

# MEANWHILE BACK AT THE RANCH

Neil Young's Redwood Studios enjoys mythical status. It's the birthplace of some of the most sublime rock 'n' roll ever recorded. AT was invited to spend a day at Broken Arrow Ranch for a rare behind the scenes glimpse.

**Text:** Andy Stewart



► “Are you sure I can park here?” I asked John as I pulled up in my conspicuously shiny Pontiac outside the front door of Neil Young’s Broken Arrow Ranch studio only to be greeted by a sign that read: “Parking For Canadians Only... All Other Cars Will Be Towed!”

“Yep,” said John with a wry grin. “Ignore the sign. Welcome to Broken Arrow.”

With those words I realised I’d finally made it. I could relax, parked in front of the most mythical private studio on earth, the ‘Redwood Studio’.

As I stepped out of the car onto the crunchy gravel driveway to shake John Nowland’s hand, I half expect the whole scene to disappear in a puff of smoke. John is Broken Arrow’s studio manager and ‘in-house’ engineer\* who’s worked with Neil Young for decades. It was on his invitation that I was here.

I’d been anticipating this moment for the entire morning as I drove up the Californian coast on my solitary odyssey. I’d followed my own handwritten instructions as per John’s over-the-phone explanation, but had grown more than a little nervous about its accuracy the further I travelled into the mountains. I’d vagued out a couple of times the night before as he carefully explained the route to Neil’s secluded ranch, my mind drifting with thoughts of what his home might be like and the songs that had been penned there.

I remembered John saying something about stopping for a bowl of green chili soup at Duarte’s Tavern in Pescadero. “It’s the best chili soup in California,” he’d said excitedly. But my recollections about which way to turn when I got to Fiveways... well, I didn’t have any. But when I finally stopped at Alice’s Restaurant to get ‘gas’ (after travelling for 20 miles through redwood forest with the fuel gauge on empty), I knew I was getting warm.

The first thing that struck me about Broken Arrow Ranch, after wending my way down the secluded back road to the front gate, was the exquisite beauty of the property and the breathtaking silence. The cold Northern Californian mountain air was as crisp and clear as an open D chord from Neil Young’s Martin acoustic, the feeble sunlight barely penetrating into the depths of the redwoods that surrounded the entrance to the property.

John’s greeting had an extraordinary focus to it now the relentless highway hum had vanished. His voice was deep and grainy and it cut the air like a scythe. My ears were still opening up to the silence around me...

“You took a while getting here. I was beginning to think you were lost.”

“Well, I wasn’t exactly racing the clock,” I said. “I was more concerned about making it here in one piece. I don’t know these mountain roads, I have no licence to drive here, and I’m on the ‘wrong’ side of the road driving a brand new Pontiac for which I have no insurance!”

“Oh right... well, you’ve made it now, so you can relax.”

On that advice I took in what felt like the first real breath I’d inhaled all morning and sighed with relief.

## RANCH FLAVOUR

Broken Arrow Ranch, for those of you who don’t know that name, is Neil Young’s California home of 35 years. Neil Young’s song *Old Man* from the *Harvest* album (a song that Neil wrote back in the early ’70s for the ranch’s caretaker, Loius Avala) makes direct references to the place, but when I listen to Neil Young albums now, I can hear the ranch in many of his songs and recordings. Indeed, many of the albums Neil Young has released since the ’70s have been recorded, mixed or mastered on the property, and John Nowland has had a hand in some aspect of most of them. And as I was to discover, virtually every analogue and digital master tape ever entrusted with storing Neil’s precious recordings is kept here, locked in a rough sawn redwood barn that looks like it was built by pioneers.

In fact, every building on the property has that aesthetic: rough hewn redwood timbers with their outer bark still intact, laid in giant slabs with massive nails worthy of a crucifixion fixing them in place. Shingle roofs, timber decks and wild-west-style split-rail fencing abound and there’s nary a painted wall in sight.

