



Andromeda

User Manual

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Important Safety Information

Please read all of the following instructions before setting up your Andromeda. Failure to follow these instructions properly could lead to physical injury.

- The Andromeda must be used on a flat, level table. Never attempt to use it on a sloping surface or on a table that cannot accommodate the full footprint of the unit.
- The front of the Andromeda must be placed at least 10cms or 4 inches back from the edge of the table. This is to prevent the unit from tipping forward if excessive weight is placed on the reading table when fully extended. There are warning labels placed on the reading table with arrows indicating the maximum overhang permissible when the table is fully extended.
- Both X/Y table and Screen contain moving parts. Please take care with folding back the screen and operating the X/Y table. If fingers get caught, injury might occur. If you feel you cannot operate the unit safely, please seek advice or contact your supplier.
- Never lift the Andromeda by the reading table.
- To prevent fire or electric shock please ensure this unit is kept away from all liquids. Do not use the unit in excessively damp or wet areas and do not expose it to rain, snow, etc.
- Before cleaning the unit, please ensure that it is unplugged. Use a slightly damp cloth to clean the exterior. Do NOT use solvents or aerosol cleaners.
- This unit should never be opened. It contains hazardous voltages. User servicing is confined to changing the lamps. Unauthorized servicing will invalidate your warranty. If you encounter any problems with this unit please contact your local dealer.
- When changing the lamps, please follow the instructions carefully.
- While we have made every effort to minimize the weight of this unit, if you feel you cannot safely lift it, seek help when moving it.
- Before moving the unit, please unplug all connectors from the back panel, ensure the screen is folded back and the reading table is parked home with the brakes applied.
- Use only with the power adapter provided.

Table of Contents

Important Safety Information	3
Equipment Supplied.....	5
Using the Andromeda	5
1. Setting up	5
2. Folding down and storing	6
3. The Front Panel	7
4. Basic Functions.....	8
4A. Reading Table.....	8
4B. Power button.....	9
4C. Zooming in and out.....	9
4D. Picture and Reading Modes	9
4E. Brightness Control	10
5. The Configuration Menu (Advanced Users).....	10
5A. The Video Controls menu	10
5B. The Button Functions menu.....	12
5C. The Focus Mode menu.....	13
5D. Factory Defaults.....	13
6. Advanced Functions.....	14
6A. Overview	14
6B Line Blank	14
6C. Colors (User Defined)	15
6D. VGA (Computer Video Input).....	16
6E. External Camera	16
6F Freeze	16
6G Disabled.....	17
7. External Camera	17
8. Computer Video Input (“VGA” mode).....	17
9. Changing the lamps	19
Specifications	20
Warranty	21

Equipment Supplied.

Check that the items below have been supplied. If you are missing any component please contact your dealer.

- Foam lined case for storage and transportation;
- Andromeda reading unit;
- Power adapter with mains cable;
- Monitor cable for connection to external computer;
- Foot pedal;
- User Manual.

