

1st Quarter

March 2003

# Bowen Productions

designers of electronic media

[www.bowenproductions.com/planetarium](http://www.bowenproductions.com/planetarium)

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## AstroFX MediaManager Update

by Mark Trotter

Many of you who saw our three-screen demo at IPS 2002 in Wichita will remember AstroFX MediaManager and its ability to manipulate layers of images, logos, text, pans, movies, etc. on multiple screens in **real-time**. For those that have not had a chance to view a demonstration of this new system, Mike, Jeff and I will be demonstrating the systems at several planetarium/museum conferences across the country this year. (See Bowen Productions "On Tour" for conference schedules and MediaManager demos).



AstroFXMediaManager is an amazing presentation tool, perfect for the planetarium environment and the planetarium professional. If you have ever used Power Point or other presentation software, AstroFX MediaManager is a quantum leap beyond in its ability to easily and creatively manipulate images on your dome or in your exhibit space.

rescale, zoom, pan, and fade across your dome using only the MediaManager server and control software running on a low power computer. All of this is done while maintaining a very high resolution of **up to 2048 x 1536**, almost equal to 35mm slides. If you change your mind, you can easily change images, motion, and fade rates within seconds. As an added plus, this system can be displayed through your current video projectors, exhibit plasmas, monitors or LCD screens. It also works great with Zeiss' new **ZULIP and ADLIP** products as we demonstrated in Germany at Zeiss Laserfest in December.

To find out more about this new and exciting technology, visit [www.bowenproductions.com/planetarium/mediamanager.htm](http://www.bowenproductions.com/planetarium/mediamanager.htm) or email Mark Trotter or Mike Grznar at [markt@bowenproductions.com](mailto:markt@bowenproductions.com) or [mikeg@bowenproductions.com](mailto:mikeg@bowenproductions.com).

Imagine downloading a **high-resolution** Hubble or Cassini image from a web site and within minutes making it

## AstroFX Commander Audio Playback

by Dan Ritchie

Save space... save \$\$\$... save time... save hassles... What could be better?

AstroFX Commander now **eliminates the need for external audio players**, cassette decks, CD players, tape machines, etc. This saves you money, rack space, and wiring.

AstroFX Commander allows you to create a timeline cue to directly play

digital audio files from the timeline. See a picture of the timeline at [www.bowenproductions.com/planetarium/commander.html](http://www.bowenproductions.com/planetarium/commander.html). This is in addition to all the typical control functions you would expect from a full-featured automation system.

Since the audio is playing back in the same show control timeline as your slide projector, special effect, slide, and other control cues, your audio is **always in perfect synchronization**. There is no waiting for tape machines to fast forward, rewind or synch to your external equipment.

You have **instant random access to any part of your show**, or for live lectures, you can manually access any narrative, interview clip, background music or sound effect, just like Alan and Chris at Shouweiler Planetarium (St Francis College, Ft Wayne) or Don Prescott (Tessmann Planetarium, Santa Ana).

For more information check out [www.bowenproductions.com/planetarium/commander.html](http://www.bowenproductions.com/planetarium/commander.html)



# AstroFX ECCS Control Interface

by Mike Grznar

If you own a bunch of Jon Frantz' neat, bulletproof show control hardware, but have been wanting the drag and drop simplicity of the AstroFX Commander timeline programming, here is a way to save big \$\$\$.

Bowen Productions, in conjunction with East Coast Control Systems, is excited to announce a new product for facilities using ECCS Automation.

AstroFX Commander ECCS Control allows you to have the **full GUI interface** of our AstroFXCommander System, without having to eliminate your ECCS automation hardware. The new system works just in front of your current Hercules Control Computer, connecting with a single cable, giving timeline and drag and drop programming capabilities over all devices currently being controlled by your existing automation system. The core system includes control over most of the basic devices in your facility, **including Jon's star projector automation** commands. We recently tested this out thoroughly with Gene Zajac (Shaker Heights, OH) and **it worked first try** out of the box!

