

ELSA ECOMO™ 340

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Aachen, August 2000

Preface

Thank you for placing your trust in this product.

With the *ELSA ECOMO 340* you have selected one of ELSA's high-end monitors. ELSA products are subject to the highest of standards in production and quality control which are the foundation for consistently high product quality. This monitor was especially designed for the demands of professional users, and distinguishes itself with a high degree of reliability.

This documentation was compiled by several members of our staff from a variety of departments in order to ensure you the best possible support when using your ELSA product.

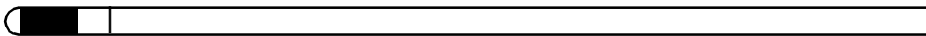
Further information on the Internet at 'www.elsa.com'

Our online services 'www.elsa.com' are available to you around the clock should you have any queries regarding your *ELSA ECOMO 340* or require any further support.

Our KnowledgeBase can be found at 'www.elsa.com/support'. In the 'Support' file section under 'Know-How', you can find answers to frequently asked questions (FAQs). Current drivers, firmware, tools and manuals can be downloaded at any time.

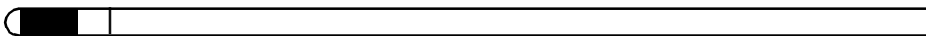
The KnowledgeBase can also be found on the CD.





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1

Introduction

This chapter provides you with important operational advice and general information about your new LCD monitor.

The following lists several of the advantages of this LCD monitor. You will uncover the other advantages yourself when you actually use the monitor.

- In comparison to regular monitors, its low radiation and reduced flicker characteristics significantly minimizes adverse stress to your health.
- LCD monitors are light and very compact, making them easy to transport.
- LCD monitors do not consume a lot of energy: this is good for your electric bill as well as for the environment!
- The specially designed housing is both pretty and ergonomic.
- In operation, LCD monitors are not that much different from regular monitors and can be used much in the same way. You do not need to install any extra hardware. The device is plug&play.

1.1

Package contents

Please ensure that the delivery is complete. When opening the package, please check that the following components are included:

- LCD monitor with stand
- *ECOMO*ware-CD with drivers and help programs
- User's Guide
- Power supply cable

Please contact your dealer if any part is missing or damaged.

ELSA reserves the right to make changes to the package contents without prior notice.



Please save the monitor's carton and packing material for future storage or shipping purposes. Be sure to store the monitor in accordance with the safety marks on the carton and the ambient conditions described in this manual (temperature, humidity).

1.2

Setup and operation

Please keep the following in mind when setting up and using the monitor:

- To avoid straining your eyes, do not place the monitor in front of a bright background or where sunlight or other light sources shine directly onto the monitor. To ensure the best ergonomic position, the monitor should be below eye-level, if possible.
- Do not cover the monitor's air vents. Make sure that there is sufficient ventilation so that heat from the monitor can properly dissipate.
- Avoid exposing the monitor to damp and dust as this can cause fire or electric shock hazard.
- Ensure that neither the monitor, nor any other heavy item is placed on the power supply cord. A damaged power supply cord can cause fire or short circuits.
- When transporting the monitor, handle it with care.
- Do not shake or scratch the monitor because it is fragile and sensitive.

1.3

The proper care for your screen

The surface of the monitor panel features an antireflective coating. Never touch the surface of the panel with rough, sharp or pointed objects such as screwdrivers or ballpoint pens to prevent damage to the coating.

