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LA Weather: Sunny and Warm Continuing for the next year or so

Gilderfluke & Co. ROBOTICS & SOUND SYSTEMS

Views and News from the world of Gilderfluke & Co.

March 1992 Volume 1 Number 1

All the News that we could jam into a little under 4 pages

New Smart Brick System Runs Shows of any Size

The **SMART BRICK SYSTEM** is Gilderfluke & Company's newest Animation Control System. It adds the ability to directly synchronize with LaserDisk players or SMPTE time codes as well as random access functions to our popular MICRO MACs Animation Control Systems.

Photo of Smart Bricks

The Smart Brick System brings the Gilderfluke concept of animation system modularity to new heights. An entire animation system is run by one BRICK BRAIN. It talks to any number of SMART BRICKS and HEADS UP DISPLAYS through a Smart Brick Network made up of standard 6 conductor modular telephone line. If you need to add additional Smart Bricks or Heads Up Displays, you just clip them onto the network!

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We Now Stock Atchley Valves

Atchley Servo Valves and Mechanical FeedBack (MFB) Actuators have long been a standard for moving analog functions in animated figures. Their only drawback has been the long lead times required to get them. To help solve this problem, Gilderfluke and Atchley have reached an agreement which allows us to stock and distribute their animation products.

Atchley products which are now available from stock include the 200PN and 204PN models of pneumatic servovalves and a variety of sizes of 161PN and 162PN MFB actuators. The servovalves all work perfectly with our Quad Electronic FeedBack (EFB) cards to control just about any pneumatic cylinder. The MFB actuators combine a 1" or 2" bore pneumatic cylinder, valve, and feedback mechanism in one compact package. They can be used with any of our D/A converters. We recommend MFB's for anyone who is just getting started with analog animation technology because of their ease of use and reliability.

An AudioBrick That Knows the Time of Day

The **AB-100 AudioBrick** is the largest selling member of our popular Digital Audio Repeater family. In response to many enquiries, we have added a clock, more configuration EEPROM, and special firmware to the AB-100 to create the **AB-Clock**. Along with the carillon and clock chime applications (chiming the quarter hours and tolling the full hours), the AB-Clock can be used anywhere specific spiels must be played at specific times of the day or night. Typical applications are in schools for the bells that mark school class times or in airport and industrial announcement systems. Up to 60 special show times can be set for each day.

Photo of AudioBrick

Like all our other Digital Audio Repeaters, the AB-Clock features low maintenance, bandwidths to 15 KHz, and a 72 dB dynamic range. Up to 255 spiels can be stored in the AB-Clock, and these can be anywhere from 1/35th of a second to as long as you need. Any sound that can be recorded (music, sound effects, or voice announcements) can be digitized and loaded into the AB-Clock.

Intelligent PA System

Our Intelligent Public Address System has been officially released. The earlier version of our PA system has been used for years in parks like Lotte World in Seoul, Korea. The first production unit of this new generation of PA Systems has been in operation at Santa Cruz Beach and Boardwalk for some time, and we are now supplying Knotts Berry Farm with a PA System to cover most of their park's public areas. Both of these parks are in the top 10 in attendance of all amusment parks in the world.

The Intelligent PA System can be used in conjunction with our popular DR-300 and DR-400 series of Digital Audio Repeaters, or in stand alone applications where a powerful, yet cost effective Public Address System is needed.

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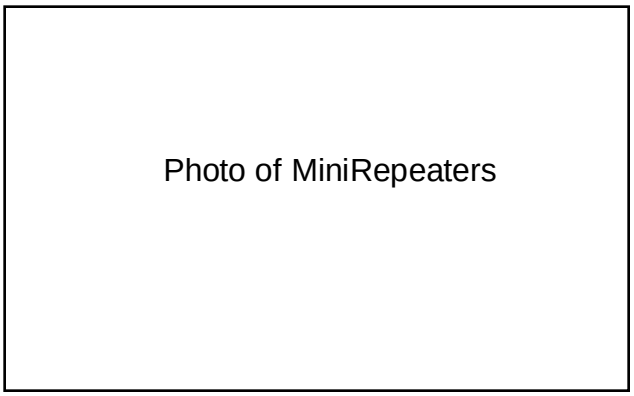
DR-50 Fills a Void

Ok. So you need to put in a whole slug of Digital Audio Repeaters, but each of them only needs to make a short sound or two. Up to now you only had the choice of using a small poor-sounding noisemaker from another manufacturer or biting the bullet and installing full-sized Digital Audio Repeaters like the DR-100 with only a single EPROM in each.



