

"Travel is fatal to prejudice, bigotry, and narrow-mindedness, and many of our people need it sorely on these accounts. Broad, wholesome, charitable views of men and things can not be acquired by vegetating in one little corner of the earth all one's lifetime." - Mark Twain

# Gilder Newsletter

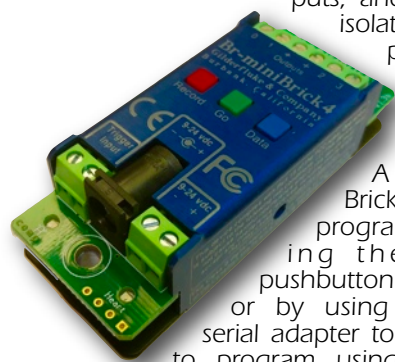
Views and News from the World of Gilderfluke & Co.

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**Serving the Entertainment Industry for 40 Years!**

## Breaking News! Old Dog Learns New Tricks!

Our Br-miniBrick4 is one of those products that has changed very little since it was first introduced. It is a simple digital (on/off) controller with four medium current outputs, and one optically isolated trigger input. It will run on anything from 5 to 24 VDC.



A Br-miniBrick4 can be programmed using the simple pushbutton interface, or by using a clip-on serial adapter to allow you to program using our free Pc•MACs show programming software.

During the Pre Vaccine period, I was contemplating how to modulate some of my yard lights for a flickering torch or candle look.

I found several cheaply built products that relied on LEDs with built in flickering patterns. All of these simply turned the LEDs on and off in a pattern that repeated every few seconds. These didn't look much like a real flame because a real flame never goes all the way out.

You also couldn't ramp the LED brightness up and down while still flickering. I wanted to keep my yard lights at a low level until a visitor (typically a Coyote) is picked up by one of the motion sensors. It

**Old Dog/New Trick: continued on p.4...**

## Training Simulators

We have several clients who use Gilder-Gear to make training simulators.

Fire and rescue departments may have simulations for hazardous waste spills, vehicle crashes, and structure fires or collapses.

Law enforcement will typically have simulations for searching for suspects, hostage situations, and shoot/don't shoot training.



Aircraft manufacturers are using Gilder-Gear for aircraft evacuation simulators.

Military simulators are often 'village scale' sites, made from shipping containers.

A Br-Brain4 will typically give you one sequencer for the ambient sounds, lighting and effects, and up to seven sequencers for scenarios that can be called up as needed.

A new audience for training simulators are dogs. Some dogs are being trained to sniff out specific smells, while service dogs are being desensitized to distractions that they may encounter in the real world. ~ G

## Neighborhood Improvements

One of the highlights of the Pre-vaccine period was the City of Burbank built a new park and bike path right in our back yard. It's still a cement ditch, but now it is a native landscaped cement ditch.

One of the lowlights was the failure of Gilderfluke Towers water pressure regulator, which allowed the water pressure in the building to rise to 4x normal, causing our Reverse Osmosis filter to burst

sometime during the weekend of September 13th, 2020, which lead to about a half inch of standing water across most of the first floor of Gilderfluke Towers before being discovered. ~ G



## It's Been An Interesting Couple Of Years...

The largest industry trade show where we exhibit is the International Association of Amusement Parks & Attractions (IAAPA). We have shown at every IAAPA convention for almost 40 years. IAAPA canceled the 2020 show themselves (at the last moment possible). 2021 was the first year that we opted out of IAAPA.

IAAPA always falls in the week before Thanksgiving holiday. After a typically busy IAAPA 2019, I flew to Singapore for a visit with a long-time client and to christen a new 'Training' fountain at one of their universities, and to teach the professors there how to program