Using the Andromeda

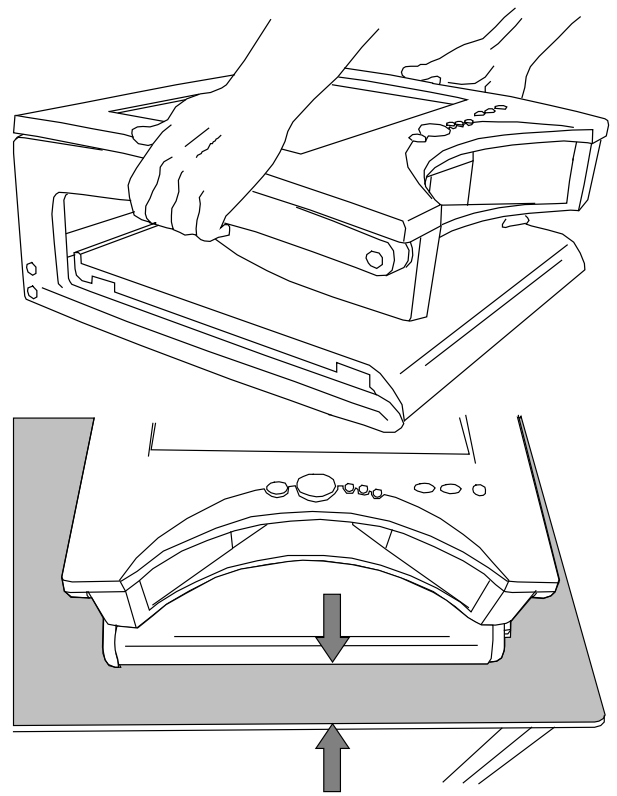
1. Setting up

Lift the Andromeda from its case and place it on a solid, level desk. Raise the screen upright.

Plug the power adapter into the mains using the lead provided and insert the other connector into the socket on the rear bulkhead of the Andromeda.

Ensure the unit is placed at least 10cms (4 inches) back from the edge of the desk. Sit in front of the unit.

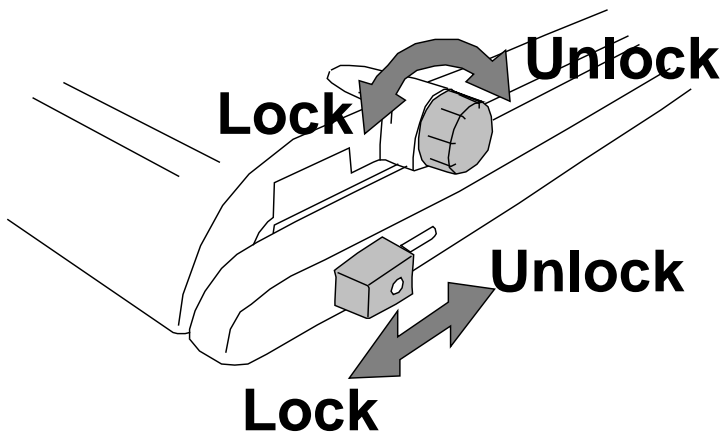
If you wish, you can connect the foot pedal into the socket on the back panel of the unit and place foot pedal on the



Min 10cm / 4 inches

floor under your desk. The pedal offers an alternative method of performing some functions and may not always be required.

Press the red button on the right of the front panel to turn the Andromeda on. The Andromeda will beep to indicate power-on and the lamps will light. After a few seconds, the image will appear on the screen.



Release the brake on the reading table and pull the table out towards you. If you push the table back in again, you will see that the table locks home only when located centrally between its legs. Place some text on the table and you should see it on the screen.

2. Folding down and storing

Press the red button on the front panel to turn off the unit.

Unplug the foot pedal and any other cables from the rear of the unit. Unplug the power adapter from the Andromeda and also from the wall socket.

Remove all material from the reading table, park it centrally between its legs and apply the brakes.

