

# LIBERTY Scholar 2

## User Manual



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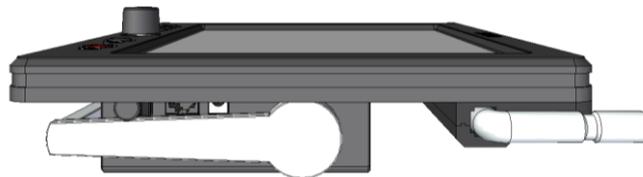
Before using this product, refer to page 18 for the  
Important Instructions for Use.

# Installation

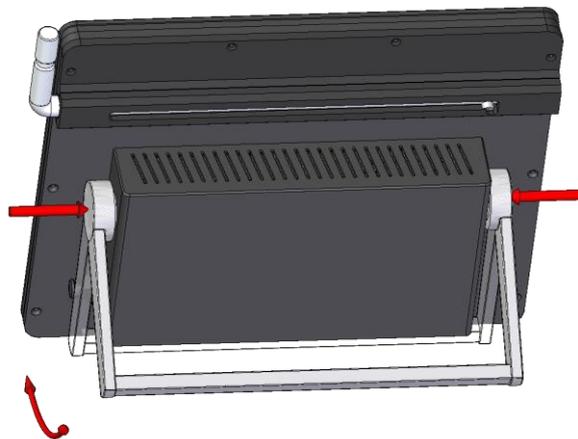
The Liberty Scholar 2 is supplied the following components:

- Main Unit
- EX2 Distance Camera
- Power supply adapter
- Mains cable
- Carry case

When setting up, it is important to choose your workplace carefully to avoid an uncomfortable or awkward position. The monitor should be below eye level to avoid strain.



- Remove the Liberty Scholar 2 main unit from its case and place on the work surface.



- Depress both handle release buttons and rotate the handle by two clicks to allow you to look onto or slightly down on the display.

**IMPORTANT! If the handle is set back too far, the camera will not be able to focus on the reading material at high levels of zoom.**

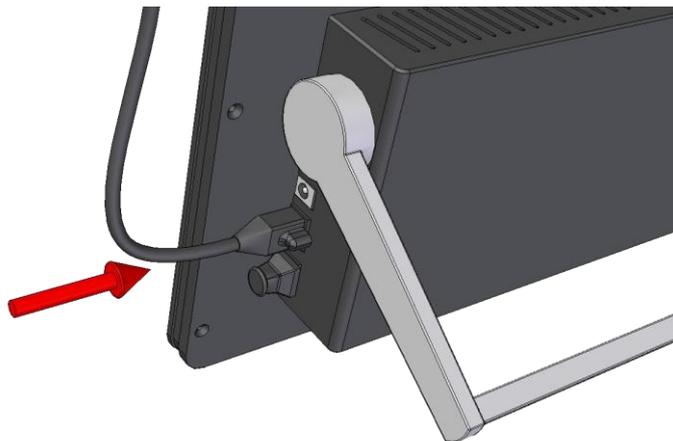
**The camera can focus on material up to about 25mm / 1-inch tall. If you wish to look at objects taller than this, tilt the camera slightly and move the object appropriately to increase the distance between the object and the camera.**



- Rotate the slide bar out of the stowed position and slide the bar outward.