“Come on in and I’ll show you around,” said John, as I stared up at the giant redwoods that surrounded us. “But before I show you through the studio, come into my office [‘His Master’s Wheels’, as it’s affectionately known] for a moment and take a seat while I quickly finish off transferring this 1/4-inch master.”

John’s ‘office,’ which is directly across from the studio building, is a clapped-out old trailer that was once a mobile recording truck. It’s a rusted mechanical relic of a bygone era that’s quintessentially American and the epitome of Broken Arrow’s aesthetic. Its prospects of ever moving again look remote and not just because it’s up to its axles in soil or that the truck which ‘hauls’ it hasn’t worked for donkeys years.

The fact is, the trailer houses one of the most sophisticated and quietest analogue-to-digital two-track transfer facilities on the face of the earth. The outer shell might prove that rust *indeed* never sleeps, but inside everything’s geared towards ensuring that the analogue tapes are lovingly preserved and safely stored.

## WHEELS OF FORTUNE

As we stepped out of the cold across the low-tech/high-tech threshold I was greeted with a sight rarely seen by anyone outside Neil’s small group of artisans. ‘His Master’s Wheels’ is a dream workspace replete with equipment that straddles five decades, all highly modified and arranged to create the perfect two-track analogue transfer system. There are Ampex and Studer tape machines, digital replay and recording formats of every make and model, a desktop monitoring controller that looks like an old RCA line mixer (or a very old, very *Big Knob*) and two of the fabled Pacific Microsonics HDCD A/D converters (I’d seen that name on so many of Neil Young’s CD released but never had I clapped eyes on the units themselves).

There were tapes everywhere. The first reel that met my gaze being a 1/4-inch master of

*Powderfinger*. Suddenly it began dawning on me where I was and what this place was about. I’d turned off the highway into a world where the electronic noise floor is lower than ‘His Master’s Axles’, where Neil and John quietly focus on the innumerable remixes, new songs and outtakes that are slated for release over the coming years.

The surreal drive down the mountain through the property, past the ‘Harvest’ barn and Neil Young’s private residence was quickly giving way to an eagerness to hear some music and see the main studio where so much of Neil’s work is created. But I needn’t have concerned myself, before long a song I’d never heard before came roaring out of the system’s SLS nearfields, Neil and ‘Old Black’ rockin’ out in a way only Neil and Old Black can. It was quite something. Apart from the sheer volume at which we were monitoring (with the door wide open), listening to the music in His Master’s Wheels with John clearly having a great old time, was a very special moment. By the end of the experience I was fighting back the tears.

After being treated to the impromptu listening session, which included an epic recorded version of an unreleased track (which I am strictly forbidden to mention by name on pain of death), John and I braved the cold once more to walk the 20 metres to Redwood Studios. We were joined on our brief ‘bushwalk’ by Apollo, John’s

“Redwood is the ultimate home studio plonked in the middle of a forest surrounded by hundreds of acres of silence”



\* along with Tim Mulligan, Chief Engineer-Mastering Engineer-FOH Engineer, John Hausmann, Engineer, and Harry Sitam, Chief Technical Engineer.



loyal dog, who'd been waiting patiently outside for the new visitor to come and throw the stick for him... I relented.

"If you throw the stick, he won't let you stop for the rest of the day," John remarked *after* I'd launched a redwood twig up the driveway. "He's notorious." As Apollo rushed to retrieve it, John and I headed indoors again, leaving Apollo 'out in the cold' once more.

#### TIMBER YARD

Redwood Studio, which was built in the early '70s specifically for 'recording at home', is basically a long wooden building made out of the very timber that towers around it. The surrounding redwoods are huge and create a wall of silent sentinels that continue to loom above you long after you've entered through the front door.

The interior of the studio looks like a classic California bungalow retreat cabin like the ones you see in old movies. There are pictures, paintings and memorabilia everywhere: photos of Neil and Pegi on holiday, Crazy Horse in the studio, mixing sessions and happy snaps from lots of different eras. The timber-lined walls create a dark and cosy atmosphere and the gabled ceilings make you feel very much at home. There's nothing about the place that feels remotely like a commercial studio. Redwood is, in fact, the ultimate home studio plonked in the middle of a forest surrounded by hundreds of acres of silence, a silence broken only when Neil plugs in 'Old Black' in the next room. Soundproof, this building most certainly isn't.