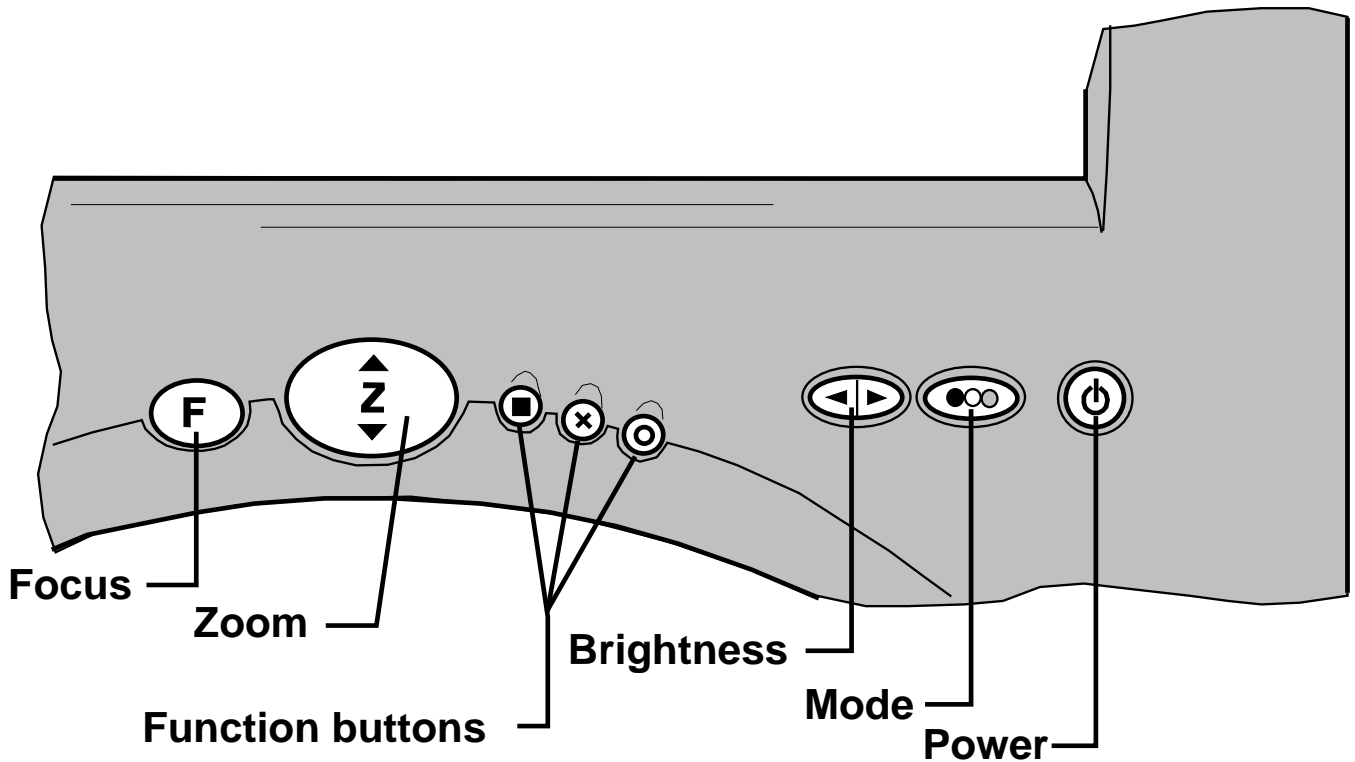
Stow the power supply and other cables in the base of the carry case.

Fold the screen back flat and lift the Andromeda into the case. Never fold the screen back with an object on the reading table or when there are cables attached to the rear of the unit.


Never place any object on the screen. The screen can be scratched or broken easily and damage to it is not covered under warranty.







Close the lid of the case securely before transporting the Andromeda.

3. The Front Panel



The front panel has eight buttons that control the various function of the Andromeda. Throughout this manual the buttons will be referred to with symbols. The exact function of each button may vary depending on the way the Andromeda is configured and its current mode of operation.

Symbol	Name	Basic function
	Focus	Press to re-focus the camera if in "press to focus mode" (see 5C: focus menu)
	Shifted button	Press and hold the  button and press the button referred to after the "+", in a similar manner to the shift button on a computer keyboard. Shifted buttons allow extended functionality depending on the mode of operation.
	Zoom	Press the top of this button to zoom in and increase magnification. Press the bottom of this button to zoom out and reduce magnification.