**Interesting Times: continued on p.4...**

GilderGear Name	Show Control	Audio Player	Show Control Output	DMX-512 Input	DMX-512 Output	Other Features	Trigger Inputs	Clock & Calendar Schedules	Serial Port(s)	Memory	Flash Card	Start Kits	Notes
<b>Amp-50</b>						Stereo 50 Watt Digital Class-D Audio Amp.							Amplifier is equivalent to a 200-250 Watt Linear Amp
<b>Br-ANA</b>	Yes		16 Analog	1 Universe (512 Chan.)	1 Universe (512 Chan.)		Four Opto + Serial		Rs-422	Sd Cards up to 32 GBytes	removable Sd or SdHC		Sixteen 8 or 12 bit Resolution Analog Outputs, plus DMX-512
<b>Br-Brain4</b>	Yes			1 Universe (512 Chan.)	4 Universe (2048 Chan.)	Simple Reader, sends serial strings, MIDI,	Ten Opto + Serial	Yes (GPS Optional)	2) Rs-422	Sd Cards up to 32 GBytes	removable Sd or SdHC		Plays 8 asynchronous shows, PopOut Shows, LCD on front displays status, shows, etc.
<b>BR-DMX</b>	Yes			1 Universe (512 Chan.)	1 Universe (512 Chan.)		Four Opto + Serial	Yes (GPS Optional)	Rs-232	micro Sd up to 32 GBytes	removable $\mu$ Sd or $\mu$ SdHC		Can be used as a single DMX universe Br-Brain4
<b>Br-EFB</b>	Yes		Four Closed Loop	1 Universe (512 Chan.)	1 Universe (512 Chan.)	Built-in Web page for Config. & Control	Two Opto + Serial + Ethernet		Ethernet Rs-422 USB	$\mu$ Sd Cards up to 2 TBytes	$\mu$ Sd, $\mu$ SdHC or $\mu$ SdXc		Four Self Tuning PID Loops for Pneumatic, Hydraulic or Electric servo loops
<b>Br-miniBrick4</b>	Yes		Four Digital Outs				One Opto		Optional	8 KBytes			Our Smallest Show Controller
<b>Br-miniBrick8</b>	Yes		8 Digital 2 Servo	1 Universe (512 Chan.)	64 DMX-512 Channels*	Two PCM ServoMotor Outputs	Two Opto + Serial		Rs-232	64 KBytes			Our Most Popular Show Controller * DMX-512 outs eat up Memory
<b>Br-SDC</b>						Serial Device Controller Rs-232 / Rs-422	Ten Opto		1) Rs-232 or Rs-422				Runs DVD players in kiosks, etc.
<b>Br-SDC8</b>						Serial Device Controller/Mux. Rs-232 & Rs-422	Ten Opto + Serial		8) Rs-232 1) 232/422				Controls up to 8 DVD players or other serial gear
<b>Br-ZBR (Z-Brick)</b>	Yes		32 Digital	1 Universe (512 Chan.)	1 Universe (512 Chan.)		Four Opto + Serial		Rs-422	Sd Cards up to 32 GBytes	removable Sd or SdHC		Combines functions of Br-multiBrick32 and Z-Brick
<b>BrightSign HD/UHD</b>		Yes (stereo)		1 Universe (optional)		4K UHD & 1080p HD Video Players	Eight TTL (most models)	Option on some models	Rs-232	$\mu$ Sd Cards up to 2 TBytes	$\mu$ Sd, $\mu$ SdHC or $\mu$ SdXc	Yes	Up to 1080p, MPEG-2, H.264/ MPEG-4, H.265
<b>Bt-DMX Bt-Servo</b>			16 PCM Output	1 Universe (512 Chan.)		Wireless Control of ServoMotors			USB Rs-422				Bt-DMX = Base Station, Bt-Servo = output cards. Bidirectional RF Link.
<b>DAC-Quad</b>	Yes		Four Analog	1 Universe (512 Chan.)	1 Universe (512 Chan.)	Four PCM ServoMotor Outputs	Two Opto + Serial		Rs-232	micro Sd up to 32 GBytes	removable $\mu$ Sd or $\mu$ SdHC		Four 8, 12 or 16 bit Resolution Analog Outputs, plus Four Model Airplane-Style Servomotors
<b>DP-DMX20L</b>				1 Universe (4 Chan.)		115 vac DMX-512 Dimmer							Other dimmer sizes available
<b>LG-DMX/DC</b>				1 Universe (8 Chan.)		12-24 vdc DMX-512 Dimmer							DMX-512 to DC Dimmer Designed for Roller Coaster Use
<b>Pb-DMX/8, /16, /24 or /32</b>	Yes		3.5 amp Relays	1 Universe (512 Chan.)	1 Universe (512 Chan.)	AC from 12 to 240 volts DC to 60 Volts	Four Opto + Serial		Rs-232	micro Sd up to 32 GBytes	removable $\mu$ Sd or $\mu$ SdHC		You can freely mix AC and DC relays on the same unit
<b>Sd-10</b>		Yes (stereo)				Line Level Out	Two Opto + optional Serial		Rs-232 (optional)	Sd Cards up to 32 GBytes	removable Sd or SdHC	Yes	CD player Replacement
<b>Sd-25 w/DMX</b>		Yes (stereo)	1 Status Output	1 Universe (512 Chan.)		50 Watt Amp Mixer Input, Line Level Output	Two Opto + Serial		Rs-232, InfraRed	Sd Cards up to 32 GBytes	removable Sd or SdHC	Yes	Amplifier is equivalent to a 200-250 Watt Linear Amp
<b>Sd-50/0</b>		Yes (stereo)				100 Watt Digital Amp	Eight Opto + Serial		Rs-232	Sd Cards up to 32 GBytes	removable Sd or SdHC	Yes	Amplifier is equivalent to a 400-500 Watt Linear Amp
<b>Sd-50/40</b>	Yes	Yes (stereo)	Up to 40 Digital	1 Universe (512 Chan.)	1 Universe (512 Chan.)	100 Watt Amp (= 400-500 Watt) 8 ServoMotors*	Four+Eight Optionals + Serial	Yes (GPS Optional)	1) Rs-232 1) Rs-422	Show: 8 MBytes Sound: Sd	removable Sd or SdHC	Yes	Our 'All-In-One' Show Controller * ServoMotors can use up to 8 Show Control Outputs
<b>Sd-50/8</b>	Yes	Yes (stereo)	Up to 8 Digital	1 Universe (512 Chan.)	1 Universe (512 Chan.)	100 Watt Amp (= 400-500 Watt) 8 ServoMotors*	Four+Eight Optionals + Serial	Yes (GPS Optional)	1) Rs-232 1) Rs-422	Show: 8 MBytes Sound: Sd	removable Sd or SdHC	Yes	Our 'All-In-One' Show Controller * ServoMotors can use up to 8 Show Control Outputs
<b>SER-DMX</b>	Yes		16 PCM Output	1 Universe (512 Chan.)	1 Universe (512 Chan.)	16 PCM Servo-Motor Outputs	Two Opto + Serial		Rs-232	micro Sd up to 32 GBytes	removable $\mu$ Sd or $\mu$ SdHC		DMX-512 to Model Airplane-style ServoMotors