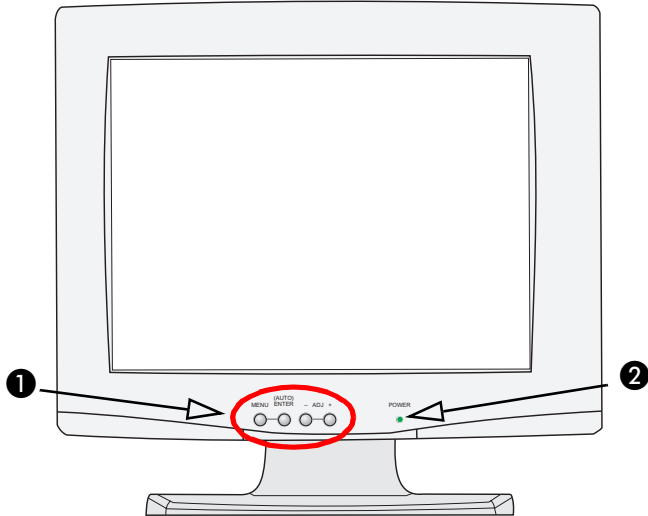
To clean the panel, use a mild detergent such as normal hand soap. Use a soft cotton cloth to apply the detergent and to wipe the panel dry. Take care not to apply excessive pressure, as small particles of dust on the panel might otherwise scratch the surface.



Remove the power plug from the socket before cleaning the monitor. Never use abrasive cleansers, scrubbing sponges, or solvents such as alcohol or lighter fluid. Never leave the monitor in contact with rubber or vinyl products for an extended time period.

2 Aspects of your monitor

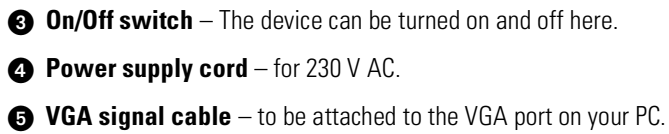
2.1 Front view



- ❶ **Function buttons** – these 4 buttons are used to operate the on-screen display (OSD). The on-screen display is used to input monitor settings. For a detailed description of the screen menu, please see chapter 'Monitor settings' on page 13.
- ❷ The **signal light** provides information on the monitor's current operating status:

green	The monitor is switched on and works in the normal mode .
amber	The monitor is in the power saver mode . The monitor will “wake up” and return to normal mode at the next key-stroke or movement of the mouse.

Back view



3 Installation

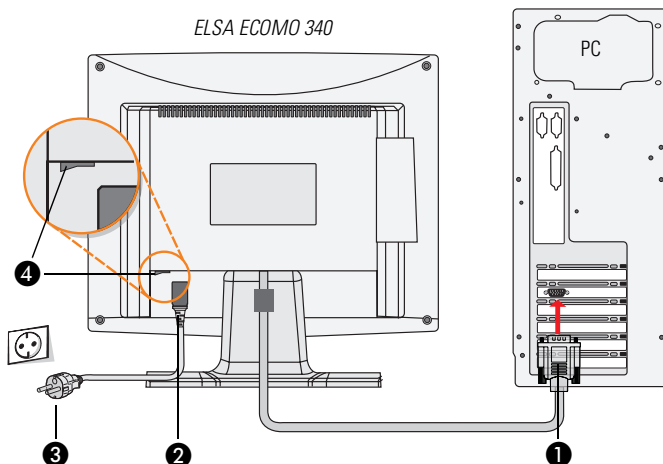
The installation of the *ELSA ECOMO 340* is a two-part process:

- the connection of the LCD monitor to your PC
- the installation of the drivers under Windows

3.1 Connecting the LCD monitor



When removing connector cables from your PC, always pull on the plug rather than on the cable to prevent damage to the cable.



- ① Make sure that your computer is switched off.
- ② Connect the monitor to the computer. You can connect the *ELSA ECOMO 340* to any regular VGA port using the VGA signal cable ①. Secure the connector to the PC.
- ③ Connect the end of the power cord ② to the connection at the back of the monitor and then plug the cord into the outlet ③.
- ④ Switch on the monitor at the power switch ④.
- ⑤ Switch the computer on.

3.2 The installation of the drivers under Windows

The first time you boot your computer with the new monitor, Windows (versions 95, 98 or 2000) will recognize the presence of new hardware and will launch the hardware wizard. The use of the hardware wizard is very similar in all Windows versions.

Most of the dialog boxes displayed by the hardware wizard can be acknowledged with **OK**, **Next** or **Finish**.

