

Gilder Newsletter

Views and News from the World of Gilderfluke & Co.

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Br-miniBrick8s TransmitDMX-512!

Last year we added DMX-512 reception to our best-selling Show Controller. This year, we add the ability to transmit DMX-512, even when it is getting Real-Time updates through the serial port from PC•MACs!

This allows a **Br-miniBrick8** to run as a stand-alone Show Controller, as a DMX-512 'slave' as a part of a larger Show Control system, or a DMX-512 'Master', sending DMX-512 to control light dimmers, wiggle lights, smog machines or any other DMX-512 controlled devices. Even other **Br-miniBrick8s!** ~G



Soon, you will even be able to order online without ever talking to a live Gilderflukian!

Kudos to Barbara Ford and Carolyn Rowley for their hard work on this project! ~G

We're Turning 25

Although we were developing systems for at least two years prior, our first controllers were bought and installed in the Spring of 1983 at Knotts Berry Farm in Buena Park, California.

We are planning an open house and celebration to mark the anniversary. Watch for an announcement and invitation.

Last time we checked, the controllers at Knotts Berry Farm were still plugging away. Twenty five years, and not a single service call! ~G

Gilder Website Updated

The GilderWebsite has been around in pretty much the same form since some time back in the '90s. The products, docs and material on the website have been regularly updated, but the framework remained the old reliable 'web 1.0' compatible version. All that changed earlier in the year. After innumerable false-starts, the website has been updated with all the sidebars, menus, and other gizmos of a modern website.

We find the 'search' to be the most useful new feature. When our techs find they need to reference a manual to help with a customer's question, instead of digging out a paper copy, the quickest way to access it is through the GilderWebsite. Just search for the product, press the 'manual' button, and up it pops!



GilderGear Chart

We make a **lot** of different products. Sometimes even we have trouble keeping them all sorted out. In most jobs, there are two or three different combinations of GilderGear that will do the job.

To help you select 'at a glance' what GilderProducts do what, we have put together the following comparison chart of our most popular pieces:

(See page 2)



