"He who wishes to be rich in a day will be hanged in a year."
- Leonardo da Vinci

"All the GilderNews we could jam into a little under 8 pages."
- Eli the Mule, CEM

GilderNewsletter

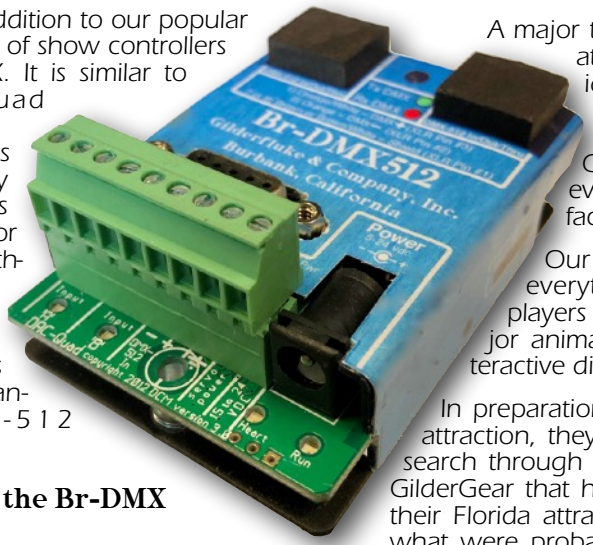
Views and News from the World of Gilderfluke & Co.

GilderHeadquarters ▪ 205 South Flower Street ▪ Burbank, California 91502-2102 ▪ 818/840-9484 ▪ 800/776-5972 ▪ FAX: 818/840-9485

Serving the Entertainment Industry for 37 Years!

New Member of the miniBrick Family

The latest addition to our popular 'miniBrick' line of show controllers is the Br-DMX. It is similar to the DAC-Quad and SER-DMX, but outputs only DMX-512. This can be used for controlling other GilderGear, lighting and theatrical effects through a standard DMX-512 network.



Features of the Br-DMX include:

- Outputs one full universe (512 channels) of DMX-512
- Two Output/Input/Thru DMX-512 connectors using standard RJ-45 (Ethernet) connectors
- Makes wiring to Sd-25s w/DMX, v-HdtoDMX, Br-CC08s, and Pb-DMX/xxs a snap, using ready-made Ethernet patch cables
- Battery backed up Real Time Clock and 365 day show scheduling, just like a Br-Brain4, Sd-50/8 or Sd-50/40
- Uses standard µSd flash card for virtually unlimited show storage capacity
- Automatic switchover from listening to dmx to transmitting DMX-512. Allows a Br-DMX to lurk passively on the DMX-512 net- work, and then take over if the normal source of DMX-512 goes away.

Br-DMX: continued on p.4...

Thirty Plus Years and Zero Failures

A major theme park operator with attractions in central Florida, Southern California, and around the world made a survey of all the GilderGear that they have ever installed in their Florida facilities.

Our GilderGear is running everything from stand-alone players up to and including major animatronic attractions and.interactive displays.

In preparation for a new international attraction, they tasked several interns to search through all the records for all the GilderGear that had ever been installed in their Florida attractions. This amounted to what were probably thousands of individual GilderProducts.

In 30+ years of operation, the only GilderGear that has been replaced were units that had been physically damaged, or ones that had been upgraded to newer models. They found no record of any GilderGear failing in service. Typically the GilderGear has outlasted the attractions it was installed in. ~ G

Updated GilderWebsite

We are just finishing a ground-up rewrite of our website. This is our fourth rewrite since www.gilderfluke.com went live on the brand-new 'Internet' in the mid 1990's.

Watch for our all-new GilderWebSite before the end of the year. ~ G

Unique App.

Don't Let The Grizzlies Eat You:

Along with the humdrum, run of the mill film and theme park attractions, fountain spectaculars and museum displays, we always like hearing of unusual uses for GilderGear. One of our favorites this year comes from the Minneapolis Zoo

It seems that in the Zoo business, one of the goals is not to have the zoo keepers interact too closely with the actual animals.

This is especially true when the animals are 600 pound, nine foot tall omnivores.

An automated audio playback system, built around our Sd-25 w/ DMX, is now used to announce when it is not a good idea for the zoo keepers to enter the bears' enclosure.