Be sure, however, to select the *ELSA ECOMO 340* from the *ECOMOware* CD as the device to be installed. If the hardware wizard doesn't suggest the *ELSA ECOMO 340* as an installation option, help it along by having it search the 'drivers' folder of the *ECOMOware* CD for drivers.

Once the hardware wizard has successfully completed the installation, please restart your PC. Your *ELSA ECOMO 340* is now ready!

For further information on using the hardware wizard, please refer to your Windows manual.



4

Monitor settings

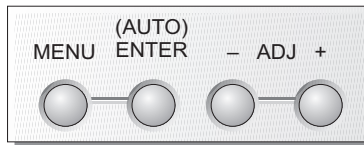
The on-screen display (OSD) of the *ELSA ECOMO 340* is used to input settings. This chapter contains all the information that you will need regarding the on-screen display.

The next section describes how to open and use the OSD menu. Finally, you will be given a three-step instruction about how to optimally set your screen. A description of all OSD menu functions is given at the end of the chapter.

4.1

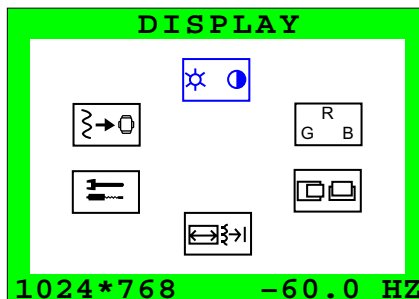
Opening and using the OSD menu

The function buttons



Opening the OSD menu

The OSD main menu is opened by pressing the **MENU** button. The display contains graphical elements next to text information. The first line shows the current selection, i.e. the active function. The last line shows the set resolution and the refresh rate.



The monitor is delivered with English as the menu language by default. You can easily change the language. The following pages under 'Setting the language of the OSD menu' provide instructions about how to change the language.

Moving and selecting in the menus

One of the symbols is displayed in blue. The current selection is displayed in this symbol. Using the buttons **ADJ +** and **ADJ –** you can move the selection from right to left. Pressing the **ENTER** button confirms the current setting and opens the corresponding function.

Changing values

Two examples of values would be brightness and contrast.

To change this value, select its designation (in this case the word 'BRIGHTNESS') and select **ENTER**. Its designation is now displayed in red.

The red color indicates that you can now change its value. Using the **ADJ +** button you increase its value and decrease it with the **ADJ –** button. When you are satisfied with the setting, press **ENTER**.

Exiting the OSD menu

The OSD menu is closed using the **MENU** button. All changed values are saved.

4.2


When you turn the monitor on for the first time

The screen can be optimally set with just a few adjustments. The following two sections provide all the necessary information.

4.2.1

Setting the language of the OSD menu



The *ELSA ECOMO 340* comes with the OSD menu in English by default. You can change the language as follows:

- ① Open the OSD menu using the **MENU** button, select the **Control** function using both **ADJ** buttons  and press **ENTER**.
- ② In the **Control** menu, select the **Language** point and select the desired language from the list. Confirm by pressing **ENTER**.







Now the OSD menu appears in the desired language.

4.2.2 Three steps to an optimal picture

Every screen must be adjusted to the graphics board with which it is connected. You also have to adjust brightness and contrast to be able to work more comfortably. For the *ELSA ECOMO 340* this goes quite quickly—it only takes three steps in order to achieve an optimal picture:

- ① **Auto configuration**
In the OSD menu, select its symbol . If you are not in the OSD menu, the function can be accessed by simply pressing the **AUTO** button.
- ② **Brightness**
Brightness can be found in the **Display** menu item under **MENU** . Select **Brightness** and activate the control by pressing **ENTER**. Use the **ADJ +** and **ADJ -** buttons to adjust the brightness. Confirm your changes by pressing **ENTER**.
- ③ **Contrast**
The control for contrast is also found in the **Display** menu. Set the desired contrast and confirm your changes with **ENTER** and close the OSD menu by pressing **MENU**.