## Sd-25 w/DMX Powering Sensurround Speakers

Sensurround was a novelty sound system developed by Universal Studios and Cervin-Vega for the 1973 'disaster' movie Earthquake.

Each Sensurround theater was retrofitted with ten to twenty 18 inch subwoofers in 4'x4'x3' plywood cabinets, each with its own amplifier and a random noise generator (two of the 1600 Watt amplifiers and the Random Noise Generator are shown in the photo below/left. Two of the Sensurround woofers are in the photo below/right).

Because you couldn't reproduce such low frequency sounds on a film's audio tracks, Sensurround used a random noise generator that could be switched on or off by special control signals on the film.

For the patrons in the adjacent multiplex, the effect was much like having a neighbor in your thin-walled apartment building turning on and off the worlds largest blender at random times while you are trying to watch a much better movie than Earthquake! (pretty much any movie would be better than Earthquake!).

Sensurround was used on two more theatrical movies: Midway (1976), Rollercoaster (1977), as well as the Star Wars wannabe Battlestar Galactica pilot (1978) and a 1979 rehash culled from the Battlestar Galactica series.

Long before Sensurround had faded into deserved obscurity, Dolby Labs and Lucas Film's THX sound systems were genuinely improving the audio systems used in theaters.

At its peak, there were over 2000 Sensurround theaters worldwide, and no more Sensurround movies being made. In an effort to recoup their losses, the theater owners (and Universal Studios themselves) sold off the Sensurround speakers and amplifiers, mostly to the burgeon-

ing Disco market.

The Sensurround rig shown in this article met a distinctly non-Disco fate. It was installed in an earthquake simulator at the California Science Center in Los Angeles.

When we retrofitted this exhibit, we eliminated a ton of obsolete gear. This included a WIN3.1 PC that just played back the two waveforms that tell the two 5 HP floor motors how to shake the floor, a laserdisc player, and lots of amplifiers, proprietary dimmers and other hardware.

One of the two floor motors had not been running in over a year. We replaced both the VFD motor controllers (in the grey NEMA box at right). This cabinet and the speakers are about the only things we kept from the original installation.

We sampled the floor command signals (rumored to be derived from a seismometer recording) and the rumble from the Random Noise Generator.

The original wiring for the subs were crossed. After ascertaining that this may have been done purposely, we wired one of the subs normally, and swapped the wires on the other. One blows. One sucks.

