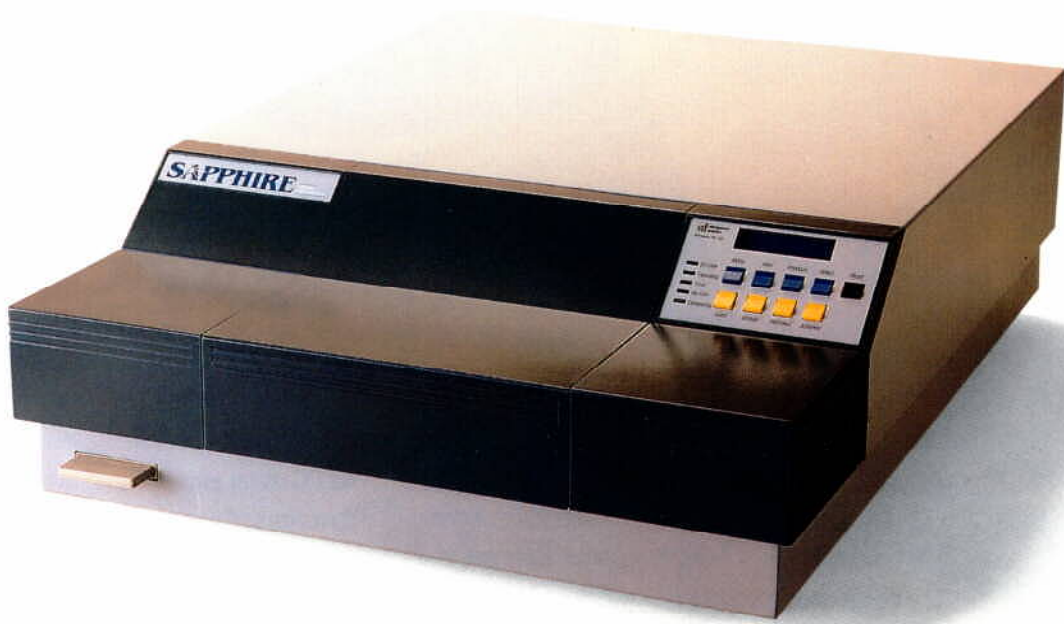


SAPPHIRE™

Management Graphics, Inc.

Precision Color Slide Recorder



SAPPHIRE

Slide Recorder For The '90s

Make the move to better slide production. Get high-quality output, terrific turn-around times, and innovative technology all in a slide recorder that anyone can use. Sapphire's combination of the finest professional features and dependable performance makes it the best choice on the desktop.

You are assured of outstanding images with Sapphire's intelligent features. Digital registration, a unified film transport, and front panel controls top a long list of unique Sapphire features that have their roots in Management Graphics' professional Solitaire® recorders.

All these items combined with imaging speed and hardware and

software compatibility make Sapphire the recorder for everyone who wants professional results on film. After all, making computer graphics is your business. Making sure those graphics look good on film is ours.



QUALITY Precision Slides

Sapphire's professional components assure you of vibrant, consistent colors and sharp focus every time you image. A matched lens, small spot size, and large CRT produce razor sharp graphics. Patented Digital Geometry Control automatically manages image settings, assuring accuracy and consistency.

Sapphire's front panel gives you the power of a professional imaging system at your fingertips. You can adjust the individual color components, make your image brighter or darker, and more – all from the front panel.

COMPATIBILITY Mac & PC Friendly

Create graphics from your Macintosh or PC using your favorite software package and send them to Sapphire with software drivers available from Management Graphics. The software drivers support a variety of file formats including PostScript, PICT, TARGA, SCODL, CGM, and Windows applications to name just a few. Sapphire also emulates most popular film recorders including Solitaire, so your new Sapphire

will easily fit into your existing work environment.

Internal Look-Up-Tables give you calibrated colors for popular professional and standard films from Kodak, Fuji, Polaroid, and AGFA. Plus, Sapphire is equipped to image Kodak's new Photo CD 3K files.