Dialing a special phone number starts the warning playing, and it can only be turned off locally when the bears are back in their enclosures. ~ G

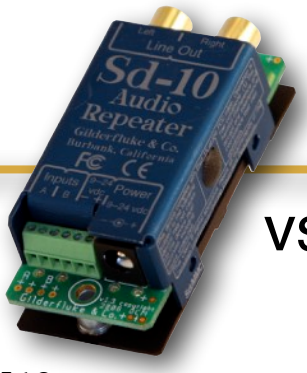
A Record Amount of GilderGear Shipped in 2019

Simply put, 2019 has been a busy year at Gilderfluke & Company.

- At least four movies that our clients worked on were nominated for Oscars. Several won.
- GilderGear was used on more, larger film productions this year, and clients are already booked for the next half dozen movies from just one major studio alone.
- Several 500+ piece orders were received from major theme parks and delivered this year
- More fountains were installed using GilderGear for their controls than any other year.
- We were hired to do the field programming on more shows than any other single year.
- More Museum display retrofits were done this year than any other.

GilderGear Comparison Chart

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
Amp-50						Stereo 50 Watt Digital Class-D Audio Amp.							Amplifier is equivalent to a 200-250 Watt Linear Amp
Br-ANA	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
Br-Brain4	Yes			1 Universe (512 Chan.)	4 Universe (2048 Chan.)	Smpte 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.
BR-DMX	Yes			1 Universe (512 Chan.)	1 Universe (512 Chan.)		Four Opto + Serial	Yes (GPS Optional)	Rs-232	micro Sd up to 32 GBytes	removable µSd or µSdHC		Can be used as a single DMX universe Br-Brain4
Br-EFB	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	µSd Cards up to 2 TBytes	µSd, µSdHC or µSdXc		Four Self Tuning PID Loops for Pneumatic, Hydraulic or Electric servo loops
Br-miniBrick4	Yes		Four Digital Outs				One Opto		Optional	8 KBytes			Our Smallest Show Controller
Br-miniBrick8	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
Br-SDC						Serial Device Controller Rs-232 / Rs-422	Ten Opto		1) Rs-232 or Rs-422				Runs DVD players in kiosks, etc.
Br-SDC8						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
Br-ZBR (Z-Brick)	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
BrightSign HD/UHD		Yes (stereo)		1 Universe (optional)		4K UHD & 1080p HD Video Players	Eight TTL (most models)	Option on some models	Rs-232	µSd Cards up to 2 TBytes	µSd, µSdHC or µSdXc	Yes	Up to 1080p, MPEG-2, H.264/ MPEG-4, H.265
Bt-DMX Bt-Servo			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.
DAC-Quad	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 µSd or µSdHC		Four 8, 12 or 16 bit Resolution Analog Outputs, plus Four Model Airplane-Style Servomotors
DP-DMX20L				1 Universe (4 Chan.)		115 vac DMX-512 Dimmer							Other dimmer sizes available
LG-DMX/DC				1 Universe (8 Chan.)		12-24 vdc DMX-512 Dimmer							DMX-512 to DC Dimmer Designed for Roller Coaster Use
Pb-DMX/8, / 16, /24 or /32	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 µSd or µSdHC		You can freely mix AC and DC relays on the same unit
Sd-10		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
Sd-25 w/DMX		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
Sd-50/0		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
Sd-50/40	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
Sd-50/8	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
SER-DMX	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 µSd or µSdHC		DMX-512 to Model Airplane-style ServoMotors



VS.

Sd-10 vs. Sd10

It was recently brought to our attention by a client that another company has a competing audio device also called the "Sd10" (without the hyphen).

Just so there is no confusion between the similarly named products, we created this handy wallet-sized comparison chart:

Gilderfluke & Co. Sd-10	Federal Signal Corporation Sd10
Introduced in 2005	Introduced in 1954
Mp3/WAV playback from Sd card	Dual-tone Outdoor Warning Siren
2-¾" long x 1.0" wide x 0.95" tall	46" diameter x 80" tall
Weight: 1.35 Oz.	Weight: 510-550 Lbs.
9 to 24 vdc @ 35ma (without Sd card)	3-phase 208/240 Vac @ 28A or 14A
1.3 Mousepower (estimated)	7.5 Horsepower
Dependent on external Amplifier(s) & Speakers	109 dB at 100 feet
Frequency Range: 20Hz to 20KHz	Frequency Range: 694Hz and 521Hz
Download Manual	Download Manual

Sampling Analog Data from an Old Control System.