You can see what the bundle includes at [www.bowenproductions.com/planetarium/commandereccs.html](http://www.bowenproductions.com/planetarium/commandereccs.html)

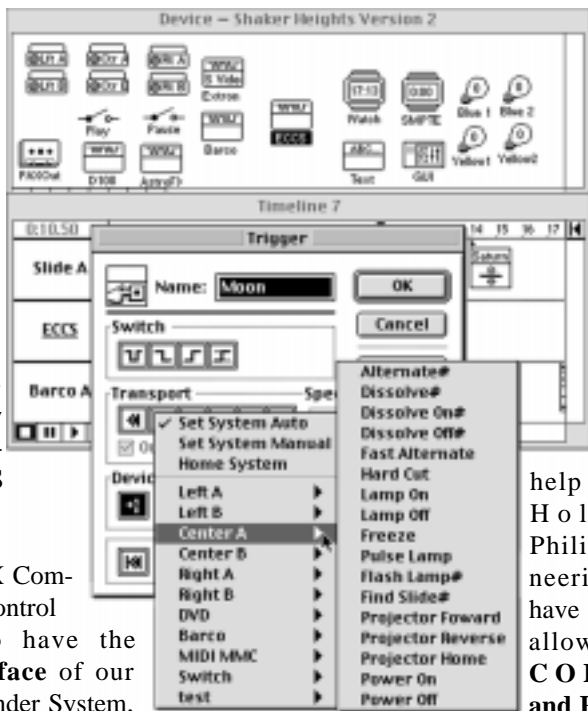
# What's New

Here is a list of some other new stuff that you may find useful:

## AstroFX3.1REC

([www.bowenproductions.com/planetarium/astro.htm](http://www.bowenproductions.com/planetarium/astro.htm)) This newest version of our popular AstroFX digital video server has been in development for two years. Finally with the help of Holland's Philips engineering, we have a unit that allows **RECORDING and PLAYING**

**right on board. An external computer encoder or video production workstation is not required with this unit.** At a price of about \$3500 with a 120Gb removable drive, this is the low cost, high performance solution we were hoping for. AstroFX1.1 and 2.1 still include some high-end features many of you will want, such as higher data rates; and most will still want to create/edit original video/graphics/animation with AstroFXCreator. But for planetaria who want to eliminate those multiple DVD and LD players, while still having access to any video/audio clip, this is unbeatable. AstroFX3.1REC is controllable via any show control system or touch screen, and the drivers are already tested and perfected. [mikeg@bowenproductions.com](mailto:mikeg@bowenproductions.com) can tell you more about it.



## AstroFXMPEGRealTime

We have been using a new **real time** MPEG2 encoder for about a year that is finally available at an affordable price point. It is a DSP card with a breakout interface that slides into about any PC (Sean can tell you the minimum requirements at [seanj@bowenproductions.com](mailto:seanj@bowenproductions.com).) This system offers very high quality encoding up to 16mb/sec with a trim tool for capturing and the ability to trim your MPEG2 clips in real time.

## Scent Machines

These nifty gadgets come in one, three, and six scent versions. The fan driven units are very quiet and crank out any of a huge assortment of scents from little cartridges. These are very popular for use in trade show exhibits, movie theaters, cookie stores, bakeries, etc. The wide range of nature scents makes them really useful for exhibits and space theaters. We can also arrange custom created scents upon request.



## 232 Controlled 5-Disk CD Player.

Finally a reasonably priced rack mount five CD unit addressable from your show control system or a touchscreen. Kevin and the gang just got one at Dreyfuss.

## Starboard

One of the coolest hardware/software bundles we have shown in planetariums in years. Write on your dome, outline constellations, write text on slides, print out the results on a color printer, all using your existing video projectors. Mark Trotter knows all about it at [markt@bowenproductions.com](mailto:markt@bowenproductions.com). ([www.bowenproductions.com/planetarium/starboard.html](http://www.bowenproductions.com/planetarium/starboard.html))



# You Lose Out: Improving Spec Writing for Planetaria and Exhibits

by Jeff Bowen, Mark Trotter,  
and Diana Bowen

Mark and I have seen a very large number of bid specs, RFPs, etc. coming through the door these recent months and we are generally surprised at how poorly written these documents are.