Just in time for the 1991 IAAPA show, Gilderfluke & Co. announced the **DR-50 MiniRepeater** and the **AB-50 Mini AudioBrick**. These are single EPROM Digital Audio Repeaters designed to to fit those applications where you need relatively short, high quality sounds and spiels. They have the exact same audio quality as all of our full-sized Digital Audio Repeaters. Typical uses are in shooting galleries, ride through attractions, or for voice announcements on audio guided tours.

All AB-50s and DR-50s support 2, 3, 4, 5, 7.5 10, and 15 KHz bandwidths. Using commonly available 4 MByte EPROMs this will give you a playback times of 15 seconds of 15 KHz bandwidth audio, or 30 seconds at voice (7.5 KHz) bandwidths. With the new 8 MByte EPROMs, all of these times instantly double!

Both units have two optically isolated inputs which can be used to tell them to start, reset, stop or loop. All configuration is done through a single dipswitch. Multiple messages can be recorded on a single unit and played in sequence. Each of these spiels can be recorded at it's own bandwidths and sample rate. The number of spiels on each card is only limited by the amount of memory installed.

Each unit has separate Bass, Treble and Volume controls and balanced line level outputs. The AB-50 also has a RCA jack for single ended line level output.

The DR-50 MiniRepeater is a card based unit designed to give you the highest possible number of audio tracks in as little space as possible. Up to thirty-two DR-50s can fit in to a single 19" wide x 1-3/4" high rack mounted CC-3250 Card Cage.

Like it's big brother the the AB-100, the AB-50 MiniAudioBrick is a stand alone unit. It comes complete with a UL listed wall-mount power supply.

The DR-50 MiniRepeater and CC-3250 Card Cage are in full production and are available from stock. The AB-50 Mini AudioBrick is still in prototype development and will be available in the next few months.

Message Stacking

The Smart Brick System and all of our full sized Digital Audio Repeaters share the same high performance microcontroller and much of the same interface software. This is what allows them to be connected on the same RS-485 control system network.

A new feature which has been added to both systems is the ability to 'stack' requests up to ten deep. (Previously when operating in the 'Store Early Starts' mode requests could only be stacked one request deep.)

In practical application this means that up to ten show requests received while another show is still running will be played back in the order in which they were received. An example of this new feature's use is in a Digital Audio Repeater System where announcements made out of individual words and phrases can easily be 'stacked' together to form a complete message.

Software Updates.....

Such is the nature of software.....it is never done. If you need to get an update of any Gilderfluke & Company software product, please contact us. Except for ROM updates, most software updates are free.

Some of the programs which have been updated in the last year include: the IBM Backup Box, DAS-100 Digital Audio Sampler, Digital Audio Repeaters, and the Smart Brick Brain.

New PC/Windows Full-Size Animation System Coming

Just to whet your appetite a bit....

Progress is continuing on our next generation of full-sized Animation Control Systems. All of the hardware is designed, the firmware written, and we are just waiting for the completion of the Windows 3-based software (scheduled for this summer).

Here are some of the features of this new system:

- IBM PC based. You can get just the boards and software from us, or complete integrated systems.
- Easy to use Windows 3 mouse-driven software.
- Each digital output card has 256 outputs @ 150 ma each.
- Each analog output has 128 eight/twelve bit resolution outputs. All endpoint adjustments are done through software.
- Hand held remote can be used to adjust outputs and set parameters for the stand-alone playback program.
- Supports analog resolutions of 8, 12, 16, 24, and 32 bits.
- Supports Micro Consoles, A/D converters, Full-Sized Consoles, DMX-512 from lighting boards, as well as future programming inputs.
- Speaks DMX-512 as a native language to allow it to directly control most light dimmers.
- Records and plays back up to 256 eight bit channels.

- LaserDisk, SMPTE, internal and external time codes.
- Graphic editing of analog and digital data on the PC's screen (you just grab a movement displayed on the screen with your mouse and mush it around as you like)
- All console presets and outputs can be given names.
- Online help screens for all functions.

If you would like to request features or have any suggestions for this new system, please let us know.

But What if You've Got a Bunch of Lights to Control?

Animation systems are usually overkill when it comes to controlling lighting. But what about those times when there are a lot of lights and a few animation control outputs? It certainly doesn't warrant the expense of putting in a full sized animation system when a brick-based system would do the job.