The USB-AtoD is used to build your own custom consoles, or to sample in the animation data from an old control system that is being replaced by new GilderGear.

The inputs to the USB-AtoD must be kept between zero and five volts. If you get much outside of this range, the USB-AtoD may be permanently damaged.

If you are sampling a unipolar signal, like 0-10 vdc, you can use a pair of identical resistors in series to drop the voltage in half to 0-5 at the inputs of the USB-AtoD.

If you re sampling a bipolar signal (a voltage that swings both above and below zero volts), things get a bit more complicated.

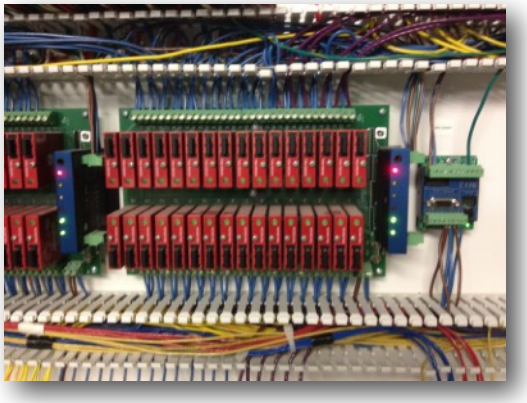
On one of our recent retrofits of an museum earthquake simulator, we used 10KΩ, ten turn pots on each +/- 10 volt signal we needed to record. The CCW terminal of each pot was attached to signal ground and the +/- 10 volts from the old system was attached to each CW pot terminal.

We could then use this pot to adjust the range of the signal around ground. The voltage at the pots' wipers was adjusted to +/- 2.5 a volts range. That gave us the five volt swing we were looking for, but because it was going below zero, we had to add one more 10K fixed resistor to each circuit.

This was tied from the ten turn pots' wipers to a 0-30 volt adjustable bench power supply. Raising the voltage (in this case to 15 VDC) on the power supply pulled the voltage at the wipers up to 0-5 volts. We confirmed that the voltage at the wipers stayed within 0-5 vdc using an oscilloscope and meter that recorded the peaks and valleys of voltage over time. Only then did we connect the signals to the USB-AtoD. We then sampled the analog data in a single pass. ~ G

Hint: Mounting Pb-DMX in a Panel

The various sizes of Pb-DMX/xxs (8, 16, 24 or 32 relays) are often mounted in electrical panels for controlling fountains and



other shows that need a bit more current on the outputs (3.5 amps continuous, 5 amps peak, 12 to 60 VDC or 12 to 240 VAC).

GilderFun

LED Color Chases

One of the most common uses you see of Red/Green/Blue (RGB) LED fixtures are color chases on the exteriors of buildings.

You may notice about the majority of these light chases is that all of the LEDs are chasing in unison. i.e.: if one is red, they all are red.

A chase like this is easy to program on GilderGear, but we can go well beyond this basic look by shifting the lights in time, as well as by color.

Start with a blank show. It can be any length. We normally program shows like this in in a miniature length version, and then stretch it to the final length after it has been programmed and we like the way it looks.

Use the 'add multiple' command from the Channels List menu to add in the number of RGB or RGBW lights you will be using.

Move all of your RGB lights to the OffLine Editing Window. and set your cut/paste options to 'none' and 'none'.

Select all your RGB channels for the first five seconds of the show.