It was at this point that John made it abundantly clear that taking photos inside this building was strictly forbidden, so I reluctantly ditched the camera and followed him into the control room. (Actually photos are basically verboten at Broken Arrow 24/7, irrespective of the circumstances, and I am very grateful to John and Neil for allowing us to take any shots at all.)

What struck me the moment I entered this very private mixing domain was the massive Neve 8078 console.

"Where's the Quad Eight I always thought you guys had here?" I asked John, without averting my eyes from the magnificent specimen in front of me.

"Oh that thing hasn't been here for God knows how long. The Neve's been here since 1990 and there were two other boards here before that."

I sat down in front of the console and pushed a few faders around (as you do) and looked out through the wood-panelled windows into the

redwood forest. The mix position faces directly away from the main entrance and feels quite elevated as the landscape drops steeply away on the backside of the building. The view into the forest looks like a painting: still and perfect and archetypal. It must be a fantastic thing to stare at during extended mixing sessions. I had to bite my tongue to stop myself from asking John to lace up a two-inch master and let me at it!

"A lot of Neil's albums get mixed in this room off those two Studer A800s in the corner there," said John, pointing over at the pair of glowing tape machines standing side by side like identical twins on their first day at school. "They're amazing machines those Studers; Neil loves them."

"Mmm, well there's nothing quite like 48 VU meters lighting the room with an 'analogue' sunset," I remarked, my eyes still roaming around the console, my hands straying here and there uncontrollably, as I twiddled and clicked EQs and pan pots like an eight-year-old.

John then proceeded to talk at length about many of the projects he's worked on in this room, the most recent of them being *Living with War*.

"During the *Harvest Moon* album, which we mixed here, I was sitting where you are now, 'pre-mixing' stems, and Neil was sitting here [John pointing directly behind me] at the helm of an old Universal Audio valve console, the 'Green' console, that is sometimes setup behind the main mix position. He was mixing the stems to the two-track that I was feeding him from the Neve."

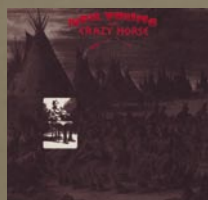
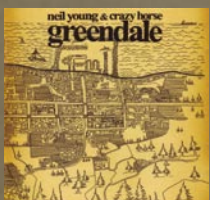
As I sat at the console, imagining the scene and staring at all the beautiful analogue equipment around me, I was amazed by the simplicity of the control room's structure and the complete lack of interest there seemed to be in following any kind of 'current' studio design. And why the hell would you after you've spent decades working in the place and know every morsel of tone and reflection the room has to offer. I guess I'd had my head so full of studio designs recently that I'd almost forgotten that there are many ways to achieve *your* perfect mixing environment. It was possibly the most comfortable control room I'd ever had the pleasure of sitting in... and it reminded me: nothing beats a view.

Next was the adjacent recording space, which again just feels like another room in the 'house'. There are no control room windows to look through or thick impenetrable walls and doors, just timber... and lots of it!



"The fact is, Neil's pretty old school. He loves old stuff like Cadillacs and Studers, that's just Neil, you know?"

Just some of the many albums to come out of Broken Arrow Ranch.







One, two, three heave... His Master's Wheels is John Nowland's 'office'. It's surrounded by redwood forest and there are no neighbours for miles around.

The recording space is actually quite small, not much bigger than the control room really, and once again the view outside is decidedly red and woody. The ceiling is gabled and virtually every surface is timber. As John and I wandered around the room, while he enthusiastically recounted endlessly fascinating stories of some of the recordings that had taken place here, I wandered towards a black electric Gibson Les Paul and before I'd even really thought about it, I found myself asking the question: "Is this um... what I think it is? Surely this isn't 'Old Black' sitting here is it?"

