



Immediate & Permanent

Times have changed with live recording

By Fletcher

Live recording — to me there's nothing better. The permanence of a recording coupled with the immediacy of a live situation. One shot, and one shot only, to document a performance. No rewind, no "let's try it again," no margin for error.

It used to be that when a band wanted to capture a live performance, they'd have the front-of-house (FOH) engineer run a cassette (or DAT or CD or etc.) from the mix position — basically a "taper" with authorization.

The downside? More often than not, the feed was taken from the main outputs of the house console as it was sent to the main loudspeakers. Thus no ambience or audience microphones were applied to provide a sense of the true ambience of a live performance at a venue.

When the recording was to be taken more "seriously," a mobile truck

was employed. The audio quality that could be achieved by using a mobile truck generally far surpassed anything that could be achieved from an archival mix done at FOH. Not only could some of the microphone selections be changed to accommodate the needs of the recording, but also audience mics could be placed, mixed and added to the recording to get the listener a sense of the venue and atmosphere.

Until just a few short years ago, most mobile trucks were running great big analog tape machines that had to be aligned before every performance. To do a 24-track recording, two machines were necessary — often, a reel could run out or get close to running out in the middle of a song.

So while there were 48 lines going to the machines, the fact of the matter was that only 23 tracks could be recorded at one time. Track 24 carried the SMPTE code for locking the reels to subsequent post production events like video or mix automation.

Today, mobile trucks run all kinds of different platforms. The range includes dedicated hard disk recorders that pretty much function as 24-tracks except they don't require the machine switching capability, to digital audio workstations (DAW) with no track restrictions other than the number of channels available from the interface to the DAW.

While many artists, and pretty much every concert video production, still employ these trucks to document their shows, more and more I've seen full-blown recording rigs that live as part of the show at FOH or monitor positions.

And I've noted these systems configured as both stand-alone as well as

Live Sound - ProSoundWeb Poll

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integrated to FOH and/or monitor. Sometimes these employ outboard mic amplifiers; sometimes they employ the direct outs from an analog console.

With in-ear personal monitoring systems (IEM) being the standard in the majority of touring rigs, audience mics are now part of the program anyway so the performer can get a sense of the space. Whip the feeds from these mics down on a couple of tracks, and it's no longer the microscopically clinical recording event of days past.

This has opened up a nearly limitless group of possibilities for the artist and a myriad of additional headaches for the crew. Now the artist can grab the recording after a show and listen to it in a multi-track format on the bus or in the hotel. Now the crew member who's running the system has to remember to record the thing, and if possible, do all the requisite labeling and documentation that goes hand-in-hand with a recording.

The best-implemented scenarios I've seen placed a kid fresh out of

"rekordin kollege" (also pronounced marginally skilled cheap labor) under the stage with a computer monitor, the recorders, a remote for the recorder, a set list and some minimal lighting.

It's this understage friend's job to follow the set list, set up every song as its own project and name all the tracks related to that song. And this isn't that big of a struggle because, usually, a "macro" has been set up, requiring just a push of a button to put everything in record mode, and with all the appropriate track labels.

Many (O.K., most) shows don't have the luxury of additional crew to hit the record button, but pretty much every show can document the audio portion of the program for later use, at the very least so the artist/each player in the band can evaluate their performances and perhaps make some corrections.

Any way we look at it, times have changed and the documentation of live performance is very affordable to pretty much any band that has gradu-

ated from doing local clubs three times a month. No longer are we looking at three times \$200-plus reels of analog tape, plus the cost of renting the recording truck and the engineers that go along with it.

Note the following list of tools I've used and found very effective for live recording – they serve only as suggestions/examples. In reality, there are many good, useful products hitting the market every month.

This serves to highlight the point that today, for an initial investment of a few thousand dollars, we can capture pretty much any event with at least "nearly album-quality" results. Then again, albums (known as CDs to you youngsters) have sounded worse and worse over the past few years, but this, my friends, is a debate for another day. ■

Fletcher heads up Mercenary Audio and also hosts a popular Recording Engineer Producer (REP) forum on ProSoundWeb. He can be reached via e-mail at fletcher@mercenary.com.

