



MRG 2

Head Mounted Display

Owner's Manual and Reference Guide
(Version 1.1)

NOTICE

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March, 1993 Edition
MAN-9301-1.1

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INTRODUCTION

Section 1 Summary

- 1.1 Features
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1.1 Features

The MRG 2 boasts sharp resolution, realistic colour, digital audio, and a clear proprietary lens all in an ergonomically designed shell. Its functions and features go far beyond today's HMD standard and include:

- | | |
|--|--|
| <i>NTSC RGB & Composite Compatibility</i> | The MRG 2 houses an on-board controller that will accept RGB or Composite signals which eliminates the need for costly signal converters. |
| <i>High Resolution LCD Display</i> | The MRG 2 utilizes a 5.7" thin film transistor active matrix LCD with a resolution of 240 x 720 pixels, displaying over 16 million colours with a cold-cathode backlight |
| <i>Digital Audio</i> | The MRG 2 incorporates Sony digital headphones which deliver the highest quality audio output |
| <i>Clear Lens System</i> | The MRG 2's proprietary clear lens system provides the user with a nominal 100° field of view that is totally <i>crystal clear</i> -unlike other displays which use fresnel lenses to simulate higher resolution |
| <i>Ergonomic Shell</i> | The current shell was designed with the human head in mind. The MRG 2 is designed to fit, built for comfort, and incorporates a simple slip-on, slip-off design |



1.2 System Requirements

The MRG 2's controller box will accept an NTSC signal in two formats, RGB, which must conform to the RS-170 standard, and Composite, NTSC-C.

The audio input must be a 3.5 mm stereo mini-jack.

The Controller box is currently setup to accept only 120 VAC/60Hz, which is the standard North American power supply.

1.3 Checklist

In addition to this manual, the MRG 2 should be accompanied by the following items:

- Heavy duty storage and travel container

- The MRG 2 control module and power cable

- 3 metre connecting cable

- Warranty card

If any of these items are missing or damaged, please contact Liquid Image Corporation for the necessary items.



1.4 Specifications

| | |
|-----------------------------|--|
| General | Biocular, self adjusting, ergonomically balanced HMD |
| Display | Full colour TFT-LCD Sharp® display 16.7 million colours Pixel count: 240 X 720 Dot pitch: 0.365mm X 0.158mm (VxH) Colour pixel arrangement: RGB Delta Response time: 80 msec Contrast ratio: 30:1 Display dots: 172,800 |
| Optics | Clear lens Proprietary optics |
| Field of View | Nominal 100° HFOV |
| Video Signal | Composite/analog RGB |
| Audio | Sony digital stereo headphones built-in; model # MDRV200 |
| 3-D position sensing | Accommodates the Ascension Bird; 3-space Fastrak and others |
| Power Supply | 120/240 volt AC to 12 volt DC |
| Input Signal | NTSC |

OPERATION

Section 2 Summary

2.1 Installation

2.2 Operation

2.1 Installation

Please follow these easy steps to assemble and wear the MRG 2:

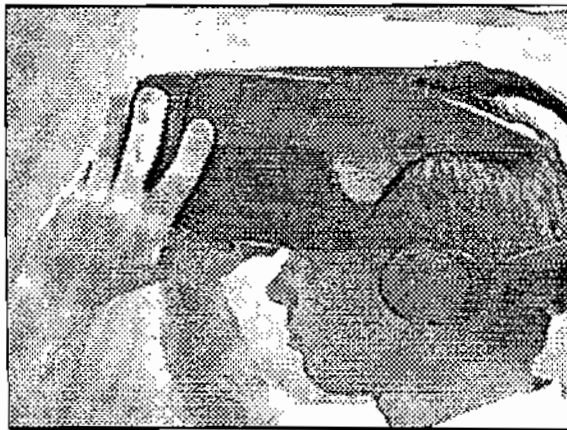
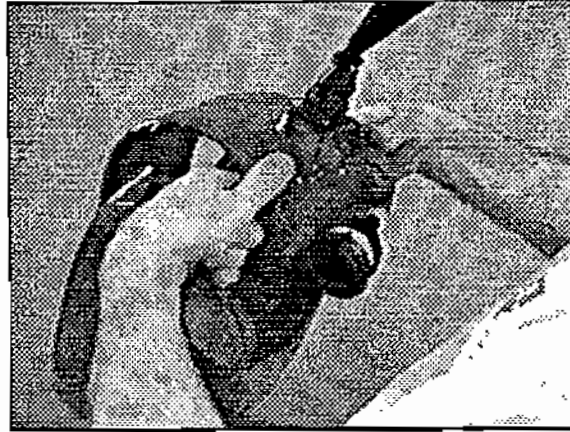
- 1) Make sure power switch is in the **OFF** position on the control module.
- 2) Install connecting cable to the control module and the MRG 2.
- 3) Connect video and audio inputs.
- 4) Plug in control module power cord into a surge protected power source.

2.2 Operation

Please ensure all of the steps outlined in section 2.1 have been carried out before proceeding.

- 1) Ensure RGB/Composite switch on the control module is in the desired position.
- 2) Toggle control module power switch to **ON**.

3) To don the MRG 2, grasp the headphones, one in each hand, spread them apart and place the helmet on your head, in the manner one would don a baseball cap (back then front).



4) To remove the unit, grasp the front of the helmet with both hands and pull the unit out and up. The movement is quite natural after a few times.

To power down the MRG 2, toggle control module power switch to **OFF**.

5) To dismantle, reverse the steps from section 2.1 (installation).



CAUTIONS AND LIMITATIONS

- 1) Do not disconnect the connecting cable while the MRG 2 is powered up.
- 2) Do not drop or shock the MRG 2 or the control module.
- 3) Do not operate the MRG 2 in or near aquatic environments!
- 4) Do not operate the MRG 2 at temperatures below 0°C or above 40°C.
- 5) Please ensure unit is not stored at temperatures below -25°C or above 60°C.

LIQUID IMAGE CORPORATION

TECHNICAL BULLETIN #2

Please be advised that use of Isopropyl Alcohol for cleaning/disinfecting the MRG2 is not recommended. Alcohol has been shown to degrade the protective coating on the optics and compromises the structural integrity of the lens. This constant wearing away of the protective coating has been shown to, over time, cause the lens to flake and/or crack.

If you are using Isopropyl Alcohol we are recommending that you stop immediately. We recommend cleaning the optics with non-alcohol based cleaners.

If you have experienced any problems in using Isopropyl Alcohol with your product please contact:

Liquid Image
Technical Support
(204) 772-6686
9:00am - 5:00pm CST