The sub's speaker leads run straight to an Sd-25 w/DMX, which we DIN rail mounted inside the control cabinet along with a Br-Brain4, v-Hd224/DMX, and the rest of the lighting and show control hardware.

The Sd-25 w/DMX allows triggering the subwoofer rumble and controlling its volume from the Show Control. This allows us to start softly and reaches a crescendo at the peak of the earthquake.

One of the surprises with the Sensurround speakers is that when running from an Sd-25, they are louder than they were when running from the two large linear amplifiers. The Evidence for this: Each time the show plays, the upper speaker is levitated on a cushion of air, and is free to move around. In the photo at the right, you can see that the upper speaker has moved a good inch or so to the left. Only the Speaker wires keep it from walking any further! ~ G

Show Control, Audio & Video Playback, Amplification, Lighting Control, etc., for CASC Earthquake Simulator

## GilderFun

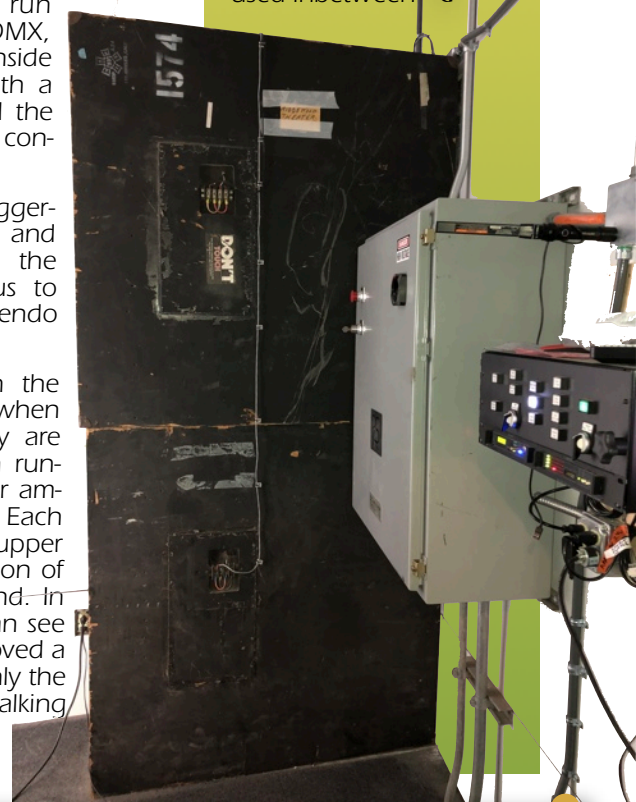
### Nearly Forty Years of GilderNewsletters

If you like reading these newsletter, you can access all our back issues from this link:

[GilderNewsletters](#)

Most of these newsletters contain a 'build' project for you to make such useful items as a fountain in a briefcase, a miniature six DOF motion base, or a low-cost backyard fountain.

You will see GilderGear as it evolves from eproms to flash cards, and every dead end memory format that we used inbetween - G



## Interesting Times... part 2 Continued from page 1

shows using our Pc•MACs software so they could in turn teach their students.

It was while in Singapore that I saw a news article that said there was a particularly virulent strain of the 'flu' going around Wuhan province in China.

Our next scheduled trade show was the March 2020 Transworld Haunt, Christmas and Escape Room convention in St. Louis, MO.

In this pre-Vaccine time, as the convention date approached, the simple 'Flu' was causing shut-downs across the globe. Transworld, the convention sponsor insisted that there was 'zero' chance of the convention being canceled. As the truck with all our gear for this show approached St. Louis, the trade show was abruptly canceled. We turned the truck around and brought all our booth supplies home without ever stopping in St. Louis.

On that day, all 'non-essential' businesses were ordered closed in California. Film and television production, which is also a share of our business, had shut down a week or two before.

Overnight we dropped to a skeleton crew of just one or two people for the remainder of the year.

The Infocom (A/V contractors), AAM (museums) and 2020 IAAPA (Theme Parks) trade shows all canceled, after insisting until the last possible moment that they would never cancel.

## Old Dogs/New Tricks Continued from page 1

then ramps the light up or down while still flickering.

We have plenty of GilderGear that will do this, but I wanted something small and simple, that I could stick into the back of a standard J-Box and have it run standalone for many years to come.