GilderGear Comparison Chart

GilderGear Part Number	Show Control	Audio Player	Other Features	DMX-512 Input	DMX-512 Output	Show Control Outputs	Trigger Inputs	Clock/Calendar Schedules	Serial Port(s)	Memory	Flash Card	Starter Kit	Notes
Sd-10		Yes (stereo)	Line Level Out				2) Opto + Serial		Rs-232 (opt.)	Sd Card up to 8 GBytes	MMC/Sd/ SdHC	Yes	CD player Replacement Equiv. to a 200-250 Watt Amp
Amp-50			50 Watt Digital Class-D Amp										
Sd-25		Yes (stereo)	50 Watt Amp Mixer Input			1 Status Output	2) Opto + Serial		Rs-232/422 (opt.)	Sd Card up to 8 GBytes	MMC/Sd/ SdHC	Yes	Equiv. to a 200-250 Watt Amp
Sd-50/0		Yes (stereo)	100 Watt Digital Amp				8) Opto + Serial		Rs-232	Sd Card up to 8 GBytes	MMC/Sd/ SdHC	Yes	Equiv. to a 400-500 Watt Amp
Sd-50/8	Yes	Yes (stereo)	100 Watt Amp 8 ServoMotors*	1 Universe (512 Chan.)	1 Universe (512 Chan.)	Up to 8 Digital	4+8* + Serial	Yes (GPS Opt.)	1) Rs-232 1) Rs-422	Show: 4 MBytes	MMC/Sd/ SdHC	Yes	* Uses 8 Show Control Outputs
Sd-50/40	Yes	Yes (stereo)	100 Watt Amp 8 ServoMotors*	1 Universe (512 Chan.)	1 Universe (512 Chan.)	Up to 40 Digital	4+8* + Serial	Yes (GPS Opt.)	1) Rs-232 1) Rs-422	Show: 4 MBytes	MMC/Sd/ SdHC	Yes	* Uses 8 Show Control Outputs
Br-MiniBrick4	Yes					4 Digital	1) Opto		Opt.	8 KBytes			Our smallest controller
Br-MiniBrick8	Yes		2 PWM Servo-Motor Outputs	1 Universe (512 Chan.)	64 DMX-512 Channels*	8 Digital 2 Servo	2) Opto + Serial		Rs-232	64 KBytes			* DMX-512 outs eat up Memory
Br-MultiBrick32	Yes			5 Universe (256 Chan.)	Feedthru	32 Digital	4) Opto + Serial		Rs-422	512 KBytes			
Br-ANA	Yes			5 Universe (256 Chan.)	5 Universe (256 Chan.)	16 Analog	4) Opto + Serial		Rs-422	1 MBytes			DMX-512 to Analog Card
Z-Brick (Br-ZBR)	Yes			1 Universe (512 Chan.)	Feedthru	32 Digital							DMX-512 to Digital Card
Bs-Brain4	Yes		Smpte Reader, DVD Control	1 Universe (512 Chan.)	4 Universe (2048 Chan.)		10) Opto + Serial	Yes (GPS Opt.)	2) Rs-422	Sd Card up to 8 GBytes	MMC/Sd/ SdHC		Plays 8 asyn-chronous shows
Pb-DMX/8 /16, /24 or /32	Yes		3-5 Amp, AC or DC Relays.	1 Universe (512 Chan.)	64 DMX-512 Channels*	up to 32 Relays	2) Opto + Serial		Rs-232	64 KBytes			* DMX-512 outs eat up Memory
MACs-USB	Yes		Smpte, DMX & Console in/out	1 Universe (256 Chan.)	1 Universe (256 Chan.)		4) Opto						Turns PC into Show Control System
Br-SDC			Serial Device Controller				10) Opto		1) Rs-232 or Rs-422				
Br-SDC8			Serial Device Controller/Mux.				10) Opto + Serial		8) Rs-232 1) 232/422				
SER-DMX	Yes		16 PWM Servo-Motor Outputs	5 Universe (256 Chan.)	Feedthru	16 PWM Outputs			Rs-422				DMX-512 to pwm ServoMotors
Video Chameleon		Yes (stereo)	NTSC/PAL Video Player				9 TTL (incl. adapter)		Rs-232	Removable CF Card	Compact Flash	Yes	MPEG1, MPEG2 8 Mbps max
Pro-DVXF100		Yes (stereo)	NTSC/PAL Video Player							Removable CF Card	Compact Flash		JPEG, MPEG1, MPEG2, MPEG
LG-DMX/DC			12-24 vdc DMX-512 Dimmer	1 Universe (8 Chan.)									DMX-512 to DC Dimmer
DP-DMX20L			11.5 vac DMX-512 Dimmer	1 Universe (4 Chan.)									Other dimmer sizes available

Electric Bills too High?

Most of you are probably unaware that Gilderfluke & Co. has a heavy emphasis on 'green' technology. We recycle everything that we can, use almost no incandescent lamps on our offices, and have priced out solar cells for Gilderfluke Towers.

Many of our customers are equally concerned about the environment. This is especially true among zoos, museums, and aquariums, where the education of the next generation of energy consumers fits hand-in-glove with their primary missions.

One such institution had an energy audit done on their facility to find out where their energy was being used. It is a new facility, so it was well insulated and heating/air conditioning already designed to minimize usage. To their surprise, they found that after lighting, the biggest consumer of electricity was in their amplifier rooms! Each of these rooms are filled with racks of new linear audio amplifiers.

Like all linear amplifiers, their existing amps are only about 20% efficient. Whether they are being used or not, if they are 'on', they draw as much as 80% of their rated wattage, and turn it directly into waste heat. This heat then has to be dissipated by the air conditioning system for the building, which also factored into the energy consumption audit.

Our **Amp-50s** are 90% efficient. When they are being used to amplify sound, 90% of the power that goes into them ends up in the speakers. Very little power is wasted as heat (less than 10% when running at full volume). When they are not amplifying a sound, their power usage drops to negligible levels. The same amplifier is also used in our **Sd-25s** and **Sd-50s**. Our client has calculated that the cost of replacing all their amplifiers will pay for itself within one to two years in the electrical savings alone. After that, the savings will continue infinitely into the future (an

important consideration for a non-profit!) On top of that, our **Amp-50s** are so tiny that they get most of the square footage of the former-amp rooms back for other uses! ~ G

GilderBluetooth

When the Bluetooth radio standard was released, the consortium of manufacturers that were backing it over-promised and under-delivered on those promises. What was supposed to be an 'idiot proof', radio standard turned out to be a jumble of incompatible pieces of hardware with a bewildering array of configuration programs needed to get two devices talking to each other.

