according to the battery directive (Batterieverordnung)

The SHARP Zaurus comes with a Lilon battery.

For users in Germany:

1. Spent batteries can be returned free of charge at the point of sale or in its immediate proximity.
2. The commercial end-user is legally obliged to return spent batteries.

More information is available at "Stiftung Gemeinsames Rücknahmesystem Batterien" www.grs-batterien.de.

Outside Germany please contact your local authorities for disposal or recycling information. In general all old batteries can be returned to TRIssoft (with free shipping of course).

Notice according to the WEEE directive (Elektronikgerätegesetz)



Product : SHARP Zaurus SL-C1000/3000/3100

Manufacturer: TRIssoft OHG, Rathausplatz 4, D-30966 Hemmingen

Manufacturer ID (WEEE-ID) : DE 46729290



