



\$150,000 Fantasy Tracking Studio

by [Barry Rudolph](#)

FIELD TEST

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There will be no console in my fantasy tracking studio. I'll center it on outboard recording chains--classic mic pre-amps, EQs and compressors that define the recorded sound--hopefully creating something worthy for the fantasy mix studio. I've used most of this gear and I can report that this collection caters to my muse--fitting together the individual sonic characters of gear and microphones to best produce and record well-performed music.

MODERN CONTROL ROOM

The principal modern touches here are a DAW, storage and UPS. I'd start with Pro Tools HD3 Accel PCIe (\$14,000) running on a 3GHz Mac Pro with two Dual-Core Intel Xeon iWoodcrest microprocessors, 6 GB of RAM, a 30-inch Cinema HD monitor, two extra Maxtor 500GB internal archive drives and Digidesign Custom Qwerty keyboard with color-coded Pro Tools shortcut keys.

Because I'm not doing final mixes, I'm only interested in a couple of pieces of extra software beyond the suite that comes with Pro Tools. To be a full-service tracking room, the ability to supply universal audio and session files to outside studios is key. I'll do this with the Digidesign DigiTranslator 2 (\$495). DigiTranslator 2 delivers reliable, accurate conversion and exchange of OMF, AAF and MXF audio files, video files and sequences directly from Pro Tools. Another useful piece of software is Digidesign's new X-Form (\$495) AudioSuite™ plug-in for time stretching and formant-correct pitch shifting. This is perfect for altering full songs you've tracked that are just a little fast or slow or in a key not quite right for your singer. Sometimes you cannot beat the 'perfect take' and X-Form will change it to the perfect tempo and/or key. www.digidesign.com

For glitch-free, reliable performance, stable power line integrity insurance comes in just a single-rack space. The Furman SB1000 UPS/Line Regulator provides up to 1,000VA or 600W of stabilized power--even during brownout or serious over/under-voltage condition--and provides three minutes of backup time. This will be the best \$630 you'll ever spend if it keeps your session "alive" just one time during a major outage. www.furmansound.com

I want to record at least 24 tracks simultaneously, so I'd get three Mytek 8X192 AD/DA I/O boxes (\$3,945 each and Pro Tools interface cards at \$795 each). The Mytek uses 64x oversampling (128x at 44.1/48 kHz) for 24-bit PCM audio out to a 192kHz sampling rate. the newest low-jitter chip technology used by Mytek precludes buying an external clock. The 8-channel units have an integrated master clock with six outputs, and 16x2 analog summing stereo bus built in with a master-quality 1dB per-step attenuator. There is also a Class-A headphone output. www.mytekdigital.com

Tracking sessions consume vast amounts of hard drive space, and running out of room is unacceptable--especially during the creative "heat" of recording a great track. For storage, I'd go with Studio Network Solutions' 2,000GB

globalSAN™ X-4 2TB RAID 5 storage system with Gigabit Ethernet (Cat5E) (\$7,000). At 1 Gigabit/second, the X-4 offers more bandwidth than the fastest USB or FireWire systems available. www.studionetworksolutions.com

A rock band coming into the control room from the studio after spending hours tracking on loud headphones are going to want to hear playback at concert level. Let's rock at any volume level with the ADAM S2.5 powered monitors (\$4,250/pair) and a Sub 12 subwoofer (\$1,749). I already use the S2.5s and I love their sound and the ability to work longer with less ear fatigue. www.adam-audio.com/professional

The Adams have to be precisely placed in relation to the listening position. Fully adjustable speakers stands that are non-resonating, sturdy and guaranteed not to influence the speaker's sound are the Sound Anchors Adjustables. (\$450 pair) These go any height and stay put on the floor. I love my pair. www.soundanchors.com

For tracking, I monitor off the stereo bus in Pro Tools--I derive all my headphone mixes there and, of course, each new song's mix and particular headphone balance is stored in the session file. This just works! I like monitoring Pro Tools in the control room using a Cranesong Avocet Class-A Monitoring controller. The Avocet has switching for three different monitor speakers, three +4dBm analog inputs, and three digital inputs. With its own mastering quality, up sampled 192kHz digital to analog converter, all incoming digital audio sources (Pro Tools' mix bus, CDs, DATs, Internet audio) can be precisely compared in terms of apparent loudness, spectral balance and dynamic processing. All volume levels are controlled by relays---there are no potentiometers to get dirty and noisy. The Avocet has complete talkback facilities, a headphone amplifier system, calibrated monitor levels in repeatable 1dB steps, and wired remote with stereo LED VU meter. (\$2,800) www.cranesong.com.

RECORDING CHAINS

DAWs, computers and OS software may come and go, but the timeless constant you'll always find in any worthwhile recording studio control room is a collection of great analog outboard gear. My fantasy analog processing is divided into two outboard racks: American and English.

American Recording Channels And Processors

For me, API is the epitome of the "American" solid-state sound. I like the punchy sound of API's Class-A/B amplifier blocks, especially for drums and bass. Starting with the API 500VPR 10-slot rack with power supply (\$949), there would be room for four 512C microphone preamps (\$795 each), two 560 Graphic EQs (\$795 each)--which are best for kicks and snare drums--two 550B 4-band EQs (\$1,195 each) and two 550A 3-band classic EQs (\$1,695 each), both great for everything else. www.apiaudio.com/.