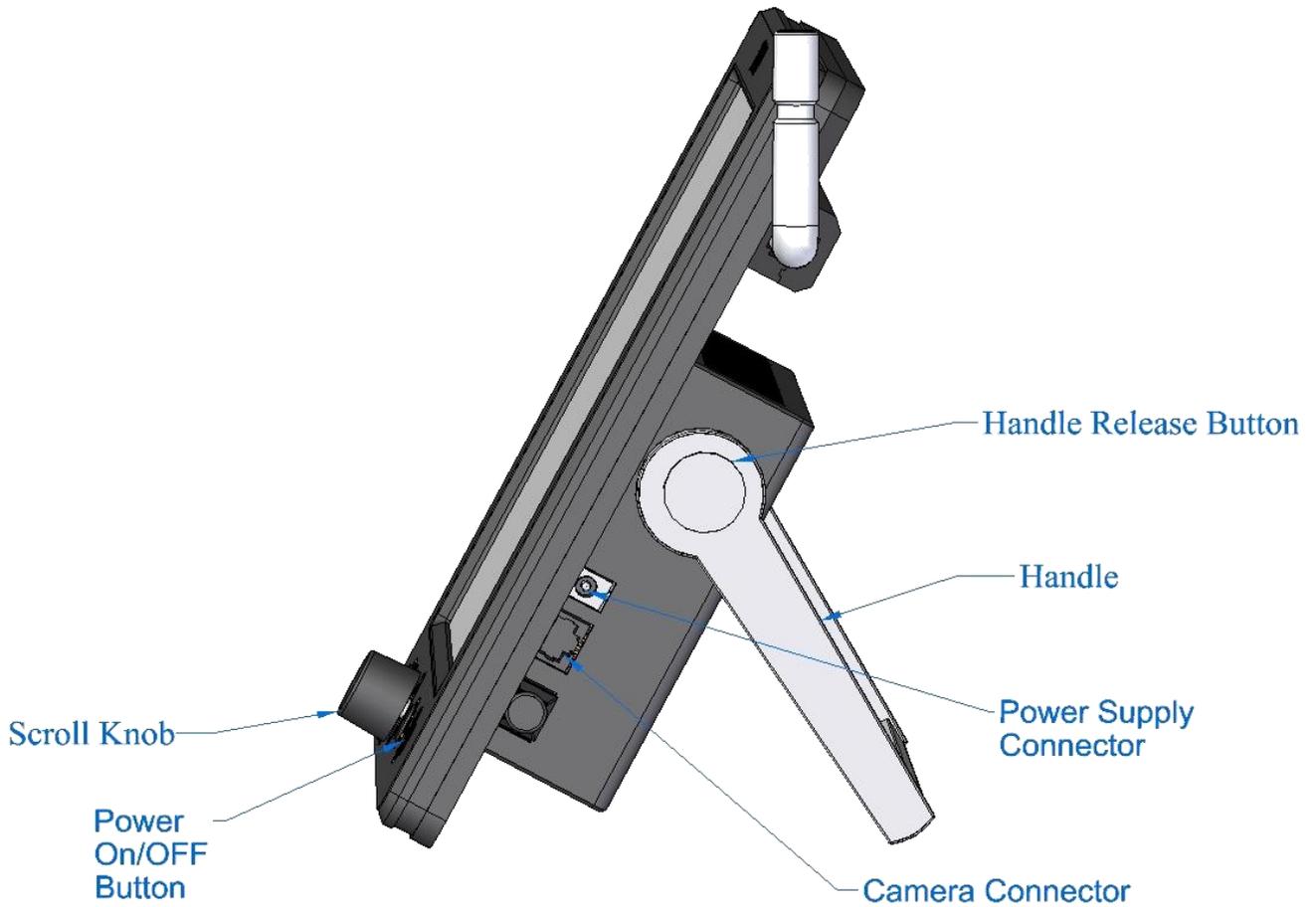


- Connect the Ex2 Camera firmly onto the slide bar and plug the camera lead into the topmost socket at the right hand side of the main unit