Use the Edit Menu's Ramp to a Color picker to set the color you would like to see at the

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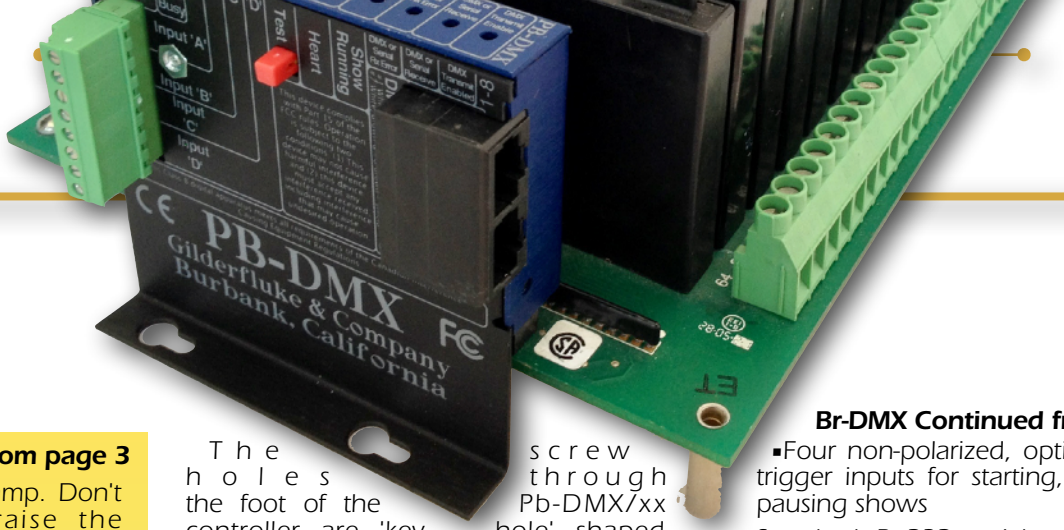


Continued from page 3

end of the ramp. Don't forget to raise the brightness slider up, or all you'll see are 'Dark Emitting Diodes' (DEDs).

Now select the next five seconds of all channels, making sure you catch just the ends of the last ramps you just created. Repeat this until your entire show is filled with ramps.

If you were to play your show at this point, it would ramp all the colors in unison.

To add the temporal shift to the light show, select the last second of your first light, cut it, and paste it into the start of the show. Repeat this for each of the lights, increasing the amount of time selected each time, and you now have a color fading light show with a temporal shift so that it chases the lights in time as well as in color.

After you have reviewed your show in the abbreviated version, open the file menu's 'Show Information' dialog, and make the show its final length. When Pc▪MACs asks if you would like your show data to be interpolated to the new show length, say 'yes'.

The show will now be the final length and ramp speeds. ~ G

The screw holes through the foot of the Pb-DMX/xx controller are 'key-hole' shaped. This allows you to slide the controller off the screws without removing them completely.

The trick is to use screws that are 3/8" to 1/2" too long for holding down the Pb-DMX/0 to the back panel. If you want to make the screws 'captive', you can bung up the threads at the screws' tips with a heavy wire cutter or pair of lineman's. That way, the screws won't easily come out of the threaded holes through the back panel.

When you need to remove the controller, back out the screws far enough that you can unplug the controller from the relay board, but not so far that the screws fall out of the tapped holes. You can then unplug the controller from the relay board, and slide it to the right to get it over the two screw heads. ~ G

UHD Video at HD prices

The latest BrightSign video players are the 4th generation.

They sport the same extruded aluminum cases used on the series '3' players, except the end caps are now white instead of black.

With each update of the BrightSign players, advanced features move 'downmarket'.

Support for full 4K video at 60 fps started as a feature only available in the most expensive of player.

Now only the least expensive LS-424 player lacks UHD playback and GPIO.

The GPIO is needed for triggering VideoFiles using our GilderScript. The GilderScript eliminates the need to do <u>any</u> BrightAuthor configuration for most installations.

Instead, the GilderScript lets you simply drag and drop your VideoFiles into specially named folders, and the GilderScript does the rest. ~ G

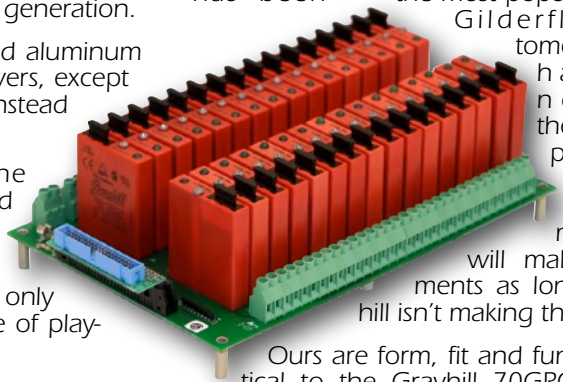
Br-DMX Continued from page 1

- Four non-polarized, optically isolated trigger inputs for starting, stopping or pausing shows
- Standard Rs-232 serial port for additional control, configuration and diagnostics
- Runs on 5 to 24 VDC
- Mounts on standard snap-track, DIN rails (with optional DIN-Adapt adapters), or just screw or velcro it to a surface. ~ G