4.3 OSD functions in detail

Symbol	Meaning	Explanation
	Display	Setting brightness and contrast
	Color selection mode	Setting color temperature, options for color correction
	Position	Determines the position of the picture on the screen
	Screen	Expanded settings for screen display
	Control	Position of the OSD, restoring the factory settings and changing the menu language
	Auto configuration	Automatically adjusts the monitor to the graphics board

4.3.1

Brightness and contrast



The brightness and contrast are adjusted in the **Display** menu. The values are displayed graphically as bars and can be changed using **ADJ +** and **ADJ -**.

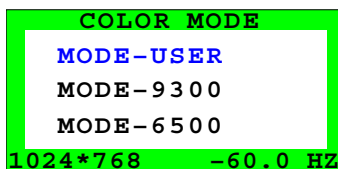


4.3.2

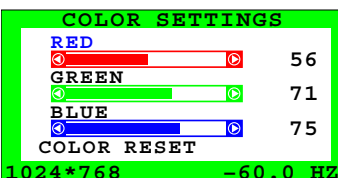
Color space and color correction



The color space is set in the **Color selection mode** menu. You can select from the following color temperatures 6500 K and 9300 K as well as a user-defined mode (designated as **Color mode** in the menu). The color temperatures are related to the color white.



In the user-defined mode (**Color**) the display can be adjusted to the three primary colors red, green and blue. Changing the color controller has the effect that the respective colors are displayed more intensely or not as intensely.



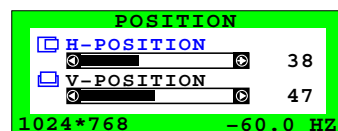
Using the **Color reset** function, you can restore the factory settings.

4.3.3

Position



The horizontal and vertical position is set in the **Position** menu. In most cases, this is taken care of automatically by the **Auto configuration** function.



4.3.4

Expanded screen settings



In the **Picture** menu, you can set the pixel rate (called **Clock** in the menu) and **Phase**. Both values are normally determined by **Auto configuration**. In some cases, manu-ally correcting both values leads to a better picture.

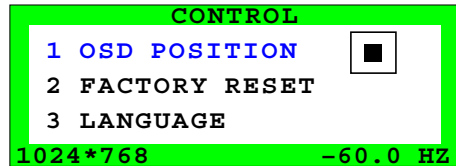


4.3.5

Other



There are three functions in the **Control** menu. In **OSD Position**, you can change the position of the OSD menu on the screen.



Using **Factory reset**, you can restore the original settings.

In **Language**, you can set the OSD menu to another language.

4.3.6

Auto configuration



Using the **Auto configuration** function, you can automatically set the parameters for pixel rate and phase as well as the horizontal and vertical position.

During the automatic configuration process, the screen will flicker and become fuzzy. The process takes less than 5 seconds. When complete, the picture should be positioned correctly and be clear and stable.

Outside of the menu, **Auto configuration** can be started by pressing the **AUTO** button.

5 Advice and help


5.1 The monitor does not respond when you start the computer

- Check whether the monitor is switched on (the light on the front side should be green). Otherwise check the connection to the power supply network.
- If the signal light is orange: the monitor is presumably in the power saver mode. Move the mouse or strike a key to restore the monitor to normal operation.
- Switch the monitor off and check whether the power supply of the monitor and the signal cable are properly connected.
- Make sure that the OSD menu can be opened. Check the contrast and brightness settings.
- Check whether the BIOS and drivers of the graphics board are the current versions.

5.2 The monitor does not properly show individual pixels

- Individual pixels may be defective for technical reasons related to the production of the panel. For the *ELSA ECOMO 340* the following number of defective pixels are within the tolerance range for a Class A panel:
 - max. 9 subpixels (red, green, black or blue)
 - max. 3 full pixels (white)

5.3 The picture is too dark

- Correct brightness and contrast in the on-screen display with .

5.4 The monitor displays colors incorrectly

- Check the connections of the signal cable.