We had two jobs with just this problem last year. One was the Tokyo Gas Museum in Japan, and the other was the $8 million restoration of the El Capitain Theater in Hollywood for Disney.

The solution in both of these installations was the **'Easy Rider**'. This is a small box which can control up to 96 channels of lights on as many as 256 different dimmers. It is normally fitted with a DMX-512 output which can talk to most dimmers. Other style outputs (0 to 10 volt analog, AMX-192, etc.) are also available.

As many as 208 lighting cues can be programmed using an 'Access' lighting console and inserting a credit card-sized cue card which contains the lighting program into the Easy Rider.

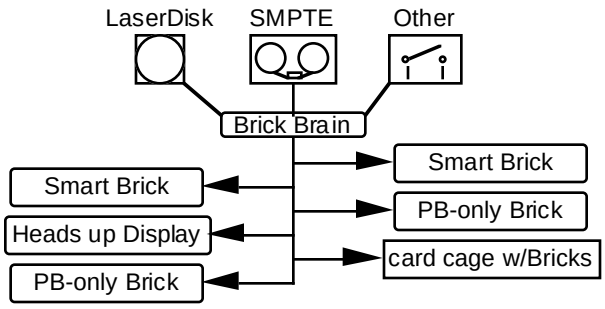
The Access lighting Console and Easy Rider are both manufactured by the Great American Market. In many cases these can be used as-is, but we modify them to allow random accessing of cues and to make them plug-compatible with our animation systems. An Easy Rider usually will cost between $1300 and $1600, depending on the options needed.

Smart Bricks.... continued from page 1

The Brick Brain can lock the entire animation system to a LaserDisk player, a SMPTE time code, or an external clock input. For shows without the need for any sync, an internal crystal controlled time base is available. Frame rates supported are from 0 to 100 frames per second. The Brain includes outputs for controlling tape decks and Sony or Pioneer LaserDisk players, and a simple pushwheel switch on its front lets you select the length of the delay it will insert between shows.

You can put the Smart Bricks right into whatever you are controlling, group them into one or more central locations, or use a combination of both. There are no limits to the maximum number of channels controlled. You add more Smart Bricks until you have enough outputs to do the job. This makes an Animation System for tens, hundreds or thousands of figures as easy to install as a system which controls just one. The Smart Brick System is compatible with all of our existing input and output accessories, including the IBM BackUp Box.

The Smart Brick System is designed to make it easy to build interactive animated shows. It supports up to 63 different shows, and can easily be configured to run one or more of these as a 'background' animation sequence. When requested, it will branch to another animation sequence, and when the requested show has finished, it will return to where it was in the background shows.



The Smart Brick Network

Smart Bricks are available in record/playback, playback-only, and rack mounted playback-only cards. The first two come ready to plug in (complete with cases and internal power supplies). The playback-only cards can be mounted sixteen to a standard rack mounted cage, or screwed onto wherever they are needed. This is how most of our larger OEM customers prefer to use them. A full card cage provides 64 eight bit channels (512 digital functions) in just 7" of 19" rack space!

The Heads up Displays are used to indicate where in the show the system is, the count down times between shows, and a variety of other status conditions. As many Heads Up Displays as are desired can be put anywhere in the system by attaching them to the Smart Brick Network and plugging them in. They are available in 19" rack mount and stand-alone styles.

Sarcos Figures Under Control

Our Animation control systems are used to control the largest animated figure in the world (Robosaurus at 60,000+ pounds, 40 feet tall, and able to pick up a full-sized car in each hand). Now our control systems are being used to control the most technologically advanced figures in the world.

These are the figures built by Sarcos Research and Animate Systems of Salt Lake City, Utah. They use the exact same technologies which the folks at Disney are now using to build their newest figures.