1 Supply Magazine

- 100' Bulk Load

2 Cassette

- 12, 24, or 36 Exposure Cassette Roll
- Power Rewind

3 Take-up Magazine

- Auto-wind
- 100' Bulk Load

4 Film Access Area

- Film Threading
- Cassette Loading
- Digital Pin Registration
- Bar Code Reader
- Film Cutter
- Film Notcher
- Straight Film Path

5 Access Door

- CRT Cleaning

6 Smart Card

- Slot for Additional Color LUTs
- Card Optional

7 Front Panel

- 32 Character Illuminated Display
- Push Button Menu System
- Status Indicators

EASE OF USE

Hassle-Free Production

The revolutionary unified transport supports 35mm film in both 100' bulk rolls and cassettes. There are no adapters to insert or assemblies to remove; the unified transport makes it easy to change from cassette to bulk load and back again in a flash. If you are using the bulk load film and want to shoot a cassette, you can leave the bulk supply magazine in place and insert the cassette into the holder. When you're done with the cassette, you can rewind it, remove it, and rethread the bulk film in a matter of seconds.

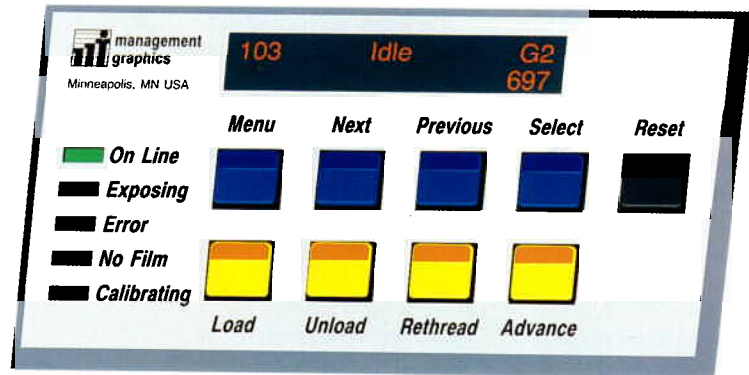
The film follows a straight path. There are no corners or pulleys to negotiate, one turn of the threading sprocket pushes the film into the take-up magazine. Once in the take-up magazine, the film winds itself. This makes it easier for you and means less film is

used in the threading procedure.

The illuminated display and push-button front panel are not only easy to use, they let you keep complete control. Every step of the imaging process is tracked. The front panel also makes it easy to check or modify existing set-ups. A Quick Reference Guide makes the front panel easy to understand, and with it you will be up and running in no time.

Sapphire's extensive self-diagnostics also monitor components to make sure they are operating properly. The self-diagnostics pinpoint any problems so repair is fast and efficient.

Finally, Sapphire fits on your desk. There is no need to move your operation because Sapphire fits into your existing computer graphics environment.



FRONT PANEL

Control At Your Fingertips

Change set-ups, adjust image characteristics, or simply notch your film with Sapphire's easy to use front panel. Color-coded buttons speed you through everyday film functions including load, unload, rethread, and advance.

You can control other module functions as well. Change film count, set the image resolution, set the edge imprint, record the time and date on

your slide, and more from the General Setup menu.

Customize options are available for people with imaging needs beyond the standard recorder settings. You can adjust image size, position, contrast, exposure, and color balance all with the touch of a button. With precise color tuning and a wealth of other functions, you can count on Sapphire for your

most demanding projects.

Sapphire is great for any level user. Shoot beautiful slides at factory settings or change image settings with Sapphire's professional features. You decide what you want to change, everything or nothing at all. But with all these options one thing stays the same; you can be sure of great images from Sapphire.



TECHNOLOGY

Innovations On The Desktop

Sapphire's powerful innovations are driving desktop image recording to a new level. Patented Digital Geometry Control, an all digital system, automatically determines critical image characteristics. Alignment, size, position, focus, vignette, linearity, and other image

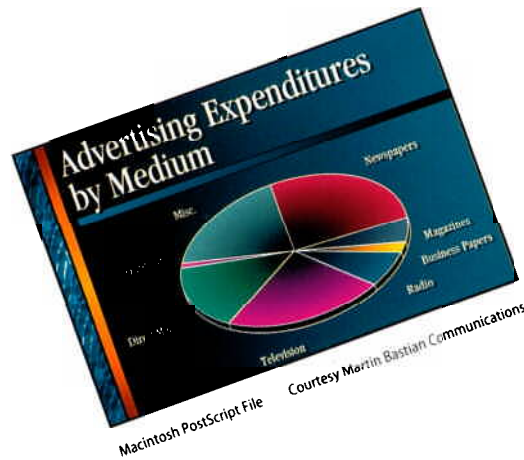
parameters are precisely controlled while you work. Your images will not drift out of specification over time because Digital Geometry Control works to make sure every line is straight and the

focus in every corner is consistent.