Any Br-miniBrick4 with a firmware revision v3.39 or later will support this dimmer/flicker mode. Any Br-miniBrick4 with an earlier revision firmware will not support the dimmer/flicker mode unless it is reflashed at our office.

A 2021 or later Br-miniBrick4 manual will give you step-by-step instructions for setting up and programming a Br-miniBrick4 in either regular or dimmer/flicker mode.

A standard Br-miniBrick4 has four digital channels assigned to it in Pc•MACs when you add a Br-miniBrick4 to your channels list. To unlock this special dimmer/flicker mode you need to delete these four digital output channels, and replace them with four 8 bit resolution analog outputs. Any other assortment of channels assigned to this Br-miniBrick4 will not enable the dimmer/flicker mode.

Once you have created a blank show, you will need to AutoDownload it to the Br-miniBrick4 so that it will now know that it will be running in dimmer/flicker mode.

Check ON 'manual mode', and you are now ready to program the Br-miniBrick4 with four lighting channels. You can assign the Br-miniBrick4's analog output to the first four sliders on the Soft Console. When you move these, you should see the output LEDs on the Br-miniBrick4 fade up and down in response to the sliders. What is more important, you will see the LEDs which are attached to the output of the Br-miniBrick4 fading up and down in response to moving the sliders.

You can program your lighting sequences using the tools on the OffLine Editing Window, or you can just hit 'Record' and program your lights 'live'. ~ G

## Br-miniBrick4 Serial Adapter 3

Where the Br-miniBrick4 has barely changed through the years, we are on our third iteration of the serial programming cable of the Br-miniBrick4.

One end plugs into the USB port on your PC, and the other end clips onto the 'input' end of your Br-miniBrick4. The four pins on the adapter should line up with the four pins near the edge of the Br-miniBrick4's printed circuit board. If you have it lined up properly, the Br-miniBrick4 and adapter PCBs should be fairly well aligned it will take a pretty good tug to pull the adapter off of the Br-miniBrick4.

Just select it from your 'Serial Port Preferences' menu in Pc•MACs, and you are ready to start programming. ~ G

## Surprising Pc•MACs Day One Features:

You may have seen footage of animatronic figures that are being programmed by CGI animators using a model of the character on the screen. As the CGI model is manipulated, the actual animatronic figure follows the movement exactly.

It may surprise you to know that the hooks for doing exactly what you have seen were 'Day One' features of Pc•MACs from 1993, decades before there were any CGI animation systems.

Pc•MACs has a simple method of importing or exporting data files, as well as 'hooks' that allow you to write DLLs to capture, modify, import or export show data from various points in the Pc•MACs software. In the case of importing and exporting CGI data, Pc•MACs treats this just like it was a type of programming console.

James Cameron, Scott Ross and Stan Winston's Digital Domain created the ride-film for a motion base attraction for Tokyo Disney Seas. They established two way communications between the CGI and Pc•MACs. A modification of the CGI visuals would alter the movement of the motion base, and conversely, an edit in Pc•MACs





would alter the movement on the CGI imagery.

The original ride motion on SpiderMan at Universal Studios in Florida was programmed by two people typing in numbers for almost two years of work on the graveyard shift. Not surprisingly, more than a few numbers were entered incorrectly, which caused 'bumps' in the ride. The profile was exported into Pc•MACs, fixed, and exported back into the ride vehicles in about two hours.

The director for the recent Tom Hanks movie 'Greyhound' generated wave profiles, which we imported into Pc•MACs to provide the motion for the gimbal that was used to shoot 90% of the movie. ~ G

## Oil Spill Scarecrow

A client is using battery operated Sd-25s w/DMX built into a buoys that are deployed as part of oil spill remediation. A collection of highly annoying sounds ranging from bird distress calls to artillery fire are blasted at 120+ dB through a pair of speakers on top.

The thing is so loud that the people who deploy these buoys must wear heavy duty hearing protection. The Sd-25 w/DMX is also configured not to make a peep for the first three minutes after it is powered up, so that they have time to get away before it starts pumping out noise. ~ G

## Tip: Using ArtNet with Pc•MACs

ArtNet is an 'open' standard for sending DMX-512 over standard ethernet networks.

To use ArtNet with a licensed copy of Pc•MACs, all you need to have is one or more ArtNet receivers on your network.

