Alcorn McBride's Digital Audio Machine
Combining Custom Narration and GPS

by Larry Plachno

The Alcorn McBride Digital Audio Machine determines the physical location of your vehicle and then makes appropriate announcements according to your predetermined plan. It has numerous applications in various parts of the bus industry where buses follow a regular or pre-arranged route. Shown here is a Budget Car Rental shuttle which operates on a route between several terminals at Chicago's O'Hare International Airport and the nearby car rental facility. NBT.

Imagine having a reasonably simple and economical device on your bus that can make announcements based on the physical location of your vehicle. It would free up your driver or tour escort so they can concentrate more on driving or helping your passengers. In addition to narrating a sight-seeing tour, announcing stops and providing location and information on shuttle runs, it also has virtually unlimited advertising possibilities. Add in the fact that this device is small and is so user-friendly that it can be set up by virtually anyone comfortable with computers. We are talking about the AM-4 Digital Audio Machine from Alcorn McBride, which has numerous interesting applications in the bus industry.

Alcorn McBride is the leading manufacturer of electronics for show control and audio and video equipment for the theme park industry. The story behind the company goes back to 1982 when Steve Alcorn, now company president, got involved with show control systems for several pavilions at the Walt Disney World Epcot Center. It was his wife, Linda, a show control engineer with Walt Disney Imagineering, who introduced him to theme parks.

Steve founded Alcorn McBride in Southern California in 1986 and initially concentrated on theme parks, the music industry and audio/video products. He designed a number of electronic musical instruments as well as a state-of-the-art figure animation system for a theme park company. In 1989, the company moved to Orlando, Florida and soon purchased its own building.

Since then Alcorn McBride show controllers have become the standard of the theme park industry. Nearly every attraction at Orlando theme parks includes Alcorn McBride control or playback equipment. One new attraction uses Alcorn McBride products to play video in a vehicle traveling at 60 miles per hour.

Due to their rugged use in theme park applications, Alcorn McBride products are designed to be highly durable and require zero maintenance. Everything is engineered and built right in Orlando. One major advantage of this is that Alcorn McBride can easily make modifications to standard products to suit the specific needs of customers.

The AM-4 Digital Audio Machine was originally developed for theme parks, kiosks and museums. As the product line developed, it soon found new applications in the retail market including department stores, malls and other consumer environments. It has become the most successful product at Alcorn McBride. There are several reasons for this including the facts that it is simple, very durable, economical, easy to use and has numerous applications.

Relatively small, the unit is about the size of a book – less than 10 inches deep, only seven inches wide, and less than two inches high. It weighs about four pounds. It can be easily installed on a bus since operating voltage is in a range of nine to 25 volts. It can be wired into the bus PA system or can be used in several other ways including connected to dedicated speakers or an on-board DVD or entertainment system.

While neither an announcement system or GPS is new, what Alcorn McBride has

done is to combine these into one simple and durable unit that is not only economical but also very user-friendly. Installing the unit requires no special training or equipment and can be done by your regular maintenance and service staff.

In a typical use, the AM-4 Digital Audio Machine continuously monitors its location using a GPS "mouse." It is so named because it looks a bit like a computer mouse. The GPS "mouse" receives satellite transmissions that the AM-4 converts into easily-recognizable latitude and longitude. The signals are picked up once a second and can be highly defined. When you set up your system, you can define a location as tightly as within five meters or as broad as you would like. The Digital Audio Machine continuously checks its stored locations against its current GPS point. When a match is found, it triggers a specific recorded message which will play over your PA system or wherever you have the output wired.

The AM-4 Digital Audio Machine has no moving parts and even works in high vibration environments such as roller coasters. It is a professional device and the sound is studio quality. It uses standard digital camera-type flash cards for memory to store both the messages and location coordinates.

There are numerous options and variations. In addition to a GPS "mouse," other triggers can be used including switches, playlists, etc. It can play background music between announcements, and return to the same spot in the song where it left off. Different modes are available. In addition to simply randomly looking for any location, the system can operate in a linear manner where announcements about future stops are desirable. In addition to sound, the GPS locator can also trigger a switch which can control some other device or operation. It can also be connected via ethernet for programming purposes or for updating content. Another interesting option is that the unit can be battery-powered and self-contained for use where conventional power is not available.

The Digital Audio Machine has no moving parts and takes advantage of state-of-the-art technology. A GPS mouse continually monitors the location of the vehicle and can be as accurate as five meters. When the Digital Audio Machine finds a match in its memory for the location, it automatically plays the associated pre-recorded announcements. ALCORN MCBRIDE.

In the past, the AM-4 Digital Audio Machine has been used on watercraft and parking lot trams, but there are numerous uses in the bus industry. One of the more obvious is sightseeing narration. You can easily set up a sightseeing route that includes narration and information along the way. You simply hand your driver a map. As he drives the designated route, the Digital Audio Machine senses its location and plays each narration or description in turn. One of the nice advantages is that you can simply change the flash card to do a tour in the next city. You can even put several city tours on one flash card.