"It sure is."

Things were starting to get very surreal at this point. Although I was feeling pretty relaxed with John – we'd been having a great old time yakking about everything from the smell of Ampex tape stock to the reliability of his Toyota 4x4 – I kept getting jolted by strange flashes and emotions that I'd had stored inside me since I was a child. Earlier, as I'd driven onto the property I'd been overcome by a memory of my eldest brother and I driving in his Kombi van in the mid '70s listening to *Harvest*, and now I was copping a dose of adrenalin from a simple Les

Paul/Fender Deluxe setup, which in my mind is just about the most significant guitar combo in recorded history. There it was sitting patiently on its stand waiting for the next encounter with its master. So what did I do? I did what anyone would do... I reached out and touched it.

More than any other Les Paul I'd ever seen, 'Old Black' was looking very, well... 'used', shall we say. But this paled by comparison to Neil's old Fender Deluxe amp, which looked like it'd been rattling around in the back of a cement truck for 30 years. Laid out on the floor in front of them both (to top it all off) was Neil's footpedal setup, the Whizzer, a device built specifically for him that turns the Fender amp's knobs remotely by means of mechanical caps, which literally grab the controls and move them based on the preset commands of the footswitches.

For some reason I wasn't expecting to see things like this, and it must have been clear to John that I was mildly shocked.

"You look surprised," he said with a smirk on his face. "This is Neil's home, don't forget, it's where all this stuff lives."

I shook my head in amazement and looked up

at the gabled ceiling to compose myself once again. "I'm sorry if I seem a little overwhelmed by all this John, I just can't quite take it all in."

This happened over and over throughout the course of the afternoon. After a quick look through Tim Mulligan's mastering room, which is directly opposite and very similar (if not the same) in physical appearance and proportion to the recording space, we wandered into the Redwood tape storage room, where dozens of two-inch, and two-track master tapes sat on the shelf with their precious cargo. It's the type of room I'd frequented many times before, but somehow all my years of grabbing master tapes off the shelf counted for nothing as I tilted my head to read the vertically aligned writing: *Tonight's The Night, Harvest Reel 1, Comes a Time, On The Beach...* I simply couldn't believe my eyes. Laid out in front of me was effectively Neil Young's entire recording career.

But this room didn't hold a candle (if that was possible) to the 'tape barn', which houses the vast majority of analogue and digital masters. The tape barn is very similar in size and appearance to Redwood Studios and, like His Master's Wheels, is a short stroll across the courtyard from the main studio.

## BARN STORMER

Inside is essentially one big open space with a high gabled ceiling, exposed beams and cobwebs – nothing like the hermetically sealed, humidity-controlled tape storage facility I was imagining it might be.

"It doesn't look like this place is exactly 'ideal' for storing the tapes long term," I said hesitantly, fearing I may be putting my foot in it.

"Well, this place wasn't built for this purpose," John replied matter-of-factly. "When we first embarked on this huge project we pulled in every tape we could get our hands on... We figured they were only going to be here for a while but they're still here 17 years later!"

As we wandered up and down, looking at what constituted virtually every analogue and digital recording format of the late 20th century, my mind lurched from album to album and song to song as the titles quietly sent my mind reeling. John talked, I listened... words by that stage had long since failed me.

The rest of our day involved a sneak peek at the echo chambers that hide in the basement of the tape barn and a long conversation back in 'His Master's Wheels', which turned into another memorable listening session. The echo chambers sounded amazing and looked every bit like an underground Coober Pedy 'miner's cottage', although John complained that they "weren't perfect" because they'd gotten carried away with curving all the edges and corners when they were applying the plaster. Even in here, one of the few rooms on the property with paint on the walls, Neil's aesthetic for all things old and rusted was plain to see. Bits of slate and even a car hub cap had been leant seemingly randomly against the walls to alter the decay and timbre of the chamber, the main technical ingredients in the space being an ankle-high NS10 and





## INTERVIEW WITH JOHN NOWLAND

► Sitting in 'His Master's Wheels', John Nowland and I spoke for hours, listening to master tapes, running through the transfer facility's technical setup and solving the problems of the world. John's been working in this office for 17 years and managed Broken Arrow Ranch twice, the first time in the early '80s, when digital recording was first becoming fashionable, and again since 1990. He's the man behind the archive, the master of two-track transfers and an accomplished engineer. The following is just a small fraction of our conversation, which began the moment I stepped through the door.