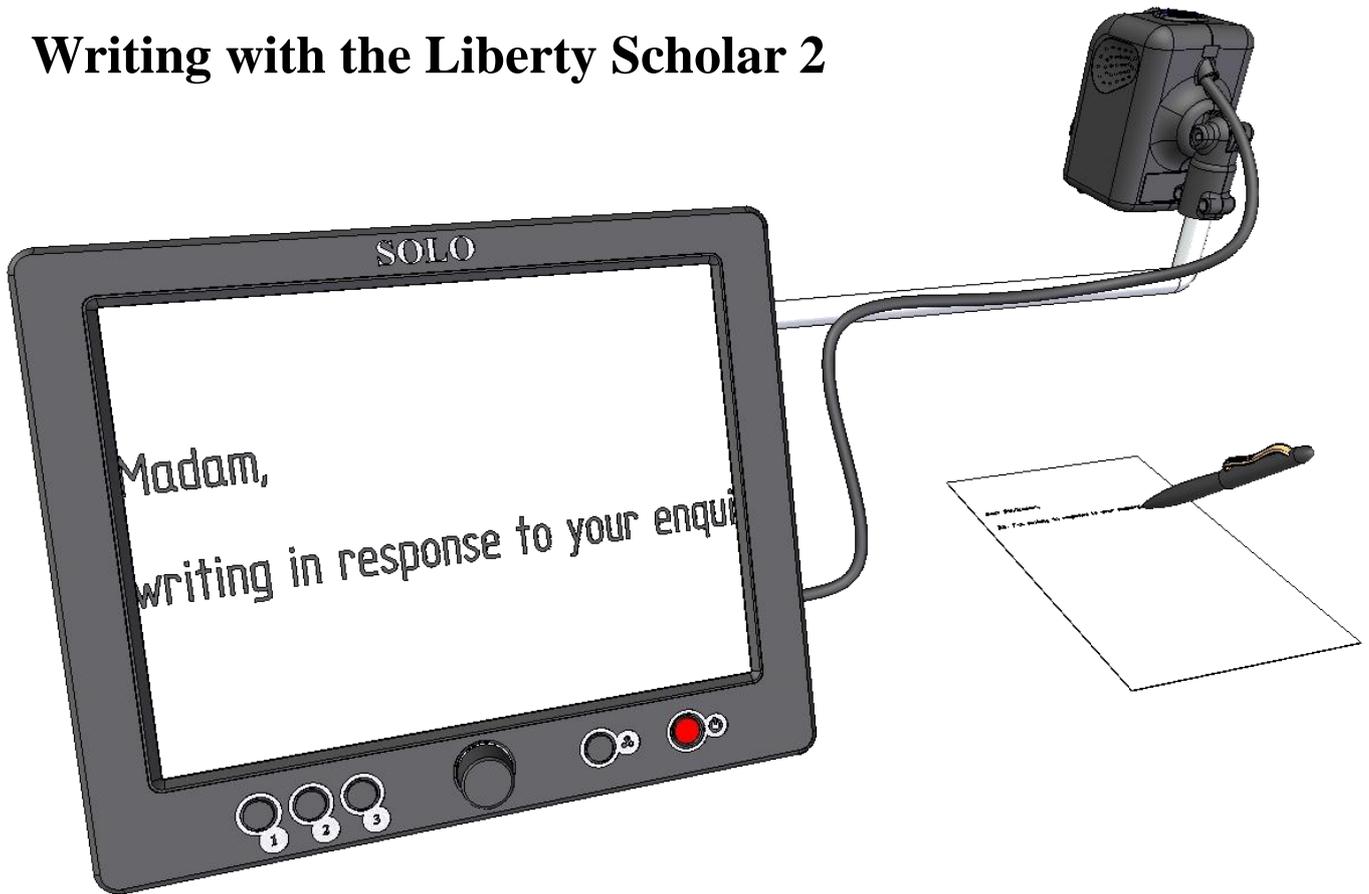


- As the unit is supplied with the battery partially charged, we recommend that you initially operate the Liberty Scholar 2 from the power supply. Plug the power supply into a wall socket and insert the connector into the right hand side of the unit above the Camera cable.

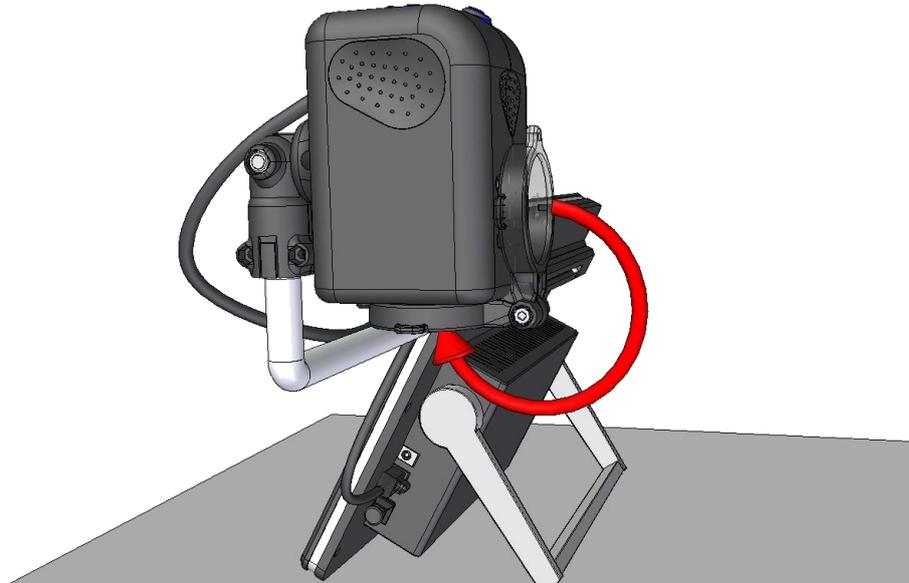
- Power up the Liberty Scholar 2 by pressing the red power button (the right-most button on the front panel).
- When you aim the distance camera at anything of interest you should see the magnified image on the screen.