5.5

The picture isn't sharp

- Press the **AUTO** button to perform an auto configuration.
- If the edges of letters and graphics appear softer than expected but the sharpness is already at its maximum level, then this is due to a technical characteristic typical of LCD displays. All LCD displays have a fixed number of pixels—the *ELSA ECOMO 340* has a resolution of 1024 columns and 768 rows (= 786,432 physical pixels). The display achieves its maximum picture quality when using this “natural” resolution. Unlike CRT monitors, LCD monitors can only simulate other resolutions. This is accomplished using interpolation methods that result in a loss of sharpness.

5.6

The display of circles and squares is distorted

- If possible, set your graphics board to a resolution of 1024 x 768 pixels. Lower resolutions should have a horizontal to vertical ratio of 4:3.
- In other resolutions you can also try to improve the display with the on-screen display functions (see also 'OSD functions in detail' on page 15).

5.7

How can I change the resolution?

- The screen resolution is set via the graphics board. The monitor recognizes the signal and adjusts itself accordingly.

5.8

How can I change the refresh rate?

- Unlike tube monitors, there is no visible advantage to using a higher refresh rate with an LCD monitor. LCD panels display all pixels simultaneously, resulting in a stable picture. They are thus flicker-free, even at low refresh rates. A refresh rate of only 60 Hz is recommended for LCD monitors.

5.9

Does the monitor also work under Linux and MacOS?

- Yes. Connect computer and display, for more information see 'Connecting the LCD monitor' on page 11. Certain computers (especially older Apple Macintosh) require an adapter.

5.10

Error message: "No Signal"

- Is the power switch on?
- Is your PC running in the normal mode? Several PCs turn off the signal to the monitor while in energy saving mode.
- Make sure that the video cable is connected correctly to the PC.

5.11

Error message: "Input Mode not supported"

- The graphics signal sent to the monitor by the PC exceeds the permissible range. This usually happens when you previously had another monitor connected to this PC with a higher resolution or a higher refresh rate. Try to set the graphics resolution and refresh rate in the PC to the permissible values. You may have to reconnect the other monitor to the PC in order to do this.

6

Technical data

6.1

Performance data and specifications

LCD monitor	Monitor	15.1"/38.4 cm
	Display area	304.1 mm x 228.1 mm
	Panel	Active matrix
	Resolution	1024 x 768 (XGA)
	Pixel pitch	0.297 mm
	Color depth	256 per color, total 16.7 million colors (TrueColor)
	Face finish	anti-reflective, antistatic coating
	Viewing angle	approx. 120° horizontal, 100° vertical
Brightness	Color temperature	6500 K, 9300 K and custom
Input signal	Video	200cd/m ² for full white video signal, contrast ratio 350:1 (typ.)
	Synchronization	0.7 V, 75Ω, RGB, analog TTL level, separate horizontal/vertical synchronization
Frequency range	Horizontal: 31.5–60 kHz, vertical: 56–75 Hz	
Input connector	Attached video cable with VGA D-sub connector, 15 pin	
Power supply	AC 96–264 V ± 10 %, 50–60 Hz	
Power consumption	Normal operation	max. 35 W
Operating environment	Temperature	5°–40° C, (storage: -20°–60° C)
	Humidity	20–85 % rel. humidity, non-condensing
Housing	398 x 380 x 195 mm (width x height x depth)	
Weight	4.8 kg, without connector cable	
Tilt base	Tilt angle	0°– +20°
Approvals/certifications	Safety (CE)	EN 60950 (TÜV-GS), UL 1950 (UL), EIAJ
	EMV (CE/FCC)	FCC class B, VCCI class B
	Others	TCO '99, VESA DPMS, EPA Energy Star ¹⁾ , MPR-II, ISO 9241-3, SEMKO, DEMKO, FEMKO, NEMKO

¹⁾ As an Energy Star Partner, ELSA has determined that this product meets the Energy Star guidelines for energy efficiency.