**John Nowland:** This is my office. I come here every morning, go through my emails and then check around the place to make sure things are working. I'm working on several projects at once in here, all the time. We've got a vinyl pressing of the live Massey Hall concert from 1971 to sort out this week, and I'm waiting on test pressings for two others as well: *Neil and Crazy Horse at The Fillmore* and *Living With War*. As soon as they get here, the headphones are going on and I've got to approve those.

My second stint here began on New Year's Day 1990 after Neil called me up and asked me to come and tackle what he thought might be a couple of weeks' worth of work, transferring some of his old master tapes. I think it was David Briggs who then rang half an hour later and said; "No, no, no... don't come down for a couple of weeks, expect to be here for three or four months!"

So I did. I came back here full-time and immediately started working on transferring analogue master tapes into the digital realm at 16-bit/44.1k. Then, of course, 20-bit came along and made all that work obsolete. Everything was changing so fast. You know what it's like, a new piece of equipment comes out or a new chunk of wire, a new A/D converter... whatever. Finally we got to the point where the Pacific Microsonics Model 2 [HDCD format] was brought out, which allowed us to transfer at 24-bit/176k. The Model 2s have two totally separate processor units in them that are either 48k or 44.1k, so they do 192k or 176k respectively, and they do them ostensibly better than anything that's been made before or since. Then, more recently, I think it was 2003 – again on New Year's Day of all weird things – Neil called me up and said; "You know, I think I want you to do everything 192 as well."

**Andy Stewart:** After you'd just finished transferring everything? You must have thought it was some kind of bad joke.

**JN:** Yeah, and I haven't even finished, to tell you the truth. I haven't finished yet!

**AS:** The 1990 project or the current one?

**JN:** The 1990 project! But you know, it's not like it's the only thing I do around here! I've got three albums coming out on vinyl any day now! [Hysterical laughter!]

"there was one year recently where I think we did over \$100,000 in tape alone!"

Klaus Heyne-modified Neumann KM83s and 84s, both mics and speaker at either end of the U-shaped room facing away from one another like they'd just been in an argument.

### HIT THE ROAD

When John and I hit the road in our two-car convoy later that evening, as the darkness and fog closed in around us, I looked back at the ranch in the rear-view mirror and gave it a wave. Night was descending fast at Broken Arrow, the redwoods sucking the light out of everything. All that was left ahead of me, after John and I had waved and tooted goodbye to one another from our moving vehicles, was the two-hour drive south down the mountain and back onto Highway 1... remembering to stay on the 'wrong' side of the road, or was it the right side? At 95 miles an hour, the Pontiac was still thumbing its nose at me... I turned up the stereo. ■

*Many thanks to Kendra Boardman and Sierra Dunton for making this trip possible.*

### OBSESSING OVER GEAR

**JN:** The real danger with gear obsession is that you can become a guy who just does nothing but listen to wire and converters and never get anything done! I just gave up on all that stuff eventually. I'm sure there's some great new wire and some great stuff out there in the world but I just don't need it. Nobody's ever beat what came out of this trailer – for a flat transfer. So I know we're doing something right, and at my age, I don't care if I don't ever listen to another piece of wire or another converter again. Does the phrase 'IN MY LIFETIME'... strike a chord?



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John Nowland behind His Master's Wheels

But now that we're settled into a routine we're working steadily through the archives. The most urgent stuff we're working on at the moment is actually some of the early digital masters. We've got years of tours on [Sony] F1 PCM video tapes that are dying rapidly – some are just gone.