Another obvious use for the Digital Audio Machine is in various shuttle bus services such as airport, rental car, parking lot and convention shuttles. Consider the advantages of allowing your driver to concentrate on driving and possibly handling luggage while the AM-4 does all of the announcing work. As your bus approaches a given stop, the Digital Audio Machine will sense the location and announce it to your passengers. At the same time, it can name airline ticket counters or provide instructions on obtaining rental cars.

The Digital Audio Machine is close to the size of a book: about 10 inches deep and only seven inches wide. Operating voltage is in a range of nine to 25 volts which is compatible with virtually all bus electrical systems. ALCORN MCBRIDE.

Your GPS mouse, power and speakers can be easily connected to the rear of the Digital Audio Machine by your in-house staff. Options include an LED display for the driver and an ethernet connection for updates. ALCORN MCBRIDE.

You can run the same route in two directions. Using the linear mode, the AM-4 can make different announcements in each direction including the mention of which stops are up ahead. With parking lot shuttles, the GPS system is so accurate that you can even call out the names of individual parking rows or sections. The system can also be programmed to play different music at different locations.

Scheduled service buses are also a good use of the AM-4. As your bus approaches a terminal, it can not only be announced but you can provide additional information such as the location of connecting services, or a request to remain seated until the bus comes to a stop.

As mentioned earlier, the unit can also throw a switch based on GPS position instead or in addition to making an announcement. There are several ways this can be utilized with buses. You can open and close gates automatically on parking lot shuttles so the driver no longer needs to reach out with a card or key. You can turn lights or indicators on and off at terminals. It can also be used to open the gate to your bus yard as the bus approaches.

The Digital Audio Machine also lends itself well to advertising. Various types of promotional or advertising announcements can be made in conjunction with regular stops or simply as your bus passes them on the road. How much would a restaurant, motel or other business pay to have an announcement made to your pas-

The Alcorn McBride Digital Audio Machine takes advantage of modern developments in GPS technology. Shown here on top of a map is a GPS mouse, so named because it looks much like a computer mouse. Using the GPS satellite system, it can determine its physical location as closely as five meters. ALCORN MCBRIDE.

sengers each time you pass by. Coming into the airport, you could have an announcement mention that the bus is passing the SkyHigh restaurant which is located on this end of the terminal in case you want something to eat before departure. This would also be appropriate for convention shuttles which pass hotels, attractions and restaurants.

Several people have commented that the advertising potential of the Digital Audio Machine is virtually unlimited. When the potential advertising revenue is considered along with the low initial cost of the equipment and installation, advertising income may be a more important factor than the regular announcements. Instead of looking at the Digital Audio Machine as an added cost to the bus, you can see that it can easily become a new source of income in an industry that could use more income.

One of the major features of the AM-4 Digital Audio Machine is that it is simple and easy to use rather than being intimidating. In most cases, your own staff can not only install the unit but also set up the information needed by the unit. The various announcements can be recorded as MP3 files which are computer-friendly and can have high quality. Locations can actually be programmed based on standard latitude and longitude. However, most people simply ride the route with a laptop computer and a GPS mouse. The MP3 files and the GPS locations can then be put on a conventional flash chip using an office PC computer.

The flash cards can be used over and over again. For example, consider using a new card and message for every convention group so you can welcome them on board by name. At the same time you can also make announcements about changes or items which pertain only to that group or convention. Of course, in between the announcements you can insert paid adver-

One of the more obvious uses for the Digital Audio Machine is bus sightseeing operations. The driver need only follow a standard route and the pre-programmed Digital Audio Machine will sense its location and trigger the appropriate announcements as they approach. It can also add in commercial messages. Shown here is a Gray Line New York Tours, Inc. double-decker Dennis Trident II with an Alexander body near New York's South Ferry. J.C. REBIS JR.

tising ". . . Come visit the XYZ Company at booth 123." Master copies of the locations and audio files can be stored on your office PC and modified as needed for each group or convention.

Alcorn McBride can provide special modifications to suite your specific needs. Some people have asked for a small LED display so the driver or tour guide can monitor the unit. Some applications build in a switch so that the driver or tour guide can skip stops if there are no passengers.

Another advantage of the system is cost. The basic system plus a GPS mouse kit comes in around $1,000. It can become very cost effective over time. It has no moving parts and hence will last a long time and requires no maintenance. Flash cards are relatively inexpensive and trouble-free. They can be used over and over or modified as needed.

For multi-lingual applications, such as tours that use headsets, more than one AM-4 can be used. The company also makes an 8-channel unit called the 8-TraXX.

Alcorn McBride is already working on a new system that combines audio and video. This can be connected to the video entertainment system in your bus much like a DVD player. Consider the possibilities of being able to provide both audio and video to your passengers based on location. A four gigabyte card will hold up to 37 minutes of video. The advertising possibilities are virtually unlimited.

For more information on the AM-4 Digital Audio Machine, phone Grace Warfield at Alcorn McBride at (407) 296-5800 or visit their Web site at www.alcorn.com.   ❑

Virtually any type of bus shuttle service can take advantage of the Digital Audio Machine and its capabilities. Airport shuttles can announce terminals and list the airlines while parking shuttles can call out areas and rows. The Digital Audio Machine is also suitable for smaller buses like this Champion which operates in Park 'n Go parking lot service in Minnesota. CHAMPION.