Pb-32 & Pb-DMX/32 from Gilderfluke

We only use Grayhill plug-in output relay modules. There are several reasons for this:

1. Lifetime Warranty. If an output module ever stops working, just send it to Grayhill for a no-questions-asked replacement.
2. Each relay has a built-in, standard 5 mm x 20 mm glass fuse. You can get replacement fuses at any gas station in the world. Other relay brands use odd-ball sized fuses that have to be ordered and shipped in if you blow one.
3. Only Grayhill has mounting boards that accommodate 32 relays.



The 32 position relay mounting board has been the most popular used by Gilderfluke customers. Grayhill has announced they will be phasing out the 32 position model. We will make replacements as long as Grayhill isn't making them.

Ours are form, fit and function identical to the Grayhill 70GRCM32 relay mounting boards. ~ G

Made in the USA

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

App Note: Build the World's Smallest Escape Room

The Escape Room Application note is downloadable from here.

The Quiz game App. Note (with sample video quiz) can be downloaded from here.

Plans for the Escape Room Toolbox can be downloaded from here.

We built our Escape Room into a 'wooden' tool box. It has eight drawers, each of which can be locked/unlocked using mag locks. In the top is the control system, video playback and 9" Hd video screen. One servomotor can be used for a 'countdown timer', and a second for the 'Wrong-O-Meter'. There are also some RGB pixel controlled lights.

What you can do for puzzles is only limited by your imagination.

Clues can be provided by the video screen, audio (there are four audio tracks available), objects in the drawers, or spelled out Ouija-style by the two servomotors.

Answers can be found in the drawers, typed in on the line of buttons, or after the player completes a task.

The tool box is easily obtainable from your local Harbor Freight tool store. The design is based upon a much higher quality Gerstner toolbox.

The Harbor Freight toolbox is made out of a material that is a cross between balsa wood and styro-foam, covered with a nice wood v eneer. Gerstner wooden toolboxes are made from well... wood.

Double Drawer assembly, removed from cabinet. Left drawer/ maglock are closed. Right mag-lock is in opened position (about ¼" out).

When a drawer is closed and the magnetic lock is energized, it takes a pull of approximately 130 pounds to force it open. That would easily rip an unmodified toolbox apart.

We knew that even in the relatively tame environment of a trade show floor, this toolbox would need some serious strengthening.

We used aluminum where possible to keep the weight down, but you could use titanium, vibranium, or any other metal you have at hand to strengthen your toolbox.

When someone pulls on the drawer, the force is transferred from the (purposely small) handle through the 1" x ⅛" wall aluminum angle to two aluminum ¼-20 all-thread rods to the steel mag lock target plate at the back of the drawer. If the mag lock is energized, the drawer can be opened slightly, but not far enough to see what is inside. When de-energized, each drawer can be opened freely.

The back of the tool chest is where the toolbox's structure starts to get serious.

Five horizontal 1" square, ⅛" wall aluminum tubes are mounted to the back of the toolbox on three vertical cleats. These three vertical cleats are the main attachment points between the new metal structure and the original wooden toolbox.

The upper three horizontal 1" square tubes support the six smaller drawers, and the lower two horizontal 1" square tubes each support one of the two larger drawers.

To keep the drawers from being pulled out of the toolbox, two 8" long bolts are run through nylon bearings through the five horizontal 1" aluminum tubes and screwed into the steel magnet plates on each drawer. The lengths of these bolts set how far the drawers can be opened.

All the holes through each aluminum tube must be aligned perfectly with the holes in each of the drawers. The spacing between the drawers is set by the position

Wiring it Up

1 = Shield
2 = '-'
3 = '+'

We were programming a large show in Taiwan, and hundreds of the DMX-512 controlled third party equipment (lights, strobes, smog machines, etc) weren't working.