**AS:** Do all the transfers get done here in this room?

**JN:** In this room, yes. I use the ATR 102 for the analogue transfers and the Studer 820 machine to wind the tape; that's all the Studer ever does – wind tape. You can put a roll of Ampex on it that hasn't been baked and repack it without scraping the oxide off it! It was around US\$15,000 when it was new and now all it does is wind tape back and forth!

**AS:** They've got great transports, those old Studers. That's the one thing about the Ampex 102s that has always disturbed me. Particularly the fast...

**JN:** The fast speed is a little scary. Nothing happens fast in here! Everything's done at library wind speeds because if an old splice lets go or something, it's catastrophic. So the 'winding' Studer runs at about a metre a second.

#### STUDIO GEAR SHENANIGANS

**AS:** Can you tell me a little bit about what changes have occurred here technically since 1990? You've obviously gone through a couple of consoles in that time, for instance.

**JN:** Well, we got a new console in 1990, the Neve 8078.

**AS:** And did that replace the Quad 8?

**JN:** It actually replaced an MCI – a 636 which itself replaced a Harrison. The Harrison went over to One Pass Video in San Francisco, which soon after suffered a terrible fire and the console was destroyed. The MCI went to a guy named Jeff Roth at Focused Audio shortly after I got here and we got the Neve 8078 from a studio in New York. It was installed by Harry Sitam, our Chief Technical Engineer here, who's worked for Neil longer than any of us, and will probably be here long after us all!

The other big change for this place occurred around '94 when Neil went back to recording on analogue tape. He did an album with Pearl Jam [*Mirrorball*] and made the decision then to go back to analogue. That's when we bought two Studer A800s. He'd been recording on two Sony 3324 digital multitrack machines since '83. Neil had the third and the fourth machines ever made... they were pre-DASH. We still have one of them, but only so we can play the tapes! That's the thing about archiving and re-issuing stuff, you have to retain machines that replay the different 'defunct' formats. For instance, in this room there's a PCM 9000 and a 1630. We don't use it as a recording format any more obviously, but you can't just throw it away – you've got to keep all that stuff.

**AS:** So formats pile up.

**JN:** Oh god yeah! That's one reason why Neil's refused to buy a ProTools rig to this point: he's just like, 'I've bought enough of this crap, you know?'. And it's true. Neil's spent a fortune on this stuff over the years. Not that ProTools is going to go away any time soon, but you know... who's to say? Neil's attitude these days is: 'If I need a ProTools rig, I'll rent one'. That way he doesn't have to worry that it's going to be obsolete or that he's going to have to buy new A/Ds for it in 12 months.

**AS:** But it doesn't sound like he needs much convincing to buy a Studer A800!

**JN:** No. Actually if I went to him tonight and said, 'Neil, there's a really cheap 800 going, and we really should pick it up for spare parts alone, he'd probably go, 'Fine! Not a problem'.

The fact is, Neil's pretty old school. He loves old stuff like Cadillacs and Studers, that's just Neil, you know? He looks at those machines and goes, 'God I love those machines'. It was even a battle to get him to buy the [Studer] 827 two-inch eight-track (which we now use to print our surround mixes), because it doesn't have VU meters. You work on an 827 or an 820 and you go, 'What's to love?'. It's a beautiful piece of machinery but it's got no 'glow factor', that's for sure!



#### THE ARCHIVE

**JN:** When we first embarked on this huge project we collected every tape we could get our hands on and put it up in the tape barn. The best thing about the barn is its proximity and privacy. Getting to the master tapes easily is critical for us because Neil might come in at any minute and go, 'Hey, you know, I was remembering

this song... could you go and see if you can pull the track sheet for it?'

Because of its proximity to my office I can just wander over, and in one minute, I have the master he's referring to.

But pretty soon any masters that have already been archived will be moving to the Hollywood Vaults so they're safer.

So we've been doing everything on analogue tape again, running dual multitracks while we're tracking, not for more tracks but so that we have a first-generation safety.

