The epic sea adventure is as old as film itself, spanning from the silent years up through various remakes of *Treasure Island* and *Mutiny on the Bounty*, the unforgivable turkey *Cutthroat Island* and last summer's surprise smash hit, *Pirates of the Caribbean*. But there's something remarkably fresh and different about Peter Weir's latest film, *Master and Commander: The Far Side of the World*, which is adapted from Patrick O'Brian's beloved series of books and stars Russell Crowe in his first major role since *A Beautiful Mind*.

Yes, the film contains the requisite cannon battles, gruff lads, claustrophobic quarters, a savage storm at sea and a good, bloody flogging. But Weir's take on the genre also steers clear of many of the clichés, while providing a realistic, almost documentary approach to life at sea, the cruelty of ship battles, and the courage and compulsions of explorers, mercenaries and seamen of every stripe. From the opening shot to the film's conclusion, there's barely any time spent on *terra firma*: You can be forgiven if you don't have your land legs after two-plus hours aboard the HMS Surprise. It's a hard, harrowing voyage.

On the early October day I visited the John Ford Theater on the Fox lot in Los Angeles, Weir and the post team are tweaking the final mix for reel 6, a climactic battle scene involving the Surprise and its French nemesis, the Acheron. (This takes place during the Napoleonic wars at the beginning of the 19th century.) It's a stunning action sequence, with lines of cannons aboard the two ships firing broadsides at each other at extremely close range; their ordnance screaming and whizzing through acrid, obfuscating smoke, smashing (with subwoofer-rattling force) into decks and masts; and sending a hail of splinters, shrapnel and bodies flying. Musket fire and the shouts and screams of the crews add to the overwhelming chaos. There is a moment of near silence, where the firing has stopped and the damage aboard each vessel is no doubt being assessed, and then comes the chilling *craaaaaaaack* of the Acheron's mast. In a long shot through hazy, swirling smoke worthy of a J.M.W. Turner painting, we see the French ship's mighty main mast toppling sideways into the water as the British sailors cheer. This surely signals the beginning of the end for the Acheron, though much more is in store for the crew of the Surprise when Aubrey leads a boarding of the crippled ship.

Across the length of the Ford stage's huge Neve DFC console, re-recording mixers Paul Massey (dialog, music) and Doug Hemphill (effects) make minute adjustments to the scene, occasionally consulting with supervising sound editor Richard King, who roams the stage and cuts sweeteners from his Pro Tools rig at the back of the room; music editor Simon Leadley, who sits at Massey's left at a Pro Tools station; ADR editor R.J. (Bob) Kizer, whose Pro Tools rig is behind the console; and picture editor Lee Smith, a one-time sound designer who knows every frame of the film and also knows director Weir's inclinations on most technical matters: This is his eighth film with the director, and they clearly have the sort of intuitive telepathy that
comes in the best director-editor relationships.

Weir drifts in and out of the room, listening attentively to the adjustments and making suggestions. At one point, he asks if there is a way to bridge the gap between the last cannon shot of the battle scene with the subtle music cue that foreshadows the imminent collapse of the mast. Hemphill brings in some ominous, almost inaudible LF rumble and that seems to do the trick. Then, Weir thinks the celebration of the British troops after the mast falls sounds “too controlled,” so Kizer is called upon to provide some wilder crowd elements from his vast storehouse of ADR and production sound elements. He finds a lusty, celebratory “huzzah!” and Massey artfully blends it in with the existing track.

During a break in the action, Weir and I retire to his office off the Ford stage to talk about his sonic approach to the film: “I wanted to do something a little different with this dusty genre, which hasn’t really been touched much in recent years other than *Pirates of the Caribbean*, though that belongs in the branch of sea films that is more on the fantasy, less realistic side,” Weir says. “To do something like this film, which is true to the detail, you probably have to go back to something like Das Boot, which was quite inspirational, though not particularly relevant, of course. I wanted it to have its own unique sound. I also wanted the music to be used sparingly so the audiences' ears would have lots of time to adjust to the sounds of the ship. If you put music from one end of it to another — and that would be an easy thing to do — you wouldn't get to know the sounds of the ship.”