When you go to the 'Universes' under the Preferences menu, you will see all your ArtNet universes listed as available DMX-512 outputs. Just pick the ArtNet networks to use, and click on the 'Use GilderChecksums' if you will be talking to GilderGear on this network. That will keep any glitches in the data from disturbing the outputs. ~ G



All equipment which is designed and built by Gilderfluke & Co. is manufactured in the United States of America. ~ G

## Happy 90th to Disney Legend (& GilderFriend) Bob Gurr October 25, 2021

## What's the Best Speaker Wire for an Sd-25 or Amp-50?

For attaching Sd-25 w/DMX and Amp-50s to their speakers, we recommend an 18 gauge shielded twisted pair. The shield should be attached to earth ground at the sending end, near the Sd-25 or Amp-50.

We typically use Beldon 5300FE for speaker and low voltage lighting. It is just 0.162" in diameter, Riser/Plenum rated, and is available in grey or easy-to-hide black.

And no, using an enormous gauge of speaker wire will not in any way enhance the fidelity of any amplifier. ~ G

## Celebrity GilderSighting:

Roger Daltry, front man and lead singer for the British rock band The Who, was spotted at a Beverly Hills-adjacent mansion where we had recently programmed a musical fountain.

He made some suggestions about the GUI while enjoying the 180° views from downtown to Catalina Island from the 'infinity' edge pool. Thirteen Oase laminar flow nozzles squirting from below the infinity edge back into the swimming pool.

I'm sure Mr. Daltry could see for miles and miles and miles, oh yeah...ah...ah...

BTW; the Who's drummer is now Ringo Starr's son, Zak Starkey. ~ G

## Interesting Times... part 3 Continued from page 4

We considered showing at IAAPA 2021, but when it was time to decide whether we would go or not, Covid-19 was raging through Florida, as it competed with Alabama for the highest infection and death rates.

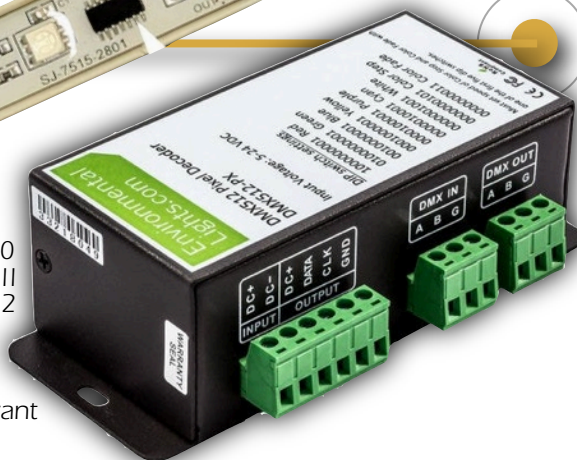
With Covid-19 still in the picture, there would be very light domestic, and almost no foreign attendees at IAAPA 2021.

On top of that, none of our staff was really enthusiastic about spending a week in the 'hot' zone, and risking their own and loved ones health.

We normally publish these newsletters in November, just in time to get them to IAAPA. Since there was no IAAPA in 2020, we don't have a newsletter #29, We skipped right over it and picked up on issue #30.

Film & TV production has picked back up, albeit with lots of health precautions in place: I was tested for Covid-19 three times in one day while working on a set.

Along with all the Marvel (and crossovers) and Fast and Furious franchises that use GilderGear for just about every production. We also have Michael Bay's Ambulance due out in February (about 50% shot on a GilderGear motion rig), a remake of Romancing the Stone, the Suicide Squad (blowing up Harley Quinn's lair at the beginning of the movie, among other F/X shots) and Spiderman franchise. ~ G



## App. Note: Light Up your Briefcase Fountain

In each issue of the GilderNewsletter, we have some sort of 'build' project, complete with a parts list and dimensioned drawings. As far as we can tell by the number of finished units we have seen, our two most popular 'builds' have been the 'Build a Fountain in a Briefcase' from issue #17 in 2008-2009 and 'Build a Motion Base' from issue #20 from 2011-2012.

Clients around the world have actually started successful companies based on just these two app. notes.

We have seen bigger fountains and smaller fountains, and fountains with more jets and fountains with less jets, all of which are based on our App. note.

Some build these small fountains as a Pc■MACs training aide, some build them to learn how to build larger fountains, and some just build them for fun.

For lighting on our prototype 'Fountain In A Briefcase', we just stuck a DMX-512 controlled RGB PAR can at each end of the fountain. These PAR cans barely lit up the water column, and were incapable of doing a lamp chase to match the fountain jets' programming.