In most cases we can easily identify where a **poor bid spec will eventually handcuff the performance of the planetarium** staff and administration if the specs are based on dated technology, poor knowledge of the planetarium physical structure, inaccurately defined power needs, and/or loose descriptions of equipment capabilities among others.

This said, it literally breaks our hearts when we are required to respond to such a spec “as written” knowing the performance will ultimately be compromised by these limitations. Often architects, administrators, or even planetarium “designers” will just copy and paste a spec they have laying around into their package, include something sent to them by a manufacturer, or include something they found on a web site. We recently saw a spec included for a video projector brightness that has not been used for about eight years. Another did not include any amplification for the audio system!!

**Once the spec is a legal document there is often no correcting it, so it is very important that these documents are authored properly.** In our history we have written dozens and dozens of successful design and bid documents for projects, and we can help you identify some pitfalls in reviewing bid documents associated with your projects. Here goes...

**Suggestion 1.** First of all, take the time to review the documents going out for bid before they go out. We are convinced that often the bid documents going out the door have not been reviewed or critiqued by the people actually working in the planetarium or exhibit space. Make sure you are getting what you want to work with for years to come by stepping into the process personally.

**Suggestion 2.** Hire someone to write the spec that truly understands the mission, products, integration, construction, insurance, and legal aspects of your unique project.

**Suggestion 3.** Get a second opinion from professionals in the vendor ranks, another successful planetarium site, or people who produce shows or who teach in planetaria. Pay a little bit of \$\$ for their time to review the bid documents, power spec, drawings and save big \$\$\$\$\$ by heading off mistakes. If you pay someone to do such work for you, **they should then spend the proper attention on the review and do it correctly.**

**Suggestion 4.** Purchasing directors like to make the spec as generic as possible and, in some cases, state purchasing requires this. For example, “four two-way audio speakers”. BP can provide such speakers for \$89 each, or \$2890 each. There simply must be specs for each component or a brand and model, followed by “or equivalent spec”.

**Suggestion 5.** Look to see if the purchasing department is treating your project insurance/bonding like a gym construction or computer network install. We often find ourselves adding construction insurance and warranty costs that are unnecessary. This robs \$\$\$ from the quality of your end product.

**Suggestion 6.** Make sure...sure...sure that the power specifications, box locations, and conduit/wireways are properly **specified in professional electrical industry standard language with CAD drawings.**

**Suggestion 7.** Inspect the “invited to bid” list and make sure that the vendors you want to work with are on this list, or that invited electrical and general contracting firms are aware of these firms for sub-contracting.

**And also,** make sure that the respondents are actually authorized to provide, install, warranty, and INSURE the specified products and services. **Even any one-person “sub-contractors” brought in by “name companies” on the installation are required to have the same level of insurances as specified in the contract.**

The Bowen team is taking great steps this year to help solve the problem of poor design/bid specs by exhibiting at architectural and administrative facilities design conferences on a national level. The planetarium-based experience of Bowen team members Mark Trotter, Mike Grznar, Dan Ritchie, Sean Jackson and Jeff Bowen totals over 60 years. We think we know how to help get projects completed properly. So, **we’ll provide a handout** with guidelines for request/writing/review of specs, which we hope will lead to implementation of projects with long operational life, minimal maintenance cost, and great flexibility in creative use of your facility. Feel free to direct your project managers to [www.bowenproductions.com/specs/bidspecs.pdf](http://www.bowenproductions.com/specs/bidspecs.pdf) to read this and other documents about planetarium and exhibit specifications.