6.2

Applicable video synchronizations

The following table lists the display modes supported by this monitor for optimal picture display. If other video modes are used, it is possible that no picture will be displayed or the picture quality will suffer.

VESA modes				
Mode	Resolution and display refresh rate	Horizontal nominal frequency ± 0.5 kHz	Vertical nominal frequency ± 1 Hz	Nominal pixel clock (MHz)
DOS	720x400 @ 70 Hz	31.5	70	28.322
VGA	640x480 @ 60 Hz	31.5	60	25.175
	640x480 @ 72 Hz	37.9	72	31.500
	640x480 @ 75 Hz	37.5	75	31.500
SVGA	800x600 @ 56 Hz	35.2	56	36.000
	800x600 @ 60 Hz	37.9	60	40.000
	800x600 @ 72 Hz	48.1	72	50.000
	800x600 @ 75 Hz	46.9	75	49.500
XGA	1024x768 @ 60 Hz	48.4	60	65.000
	1024x768 @ 70 Hz	56.5	70	75.000
	1024x768 @ 75 Hz	60.0	75	78.750

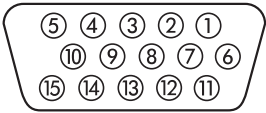
IBM modes					
Mode	Resolution and display refresh rate	Total	Horizontal nominal frequency ± 0.5 kHz	Vertical nominal frequency ± 1 Hz	Nominal pixel clock (MHz)
DOS	720x400 @ 70 Hz	900 x 449	31.5	70	28.322
CGA	640x400 @ 70 Hz	800 x 449	31.5	70	25.175
EGA	640x350 @ 70 Hz	800 x 449	31.5	70	25.175
	720x350 @ 70 Hz	800 x 449	31.5	70	28.322
XGA	1024x768 @ 72 Hz	1304 x 798	57.5	72	75.000

MAC modes

Mode	Resolution and display refresh rate	Total	Horizontal nominal frequency ± 0.5 kHz	Vertical nominal frequency ± 1 Hz	Nominal pixel clock (MHz)
VGA	640x480 @ 60 Hz	800 x 525	31.5	60	25.175
	640x480 @ 67 Hz	864 x 525	35.0	67	30.240
SVGA	832x624 @ 75 Hz	1152 x 667	50.0	75	57.284
XGA	1024x768 @ 60 Hz	1312 x 813	49.0	60	64.000
	1024x768 @ 75 Hz	1328 x 804	60.0	75	80.000

6.3

The VGA D-shell socket



Pin assignments

Pin	Signal	Pin	Signal
1	red	9	+5V
2	green	10	Sync ground
3	blue	11	ground
4	ground	12	bi-directional data (SDA, DDC1/2B)
5	DDC ground	13	horizontal synchronization
6	red ground	14	vertical synchronization
7	green ground	15	Data clocking rate (SCL, DDC2B)
8	blue ground		

The *ELSA ECOMO 340* produces analog signals according to the RS-170 regulation. Synchronization information is transmitted separately.

7 Appendix

7.1 TCO '99



Congratulations! You have just purchased a TCO '99 approved and labeled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

The complete criteria document may be ordered from TCO:

- TCO Development
114 94 Stockholm
Sweden
Fax: +46 8 782 92 07
E-mail: development@tco.se

7.2 CE conformity and FCC radiation standard

CE

This equipment has been tested and found to comply with the limits of the European Council Directive on the approximation of the laws of the member states relating to electromagnetic compatibility (89/336/EEC) according to EN 55022 class B.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commission (FCC) Rules.



Caution to the user: The Federal Communications Commission warns the user that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

We would be pleased to supply additional information on the CE and FCC if required.

7.3

ELSA ServiceDirect for *ELSA ECOMO* monitors**3-year warranty including ELSA-Onsite**

As of the purchase date, ELSA grants a three-year warranty on *ELSA ECOMO* monitors including ELSA-ServiceDirect. ELSA strives to offer its customers top product quality with its extensive quality assurance measures. If, however, the customer makes a complaint, this service program guarantees perfect support and repair procedures to minimize any inconvenience. As well as repairs carried out free of charge, the following ServiceDirect services are offered within the extended scope of the warranty.