We were looking for individual Red/Green and Blue (RGB) led modules that would fit our existing fountain jets. Our friends at Environmental Lights had the perfect solution in their Pixel Lights.

Each pixel is either 1.4" square x 0.2" thick or 2.9" long x .55" wide x 0.39" thick, and are joined to the next pixel by about 3" of wire. Each of these pixels has four RGB LEDs on it. To illuminate the water column, it will be best if the LEDs surround the water column. On earlier version of the square Pixels you could drill out the circle in the middle of each pixel so that

they can be slid down over each nozzle. We fabricated a set of rails for the Pixel modules to slide into from 'C' channel hobby brass. Since the nozzles aren't perfectly spaced, this allows the pixels to be slid around until they fit the nozzle spacing.

The square Pixels are potted in a small metal tray. We removed the ears, because they interfered with rails we had constructed. The rectangular ones have plastic trays.

The pixels are rated IP65, and our experience has been surprisingly good at staying dry. We added additional sealant around where the wires enter and exit the Pixels, as that is the most likely place for water to seep in.

For each 170 pixels, you will need a DMX-512 Pixel Decoder to turn DMX-512 into the signal that the pixels want to hear.

The 12 VDC power supply is connected to screw terminals 1 & 2 (counting from the left). The next four terminals are for attaching the wires that go to the left (input) side your first Pixel. The red wire (DC+) goes to the #3 screw terminal, The green 'Data' wire goes to screw terminal #4. The yellow (clock) wire goes to screw terminal #5. The black (ground) wire goes to screw terminal #6

The DMX can be connected to the screw terminals, or to the XLR-3 connectors on the Pixel decoder

Add the pixels to your channel list in Pc■MACs as 'Generic RGB Lights'. The 'Addr' column in the Channels List will show you what the first Pixel address is.

The address of your first pixel must be set using the ten position dipswitch on the DMX-512 Pixel Decoder. If your first Pixel is at one of the numbers shown below the dipswitch, just turn on that one switch.

If your first pixel number wasn't one of the numbers below the DipSwitch, you'll need to do some simple addition to decide which switches need to be turned off or on. If the desired address is '10', turn on 008 and 002. Add them together and it equals 010. If the first Pixel is at 37, turn on 032, 004 and 001. Add them together and you have 037. You can easily set any address from 1 to 512 using this simple 'addition' trick ~ G



## Machao Orphanage

MACHAO Orphanage Foundation is turning 17! My, how time flies. Seventeen years ago our very own VP & CFO took her first trip to Kenya, met 13 orphaned children

and was led to create The MACHAO Orphanage Foundation. During that time, they built dormitories for the girls and boys, latrines and bath houses, put in clean living water, built a greenhouse, put in solar panels, and solar irrigation for the current 43 children. The future of MACHAO is sustainability which will focus on putting in another water source, four more greenhouses and housing for 80 children.

Gilderfluke's support of The MACHAO Orphanage Foun-



Machao Orphanage  
Latitude.: 1°47'7.79"S  
Longitude: 37°36'40.86"E



dation, located in Kenya, East Africa, is very important to the orphaned children residing in Makueni. Ways you can help the children include: donate to purchase hygiene items (such as soap, toothpaste and lotion), shoes, sanitary kits for girls, school tuition, beds and chairs.

If you would like to take a life changing trip, RSVP to attend the MACHAO Service Trip Informational Meetings either in person or via Zoom video.

P.S. In 2020, when COVID hit, this was the worse year for donations received for MACHAO. On top of that, in 2021, the only water source needed repair. Early 2021, the water source was down and it took us eight months to raise enough funds to repair it. That's eight months without water. Your donation can literally be life-saving, life-changing. For more information on how to get involved go to: [www.machaoorphanage.org](http://www.machaoorphanage.org)



into products produced by our clients.

We can also custom-brand 'Stock' GilderGear. If you are interested in custom-designed equipment, please contact Doug Mobley ([doug@gilderfluke.com](mailto:doug@gilderfluke.com)). ~ G

## Gilder Thumb Drive

We distribute all our printed material and software on a USB GilderThumbDrive. Every video, manual, cut sheet, and piece of software we offer is all on each Gilder Thumb drive. These are available for a nominal charge. ~ G

## Classes?

The spacious quarters at Gilderfluke Towers has a permanent display area where we offer classes in GilderGear. We know that our stuff is pretty easy to learn to operate, but if you would like formal classes, they can be scheduled.