After the hype died down, the engineers went back to work to revise the Bluetooth standard, and work out all the bugs. It has become the de-facto standard for cell phone earpieces, GPS receivers, and is now built into most palm and many laptop computers.

Another recent custom project caused us to dust off the Bluetooth standards and take a look at them again. You can now use off-the-shelf Bluetooth transceivers to control, program, and configure most GilderGear from up to 100 meters away. This is shown in the photo where a battery powered Class-1 Bluetooth transceiver from Roving Networks is plugged into the serial port of a **Br-MiniBrick8**. ~ G

At last!

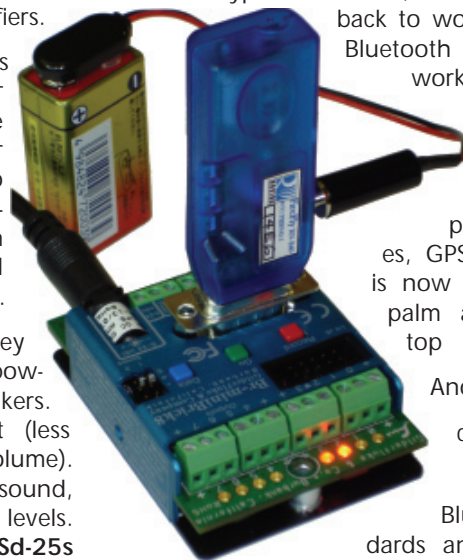
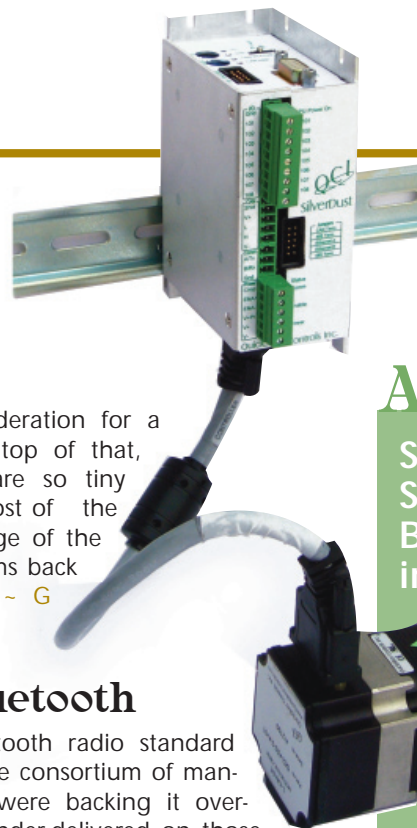
Something Supports 32 Bit Resolutions in PC•MACs!

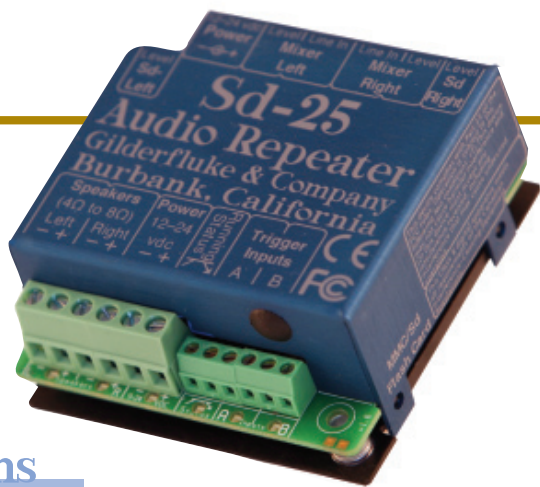
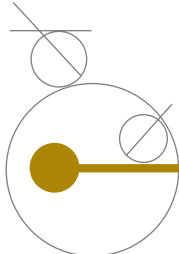
It has taken almost 15 years, but at long last there is something that can actually use the 32 bit resolutions we have had available in **PC•MACs** since it was first released. Thirty-two bit resolution allows 4,294,967,296 steps. This would allow you to control a movement of 67.786731 miles (109.09217 Kilometers) with a resolution of .001 inch (0.0254 millimeters)!