IZ Technology RADAR

www.izcorp.com

Overview: A range of pre-packaged recording systems ranging from simpler to comprehensive (pictured here); basic RADAR Project D is a 24-track, 192 kHz recording engine; comes standard with Lightpipe or TDIF with AES/EBU option; 120 gigabyte system/archive drive; non-linear editing functions; DVD-RAM/R option also offers compatibility with DAW.

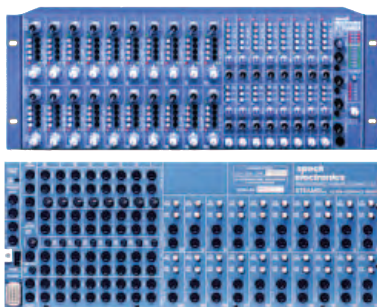
Fletcher's Take: This is the best digital recording device I've ever used. The converters, especially the "Nyquist" converters, render by far the deepest, richest tone of any hard disk system I've ever experienced.

U.S. List Price: Starts at \$4975



Speck Electronics XTRAMIX

www.speckelectronics.com



Overview: The XTRAMIX Version 5 is a compact 8-bus mixer, offering 76 inputs and 18 bus outputs; can link to DAW tools such as Digidesign Pro Tools and MOTU or any digital recorder; 20 stereo line inputs; 8 stereo effect returns; expandable to 148 inputs.

Fletcher's Take: This small mixer is just four rack spaces while providing and an impressive 76 inputs. It has an excellent tone, more than acceptable headroom and will allow you to get an accurate picture of your recording without taking up too much rack space.

U.S. List Price: \$4890 (\$3,545 direct price)



REAL WORLD



Carillon AC-1 Audio Computer

www.carillonusa.com

Overview: Like RADAR, Carillon offers a wide range of flexible, expandable models and options; the popular model AC-1 is outfitted with Intel 865 and 875 motherboards; hyperthreading support; full-size PCI slots and full-length DSP cards; serial and parallel ATA, patch socket; silent drive enclosures, four-rack-space chassis.



Fletcher's Take: If RADAR is out of your budget range or you prefer a DAW rather than dedicated hard disk recording and mixer, the Carillon is a must. I've also found its stability, vital for recording, to be stellar.

U.S. List Price:

Apogee Big Ben Digital Clock

www.apogeedigital.com

Overview: A stand-alone master clock focused on address phased lock loop (PLL); modes include S/PDIF to AES, AES to ADAT, ADAT to S/PDIF, etc., selectable on the front panel; expansion slot for the optional X-FireWire to synchronize digital devices with inadequate clock signals; Adaptive Loop Filtering™ (ALF) enhances clocking ability with an intelligent low pass filter; one-rack-space unit.

Fletcher's Take: If you've going to go with a DAW live recording format, then I recommend keeping an Apogee Big Ben close by. It's outstanding for minimizing the "jitter" that can be found with other clocking systems.

U.S. List Price: \$1495



API 212 Mic Preamp

www.apiaudio.com

Overview: Mic pre-amp card that goes in four- or 12-slot rack frame; other module options available; AP 212 offers wide range gain control, 20 dB pad, 48-volt phantom power switch, RE 115-K mic input transformer; uses API 2520 op-amp; all discrete circuitry.



Fletcher's Take: The most compact and affordable of the API preamps, these little guys will deliver a full-sounding account of the music played on stage. While some desks have "direct outputs," few will deliver a sound that is nearly as rich as the API 212.

U.S. List Price: \$695

Microtech Gefell M930 Microphone

www.gprime.com

Overview: A large-diaphragm condenser microphone with a cardioid pickup pattern; measures just over four-and-a-half inches long; simple mount is supplied, suspension mount is an option; frequency response is stated as 40 Hz to 18 kHz; signal-to-noise ratio is rated at 87 dB (A weighted), sensitivity (at 1kHz); maximum SPL is 142 dB (less than 0.5 percent distortion).