## Writing with the Liberty Scholar 2

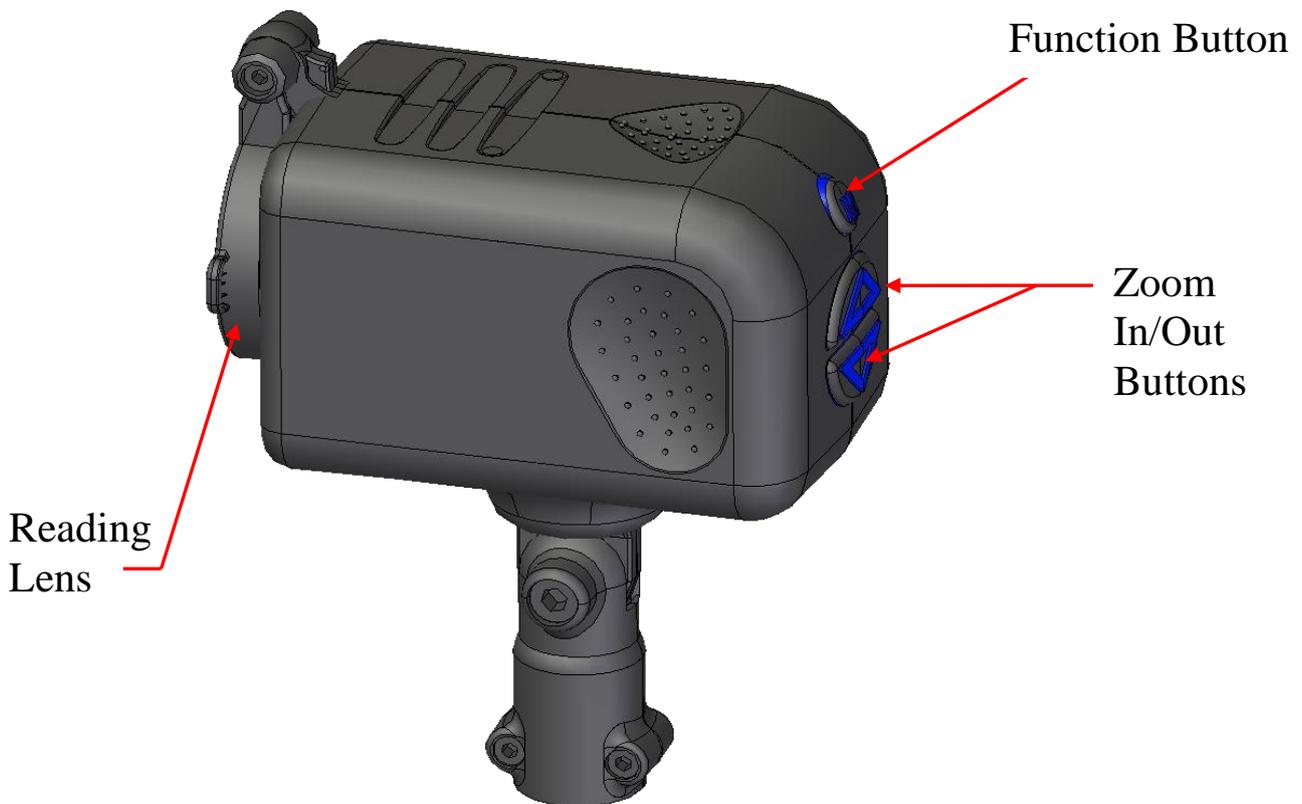


- Slide the camera away from the Scholar unit as preferred and rotate the camera head down to look at the object of interest.



- Flip the lens down and fully into place over the camera.
- The unit will automatically restore the last-used settings for both distance viewing and close-up mode.

## Operating the Camera



## **Reading Lens**

The reading lens should be flipped up and onto the back of the camera when viewing into the distance. It should be placed firmly down and over the camera lens when looking at closer items.

There is a mirror mode available. If the camera is looking out horizontally and the reading lens is down over the camera, it will automatically mirror the image. In this mode the Liberty Scholar can operate in a similar manner to a magnifying mirror.

## **Mode Button**

Press the small round button for overview mode or to freeze the image. The operation performed depends on how the button function has been programmed. Refer below to the next section – “Menu”.