*Be sure to visit our  
booth at upcoming  
conferences.*

*We’re traveling all  
the time. Call us to  
schedule a visit.*

# Pro A/V Magazine Names Bowen Productions' Project as One of "Top Ten" Installs in North America for 2002.

Pro A/V Magazine ([www.proavmagazine.com](http://www.proavmagazine.com)) named the Bowen installation at the new 230,000 square foot Indiana State Museum as one of the Top Ten audio installations in North America for 2002. This was the only museum project listed. 120 channels of digital audio are delivered by an innovative Cat5 UTP based audio delivery system, which saved over \$100K on wire costs. You can read more about the project equipment list and how it all came together at [www.bowenproductions.com/ism](http://www.bowenproductions.com/ism). There are site pics and the three PDF docs from the actual color magazine article available there.

Jeff, along with other Bowen staff, worked on contract in a Design Phase through the year 2001 with world-renown museum exhibit designer Ralph Applebaum and Associates of Manhattan, and Electrosonic Systems, Inc. of Toronto to

design the most progressive interactive audio and video systems ever seen in



Indiana. Interiors were constructed by Maltbie Exhibits of New Jersey.

Planetarium/museum veteran Mark Trotter managed the Bowen Project Team (on a typical day we would have up to 20 people working on the project from our team) as we integrated these complex systems to work with incredible new audio and video productions being produced by producers from New York, Virginia, and Indiana. Bowen Productions was also selected as one of these content producers.

Bowen also served as the prime installation contractor for all the interactive touchscreen, plasma, projector, computer and even some lighting components.



One of the unique areas in the museum is the thirty-two seat and eight standing position interactive Futures Gallery, where the audience interacts with a curved five-screen video pan system and a curved six-screen video pan system on opposing walls.



## Here is a partial list of the systems provided by the Bowen team:

- 30 High Resolution Video Projectors (Barco and Fujitsu, Draper and Premier Mounts)
- 30 Bowen ExhibitFX Digital Video Servers
- 16 channels of Electrosonic Digital Video Servers
- 14 Flat Panel Plasma Video Screens (Pioneer and Fujitsu)
- 95 18", 15" and 10" Flat Panel Video/Touch Screens (National Display and IDE)
- 120 channels of computer controlled digital audio (Mackie, Rane, Crown, Alcorn McBride, KlipschPro, Tannoy, Dakota Audio, Magenta, IMP, RDL, QSC)
- 98 Interactive Computer Servers (IBM, SAG)
- Two Broadcast Quality A/V Control Rooms with KVM Switch and Monitoring Systems (BlackBox, Magenta, Middle Atlantic, Panasonic, ADC)



## Seasons DVD and Improved AstroFX Library Coming Soon

by Sean Jackson

By the time you read this, we will have a fully compatible (finally!... fully compatible!... no small task here!) DVD



version of the video for our popular planetarium show **“Mystery of the Missing Seasons.”**

Rick Greenawald (Faulkner Planetarium, Twin Falls) took delivery on the first one. This DVD has chapter markers at each video clip, so you can **use the clips as a video library** for teaching, include them in other shows, etc. You can start and stop clips with your control system and RS-232 enabled DVD player, or you can play it straight through.

AstroFXLibrary quality improvements. We have been encoding MPEG video for over three years now and our new real-time encoders are much cleaner than those from two years ago. So we have also revisited and improved many of the “Seasons” video and AstroFXLibrary clips, as well as the masks and slides for the other shows in our AstroNotes series, such as **“Sandy, Pepper, and the Eclipse”**, **“Lifestyles of the Stars”**, and **“Moonwitch.”** Video production/animation work by Brien, Sean, and Mike continues and is nearly complete for these three shows as well.

Current owners of the “Seasons” video or AstroFX clips can receive the new replacement media for cost of shipping plus \$50. What a deal!!!

You can see more information about these shows online at [www.bowenproductions.com/planetarium/shows.htm](http://www.bowenproductions.com/planetarium/shows.htm). Contact [seanj@bowenproductions.com](mailto:seanj@bowenproductions.com) for more info.