Symbol	Name	Basic function
	Function button 1	The user can decide the function of these buttons by using the Configuration Menu described later.
	Function button 2	
	Function button 3	
	Footswitch	Although not on the front panel, the footswitch acts as an additional function button and is programmed in the same way as the other function buttons.
	Brightness	Pressing this button on the right or left increases and decreases the brightness or contrast of the image.
	Mode	<p>The mode button switches between picture mode (for viewing pictures and images) and reading modes (high contrast mode). A single press will switch from picture mode to the last used reading mode (positive or reversed) or vice versa. A subsequent press within 2 seconds will switch to the other reading mode.</p> <p>Pressing and holding this button for 2 seconds will bring up the Configuration Menu, described in Section 5 below.</p>

4. Basic Functions

This section will describe how to use the basic features of the Andromeda to magnify text and images. Follow the instructions in section 1 – **Setting Up** before you begin using the unit.

4A. Reading Table

Unlock the table and place the material you want to read on it. The table should slide easily in all directions. After transport, the bearing carriers in the table slides may have moved, tending to restrict the extent of the movement – this is normal. To correct this, extend the table in all directions to its full extent, applying sufficient force to re-align the bearing carriers.

The brakes on the table can be used to restrict the table's movement:

- The rotary knob locks the side-to-side movement.
- The sliding knob locks the in-out movement.

Both brakes operate independently and you may find that locking one or other allows you to scan a line of text or a column of numbers easily.

Locking both brakes facilitates writing under the unit.

4B. Power button

Press the power button to turn on the unit. Pressing the power button again (after the start-up screen has cleared) will turn off the unit. The Andromeda stores its settings only when it is powered off using the power button. If the power is interrupted, either by a mains failure or by unplugging the power, any changes made during the session are lost.

4C. Zooming in and out


Press the upper half of the zoom control to enlarge the magnification. The button can be held until the desired magnification is reached. When the maximum magnification is reached the key click will change to a beep and zooming will stop.

Pressing the lower half of the zoom control will reduce the magnification in a similar manner.

4D. Picture and Reading Modes

Picture mode offers a full color image suitable for viewing photographs and other images or for viewing text without enhancement.

There are two **Reading modes**, positive and negative; sometimes referred to as normal and reversed. The positive mode enhances the contrast and removes grays. Negative mode enhances the contrast and also reverses the ink and paper making the letters white and the paper black.


The Mode button  is used to select the desired image mode. Repeated pressing of the mode button will switch from picture mode to positive to negative and back to picture mode. Select the reading mode you find easiest to use.





If you allow a 2 to 3 second interval between presses of the mode button, Andromeda will switch from your current reading mode to picture mode and back to your last used reading mode. This sounds complicated, but in normal use, you will generally switch from your chosen reading mode to picture mode to view an image, then you will switch back to reading mode to continue reading.

4E. Brightness Control

You can press either side of the brightness control at any time to adjust the image. You may find that details in some photographs will appear clearer at different brightness settings. In reading mode, lowering the brightness control will bring in the grain of the paper if desired.

5. The Configuration Menu (Advanced Users)

Press and hold the mode button  for 2 seconds and the configuration menu will pop up on the screen. **Note that the mode will change upon pressing the button but reverts back to the previous mode when the menu pops up.**

	MAIN MENU
	VIDEO CONTROLS
	BUTTON FUNCTIONS
	FOCUS MODE
	FACTORY DEFAULTS


Use the Zoom button  to move the highlight up and down.

Press the Focus button  to proceed when you have highlighted the desired item.

You can press the Mode button  at any time to exit the menu.


The various menu choices are explained below.



5A. The Video Controls menu

 The Video Controls menu appears as across when you are using the Andromeda's internal camera. The menu may have different controls available when

	VIDEO CONTROLS
	BACKLIGHT
	BRIGHTNESS
	CONTRAST
	SATURATION
	IRIS

using external video sources, these controls are also explained below.

Selecting a control item by pressing  will clear the menu and bring up an indicator at the bottom of the screen. You can then use either the

Zoom or Brightness buttons to adjust the setting. Press  or  when you are finished adjusting the control to bring you back to the full Video Controls menu.



Backlight: This controls the intensity of the lamps behind the display. The lamps can be dimmed if the image is causing glare or for some eye conditions such as photophobia. The setting of this control affects all viewing modes including computer video input (VGA mode).