Fletcher's Take: While there are a myriad of good microphones that can be used to faithfully deliver the sound of the room to the recording, I've found these small-profile units offer a very large and detailed sound at a rather affordable price.

U.S. List Price: \$1150





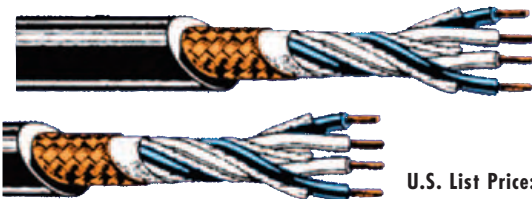
REAL WORLD



Canare L4E6S Cable

www.canare.com

Overview: Braided, copper shield; standard diameter, 21 AWG cable fits into all XLR-type audio connectors; 40 separate strands in each conductor eliminate breakage due to flexing; 10 color jackets; standard lengths of 656 feet and 1000 feet; narrower version (L-4E6C) saves space and reduces weight.



Fletcher's Take: Use this for all dedicated runs. Sometimes you're inevitably going to end up in a high RF (radio frequency) environment. This wire is the best I've encountered in terms of RF rejection and clean audio.

U.S. List Price:

Apogee X-Digi-Mix Expansion Card

www.apogeedigital.com

Overview: Allows for direct connectivity between (Digidesign) Pro Tools Mix Core or Farm Cards and the Apogee Rosetta 200 or Rosetta 800; "superclock" (FSx256) output for integration into existing Pro Tools configurations; multiple slaved Rosetta 800s may lock to word clock or directly to the Digi Mix card for low jitter synchronization of Pro Tools.

Fletcher's Take: If you're using Pro Tools, you might be a happier camper if you use this Apogee AD-16x card. Not only do these units carry a version of the Big Ben clock referenced earlier, but they also have superior analog electronics leading to a much more three-dimensional representation of the music.



U.S. List Price: \$695

Ultrasonics HFI.650 Headphones

www.ultrasonicsusa.com



Overview: Utilizes process called "decentralized transducer positioning" to reflect sound off the outer ear; a longer-than-usual cord (more than 9 feet); closed-back design provides effective isolation from outside sounds; foldable; swiveling earpiece joints permit listening through only one ear; frequency response is listed as 10 Hz to 25 kHz and SPL at 94 dB.

Fletcher's Take: Like mics (and studio monitors), there are a lot of good headphones available. But I trust the sonic quality of these the most. What works for me may very well not work for you.

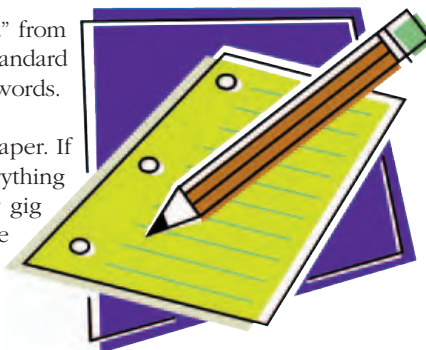
U.S. List Price: \$249

Pencil & Paper

www.buy-it-at-the-store.com

Overview: Analog process; whether it's the classic Ticonderoga #2 or that "off-brand" from Wal-Mart, good pencils can be had in spades; yellow legal pads available in both standard and longer lengths – nice option; must have experience forming legible letters and words.

Fletcher's Take: Actually, a school notebook works well. Document everything on paper. If you want to copy it on to your laptop computer later, have at it... But write everything down. It's much faster and far more permanent to look through a notebook for gig documentation than it is to call it up on your computer. That, and I prefer to use my PC for its intended purpose. (Surfing the web while babysitting the recording, of course.)



U.S. List Price: Negligible (yet priceless!)