Quicksilver Controls' SilverDust™ line of servo motor controllers have had Gilderfluke compatible DMX-512 inputs added to them. They even support the GilderChecksums, which are unique to Gilderfluke & Co.

DMX-512!. In addition to 32 bits, these controller can support eight, sixteen or twenty-four bit resolutions. As a side benefit, they also translate the GilderData into CAN buss, so you can use the Quicksilver motor controller as a bridge to all sorts of other CAN buss compatible equipment. For more information, contact:

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 eric_dunn@
 QuicksilverControls.com
 www.QuicksilverControls.com





Touchscreens Revisited

Last year one of our clients built a control system for a project in Hong Kong. Although the specification didn't call for it, they added a stand-alone touch screen to call up shows, maintenance tests, and display the system's status. This so impressed their client, that they have now started specifying similar touch screens for all their projects. Suppliers of stand-alone touch screens include:

- Maple Systems:
<http://www.maple-systems.com>
- QSI:
<http://www.qsicorp.com>

These industrial-strength LCD displays come with a Windows-based program that allows you to draw boxes, labels, and other controls on the screen, and then attach serial strings to them. Gilder-Gear has supported touch screens with serial interfaces since around 1990.

~ G



New Modes for Sd-25

We recently added even more modes, and enhanced several existing modes on our best selling audio player, the Sd-25. You can now select whether sustained inputs loop a single sound, all the sounds, or just play the selected sound once.

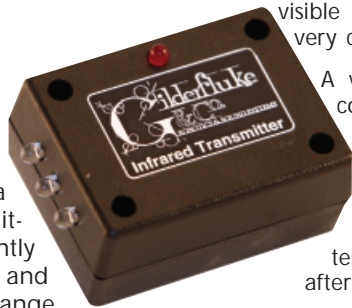
The 'loop all' mode now supports up to 32,767 Sound-Files, and the randomizer now works with more than 256 SoundFiles.

The new 'Doug's Doorbell' mode allows up to 32,767 SoundFiles to be triggered sequentially or randomly.

New variants on two of the modes that loop a 'background' SoundFile whenever it is not playing a triggered 'foreground' SoundFile now ramp out the 'background' SoundFile gracefully before starting the 'foreground' SoundFile. ~ G

Easier Addressing for Ir-Tx

The Ir-Tx and Ir-Rx were built to solve a particular application problem at a major theme park. Transmitters are mounted permanently along the path of a vehicle, and when a vehicle moves into range, it knows from the transmitters which show or sound it should play. When we needed to build some more of the Ir-Tx units, about the only improvement we could think of to make to them was to use a pair of rotary switches in place of the eight position DipSwitch. Now you just 'dial in' the show or sound you want the transmitter to trigger. ~ G



Gilder Leap Years

I once saw a sign in a very rural part of Japan that read 'Open 365 (366) Days A Year'. The sign should have read 'Open 365.2425 Days A Year'.

The Julian calendar, adopted in 45 b.c. by Julius Caesar, introduced the idea of leap year every fourth year. Over the lifetime of an average person, the drift was negligible. But through fifteen centuries, the Julian calendar had caused ten days' worth of drift. By the 1500's, it was noticed that holidays were drifting out of their traditional seasons.

The Gregorian calendar was created at the behest of Pope Gregory XIII in 1582. To better approximate the spin of the Earth and the time it takes for the Earth to circle the sun, it was decided to have a leap day 97 years out of 400 instead of once every four years. To do this, there is a leap year every year divisible by four, unless that year is also divisible by 100. If it is divisible by 100 it would only be a leap year if that year was also divisible by 400. So, in the last millennium, 1600 and 2000 were leap years, but 1700, 1800, and 1900 were not. In this millennium, 2100, 2200, 2300, 2500, 2600, 2700, 2900, and 3000 will not be leap years, but 2400 and 2800 will be. The years that are divisible by 100 but not 400 are known by the very cool name "exceptional common years".