How did Weir form his own views on shipboard sounds? Is he a sailor? “No, I'm not a sailor, but before I made this film, I took two cruises on the Endeavor, which is probably the most accurate re-created vessel there is from this period: the 1770s. It was Captain Cook’s vessel. I spent three days on one voyage, four on another, and you work the ship. It’s not just museum-accurate on the top; it’s also accurate below, so you sleep in hammocks and everything is as it would have been in the time of Cook. What I learned on those trips became the foundation for everything I did from then on — the script through to the shoot, to the post — and I made extensive notes about the sounds I heard. Everything was always moving, including the timbers of the vessel. A lot of times, you couldn’t even identify what the sounds were; you couldn’t determine what was rubbing against what. But there’s almost always this great creaking and groaning and noises of indeterminate origin.

“Then, out on the top deck, you've got all of the sounds of the rigging and the sails and, of course, the water. I’m fortunate in that Richard King is a sailor, as are Paul [Massey] and Doug [Hemphill], so they're particularly sympathetic to the sounds of the sea. I really wanted this to be a sea film. It opens at sea and ends at sea, and there’s no architecture in it at all or the usual frames of references to settle into: the barrel on the quay, the carriage pulling up, the crinolines of the young lady saying goodbye to her officer. I didn’t want any of that. I wanted the viewer to have the unique experience of joining the voyage and really being a part of it, because that was my favorite experience of reading O'Brian. I loved the books that dealt with the longer voyages because you got lost in them more. That's what I was after: the feeling of being *at sea.*”
Principal photography took place over a five-month period in Ensenada, Mexico, using the same mammoth sea “tank” that James Cameron employed for Titani, except this time around, there was a full-size working replica ship, the Rose (which became the Surprise), as well as another ship on a gimbal and other portions of ships on gimbals on soundstages. Weir is a stickler for authenticity, and he had a series of notebooks filled with pertinent information for various crew members. “He had one pertaining to sailing, another to armaments, all different subjects,” says King. For ADR editor Kizer, the loose-leaf binder included a list of cannon commands, an English-French sailing dictionary, charts on sabre combat, historical background on the period of the film, and a 26-page glossary so he’d never mix up a “clew” with a “leech” or a “luff.” Even the right-hand wall of the Ford Theater was adorned with a giant schematic of the deck and interior of the Surprise.

Only a portion of the production sound from the shoot was usable, says Kizer, “because you have scenes like the storm sequence where they’re using giant engines to get the wind and water going. Another problem is that everybody had radio mics, but they didn’t respond that well to humidity or water, so sometimes you only got half of the words, and even then you could only hear one or two over the din.” Well over half of the dialog had to be looped later at studio sessions in London, Vancouver and, in Russell Crowe’s case, Australia. “A lot of it was group ADR,” Kizer says. “We had these loop groups of 12 in England, and we’d have them choking each other and fighting to get the mayhem we needed.” It was also a very Foley-intensive film, with Gary Hecker supervising that aspect — which also included considerable swordplay — over at Sony in L.A.

When it came to effects, Weir wanted realism over Hollywood bombast, noting, “Fortunately, O’Brien is very detailed in his descriptions of the sounds of the ships and the battles, and, of course, there are some re-created vessels. So we had a good starting place, but then Richard [King] went to some extraordinary lengths,” he says with a laugh.

ORIGINAL EFFECTS RECORDING
Indeed. King and effects recordists Eric Potter and John Fasal ventured far and wide to capture authentic sounds for the film. One excursion found them in the snows of Michigan in January recording cannon fire on Zaxcom Deva 24-bit 4-channel recorders, stereo Nagra and DATs (see “Fun With Cannons” sidebar). Muskets and other guns required a whole other recording environment.