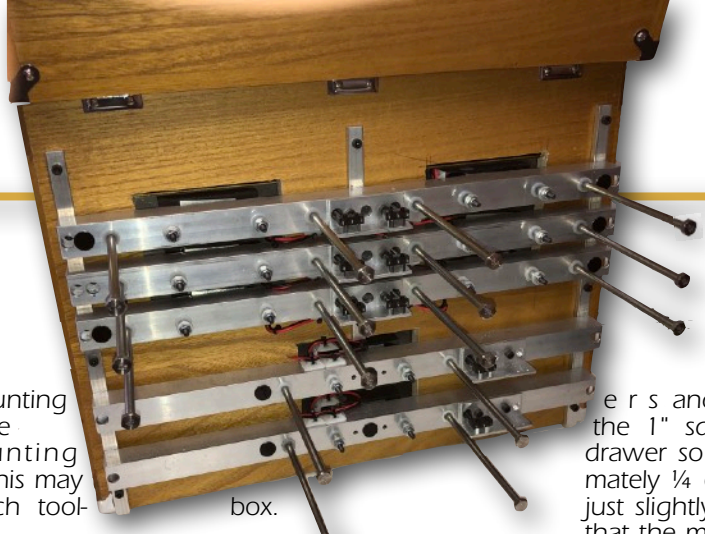
The DMX-512 cables daisy-chained point to point between all this gear, as it should.

If we plugged a DMX-512 cable directly into any non-working unit, it worked perfectly. That proved it wasn't a hardware or DMX-512 addressing problem.

XLR connectors were used on every cable. With either three or five pin XLR connectors, pin one is always the shield, pin two is always the DMX-512 '-', and pin three is always the DMX-512 '+'. There is one way to wire it correctly, and five ways to do it wrong.

The electricians had wired every XLR connector randomly. The only reason that some equipment was working, is just through going through enough random connections, every once in a while the cable came back to the correct pinout.

Whenever we go out on an installation, we bring a handful of our LED Dmx testers!. ~ G



Bolts provide support & guidance for drawers. They also keep guests from opening drawers too far, or removing them from the cabinet. The Sliding Mag-locks are located behind each drawer's center.

of the mounting holes in the three mounting cleats, and this may vary for each toolbox.

The drawer slides on the Harbor Freight toolbox are simply wooden cleats, held in place by two or three staples. Any vertical movement would strip these right off, so we have replaced them with solid aluminum cleats, each held in place by three 8-32 Allen head machine screws. Three of the center cleats are clear drilled and countersunk for 8-32 flathead Allen screws. The other thirteen drawer cleats are all drilled and tapped 8-32. Drilling the holes through the toolbox walls slightly oversized will allow you to make small adjustments to the alignment of the cleats and drawers.

The two large draws get the same reinforcements and mag-locks as the six smaller drawers

The easiest way we found to get everything aligned is to first cut away the clearance hole on the back of the toolbox. We then temporarily assembled the five 1" horizontal tubes to the three mounting cleats and clamped them to the back of the toolbox. We slid the modified drawers into the front of the toolbox, and screwed the 10" long retainer bolts through the nylon bearings from the back and into the drawers. If the drawers slide smoothly on the original wooden cleats, you can leave them in place for now. Otherwise, remove the offending wooden cleats and carefully mark and drill to install the replacement aluminum drawer cleats.

When everything is sliding smoothly, drill out the mounting holes for the three vertical mounting cleats on the back of the toolbox and permanently mount them using 10-32 Allen cap screws and 'tee' nuts on the inside of the toolbox.

The center wall is sandwiched between the pairs of cleats. The ten outboard cleats are attached to the outer walls using the 8-32 flathead screws and decorative brass washers. The large surface area of the washer distributes the load from the cleats to the wooden toolbox chassis.

The mag locks are each mounted using two 8-32 cap head Allen bolts, two ¼" OD aluminum sleeve, two washers and two nylock nuts. They are mounted through the 1" square aluminum tubes at the center of each drawer so that they are free to slide in and out approximately ¼ of an inch. This allows a drawer to be opened just slightly when the mag lock is energized, far enough that the microswitch will be tripped to tell the control system that someone is trying to open a locked drawer.