**AS:** So you've been doing a split straight at the source?

**JN:** Yeah. God, there was one year recently where I think we did over \$100,000 in tape alone!

#### THE TWO-TRACK TRANSFER SYSTEM

**AS:** Can you tell me what the straight analogue tape transfer system here consists of?

**JN:** Sure, well the whole audio system in this trailer was built starting with a pair of speakers and a tape machine to get the least amount of hum. And then the other components, like the A to Ds and the power supplies, were all added later. The power supply for the A to D sitting in front of me here for example, is turned and sited in a particular direction...

**AS:** To minimise hum?

**JN:** Yes. And so too are all the wall-warts, including the ones for the lighting. They're extended as far from the tape machine as possible so they don't get to the tape head. All that's done so that you can crank everything up to 10 and open the head gate on the tape machine and basically not hear any hum. Damn near no hum at all!

Every piece of equipment – all of the power conditioning, everything – was placed wherever it created the least hum rather than look or convenience or ergonomics! As it just happened those pieces [pointing to the neatly placed, perpendicular-to-the-wall power conditioners] worked okay there, I swear to God! They could have ended up over here, over there, turned this way or that way... the same applies to everything in this room, apart from me of course.

[John then proceeds to wind the amps to 10, the monitoring to 10 and open the gate on the 1/4-inch headblock and there was basically no audible sound at all – which was astonishing]. I was poised to put my fingers in my ears at a moment's notice...

**JN:** If I pressed play on that tape machine right now, the volume would launch those woofers right



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"Surely this isn't 'Old Black' sitting here is it?'  
'It sure is.'"

across the room. If I played you something that loud... we'd be killed basically!

**AS:** There's no hum.

**JN:** No, there's no hum. You hear a little bit of hiss, but that hiss is very even. And that's up staggeringly loud, believe me.

**AS:** I don't want to know how loud that is!

**JN:** No! You don't want to find out, that's for damn sure!

#### WORKING WITH NEIL

**AS:** What was the last album you recorded or mixed with Neil?

**JN:** Let's see... The last thing I mixed was his solo performance of *Greendale*, which was recorded at Vicar St in Ireland – it came out with the DVD. Before that I've been doing mainly the video stuff, including the *Red Rocks* DVD. I also mixed the *Silver And Gold* DVD, which was a solo at Bass Hall. I also recorded and mixed some of the *Silver And Gold* album with him... all done here on the ranch.

The fact is, Neil works with whomever he thinks he'll feel comfortable with for that project. There's no second-guessing it... *Greendale* was the perfect example of that. He started with one song and every day he brought in a new one. He recorded it with John Hausmann (who'd never been 'first chair') on the other side of the property, and they just kept going for months. Next thing, Neil's off to Nashville to record *Prairie Wind* and none of us are involved until the mastering stage. But everything comes back here at some point – back here to me, I do the transfers. Then it goes to Tim and he does the mastering.

**AS:** So the mastering for every one of Neil's albums is done across the driveway here in the Redwood Studio mastering room?

**JN:** Nothing comes out of here without it going through Tim's hands. Nothing. Not a thing. Until he signs off on it, it's not leaving here. Tim's been here forever you know. He came out here from Chicago in around '72 and was building

fences on the ranch and ended up doing front of house. He's co-produced several albums with Neil and is still doing front of house. And all the mastering too.

**AS:** After all these years do you and Neil have a fairly seamless working relationship where not a lot needs to be said?

**JN:** Oh yeah. I feel that way for sure, and I've also come to realise that there's a time when you just don't speak because it's in these silences that so much of the work gets done. So quite honestly, I find the best thing to do with Neil is just leave him be most of the time. If he wants to talk about something, great, if he's got something to ask me or tell me, or whatever, fine. Other than that – unless we're sitting having a beer or something – it's not the time to just sit and gab because when he walks in here, he's coming here to work – he's not coming to 'hang out'. It took me a long time to work that out, actually, but I finally realised: he's coming here to work and he doesn't need somebody to slap his back.