## **Zoom-In Button**

Press to zoom in (magnify). At high zoom levels, the camera cannot focus on objects closer than 1 meter with the reading lens up or closer than 16cm with the reading lens in place. Objects closer than this may or may not focus correctly depending on the level of zoom – this is not a fault in the camera.

## **Zoom-Out Button**

Press to Zoom out.

## **Camera Customization Menu**

Certain aspects of the camera’s operation can be customized through its menu. The camera’s menu can be accessed by keeping the Function (top) button pressed for three seconds. Move up or down through the menu by using the up (zoom-in) or down (zoom-out) buttons. Press the Function button to select the function.

## Menu Structure

- BUTTON FUNCTION...
  - OVERVIEW
  - FREEZE IMAGE
  - EXIT SUBMENU
- FOCUS MODE...
  - FULL AUTO FOCUS
  - PUSH TO FOCUS
  - EXIT SUBMENU
- ORIENTATION
  - ORIENT NEAR
  - ORIENT AWAY
- FACTORY SETTINGS
- EXIT MENU

### Button Function ...

Selects the function of the top button:

#### **Overview**

Pressing the top button brings the camera into a low zoom position, allowing you to see where the camera is looking in the scene. Press any button to restore previous zoom level.

#### **Freeze Image**

Pressing the top button freezes the image being displayed. Press any button to cancel.

### **Focus Mode...**

This allows you to choose between full automatic and camera auto focus only when the zoom position has been adjusted.

#### **Full Auto Focus**

When selected the camera will constantly monitor and adjust its focus without the user's intervention.

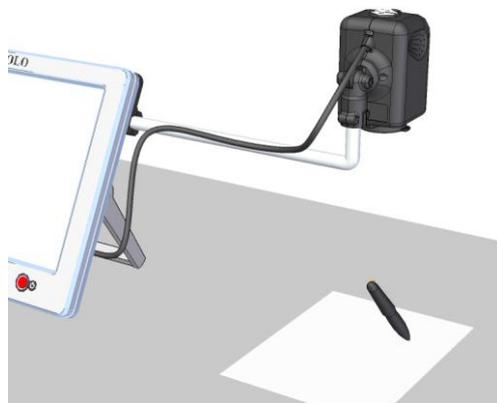
## **Push To Focus**

When selected the camera will only adjust the focus position when Zoom In or Zoom Out buttons are pressed.

## **Orientation**

By default the camera is orientated away from the user. This orientation makes it easier to flip up for distance viewing and down for close-up work. But the camera can also be orientated towards the user, reducing the distance to the user has to stretch when writing.

In the orientation menu you can choose from Orient Away or Orient Near.