ELSA-Onsite: 3 years of on-site exchange service for ELSA monitors—free of charge

You can avail of the numerous advantages of our onsite exchange services for *ELSA ECOMO* monitors throughout Europe. If you discover a fault with your monitor, you first contact our support team. If repairs are required during the three-year guarantee period, you will receive a loan monitor free of charge¹. Your repaired monitor will be returned to you as soon as possible.

Your direct contact partner at ELSA-ServiceDirect

As an ELSA customer, you will receive support and advice from ELSA's customer service at all stages of the warranty services being carried out.

The ELSA Support hotline is the first number to dial if you discover a malfunction or fault on your monitor.

ELSA monitor support hotline
+49-(0)241-606-6135

1. Provided that the complete documentation reaches the ELSA support team by 11.00 a.m. Please note that warranty services are only granted for faults which are covered within the framework of our warranty conditions, valid for the Federal Republic of Germany.

If the ELSA service cannot find any fault in the unit claimed to be defective, we will invoice you for DM 200 plus tax to cover inspection costs and replacement of the unit.

7.4 Warranty conditions

The ELSA AG warranty, valid as of June 01, 1998, is given to purchasers of ELSA products in addition to the warranty conditions provided by law and in accordance with the following conditions:

1 Warranty coverage

- a) The warranty covers the equipment delivered and all its parts. Parts will, at our sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Also we reserve the right to replace the defective product by a successor product or repay the original purchase price to the buyer in exchange to the defective product. Operating manuals and possibly supplied software are excluded from the warranty.
- b) Material and service charges shall be covered by us, but not shipping and handling costs involved in transport from the buyer to the service station and/or to us.
- c) Replaced parts become property of ELSA.
- d) ELSA are authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2 Warranty period

The warranty period for ELSA products is six years. Excepted from this warranty period are ELSA monitors and ELSA videoconferencing systems with a warranty period of 3 years. This period begins at the day of delivery from the ELSA dealer. Warranty services do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty procedure

- a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.
- b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the transport company representative and ELSA should be informed immediately. On discovery of damage which is not externally visible, the transport company and ELSA are to be immediately informed in writing, at the latest within 7 days of delivery.
- c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.
- d) Warranty claims are only valid if the original purchase receipt is returned with the device.

4 Suspension of the warranty

All warranty claims will be deemed invalid

- a) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),
- b) if the device was stored or operated under conditions not in compliance with the technical specifications,
- c) if the damage occurred due to incorrect handling—especially to non-observance of the system description and the operating instructions—,

- d) if the device was opened, repaired or modified by persons not authorized by ELSA,
- e) if the device shows any kind of mechanical damage,
- f) if in the case of an ELSA Monitor, damage to the cathode ray tube (CRT) has been caused especially by mechanical load (e.g. from shock to the pitch mask assembly or damage to the glass tube), by strong magnetic fields near the CRT (colored dots on the screen), or through the permanent display of an unchanging image (phosphor burnt),
- g) if, and in as far as, the luminance of the TFT panel backlighting gradually decreases with time, or
- h) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable software, hardware, installation or operation, ELSA reserves the right to charge the purchaser for the resulting testing costs.

6 Additional regulations

- a) The above conditions define the complete scope of ELSA's legal liability.
- b) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.
- c) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.
- d) ELSA is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.
- e) In the case that the intentional or culpable negligence of ELSA employees has caused a loss of data, ELSA will be liable for those costs typical to the recovery of data where periodic security data back-ups have been made.
- f) The warranty is valid only for the first purchaser and is not transferable.
- g) The court of jurisdiction is located in Aachen, Germany, in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, ELSA's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.
- h) The law of the Federal Republic of Germany is applicable. UN commercial law does not apply to dealings between ELSA and the purchaser.