Brightness: This control affects the overall level of light coming from the image. The brightness settings for picture mode and reading mode are independent and stored separately.



Contrast: The contrast control increases the difference between bright and dark areas, making bright areas brighter and dark areas darker. The Andromeda retains independent settings for picture and reading modes.



Saturation: This controls the intensity of color displayed in picture mode. Reducing the saturation to minimum will result in a monochrome image.



Iris: The iris controls the amount of light entering the camera. Generally, this control should be left as supplied but with bright external lighting it may be necessary to turn it down to avoid glare from bright paper. This control does not appear on the menu when using an external video source.



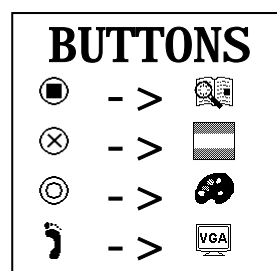
Phase: The phase control appears on the menu when displaying external computer video. It controls the alignment of the pixels from line to line. It must be adjusted so that any jitter, blurring or streaking is minimized. Advised input signal: 1024 x 768 @ 60Hz.



5B. The Button Functions menu

The three function buttons on the front panel and the footswitch can be programmed to perform one of six possible functions, or they can be disabled to prevent accidental changing of settings.



The Button Functions menu will list icons indicating the four controls and the icon indicating their current function. The icons mimic the legend on the function buttons, which due to their size, most users will be unable to see. The first line refers to the leftmost function button; the second to the middle; the third to the rightmost function button. The last line refers to the footswitch.



Select the button whose function you wish to

change by using  and then press .

You will be presented with a list of possible functions. Select the desired function and

press  to accept or  to exit and leave the button unchanged.



The choices available are described briefly

here. The functions are described fully in a later section of this manual.



Overview: Press once to zoom out and get an overview of your current position on the page. Press again to return to your previous zoom setting.



Lines | Blank: Brings up a line or shades out the screen to aid in the tracking of a line of text.



Colors: Allows the selection of “ink” and “paper” colors in reading mode.



VGA: Press to display external computer video.



Ext Camera: Press to display an external camera or other video source.



Freeze: Press to freeze the display.



Disabled: Pressing the function button has no effect.

5C. The Focus Mode menu



You can choose from three different methods to focus the Andromeda.

	FOCUS MODE
	PUSH FOCUS
	AUTOFOCUS
	MANUAL FOCUS



Push Focus: In this mode the camera will re-focus itself only when the Focus

button is pressed. If the height of the material under the camera is changed, it will be necessary to press the focus button again.



Autofocus: In this mode the camera constantly monitors the image and re-focuses automatically if necessary. This is the recommended mode to use for most applications.



Manual Focus: This mode is useful if you require an image that is slightly out of focus or you are looking at an awkward object that the camera will not focus on correctly. In this mode you must press

+ (Hold focus button down and press Zoom Up or Down) to set your desired focus.


5D. Factory Defaults



Selecting this menu item will restore all video settings, modes, colors and button functions to their factory settings. This option is provided in case you set the unit into a mode that you cannot remember how to undo. You will be prompted to press the middle function button on the front panel to reset the unit; pressing any other button will exit without altering the current settings.

PRESS ⊗ TO RESET

If, for some reason, you cannot see the menu to choose Factory Defaults then perform the following sequence of button presses:



- Power the unit off then on again. Wait for a few seconds to allow the start-up sequence to complete.
 - Press and hold the mode button  until the beep is heard.
 - Press Zoom-Up once.
 - Press Focus once.
 - Press the middle function button and the factory defaults should be restored.
-

6. Advanced Functions

It is possible to select and assign one of the advanced functions to the three function buttons on the front panel and to the footswitch that plugs into the back of the Andromeda. The functions are assigned by using the Button Functions option of the Configuration Menu described above in section 5B.

Please try out the available functions and then decide which ones suit your needs most.