This advanced alignment technology also serves as the basis for Sapphire's new Digital Pin Registration. Your multi-image shows or

build slides line up perfectly every time. This new digital registration also makes a straight film path possible where every frame is registered to the CRT, not just the aperture.

Sapphire also utilizes 12-bit color tables for the best color range available and the smoothest gradations between colors. A smart card slot makes it easy to update your film color Look-Up-Table library with an optional card.




SPEED

Finish On Time

Get all your slide projects done fast. Image a slide in as little as 50 seconds and shoot more than 750 slides without reloading film. With Sapphire you can get all your jobs out on time. Simply queue up the images and let

Sapphire take over. Innovations in film loading and automatic calibration also speed up production. This means you spend less time loading film and adjusting settings and more time imaging.

YOUR ADVANTAGES

A precision color slide recorder for the desktop

High-quality, consistently sharp images at 2K and 4K, professional optics (special lens), Digital Geometry Control, and user friendly design give you a high-quality recorder on your desktop.

You no longer need to sacrifice quality for price or need high-volume production to justify a quality film recorder.

Digital Pin Registration

Assures accurate image positioning on film electronically. No pins or film lifters are needed for the process.

This technology ensures jitter-free build sequences and allows a simple, straight film path for easy threading.

Unified bulk load and 36 exposure cassette transport

Image long roll film and cut the roll to any length, or shoot smaller rolls without a different transport.

The integrated transport gives you the option of choosing the film best suited for a particular job. Bulk load also offers the benefit of savings on film, processing, and time needed to load the module. The cassette option offers you an economical way to utilize less frequently used film types.

Speed

Imaging times of 50 seconds for average 4K slides.

You save hours of production time because Sapphire outputs slides in under a minute.

Color Control

Adjust your colors for a desired effect or match another piece of film.

The ability to control colors yourself means you can achieve the highest quality output for the most discerning viewer.

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SPECIFICATIONS

Hardware Compatibility

Solitaire (GPIO & SCSI)
AGFA QCR-Z / PCR (GPIO)
Slidewriter (SCSI)

Interfaces

SCSI: ANSI X3.131-1986
(SCSI-2 connector)
GPIO: ANSI/IEEE 488-1978

Ease of Use

English Front Panel

- 2 lines of 16 characters (backlit LED)
- Beeper for errors (may be set on or off)
- User adjustments for size, position, exposure, time, date, contrast, and color balance
- All front panel setups are stored in permanent memory

Auto Notching

Sprocket Area Labeling

- Imprint of internally generated current frame #, time, date, exposure info, and/or 16 character message

Power Up Tests

Internal Test Patterns

- Imaged from host or front panel
- Verification of colors, resolution, alignment, and geometry¹

Film Transport

- Unified 35mm transport
- Digital Pin Registration*

- Digital Geometry Control²
- Removable 100' bulk magazines
- 12-24-36 exposure cassette load capability
- Power cassette rewind
- Easy loading straight film path
- Oversized aperture for sprocket area labeling
- Notcher
- Out-of-film detection at end of film or by frame count
- Automatic film cutter
- Self threading take-up magazine*
- Jam/Misthread detection
- DX bar code reading of cassette film type & roll size³

Accessories Included

- User's Manual
- 36 exposure roll of film
- Power cord
- Cleaning cloth
- Quick Reference Guide

Available Options

- SCSI cables
- GPIO cable
- Additional supply and take-up magazines
- Smart card
- Programmer's Manual
- Software drivers
- Video User's Guide
- Film loading bag
- Cart

U.S. Patents: 1 - 4,917,488; 2 - 4,754,334; 3 - 5,109,241; * - patent pending. Sapphire is a trademark and Solitaire is a registered trademark of Management Graphics, Inc.; QCR, PCR, and Slidewriter are trademarks of AGFA/Matrix Corporation; PostScript is a trademark of Adobe Systems, Inc.; Macintosh is a registered trademark of Apple Computer.

See Specification Sheet for full listing of features.