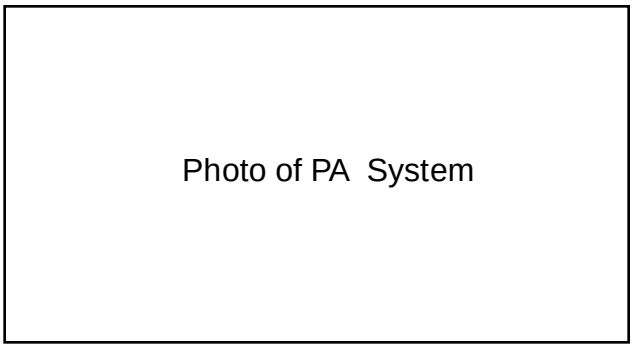
Intelligent PA System.... continued from page 1

The Intelligent PA System consists of:

- MA-100 PA Master to run the entire system and first eight PA stations.
- MA-200 PA SubMasters for attaching each eight additional PA stations.
- PA-100 One button PA Stations for accessing a single PA zone.
- PA-400 Four button PA Stations for accessing up to five

different PA zones.
- Intelligent PA Stations for accessing any PA zone or feature in the system.
- Phantom PA Stations for routing automated announcements into the PA system from repeaters and other sources

As many as thirty-one MA-200's can be attached to each MA-100 for a total capacity of up to 256 PA Stations in each system. Each MA-100 or MA-200 has eight balanced line level inputs and outputs in addition to the PA station connections. When a PA zone is accessed, any output which responds to that zone ducks the level of it's normal audio while the system routes the audio from the appropriate microphone to it. All configuration is done through easy to use menus using any computer or terminal. This includes the volume of the normal audio, ducked level for the normal audio, and PA announcement levels. PA system priorities are set by the order in which the zones are entered.



All configuration data is battery protected against power failures, and there is a key lock to prevent unauthorized reconfiguration. A second serial port on the MA-100 can be used to attach a printer to keep a running log of all PA system activities.

Disney Compatibility

Our Animation Systems can now be programmed using any of Walt Disney Imagineering's Animation Programming Consoles. They can then burn EPROMs using their own equipment and plug them directly into our systems.

Show Plans

We are scheduled to exhibit at the following trade shows in 1992. Most of the equipment described in this newsletter will be on display at these shows:

- Apr. 27-29: NSCA (National Sound Contractors' Association) at the Anaheim, California Convention Center
- Jun. 20-22: Show Biz Expo at the Los Angeles, California Convention Center
- Nov. 18-22: IAAPA 1992 (International Association of Amusement Parks and Attractions) at the Dallas, Texas Convention Center

George Boards

The George Board (officially called a **Quad D/A and EFB** card) combines the functions of our normal Quad D/A (Digital to Analog) converter and Quad EFB (Electronic FeedBack) controller onto one card. This board is designed to be mounted in a Brick card cage, or can be mounted on standoffs or angle brackets.

Obscure Reference

Eli Gilderfluke was a cartoon character who appeared in railroading trade magazines in the middle of the 19th century. He developed strange inventions to assist the steam trains of the period. How was that for an obscure reference?

Coming to a Theater Near You.....

You probably have seen our equipment in use on several film and television productions without even knowing it!

Our equipment is used in several movie productions each year. This has given us the opportunity to work with and supply equipment to effects shops like Stan Winston, Industrial Light & Magic (ILM), Henson Associates, Rick Baker, Kevin Yagher, Reel Effects, Dave Miller, Dick Smith, All Effects, Rick Lazzarini, Rob Bottin, etcetera. Past projects have included Total Recall, Gremlins II, Ghostbusters II, Child's Play III, and Empire of the Sun, among others. Two of the new movies that Amalgamated Dynamics has used our equipment on this year are:

In 'Aliens III', due out this summer, our equipment doubles for one of the key characters in an emotional death scene (We wouldn't want to give any more away than that!).

Bob Zemeckis' new comedy, 'Death Becomes Her', is using our equipment to double for Meryl Streep in some scenes. Also appearing in this picture are Goldie Hawn and Bruce Willis.

On the small screen our equipment is used in a variety of commercials and TV programs. One recent award winning commercial for Peirrer shows a woman and a lion roaring nose to nose on a hill in Africa. All Effects built both using our control systems.

PlayBack Only Brick Cards

The PlayBack Only cards are the most economical versions of our standard or Smart Bricks. Although designed to be mounted in our 16 slot card cages, they can be mounted in a variety of other ways too.

The easiest way to mount one or two of these cards on a figure (or whatever you need to control) is on standoffs. This works great, but makes it a little hard to get the cards in and out. With a little 1/16" thick material bent into a pair of 'L' brackets and some plastic card guides you can make an effective card holder. For the electrical connections to the card a ribbon cable style edge connector is mounted between the two brackets.

When you need to combine an animation and sound system in one compact package, you can mount one or two PlayBack Only

Brick cards in the lid of an AB-100 AudioBrick. This extra space in the lids of the AB-100s would normally be used for MX-100 memory expansion cards.