6A. Overview

 The Overview function provides a method of locating your position on the page. Pressing the assigned function button will cause Andromeda to zoom out beyond its normal minimum zoom level to provide an overview of the area of the page you are currently viewing. A target symbol  will appear in the center of the screen indicating where you were looking on the page. Pressing any key will exit the overview mode and restore the previous magnification level.

If you wish, you can use the target to center a point on the page that you want to see magnified. Upon pressing a key to exit the overview mode, the Andromeda will zoom in on the targeted point. This could be used, for instance, to locate the line on a form where you need to sign.

6B Line / Blank



This mode can be used as a guide to tracking a line of text. It only operates in reading modes; disappearing when using the picture mode. There are two aids for tracking text: the line and blanking shutters.

The first press of the assigned function button will display a horizontal line in the current ink color about two-thirds of the way down the screen. You can use this line to underline the line of text you are reading by moving the table appropriately.

The second press of the function button will display the shutters. These dim the text at the top and bottom of the screen leaving an area in the center at full brightness. The distance between these shutters can be adjusted, as can the position of the center area on the screen. To

adjust the shutters, use **F** + [Function button] (i.e. press and hold the focus button and press the particular function button assigned as “Line | Blank”). The unit will beep to indicate that you are entering the shutter adjustment mode. You can use the Zoom button to widen or reduce the undimmed area. You can also use the brightness button to adjust where on the screen you want the undimmed area to appear. Pressing the function key will exit the adjustment mode. If you do not press a key for five seconds the Andromeda will automatically exit the adjustment mode anyway.

Ideally, you should set your desired magnification level then set the distance between the shutters to suit the size of text on the screen.


Pressing the function key a third time will clear the shutters, returning to full screen reading mode.

6C. Colors (User Defined)




Some users may benefit from setting the ink and paper to colors other than black and white. The Andromeda offers four of the most commonly used preset color options and one user-definable option where the ink and paper colors may each be chosen from any of eight fore- and background colors.

The color options are only available in reading mode. Pressing the assigned function button will cycle through the options available (including the user-defined option).

If none of the presets work for you (or if you wish to experiment) you can set the user-defined option by using  + [Function button] (i.e. press and hold the focus button and press the particular function button assigned as “Colors”). The unit will beep to indicate that you are entering the color selection mode. You can use the Zoom button and brightness button to set the ink and paper colors. Note that you cannot display the same color for ink and paper. Pressing the function key again will exit the adjustment mode. If you do not press a key for five seconds the Andromeda will automatically exit the selection mode anyway.


You will notice that the menu colors will follow the colors chosen for paper and ink.

6D. VGA (Computer Video Input)

 The Andromeda can display computer video and so act as a computer monitor. When a button is assigned to this function simply press once to display the computer video and press again to return to the internal camera. If no computer video is present, a message to this effect will be displayed on the screen and the Andromeda will display the internal camera instead.

Refer to Section 8 below for further details.

6E. External Camera


 This function operates in an identical manner to VGA above. With an external source of video connected, press the assigned button to toggle between internal and external cameras.

Refer to Section 7 below for further details.

6F Freeze



The freeze function works only with the internal camera. It freezes the image allowing you to study it without the object

present on the reading table. The  icon appears on the screen when the image is frozen. Pressing any key restores the live image again.

6G Disabled



Although not strictly a function, the function keys can be disabled by setting them to Disabled. This “function” is useful when the Andromeda has been configured for a child, where accidental pressing of function buttons could lead to confusion.

7. External Camera

The Andromeda can accept and display the image from an external video source. The source can be in NTSC, PAL or SECAM standards at 50 or 60Hz. The intended use was to display the image from a “blackboard” camera (i.e. a camera pointing at a distant image such as a classroom blackboard) but you can connect it to a video or DVD player or the video output from a TV (if available) and use the Andromeda as an additional monitor. The Andromeda does not however have any audio capabilities.