## Video Scalers and Switchers

by Mark Trotter

In the past, image quality has been improved by adding a “line doubler” or “line quadrupler”.

The new generation of video scalers improves on this by **“upscaling”** the output resolution of video source players to the highest that the video projector will accept. A standard video source, S-video and computer video, can all be routed through the scaler/switcher and then sent to the video projector at a single **maximum resolution**.

Three big advantages of using a scaler:

1. It allows you to switch between three to seven (or even more) different video sources. The video source switching can be done manually or through RS-232 control via a show control system.

2. Use of a scaler produces a **higher quality image** than a line doubler or quadrupler.

3. Because there is only one video resolution sent to your projector, **you only need to converge and adjust that projector to one input type**. This is a nice reduced maintenance benefit for Mike Gardner and Richard Walker (Longway Planetarium, Flint) where we installed three Barco BD708 projectors with scalers.

Bowen has installed many types of video scalers in planetariums as they have become a standard part of our Barco projection system packages. Not only do these scalers improve image quality, but they also **simplify the operation of the video projector**.

To find out what video scalers Bowen Productions offers and how they can improve your planetarium presentations, go to: [www.bowenproductions.com/planetarium/](http://www.bowenproductions.com/planetarium/)



## LED and Standard Cove Lights

by Mike Grznar and Dan Richie

Heard about some of the new techniques in cove lighting systems? In the coming weeks we will be rolling out our new **LED cove lighting system**.

From an installation standpoint, the electrical wiring and power requirements are simplified greatly, and maintenance is reduced as well. Just by their very nature, LED’s need less attention than regular incandescent bulbs. (No more getting up on a ladder and inspecting/changing bulbs all the time.) The advantages of a system like this also include:



**less power consumption** (good for the environment and your facilities’ electric bill) and a drastic **reduction of heat** from your coves (which is better for your equipment).

From a production standpoint though, the biggest difference you’ll notice is the **quality of colors**. The Reds, Blues, and Greens are much more rich than a traditional incandescent system, covering your entire dome with pure, clean colors. Each one foot strip can be controlled separately, if needed, greatly extending your ability to fine-tune the colors on your dome. The **timeline based GUI programming** (NO DOS!!!) allows you to store some of your more exciting light routines; like wipes, snaps, that perfect sunrise or sunset you’ve always wanted to recreate, and any other creative effects. This also **eliminates the steppy jaggies of standard DMX control** so fades are as smooth as satin. These can then be played back by a single, simple DMX command from any show control system, including AstroFX Commander.

For more information please contact: [jeffb@bowenproductions.com](mailto:jeffb@bowenproductions.com) or [markt@bowenproductions.com](mailto:markt@bowenproductions.com)

**Bowen Productions  
"On Tour"  
2003**

*April 12*

Indiana State Meeting, Indianapolis Demos, papers, workshops @ Bowen Productions facility and Lawrence North HS.

*April 12*

Ohio State Meeting, Columbus. Bowen Demos by Mike Grznar.

*May 3*

Michigan State Meeting, Jackson. Bowen Demos by Mike Grznar.

*May 9-10*

MAPS, Lanham, MD. Bowen MediaManager Workshop and Dome Demos by Jeff Bowen

*May 19-21*

American Association of Museums (AAM), Bowen Demos new Interactive Exhibit Technologies and Content

*June 17-21*

SEPA, Baton Rouge. Bowen MediaManager Workshop and Dome Demos by Mark Trotter.

*October 8-11*

Western Alliance, Salt Lake City. Tentative: Bowen MediaManager Workshop and Dome Demos by Mark Trotter.

*October 22-25*

GLPA, Cleveland. Thursday-Bowen Field Trip to Shaker Heights Planetarium. MediaManager Workshop and Dome Demos by Mark Trotter/Dan Ritchie. See a Complete Bowen/ECCS Theater. Live Concert by Jeff Bowen and Mike Grznar.

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