**AS:** Particularly at home...

**JN:** Yeah! Exactly. And that's part of it. This is his home, make no mistake about it. So although I come to work here, I have to respect that fact... always. I've had that experience in the past – as you probably have – where you've got the wife or the kids or the dog or whatever distracting you while you're trying to get stuff done at home, and it just doesn't happen! It's a bitch, you know? You don't have that space for free thought. So when I finally equated that situation with Neil coming over here and trying to get stuff done, I realised that the best thing you can do is just leave the guy alone. If he wants something – my job is to be here for what he wants.

#### MIXING TO TAPE

**AS:** When you're mixing on the Neve in the Redwood studio, do you mix straight to half-inch Ampex ATR?

**JN:** That's right. And if we're doing surround mixes we go to the two-inch eight-track Studer 827.

#### FROM AMPEX TO HD-CD

**JN:** What we're doing is coming out the bottom cards of the Ampex; we're not using the I/Os so it's essentially unbalanced. We eliminate the top electronics entirely because it's just another thing we don't need. Everything inside the machine is wired internally with 'cello wire', which is a very high quality wire. The cards that we're using started out as stock Ampex cards, which were essentially mastering playback-only cards. And then we modified them, taking out every piece of crap we could, so there are no FETs in them, for example. So now if you

want to change speeds, for instance, you move a jumper. From there we go straight into the Microsonics Model 2. And because of the signal level that we're working at, the Model 2 is set at its most sensitive position. It also has an AES split so I can do two AES feeds at once at 192k. That feeds the Genex for the magneto optical at 176k or 192k, and our cheap and dirty backup to the Tascam DA98HR or, in the case of other stuff, we can take that feed the computer directly and create a file that way. I also do a 30ips half-inch of everything. The point is to have everything stored in a couple of places and

also to make an analogue safety of it because we know that 50 years from now we'll be able to play the analogue tape. Nobody knows whether there'll still be a Genex machine or a computer that will play it back by then, you just don't know.

Very occasionally we'll patch in a Dolby or an EQ, but no matter how great they are, just the effect of patching something in and having another set of cables, it's often more trouble than it's worth. It's easier for Tim [Mulligan] to do it in Sonic Solutions, or with his Millennia Media stereo parametric or his new Manley Mastering Massive Passive.

**AS:** And do you use the two spare tracks on the eight-track or not?

**JN:** The eight-track gets a stereo mix and a 5.1 mix which is essentially all done at the same time. Typically, the stuff that I've done, I mix in stereo and just check the surrounds. I don't use much centre channel. The *Harvest* DVD, which was mixed here by Elliott Mazer, was purely a 5.1 remix – the stereo mixes on the DVDA disc are the original masters.

**AS:** You mentioned earlier when we were wandering around about a surround remix of Neil outside the Harvest barn being interviewed during the original tracking sessions... can you tell me more about what you did there?

**JN:** There was a great interview recorded in mono on a Nagra by L.A. Johnson, of Neil by over by the Harvest barn at the time they were recording the album in '71, with him listening to a version of the song *Words*. Neil's sitting out there playing with cow patties and drinking a Coors and talking about how great it is, hearing the sound bouncing off the hills. So we found the take he'd been listening to at the time – which was an outtake – remixed it in mono to emulate the balances of the one in the interview and then drove a pair of Altec 604s, a Mac 2105 power amp and the Genex machine over to where the 'Harvest' mobile recording truck was originally positioned next to the barn, set up four Klaus Heyne-modified Neumanns (two U87s and two 86s) right where Neil had originally sat when the interview took place and blasted it out into the hills and re-recorded it.

We then did a 5.1 mix at Redwood after delaying the four surround tracks by the distance from the truck to the mics. We had to look at the original footage with Mulligan to ascertain the exact spot Neil was at during the interview. Had to edit it a bunch though, as there are a lot more planes flying overhead these days than in '71. A great coincidence occurred as a jet flew over at precisely the same moment as in the interview, during one of our many record passes. That 15 minute piece probably cost more to do than the DVD-A made, but it was a giggle! ■



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