Big sounding and all-American with its genesis in the 1950's is the Manley Laboratories MIC/EQ 500 Combo. This single channel mic pre-amp and passive Hi/Lo EQ unit was conceived to be the first choice for recording vocals, acoustic and electric guitars and even orchestral primary mics. I like them for vocals, drum overheads or any orchestral instrument. (\$2,900 X2). I buy single channel gear in pairs--for stereo recording and because "more is more." www.manleylabs.com.

Modern tube design with vintage provenance comes in the form of GT Electronics' Vipre. This is a variable impedance all tube mic pre-amp that sounds huge on everything--especially vocals, guitars, drums--everything! Exactly the ticket for impedance-sensitive ribbon mics, Vipre would not go unused during any day at the Fantasy Studio! (\$3,499 X2) www.groovetubes.com/product.cfm?Product_ID=1602.

For smooth overall tube equalization for vocals or keyboards, I'd spec two Mercury Recording Equipment EQ-H1s (\$1,795 each). The EQ-H1 is based on the famed American Pultec EQ and has a transformer-balanced I/O, with a single-ended gain makeup amplifier. www.mercuryrecordingequipment.com.

No tracking studio would be without a pair of good U.S. compressors. I'd start with two Universal Audio 1176LNs--

the classic FET peak limiter. A lot of units come close but nothing does what these transistorized wonders from the '60's do. (\$1,995 X2) www.uaudio.com.

English Recording Channels And Processors

Keeping the British end up are the reissued AMS Neve 1073 modules (\$3,750 each; I'll buy four units)--classic Class-A units anyway way you look at them. To match the Yank rack, there should be four channels that are great for anything but especially electric guitars, vocals and drums. (\$3,750 X4) www.ams-neve.com.

Next, I couldn't be without a Trident S80 Producer Box with two channels of Trident Series 80 modules. These are harder, purer Rock sounding channels I love for a very hard "in your face" sound. (\$3,933 for two channels) www.tridentaudio.co.uk/.

The Brit rack continues with four channels of the Helios 1r Twin Type 69 Mic Pre/EQ in a "lunchbox." These represent another world of sound so much different from Neve or Trident. Great for hyped-sounding vocals and guitars, boosting low frequencies with these channels sounds like nothing else in the world! (\$6,950) www.vintageking.com/Vintage-King-4-x-Helios-Type-69-Lunchbox also www.helios-electronics.com/

Lastly, the EMI Studios sound is represented by Chandler Limited's TG Channel MKII Abbey Road Special Edition unit. A cross between API and Neve in character, these Class-AB amplifiers with EQ were used by the Beatles for the Abbey Road album, Pink Floyd's Dark Side Of The Moon, Paul McCartney and others. (\$2,350) www.chandlerlimited.com

For English compression, I'd like to have a pair of vintage Neve 2264E compressors from Vintage King. These are the coolest sounding units on drums and guitars--a little squashy and just full of vibe. The Neve 33609 stereo bus compressor/limiter is based on these units and I'll have to be careful not to overuse these babies. (\$3,500 X2) www.vintageking.com

Although not U.S. or made in England, the Danish TubeTech CL-1B features a super low distortion gain-reduction element positioned immediately after the input transformer. It is controlled by the sidechain amplifier, which contains two time control circuits--one for fixed and one for variable Attack/Release. CL-1Bs sound very clean under huge reductions--my fave tube unit for vocals, bass guitar, and electrical and acoustical guitars. (\$2,500 X2) www.tubetech.com

OUT IN THE STUDIO

Out in the recording area, the headphone system has to be loud, clean and mix-flexible. Mytek Technologies' all-analog Private Q 12-channel headphone distribution system consists of a distribution/power supply rack (\$995), and five satellite mixing stations (\$695 each) and snap-on DL-DL cables. The mixing stations mount easily on a mic or music stand and deliver 2x30 watts Class-A sound. www.mytekdigital.com.

Lastly, I'd give out AKG K271 headphones (\$284 each X5). They are flat-sounding, clean, loud, rugged headphones that automatically switch off when removed--no accidental headphone leakage from phones left lying on the floor. www.akg.com/products/powerslave,mynodeid,186,id,250,pid,250,_language,ENUS.html.

For starting my mic collection, I've picked a few great units that deliver consistently excellent results. A [Sennheiser e901](http://www.sennheiser.com) boundary mic (\$389), and [e902](http://www.sennheiser.com) dynamic (\$359) sound great for kick drums and bass amps; for snare drums and guitars I'd use [Shure SM57s](http://www.shure.com) X3 (\$316); tom-toms get [Sennheiser MD421 II](http://www.sennheiser.com) dynamic mics X3 (\$1,530); while hi-hats sound good using a [Neumann KM 184](http://www.neumann.com) cardioid (\$949); for orchestra instruments, pianos, drum overheads, room mics or really anything, I like a [DPA 3532-T stereo microphone kit](http://www.dpa.com) (\$8,000); then lead vocals, drum room mics or drum overheads, I like using [Soundelux E250s](http://www.soundelux.com) X2 (\$6,000); for guitars and brass I'd use two [Royer R-121](http://www.royer.com) ribbon

mics (\$1,898); and for acoustic guitars and very quiet percussion and delicate sounds, I'd go with a [Schoeps](#) CCM4 L ST100 stereo pair (\$3,416).

I still have a bit of money left, so I'm allotting \$4,000 for my patchbay, racks and wiring (granted, there's lot of D.I.Y. here), and \$1,174 for miscellaneous accessories: cables, mic stands, DI boxes, and, of course, lava lamps and incense.

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