If you are interested in training on GilderGear, please contact Carolyn Rowley in our California GilderOffice: [Carolyn@Gilderfluke.com](mailto:Carolyn@Gilderfluke.com). ~ G

## On-Site Service

Gilderfluke technicians are available for installations worldwide. You will need to pay all the usual transportation expenses (business class or better airfare, hotel, food, and per diem) in addition to the fee for the technician.

If you are interested in field support and installation of Gilderfluke & Co. equipment, contact Carolyn Rowley in our California GilderOffice: [Carolyn@Gilderfluke.com](mailto:Carolyn@Gilderfluke.com). ~ G

## Gilderfluke Show Plans

We are considering exhibiting at the following trade shows in the upcoming year. We will evaluate the health and safety aspects of each show on a case-by-case basis as each show approaches.

March 17-20, 2022

Booth #t.b.d.

[Transworld's Halloween & Attractions \(HHA\) Expo](#), America's Center, Saint Louis, Missouri

May 19-22, 2020

Booth #t.b.d.

[American Alliance of Museum \(AAM\) Expo 2022](#), Boston, Massachusetts

June 8-10, 2022

Booth #t.b.d.

[InfoComm Expo 2020](#), Las Vegas Convention Center, Las Vegas, Nevada

November 15-18, 2022

Booth #t.b.d.

[International Association of Amusement Parks & Attractions \(IAAPA\) Expo 2020](#), Orange County Convention Center, Orlando, Florida

## GilderSwag Available

As everyone knows, there is no human being more fashionable on this planet than your typical Gilderfluke & Co. Employee.

Now you too can dress just like one!

GilderShirts, GilderChocolates, and other great GilderSwag are available from our online web store. ~ G

## Custom Design Work

Most custom design work are for clients that need a product to do a specific job that none of our off-the-shelf boards will do. Usually, these have been incorporated



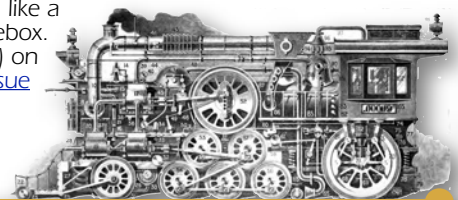
## Sassafras & Cypress

## Our Two Most Asked Questions

In the 39+ years we have been in business, the second most commonly asked question is where our company's unusual name came from.

Eli Gilderfluke was an 'inventor' whose illustrations appeared in railroading trade magazines in the 19th Century. A precursor of Rube Goldberg in the 20th Century, he developed strange inventions for steam trains. These were things like a big scoop to catch the exhaust coming out of the smoke stack and feed it back into the engine's firebox. The verb "to Gilderfluke" something eventually came to mean improvised repairs (i.e.: "Jerry-Rigging") on a piece of machinery. To the right is 'Gilderfluke's Perfected Locomotive' from the [December 1897 issue of Railway and Locomotive Engineering Magazine](#).

The answer to the most commonly asked question is: 'No, we don't build animated figures! ~ G



• You can follow us on:



## Who Are We?

For almost 40 years Gilderfluke & Company has been building Animation & Show Control Systems for theme parks, museums, and other entertainment venues. In 1988 we added Digital Audio Playback Systems to our product line, and became the first company to be able to provide the entire electronics package for your animated show or attraction.

We currently deliver an average of four or five systems a day. We are the only company that delivers complete, off-the-shelf Animation & Show Control Systems from stock. Most systems are bought by Animation Manufacturers for incorporation into their shows. They are simple enough to be installed by anyone.

Our **PC•MACs** Animation & Show Programming Systems were the first to run under Microsoft's Windows. It is still the technological leader among Animation Programming Systems. Our 'Brick'

Show Control Systems are the largest selling Animation & Show Control Systems in the world. These are modular systems which can be used to control any size show you can imagine.

Our Digital Audio Systems are led by our **Sd-10**, **Sd-25** and **Sd-50** Industrial-Strength Mp3 players. These store audio on standard MMC/SD Flash cards for any installation where you need a sound to play reliably and with zero maintenance; forever. Our systems are modular. Systems with two to thousands of outputs are can be made with our repeaters.

**Sd-50** players are also available with an option that adds eight or forty digital Show Control outputs, DMX-512, MIDI and COM ports to them. This turns them into a total Audio and Show Control playback solution. The GPS option allows shows and sounds to be scheduled, accurate to a thousandth of a second. ~ G

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Watch Our FREE Tutorial Videos On GilderYouTube