Also attached to the back of the inboard drawer all-thread rod is a ¼-20 to 10-32 adapter nut. This holds a long 10-32 setscrew that contacts the microswitch that tells the control system that the drawer has been opened even slightly. The setscrew can be turned in or out to adjust the trip point for the microswitch. Once adjusted, the setscrew is held in place by a 10-32 jam nut.

We are using an Sd-50/40 for show control and a v-Hd224/DMX for video playback. One servomotor output is used for the 'correct-o-meter', and the other servomotor output is used for countdowns. There are eleven momentary buttons (numbers 1-10, plus a 'start' button), eight enables for the drawer enable switches, and eight outputs for the drawer mag locks.

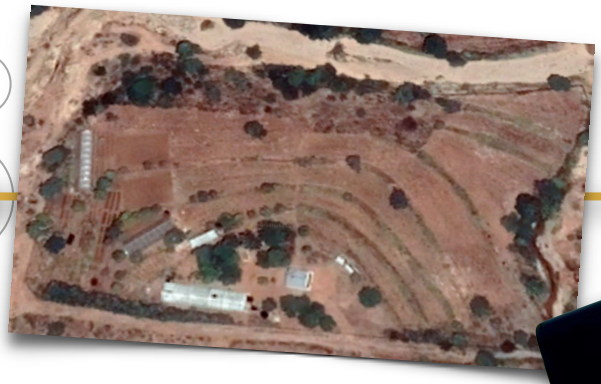
No computer coding is needed for programming an Escape Room when using GilderGear. Markers are simply drawn on the timeline to enable the lights, video, mag locks, servos and input switches and check the answer so it knows whether to branch to the 'correct' or incorrect' show.

Because we were building this for trade show purposes, we didn't worry too much about audio. As it stands, it has a stereo track from the Sd-50/40 (with a 500-600 Watt equivalent amplifier) and a line out audio from the video player. About 500 channels of DMX-512 are also available to expand your show well beyond the toolbox. ~G

Machao Orphanage

MACHAO Orphanage Foundation is turning 15! My, how time flies. Fifteen 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 panel, and solar irrigation for the current 43 children. The future of MACHAO is sustainability which will focus on another water source, four more greenhouses and housing for 80 children.

Gilderfluke's support of The MACHAO Orphanage Foundation, located in Kenya, East Africa, is very important



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

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. For more information on how to get involved go to www.machaoorphanage.org

Greatest Hits on a GilderThumbDrive

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 GilderThumbdrive. These are available for a nominal charge. ~ G

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

Classes Anyone?

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. ~ 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 into products produced by our clients.

We can also custom-brand GilderGear, if you prefer to start with an off-the-shelf design.

If you are interested in custom-designed equipment, please contact Doug Mobley (doug@gilderfluke.com). ~ G

On-Site Show Programming, Installation & 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) ~ G

Gilderfluke Show Plans

We are scheduled to exhibit at the following trade shows in the upcoming year. We have free passes for many of them, so contact us if you would like to attend as our guest.

November 19-22, 2019
Booth #1667
International Association of Amusement Parks & Attractions (IAAPA) Expo 2019
2019, Orange County Convention Center, Orlando, Florida

March 19-22, 2020
Booth #1030
Transworld's Halloween & Attractions (HHA) Expo,
America's Center, Saint Louis, Missouri

May 17-20, 2020
Booth #446
American Alliance of Museum (AAM) Expo 2020,
Moscone Convention Center, San Francisco CA

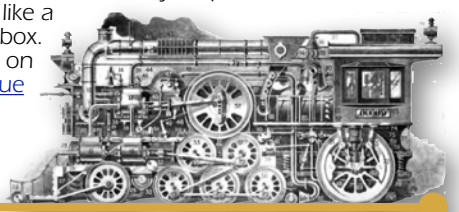
June 17-19, 2020
Booth #S4076
InfoComm Expo 2020,
Las Vegas Convention Center, Las Vegas, Nevada

November 17-20, 2020
Booth #t.b.d.
International Association of Amusement Parks & Attractions (IAAPA) Expo 2020,
Orange County Convention Center, Orlando, Florida

Our Two Most Asked Questions

In the thirty-five or so 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

Who Are We?

For 35 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

In this issue...

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Watch Our FREE Tutorial Videos On GilderYouTube