The details of the connector are available from your dealer. Ash Technologies intend to produce a blackboard camera for use with the Andromeda.

Refer to Sections 5B and 6E above to configure the Andromeda to display external video.

8. Computer Video Input (“VGA” mode)

The Andromeda will display many of the computer video standards at most common refresh rates. The maximum resolution that can be displayed is 1024 x 768 pixels; resolutions above this are not supported. Lower resolutions are expanded to fit the screen.

When displaying computer video, the Zoom button takes a different role: Zoom-Up and –Down will adjust the phase of the display. The phase affects how the pixels are sampled to fit to the display and, if set incorrectly will cause jitter, blurring or streaking.

F+Zoom-Up and **F**+Zoom-Down will move the image up and down on the screen. If the image distorts or disappears when adjusting this control, simply move back in the opposite direction to restore the image.

F+Brightness will shift the image sideways in a similar manner.

The settings of phase and position are stored for one particular mode of video input only. So for example, presume you normally use 800 x 600 video at 60Hz and you have adjusted the Andromeda to suit, then the settings will be saved for this mode and re-used each time you are displaying this particular mode. Assume you exit to a DOS screen and readjust either of the phase or position controls, then the phase and position settings for the new (DOS) mode overwrite those of the previously saved (800x600) mode. When you return to the 800 x 600 mode, the Andromeda will resort to its internal defaults for this mode.

Refer to Sections 5B and 6D above for details on how to configure the Andromeda for Computer Video mode.

9. Changing the lamps

If either of the lamps begins to dim or fails to start, they will need to be changed. You should replace both lamps at the same time to maintain a good image.

Before starting to replace the lamps you must unplug the power cord from the back of the unit.

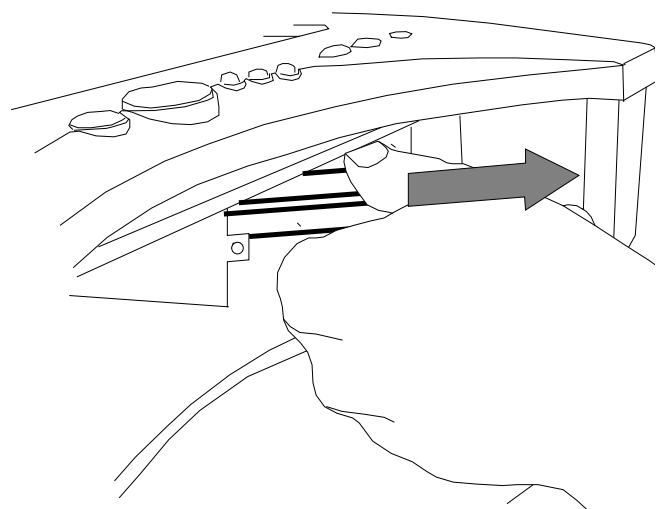
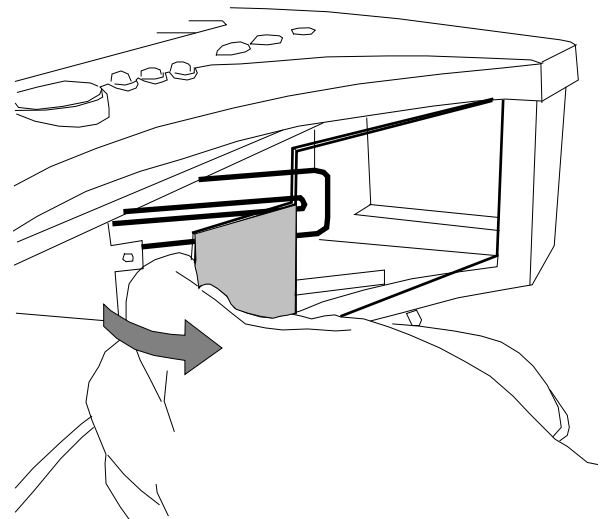
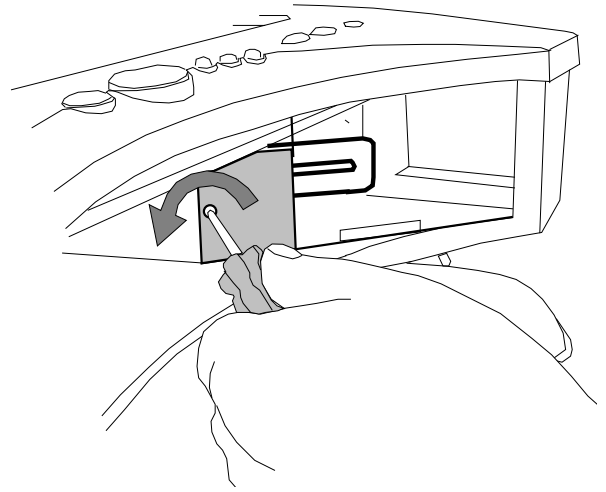
You will require a small crosshead screwdriver to unscrew the lamp covers. Refer to the diagrams across and follow the sequence of operations. The lamps should be removed from their sockets by pulling them in the direction of their length only. The lamps are made of glass, so be careful not to break them.