**Camera Orientated “Away”**



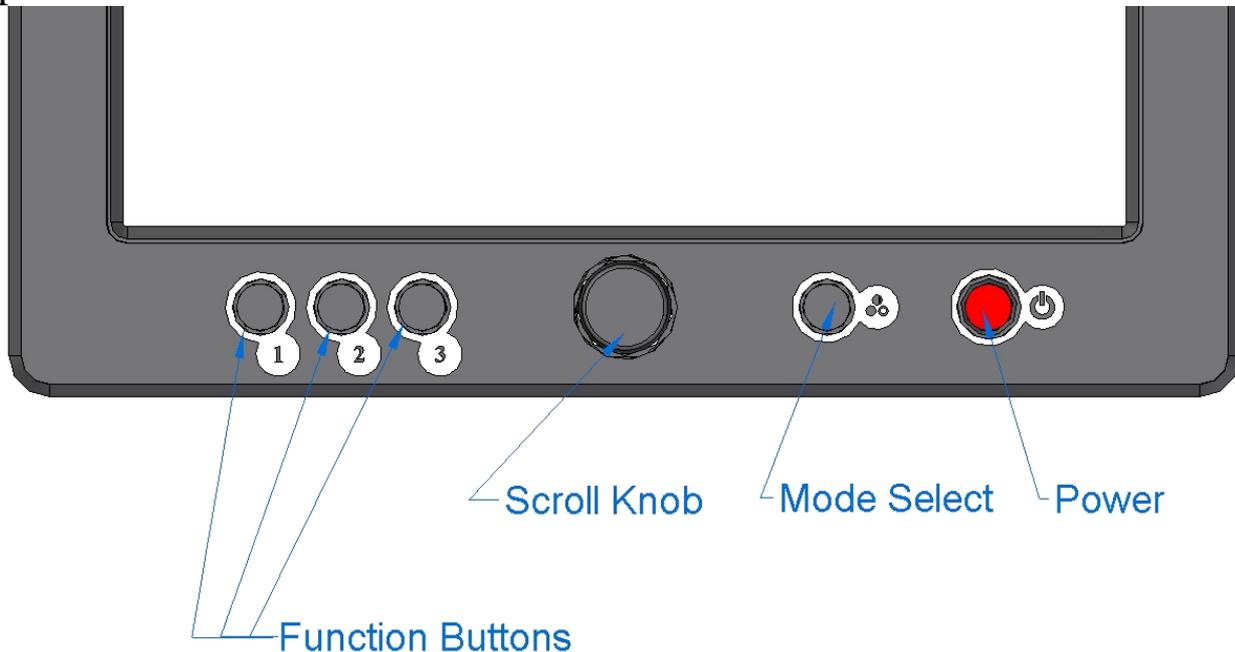
**Camera orientated “Near”**

## **Factory Defaults**

Restores the factory settings (for the camera only)

## Main Unit Controls

The Liberty Scholar 2 has the following controls. Refer to the diagram for the position of the controls.



### Power Button

Press to power up the unit. Press again to power off. The Liberty Scholar will not operate without the camera attached; this is to prevent accidental discharge

of the battery. The unit will power off if the camera is unplugged. The  icon indicates that no camera was found and the unit will now power-off.

The last-used settings are stored at power off and are restored when the unit is switched on again. Removing the power cord with the unit powered on may corrupt the saved settings.

### Mode Select Button

There are three modes of operation:

- **Full-color mode** for viewing photographs, images, etc.
- **Positive mode**, an enhanced reading mode where the foreground “ink” is darker than the background “paper”.
- **Negative mode**, an enhanced reading mode where the foreground “ink” is brighter than the background “paper”.

The Mode button will toggle between the last reading mode and full-color mode if a few seconds elapse between presses. Repeated pressing of the Mode button will cycle through all three modes.

## Scroll Knob

The central control knob can be rotated freely and can also be pressed.

- Rotating it controls the camera's zoom.
- Press and rotate to adjust the image brightness.
- Press and hold the knob for 8 seconds (without rotating) to bring up the menu for extended functionality.

## Function Buttons

There are three functions buttons, labeled 1, 2 and 3. These perform the following functions:

- 1: Linemarker/Blinds (operates in Positive/Negative modes only)
- 2: Semi-color (operates in Positive/Negative modes only)
- 3: Overview (or Image freeze if programmed into the camera).

## Menu

Press and hold the scroll knob for eight seconds to access the menu. By rotating the scroll knob, you can navigate through the menu, pressing to accept an option.

An overview of the menu system appears overleaf. Each sub-menu is explained in the subsequent sections.

Many sub-menus have an exit icon, , select it to exit the menu.

Some menus offer an on/off choice. Select  or  as appropriate to confirm your selection.

## Main Menu



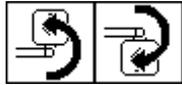
## Configuration Menu



Information Panel (incl. battery status)

Reset to factory default settings

## Camera orientation



Orientate the camera towards the user

Orientate the camera away from the user

Sounds on/off

## Display Setting Menu



## The Menu Structure

## Main Menu



Opens Display Settings menu, to alter the brightness, contrast, etc., of the image.



Opens the Configuration menu to set various options.



Exits the menu.

## Display Settings Menu

All options below bring up a scale on the bottom of the screen to allow adjustment of the particular attribute. Each setting is unique to the mode and camera currently being displayed and will be used when that mode and camera are displayed again. The exception to this rule is the backlight level, which is common to all modes.



Adjusts the image brightness.



Adjusts the contrast level of the image.



Adjusts the color saturation. This is only available when displaying a full-color image.



Sets the backlight level. Note that lower levels of backlight significantly improve battery life when operating with battery power.

## Configuration Menu



Turn the sounds on or off.



Camera orientation. Choose the orientation of the camera that suits you,

either rotated towards the back  or front  of the unit. Note there is a short delay before the settings take effect.



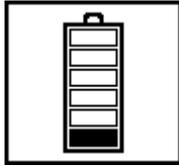
Reset to Factory Defaults. If you choose settings that render the unit unusable, you can restore the settings to a known set of values that produce an image. All previous settings are replaced with the factory default values.