A whopping big leap year was used to correct for the accumulated drift. In the British Empire, which then included the American colonies (this was fourteen years before the 'unpleasantness' of 1776), Wednesday, September 2, 1752 was followed by Thursday, September 14, 1752. This was only 170 years after the Gregorian calendar was created!

This is the sort of stuff that Microsoft forgot to put into Windows pre-Y2K. It has been written into the Sd-50s and the upcoming Br-Brain4.

Not only are they accurate to within .001 of a second when using the GPS option, they will correctly calculate for leap years and the day of week through the year 10,000 a.d.. If any readers are around in the year 10,001, please give us a call and let us know how it works. ~ G

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App Note: Moving Sound

What do you do when you need to create the effect of a train passing by or the whoosh of an aircraft flying over? There are several ways to 'chase' a sound past a listener. Most of these involve having more than just a stereo pair of speakers.

All the audio repeaters we make are stereo. That is to say, they have a 'right' and a 'left' output. There are several ways to create a 'moving' sound:

- **Speaker Switching:** A single Stereo sound can be fed to multiple speakers through a matrix of relays controlled by a **Br-miniBrick8** or other controller. Electro-mechanical relays can be used, but FET output solid state relays are better. If different numbers of speakers are on at the same time, it can effect the overall volume of the system (unless 70 volt speakers and amplifiers are used), and there can be an audible 'pop' when speakers are switched in and out.
- **Amplifier Switching:** You can also switch the 'line' level signals before they are amplified using our little RD-RLY reed relay board or small FET output solid state relays. Using a **Sd-10** as the audio source, just wire all the 'shields' together, and run the center wire of each RCA cable through the relays and then to your amplifiers and speakers.
- **External Mixer:** There are several brands of audio matrix mixers available. These can be programmed to take the input from one or more Sd-10s and feed them across multiple outputs.
- **'VCA' control:** **Sd-50/8s** and **Sd-50/40s** can control the volume of the outputs through the animation data. You can use one Sd-50/xx player for each pair of speakers. This has the advantage that you can program the volume of each speaker as the rest of the show is programmed. Since the Sd-50s also output DMX-512 and Show Control, they can be used to also control lighting, and other effects in the show.
- **Multiple Sd-25s:** The simplest and most cost effective way to chase a sound is to use several **Sd-25s** and premix the audio to chase across the number of speakers you will be using. Just trigger the **Sd-25s** in parallel, and the sound will chase across. No additional Show Control or mixers are needed.

This last method is also the best way to create an ambient 'soundscape' for a night time (frogs and crickets), jungle (insects and bird calls) or crowd (traffic and voices). By using several **Sd-25s**, each with its own set of sound tracks, and each soundtrack of a different length and set to play 'randomly', the sounds are layered into a myriad of textures that will never play the same way twice. ~ G



California Compliant Power Supplies

We like 'idiot' lights. We put all kinds of blinking LEDs on all GilderGear to help with simple diagnostics. Until recently, the power supplies we provided had a LED on them to show that they were plugged in and working. New power supplies will not have this most simple of diagnostic features.

Power supplies were once made with a transformer, rectifier, and a voltage regulator. They were big, heavy, and got hot, whether anything was attached to them or not. Newer power supplies are called 'switching power supplies'. They work at far higher frequencies than the older linear supplies. It is identical to the difference between our 'switching' Class-D **Amp-50s** and older 'linear' audio amplifiers. The higher frequencies allow the transformer to shrink, and the efficiencies to shoot up.



California is leading the world in efficiency requirements for power supplies. The new 'California Energy Compliant' ('CEC') standards for power supplies require that they draw next to no electricity when nothing is attached to their outputs. That is what happened to the LEDs. To meet the California standards, there is not even enough spare juice to light even one poor little LED on these new power supplies! ~ G

Linx-Rx Is Better Listener

The **Linx-Rx** and can be used with one of two pocket-sized transmitters to trigger shows and sounds. The transmitters are available as a key fob-sized five button **Linx-Fob5**, or a slightly larger, and longer range transmitter with eight buttons.