“We did several musket sessions in this small but contained canyon out near Santa Clarita [outside of L.A.],” King says. “We did some Blunderbusses, which have the flare out of the muzzle, a seven-barrel volley gun and a Hotchkiss gun, which is like a small cannon. We also recorded .75-cal and .45-cal black-powder muskets firing live rounds. As far as machines, I ran two machines, Eric Potter ran two more — distant — and John Fasal shot onto three machines close to the weapon. I had mics in different spots in the canyon, including a set of Schoeps maybe 100 yards away from the guns, facing away toward the hills. After every shot, I’d go back and listen to a little of each one to hear how it was coming out, and we found that the machine that had the two Schoeps facing away sounded so great. At one point, I went over to check to see exactly how the mics were positioned, and it turns out that the mic
stand had fallen over and the mics were flat on the ground! But it gave the sound this great low end; maybe, it was from the sound traveling along the ground. You sometimes get those kinds of weird accidental acoustics. In general, though, we found that the best stuff was from 50 yards away and up. You need the close mics for the detail of the flash and the crack, but you get the boom from farther away.”

Many of the shipboard sounds came from a number of sailing expeditions the trio made aboard the Rose off of Ensenada and on two other tall ships out of L.A. “We’d go out when it was calm or just a light swell, and that was great for getting all of the creaks and groans we needed,” King explains. “We got some amazing discrete sounds. Eric had the Deva below deck — 4-channel, which is how it is [mixed] in the movie — and it really puts you in the room. You have a creak in the right front and it will move to the right surround; you really feel like you’re inside of something. We did all of the sail drops and raising of the sails and the rigging; we did that for three days. I also wanted to go out on a day that was really windy, so we picked a day when there were 12-foot seas and small-craft warnings. We got great thundering crashes and waves smashing against the side of the boat and so on; it was very dramatic.”

Yet another effects adventure took King, Potter and Fasal to the desert north of L.A., where they recorded “discrete sail movement and wind over sails, without all of the water noise and atmosphere,” King says. “We borrowed some sails from the Rose and rigged a mast in the desert.” They also went to great lengths to record some unusual wind sounds in the desert for the film’s incredible storm scene (see “Creating the Perfect Storm” sidebar). And for more human shipboard noises, “After shooting wrapped, the Rose was made available to us. I sent Eric Potter down to San Diego, where the ship had been moved. Eric recorded 4-channel recordings on Deva of the crew walking, running and moving about on deck.”

As post work progressed, other challenges presented themselves to King and Hemphill. “We were looking for sounds to augment the cannon shot flying by,” King says. “I was looking for a low-end component to convey weight — that's from O’Brian's descriptions of hearing the hum of a cannon ball passing over deck. So I got some crossbow arrows and fired those over mics and pitched them down significantly and that was perfect. It was this very organic sound.

“We also didn’t feel like we had strong enough impacts; they didn’t have enough splinter to make them visceral,” he continues. “So we spent two or three days firing a sling shot filled with various pieces of wood — dowls, cut pieces, jagged pieces and other objects — over a microphone. In the end, we probably had 20 to 25 separate effects predubs: The cannon shot is one predub, the ordnance passing through the air is another, hitting the ship is another, splinters is another, the sound of splinters dropping onto wooden surfaces is another. We had as many as six 32-channel Pro Tools running when Doug and I were doing the effects predub together.”

**SPARE, ANTHEMIC MUSIC**

While King was collecting, assembling and fine-tuning effects, music supervisor Simon Leadley was hard at work recording the unconventional score at The Village in L.A. “I was sort of composer wrangler in a way,” says the genial Aussie, best known for his work as supervising music editor on *Moulin Rouge,* “because there were three of them working and each is very different from the others, and they all had equal input into the score. There’s Iva [Davies], who was in [the Australian band] Icehouse. He was classically trained and became a pop star. Then you’ve got Christopher Gordon,
who's more of a regular film music person, and Richard Tognetti, who's the artistic director of the Australian Chamber Orchestra. You've got these three different strains coming together in really interesting ways. There are a lot of high strings mixed with synths, and lots and lots of percussion: taiko drums and bells and various metallic things that are very interesting tonally.