Replace the lamp with the same type and color temperature. The following two lamps are suitable replacements:

- **Osram Dulux S/E 7W/21-840**

The “840” indicates the color temperature which should be cool white to maintain color rendition.

To replace the lamps simply reverse the sequence of operations.



Specifications

Dimensions:	Table footprint: 45cm x 42cm (17.7" x 16.5") Folded height: 18.5cm (7.3") Upright height: 54cm (21") Height to screen center: 38cm (15") Weight: 9.8kg (21.5 pounds)
Power:	12V 3A from the power supply provided. Wide input voltage (100V to 240V, 50-60Hz)
Display:	15.1-inch diagonal Active Color Matrix TFT liquid crystal display (viewing area comparable to a 17 inch standard picture tube); 1024 x 768 pixels; anti-glare coating. Free from the flicker and radiation associated with CRT monitors.
Modes of Operation:	High-contrast positive and negative reading modes with full selection of ink and paper colors. Full color picture mode. External computer video display. External PAL or NTSC video display.
Advanced features:	3 customizable function buttons and a footswitch allow access to seven functions: Overview, line markers, semi-colors, freeze, disable, external camera and external computer inputs. Displays an external video source (NTSC or PAL) Displays VGA, SVGA, and XGA computer video at many refresh rates. On-screen menu allows full customization. Extra large reading table with 41cm x 30cm (16" x 12") travel.
Focus modes:	Auto-focus; push-to-focus; manual focus
Ergonomics:	Collapsible to compact size. Comfortable screen height. Tiltable display. Overview mode for quick location during reading. Low weight
Accessories supplied:	Customized wheeled carry case Footswitch, computer video lead.
Magnification:	x3 to x50 continuous zoom
Temperature:	10°C to 40°C (50°F to 100°F)

Patents pending

As we strive to constantly improve our products, this information is subject to change without notice.

Warranty

Ash Technologies warrants the equipment, when purchased new, to be free from defects in material and workmanship and will repair or replace at Ash Technologies' discretion, any equipment which exhibits such defects; provided that the equipment has been operated under the proper conditions of installation and has not been tampered with by any persons not authorized by Ash Technologies or its agents and that it is solely serviced by Ash Technologies or its agents.

Pixel defects are not covered by warranty.

In no event shall Ash Technologies or its agents be liable for special, indirect, incidental or consequential damages; the original user's remedies being limited to repair or replacement.

This warranty is valid only when serviced in the country of original purchase.

Ash Technologies makes no other or further warranty, express or implied, including and warranty of fitness for a specific purpose or warranty of merchantability.

**This warranty is valid for a period of
24 Months
effective from the date of delivery.**

For warranty claims or service during or after warranty period please contact your distributor.



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