The sensitivity of these radios has been increased from the original design, which has increased their range considerably. With the key fob-sized **Linx-Fob5** transmitter, you should expect at least the same range as the alarm system on your car. The larger **Linx-Tx8** should now give you even greater range. ~ G



Odd

Applications for GilderGear

Some of our favorite applications from last year are:

- Automated radio stations using Sd-10s as their audio source. They can store days worth of audio, and the program material can be changed by simply switching Sd cards.
- Doug's Doorbell: using a **Sd-25** as a residential doorbell. Load the Sd card with thousands of sound effects, and mount a pair of speakers over the doorway on the outside of your house to scare the heck out of unsuspecting visitors.
- During 'sidebars', where the judge talks privately with the lawyers, the **Sd-10** or **Sd-25** will play music so that the jury can't overhear what is being said.
- Have you ever been in a public restroom that was as quiet as a public library? In a twist on the jury audio masking system, noise is piped in to the restroom to mask 'other' sounds. I would recommend the sound of the space shuttle lifting off as the appropriate SoundFile to use in this application.

~ G

GilderGear in Really Bad Places

In more than twenty-five years of delivering control and sound systems, we have seen some odd repair returns. Units that were run over by cars, trucks, and even one monorail. Direct lightning hits have blown holes large enough to stick your thumb through a circuit board.

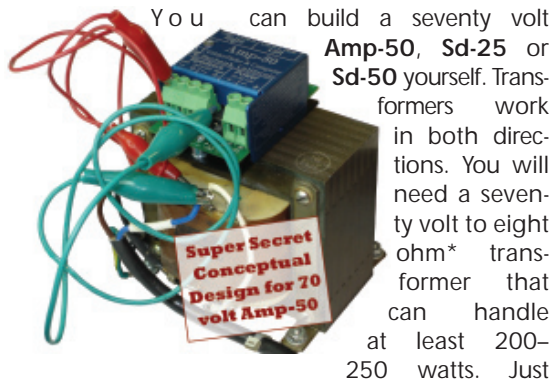
And Rust. Everyone knows that water and electronics don't mix. Yet we have gotten back systems that have been on boats that have sunk, fountains that have blown a gasket, and of course the assorted hurricane, typhoon, and other natural disaster. We even had one fountain controller that was in a glass-front NEMA box on view to the public so they could watch the blinking LEDs. After leaves clogged the drain, water had entirely filled the cabinet to the top. The immersed system continued to operate normally for quite some time. They didn't know the box was full of water until they opened the door and were hit by hundreds of gallons of water. Surprisingly, if a circuit board is quickly and thoroughly dried, water will have little effect.

Most of our products can have an additional moisture protection in the form of a layer of 'conformal coating'. This encases the entire circuit board in a layer of epoxy. Everything but the connectors are then protected from moisture. The 'downside' of adding a conformal coating is that it makes a product 'unrepairable'. If it breaks, it must be replaced with a new unit. And even a conformal coating won't protect against direct lightning hits. - G

Seventy Volt Speaker Systems

The outputs of our **Amp-50**, **Sd-25** and **Sd-50** are all four to eight ohms. You can series/parallel a few speakers on each output, but to run many speakers you really need a Seventy-volt speaker system. A transformer on the output of the amplifier boosts the speaker output of the amplifier to a higher impedance and voltage levels. Matching transformers on the speakers then tap into this speaker 'party' line, and drain off only the portion of the amplifier's wattage that they need. Adding and subtracting speakers from the seventy-volt line only minimally affects the other speakers (great for speaker switching!).

We have been asked several times why we don't make a seventy volt output version of the **Amp-50**, **Sd-25** and **Sd-50s**. The answer is just that a tiny blue box would look silly bolted to the top of a big transformer!

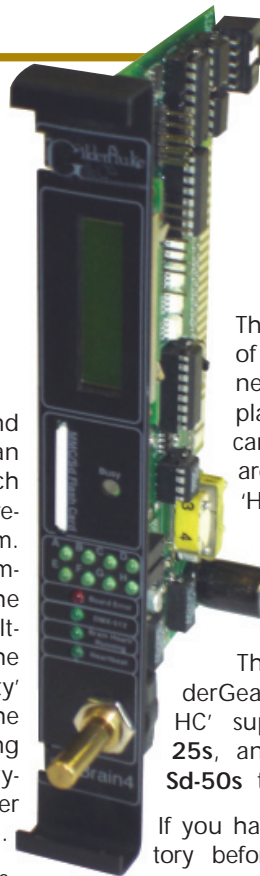


You can build a seventy volt **Amp-50**, **Sd-25** or **Sd-50** yourself. Transformers work in both directions. You will need a seventy volt to eight ohm* transformer that can handle at least 200-250 watts. Just attach the transformer backwards: the 8 ohm 'low impedance' side to the output of the amplifier, and the seventy volt 'high impedance' side to your speakers' 'party' line.

