DIGITAL MICROSCOPE

DG-2A

Scalar Corporation microscopes have been used in conjunction with NASA space shuttle missions.

Now With Enhanced Features!
- Focus bar indicator
- Time/Date stamping
- Fixed shutter speed
- Color Balance

Both a Microscope and a Digital Camera in One!
Use the DG-2A as a standard digital camera without changing this micro-macro lens.

Scalar Corporation microscopes have been used in conjunction with NASA space shuttle missions.
Scalar Announces Innovations for the DG-2A

The DG-2A has new features to help you achieve the very best image quality:

- Focus Bar Indicator (at left of LCD) easily allows you to get the correct focus.
- Time & Date stamp (at the bottom of LCD) helps you to remember exactly when the picture was taken.
- Adjustable white balance setting lets you adjust the Red and Blue color strength for your preference.

The DG-2A has a wide variety of lenses from which you can choose:

- High Resolution Lenses – These lenses come in the following magnifications: x100, x200, x500, x1000
- Bore Lenses – Our bore lenses are made to get to those difficult to reach places and are equipped with a detachable 90 degree mirror for side viewing.
- Micro-macro lenses – Choose from three different types: x0~x30, x0~x30N (non-reflective), x0~x100. With these lenses, you will have both a digital camera and a microscope with a simple turn of the focusing ring.

The DG-2A sports a C mount adaptor which may connect to an endoscope or microscope:

- Preserve digital images taken with an endoscope or on a microscope by using the C mount adaptor included in the basic set. Catalogue these images in a database for a report or presentation.
- Attach the DG-2A to an endoscope
- Microscope attachment option (or telescope for bright night-time objects)

Scalar’s Touch & View technology allows you to image surfaces as never before:

- Simply touch the surface needing magnification with a DG-2A lens to record clearly defined microscopic images even without a stand (non-contact lenses are also available).
- DG-2A being used to analyze the space shuttle’s leading edge.
Scalar’s advancements combine digital and optical technology in a unit which will let you go virtually anywhere with an array of magnifying options.

CF Memory card links data with your computer

The DG-2A is equipped with a 16MB CF memory card to download data to your computer or printer. The DG-2A can record at least 17 high resolution JPEG images. Larger CF memory cards can be used to store a greater number of images.

Video output port included

The DG-2A can serve as a video camera as well, delivering 30 frames per second to a large size monitor or projector with a video cable. You may want to record these images as well in a VCR format.

High speed LCD monitor

The DG-2A displays its images on a type-2, high-speed LCD monitor. At 30 frames per second, you can enjoy full motion video right before your eyes. Still images are recorded to a CF memory card or live recording may be made when the unit is attached to a VCR via an optional cable.

At only 400 grams, the compact DG-2A is ready to go to any workplace.

The DG-2A is ideal for traveling to any site you may wish to go. Its lithium-ion battery makes it a cordless digital solution to allow you to take it into the plant or on the field to image anything you please.

One touch of a button delivers high resolution images.

The DG-2A can provide 2.3 megapixel images. With 2x digital zoom feature, a 1000x lens produces 2000x images.

Attractive case provided

The DG-2A comes equipped with a durable case to protect the main camera and its core accessories. There is also room for several optional lenses that you may choose.

Light & Mobile Touch & View
automotive paint imperfection (X200)

spiderwort pore (X200)

ant head (X200)

aeronautical windshield inspection (X200)

automotive paint imperfection (X200)

tea stalk tick (X100)

IC (X200)

watch (C mount lens)
QC metal scratch (500x)

IC with coaxial illumination (X1000)

United States $20 bill (X30)

fibers (X200)

skin with mole (X30)

metal surface (X100)

ballpoint pen tip (X200)

printed circuit board (C mount lens)
The DG-2A full system is versatile enough to meet any of your imaging needs

A wide variety of changeable lenses can be used at your work site, in the field, attached to your microscope, or even mounted on your telescope to view bright heavenly objects.

The lenses which you may choose are broad and diverse (reflective, non-reflective, fluorescence, etc.) Depending on the type of light source you prefer, we have standard x30, x50, x100, x200, x500, x1000. Low magnification and high magnification zoom lenses are available.

Choose from a wide variety of built-in light sources: ultraviolet, infrared, and normal visible light.

Sometimes changing the light source can make a world of difference in what you can see. Scalar has provided for each of your imaging challenges with lenses designed to meet your particular need.
## System Configuration

### 1. Groups of lenses

<table>
<thead>
<tr>
<th>lenses</th>
<th>X50</th>
<th>X100</th>
<th>X200</th>
<th>X50N</th>
<th>X100N</th>
<th>X200N</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard lenses</td>
<td>X30</td>
<td>X30N</td>
<td>X50</td>
<td>X50N</td>
<td>X100</td>
<td>X100N</td>
</tr>
<tr>
<td>micro-macro lenses</td>
<td>X0~X30</td>
<td>X0~X30N</td>
<td>X0~X100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high resolution lenses</td>
<td>X25</td>
<td>X50</td>
<td>X200</td>
<td>X500</td>
<td>X1000</td>
<td></td>
</tr>
<tr>
<td>C mount adapter</td>
<td>fisheye lens</td>
<td>various C mount lenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>fiberscope for industry</td>
<td>microscope/telescope adaptor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mount converter SLR Camera’s lens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coaxial illumination lenses</td>
<td>X50</td>
<td>X100</td>
<td>X200</td>
<td>X500</td>
<td>X1000</td>
<td></td>
</tr>
<tr>
<td>zoom lenses</td>
<td>X25 ~ X200</td>
<td>X50 ~ X200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bore lenses</td>
<td>(low magnification, high magnification)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>side viewing lenses</td>
<td>X10</td>
<td>X20</td>
<td>X50</td>
<td>X100</td>
<td>X200</td>
<td></td>
</tr>
<tr>
<td>phase-contrast lenses</td>
<td>X1600</td>
<td>X4000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>uv/visible ray electrical changeable lenses</td>
<td>X20</td>
<td>X50</td>
<td>X100</td>
<td>X200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infrared/visible ray electrical changeable lenses</td>
<td>X20</td>
<td>X50</td>
<td>X100</td>
<td>X200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2. outside lights