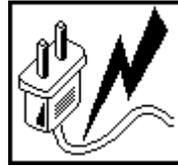
Information display. This screen displays a symbol indicating that the unit is operating on mains power or on battery. It also displays which camera socket is in use and the type of signal received.

## Battery

The Liberty Scholar 2 contains a rechargeable battery that can provide power for mobile use. A low battery warning icon will appear briefly on the screen, in addition to warning beeps, when the battery is running low or when powered-on with a dying battery. The Liberty Scholar 2 will only power up very briefly, or not at all, when the battery is dead.



**Low Battery Warning**



**Power Adapter Detected**

The battery will power the unit for over 5 hours depending on the backlight brightness. So, to extend battery time, use the lowest backlight level you can comfortably read with.

A full recharge takes approximately 5 hours. The Liberty Scholar 2 will charge when the power cable is inserted; it does not have to be switched on and it will also recharge during normal use with the power cable attached. The battery cannot “overcharge” and does not have to be fully discharged before recharging. An icon will appear briefly on the screen when the power cable is attached, showing that the battery is now being charged.

## Maintenance

When the Liberty Scholar 2 becomes dirty it can be cleaned with a damp cloth and mild detergent. Do not use solvents or abrasive cleaning agents as they can mark the display area. The camera’s lens and the reading lens should be cleaned with a clean, dry cloth.

If the tilting of the camera becomes too loose with use, we have supplied an allen key with this manual to enable you to tighten the movement. Do not over tighten the screw!

# 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. This warranty shall be voided in the event of damage or abuse to the unit caused, in the opinion of Ash Technologies or its agents, by general wear and tear, abuse, neglect, failure to observe stated precautions or by dropping the unit.

Batteries and backlighting are warranted for failure within a period of one year. Pixel failures, cracks, scratches or similar damage to the display are specifically excluded from warranty. Non-electrical accessories are specifically excluded from 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.

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 TWO YEARS effective from the date of delivery to the customer.

Depending on the country of sale, the warranty conditions may differ. Contact your distributor for details.

# Specifications

Display unit:	302 x 252 x 62mm, 2.66 kg (11.9"x 9.9"x2.5", 5 lb 13oz)
Camera:	105 x 65 x 105mm, 340g (4.2"x2.6"x4.2", 12.5oz)
Power consumption:	15W operating, 35W recharging and operating. Mains voltage: 100-240V AC, 50/60Hz. Input: 12V dc center positive 5A
Battery:	Custom Li-Ion rechargeable battery Battery life is 5 hours but will vary depending on the backlight brightness.
Screen:	High brightness 12" (30cm) diagonal TFT display.
Magnification:	1.5x to 50x continuous zoom in close-up mode.
Temperature:	Storage: -10°C to +40°C. (15°F to 100°F) Operating: +5°C to +40°C (40°F to 100°F)

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

## DECLARATION OF CONFORMITY

We, **Ash Technologies Ltd.**, declare under our sole responsibility that this product, **Liberty Scholar 2**, of the brand **Ash Technologies** to which this declaration relates, is in conformity with the following standards or other normative documents:



- EN60601-1-2:2001 - Medical Electrical Equipment
- EN 50081-1:1992 CENELEC Generic Emission Standard  
Part 1: Residential, commercial and light industry
- EN 50082-1:1997 Generic Immunity Standard  
Part 1: Residential, commercial and light industry.

following the provisions of EMC directive 89/336/EEC and Low Voltage directive 73/23/EEC and the Medical Directive 93/42/EEC

Signed, for and on behalf of Ash Technologies Ltd,

Alan Johnston,  
Engineering Director

Naas, Ireland. October 16, 2009

## **Important Instructions for Use**

The following instructions and warnings must be observed:

- Remove the Liberty Scholar 2 and its power supply adapter from the carry case during use.
- Use only the power supply adapter provided.
- Do not use the Liberty Scholar 2 in a bathroom, near water or other damp conditions.
- Do not open the Liberty Scholar 2 - there are no user serviceable parts inside and opening it will invalidate your warranty.
- The camera must be plugged in prior to powering the unit on or the unit may fail to operate correctly.
- The unit is designed to be used in the Residential Commercial & Light Industry.
- Use near other non-light industrial transmitters is not a foreseen use of the product

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

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