* Use a four ohms impedance transformer if you are 'bridging' the amp for a single 50 Watt Class-D mono output. - G

Really BIG Sd HC Cards

The good news: Larger capacity Secure Digital (Sd) flash cards continue to be released. These are the Flash cards used in **Sd-50s**, **Sd-10s**, and **Sd-10** Audio Repeaters and upcoming **Brain4**. Sd format flash cards with up to 32 GByte capacity have been announced.



These will hold up to sixteen **DAYS** of typical Mp3 music files! The bad news: In the continuing effort at planned obsolescence, new 'Sd' cards that are four GBytes or larger are now in a format called 'Sd HC'. 'HC' stands for 'Hardly Compatible'.

Almost any card reader, camera, Mp3 player, or other device you already have will not work with these new 'Sd HC' cards.

The exception to this is most GilderGear! We have already added 'Sd HC' support in the **Sd-10s** and **Sd-25s**, and will probably have it in the **Sd-50s** too, by the time you read this.

If you have a **Sd-nn** unit that left the factory before we added the 'Sd HC' support, you will need to have the firmware inside the player updated to support it.

On **Sd-50s**, this will mean simply downloading an update from our website and putting it on a non-Sd Hc flash card. When the card is inserted in the **Sd-50**, it will find this file and update the firmware inside the unit.

For **Sd-10** and **Sd-25** players, they will need a quick trip back to the GilderHospital to be re-flashed. - G

Solid State Relays with Switches

The relays used on our standard relay modules (**Pb-08**, **Pb-16**, **Pb-24**, and **Pb-32**) and DMX-512 input relay modules (**Pb-DMX/08**, **Pb-DMX/16**, **Pb-DMX/24**, and **Pb-DMX/32**) are available in AC and DC output models. Each is conservatively rated for a 3.5 amp current flow and fused at 5 amps.

These relays can be special ordered with built-in Hand/Off/Auto switches. These allow you to manually override the programmed data and force a relay output on or off. - G



Judging Sd Card Speeds

We are often asked what brands of flash cards should be used in Gilder-Gear. It is a little hard to say.



In general, you want to use the 'fastest' Sd cards you can find. The problem is, except for the new 'Sd HC' flash cards, there are no standards for Sd card speeds. Even the 'Sd HC' 'Class' ratings are based on how fast you can 'write' files to the card, and about all we need to do is to 'read'. When it comes to reading Soundfiles, one company's 'slow' card may be equivalent to another company's 'fast' card.

The programs we have tested to judge flash card speeds have been less than enlightening. They have reported flash cards we know to be quite fast as 'slow', and visa-versa.

The best test we have found is the time it takes a **Sd-10**, **Sd-25**, or **Sd-50** to 'count' all the sounds loaded on it when a card is inserted. A truly 'fast' card will spit out the SoundFile names at ten per second. A 'slow' card may only print out a SoundFile name once each second. If you have a serial port attached to your **Sd-xx** player, you can see the names on the screen of your computer. If you don't have a computer attached, then you can watch how fast the 'access' LED flashes on the player right after it boots, but before it starts playing, to judge the speed of the Sd card. ~ G

Class-D Filters

The digital Class-D amplifiers used in the **Amp-50**, **Sd-25** and **Sd-50** are extremely powerful, and work with most speakers without a problem. A few speakers, although they are rated to handle the power from these amplifiers, have a problem with clipping at the highest volume levels. We found that this is usually the protection circuitry in the speakers' cross-over getting confused by the quick pulses that Class-D amplifiers put out.