- optical light stage (transparent and dark field illuminator)
- outside light unit
- ring light unit

### 3. stands

- stand adapter
- up-down stand
- XY stage
- flexible stand

### 4. neck strap

- image analysis software

### 6. other

- the c-mount adaptor provides use of 3rd party lenses and accessories.

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**DG-2A**

- side lighting and down lighting electrical changeable lenses
- transparent and down lighting electrical changeable lenses
- non-shadow light lenses
- lens for microscope slides
- special order lenses
- outside strobe
- remote shutter
- hood for outside use
- neck strap
- up-down stand
- XY stage
- Transparent and dark field illuminator
- video cable
- personal computer
- printer
- DC-DC cable
- battery charger
- wireless adaptor
- lithium-ion rechargeable battery (accessory)
- PCMCIA card adaptor
- personal computer
- monitor
- PCMCIA card adaptor
- outside strobe
- remote shutter (optional)
- hood for outside use (optional)
- neck strap (optional)
- up-down stand (optional)
- XY stage (optional)
- Transparent and dark field illuminator (optional)
- video cable (accessory)
### DG-2A main specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image capture sensor</td>
<td>1/1.45 inches interface scanning CCD (aspect ratio 3:2, RGB primary color filter square pixel)</td>
</tr>
<tr>
<td>Pixels</td>
<td>total pixels: approx. 2.3 million pixels (1901 x 1212)</td>
</tr>
<tr>
<td></td>
<td>effective pixels: approx. 2.19 million pixels (1816 x 1208)</td>
</tr>
<tr>
<td>Mount</td>
<td>Scalar DG mount (based on C mount when C mount adaptor installed)</td>
</tr>
<tr>
<td>Shutter speed</td>
<td>1/45 to 4 second</td>
</tr>
<tr>
<td>Storage media</td>
<td>CompactFlash™</td>
</tr>
<tr>
<td></td>
<td>• NORM mode: 1792 x 1184 pixels - approx. 500KB</td>
</tr>
<tr>
<td></td>
<td>• FINE mode: 1792 x 1184 pixels - approx. 900KB</td>
</tr>
<tr>
<td></td>
<td>• ZOOM mode: 896 x 592 pixels - approx. 500KB</td>
</tr>
<tr>
<td>Monitor</td>
<td>2 inches - 130,000 pixel low-temp. poly-silicon TFT liquid crystal (dot number: 537 x 234)</td>
</tr>
<tr>
<td>Video output</td>
<td>NTSC composite signal</td>
</tr>
<tr>
<td>Video out terminal</td>
<td>3.5 monorail jack</td>
</tr>
<tr>
<td>Remote terminal (also used for outside synchronous strobe)</td>
<td>2.5 sub-mini jack</td>
</tr>
<tr>
<td>DC in terminal</td>
<td>EIAJ standard type-2 (DG jack center plus)</td>
</tr>
<tr>
<td>Light switch</td>
<td>light A, light B interchangeable (when functional light bulb in lens unit is used)</td>
</tr>
<tr>
<td>Power requirements</td>
<td>DC6.0V ± 5% 1A 6.0V - 7.2V ± 5% when battery is used</td>
</tr>
<tr>
<td>Power consumption</td>
<td>approx. 6W when only the main body is operable</td>
</tr>
<tr>
<td>Battery duration time</td>
<td>1 - 1.5 hours under continuous operation (depending on type of use)</td>
</tr>
<tr>
<td>LED for power check</td>
<td>power on - Green LED</td>
</tr>
<tr>
<td></td>
<td>battery low - Red LED</td>
</tr>
<tr>
<td></td>
<td>power off - Both LEDs off</td>
</tr>
<tr>
<td>DC in terminal</td>
<td>approx. 250g (for body only), approx. 370g (when battery and CF card are used)</td>
</tr>
<tr>
<td>Operating environment temperature</td>
<td>0 to 40°C</td>
</tr>
<tr>
<td>Storage environment temperature</td>
<td>-10 to 55°C</td>
</tr>
<tr>
<td>Operating and storage relative humidity range</td>
<td>30 to 85% (non-condensing)</td>
</tr>
<tr>
<td>Output power</td>
<td>5V maximum output current 250mA</td>
</tr>
<tr>
<td>DG-2A Enhancements</td>
<td>Focus indicator bar</td>
</tr>
<tr>
<td></td>
<td>Time/Date Stamping</td>
</tr>
<tr>
<td></td>
<td>Variable settings for Red-Blue color balance defaults</td>
</tr>
</tbody>
</table>

### DG-2A controls

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