To help in this situation, we have built

a small filter that goes between the amplifier and the speaker and 'rounds off' the peaks, without adversely affecting the quality or power of the Class-D amplifiers. These filters can also be used in retrofit applications where shielded speaker wires are impractical. ~ G



Greatest Hits On CD

We distribute all our printed material and software on a single CD-ROM. Every manual, cut sheet, and piece of software we offer is all on one disk. These are available with most purchases, or for a nominal charge. ~ G

Custom Design Work

As time allows we do custom design work. Most jobs 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.

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

Classes Anyone?

The spacious quarters at Gilderfluke Towers has a permanent display area where we offer classes in GilderTechnology. 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 Gilderfluke & Co. equipment, please contact Carolyn Rowley (carolyn@gilderfluke.com) in our California GilderOffice. ~ G

Field 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, and a reasonable per diem) in addition to the fee for the technician.

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

Gilderfluke Show Plans

We are scheduled to exhibit at the following trade shows. Most of the equipment described in this newsletter will be on display at these shows. We have free passes for many of them, so contact us if you would like to attend.

November 13-16, 2007
International Association of Amusement Parks & Attractions (IAAPA), Orange County Convention Center, Orlando, Florida.

March 16-19, 2008
National Haunt & Attraction Show, Sands Expo & Convention Center, Las Vegas, Nevada.

June 18-20, 2008
InfoComm International, Las Vegas Convention Center, Las Vegas, Nevada.

November 18-21, 2008
International Association of Amusement Parks & Attractions (IAAPA), Orange County Convention Center, Orlando, Florida

Our Two Most Asked Questions

In twenty-five years we have been in business, the second most commonly asked question is where our company name came from.

Eli Gilderfluke was a cartoon character who appeared in railroading trade magazines in the middle of the 19th century. A precursor of Rube Goldberg, 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 answer to the most commonly asked question is: 'No, we don't build animated figures'. ~ G

Who Are We?

Gilderfluke & Company was founded in 1983 to build Animation & Show Control Systems for theme parks, museums, and other entertainment venues. In 1988 we added audio 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 more than one Animation & Show Control System 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.

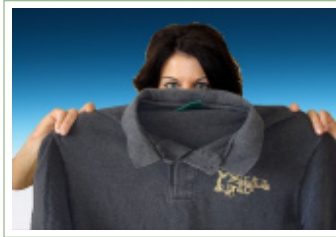
Our **PC•MACs** Animation & Show Programming Systems were the first to run under Microsofts Windows. It is still the technological leader among Animation Programming Systems. Our 'Brick' Show Control Systems are the largest selling Animation & Show Control Systems in the world. These are modular systems 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. All of our systems are modular. Systems with two to thousands of outputs can be made using our repeaters.

Sd-50 players are also available with an option that adds eight or forty digital Show Control outputs, DMX-512, MIDI and serial ports to them. This turns them into a total Audio and Show Control playback solution. The GPS option allows shows/sounds to be scheduled, accurate to .001 second. ~ G

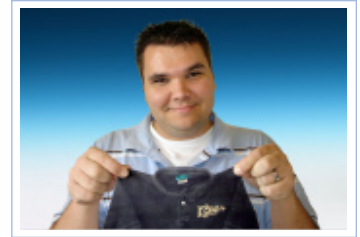
Two new Gilderflukians!

Two new people have joined our crew since the last years GilderNewsletter. Both will be working in Sales and customer service, so if you haven't already been introduced, you will be getting to know them soon.



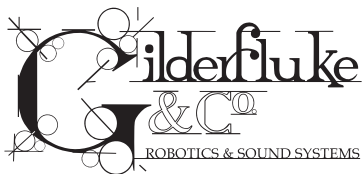
Lisa Franzke

...has been heading up our California sales team since this past Spring, after an extensive career in television production. Lisa has had the pleasure of working with many entertainment companies such as Paramount, Universal, and Mark Burnett Productions.



Richard Cox

...joins Toni Brown this Fall in our Florida GilderOffice. He will be helping out with answering questions and customer support from the Eastern time zone, as well as field service and installation advice. Richard has extensive experience in PLC and Show Control, having worked for Disney, Sea World, Universal Orlando. Richard has an EET (Electrical Engineering Tech.) degree from Purdue University.



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