"Peter didn't want a traditional score," Leadley adds. "That's been done to death. He wanted something that would convey urgency and spirit. That's why anytime there's an inference of going to battle, there are 'war drums,' if you like. People probably expect a certain kind of music in this sort of film, but they're not going to hear it here."

So instead of string swells, there is shakuhachi and drums and Richard King's strange winds, and also fairly long stretches with no music at all: "Peter wanted to allow plenty of space to let the film breathe," comments Massey. "This is not a film where the audience is pulled along by a constant barrage of effects and music. It's a film where the director wants the audience to sink into it and become part of the world — sort of documentary-ish in style — and live the day-to-day aboard the ship."

Widely regarded as among the top re-recording teams in L.A., Massey and Hemphill have collaborated on a few dozen films since first working together at Todd-AO in the early '90s. A few years later, they plied their trade at Sony, opening up the William Holden Stage there. Then, in 2000, they moved over to Fox when the John Ford Theater opened. "Even though we're still independents, I feel like we need to have a room we're familiar and comfortable with," Massey says. "I like the boutique feel at Fox." And though he says he has some "operator issues" with the Neve DFC, "overall, I love the sound, particularly of the EQ and compression."

Of his working relationship with Hemphill, Massey notes, "My approach and Doug's approach is always, 'What can we take out? What can we clear so that we can hear everything we need to hear?' It's so easy to get too busy and to think that you have to have a sound for everything that's going on. As a mixer, you can't allow that to occur or you end up with this big mono mush. So the challenge becomes highlighting the effects you want to hear, the dialog you have to hear, letting the music do what it needs to do, and take everything else out."

"As mixers," Hemphill notes, "we're thinking, 'What are we asking the audience to sit through?' In this film, there are three set pieces in a row that are combat — big battles. And in the final one, we ended up going more for the general impression of what's going on, because it's just overwhelming otherwise. In a couple of scenes, we even lowered our cannons a bit because we decided that you aren't gaining anything story-wise to make them that big. On one hand, we're mixing for the drama and the pacing, but on the other hand, we're saying, 'What can the audience take?' I've got to tell you, where I live in Montana, people are always saying, 'Why do movies have to be so loud?' You have to rein it in every once in awhile.

"And, actually, some of the stuff I'm most proud of in the film are the backgrounds Richard put together and the way we mixed it," Hemphill concludes. "It all becomes part of the story. The ship 'responds' to the characters. Telling a story is always paramount to me, and Peter is the same way. I think that's one reason this all went so smoothly. We're all on the same page. We all want to use our sensibilities to tell a great story."
CREATING THE PERFECT STORM
The Surprise encounters a fierce storm as it rounds Cape Horn at the tip of South America. Richard King: “We wanted the sound of gale-force winds, but after doing some research, we decided that we were going to have to make the stuff up. So we built this big wooden frame with these cross-members on it, and 1,000 feet of 1-inch and half-inch hemp line up and down and around it, tightened with turnbuckles. Then we rented a pickup truck, put the frame five or six feet above the cab, and drove that truck at 70 miles an hour into a 30-mile-an-hour wind up in the Mojave Desert, with a directional stereo mic laying in the bed of the truck, which had been dampened with sound blankets and foam. The mic was shooting up into the rigging so we didn’t get any of the truck sound, and we ended up recording all of these really interesting, weird, organic noises to the 24-bit Deva. We also had this ‘wind harp,’ a lyre with gut strings, that we'd de-tuned and stuck out in the wind on the truck.

“Later, when we mixed the storm sequence, we did add some sampled vocal elements. When you read descriptions [in O'Brian's books], it says that a storm could sound like ‘a thousand animals being tortured.’ So we took off from that, too.

“Also, at the big tank in Baja a couple of days after the shoot wrapped, we had production position two huge water tanks above the ship. We miked the entire ship — from the rigging, below decks, etc. — and then dumped several tons of water on deck; we got some incredible recordings — huge hull/water crashes — which we used for the storm scene.”

Doug Hemphill: “Peter was very intent on the wind changing character when the ship changes course [as it goes around the Horn]. We used a variety of low-frequency and high-frequency material; very pitch-oriented. Then, there’s another component as you’re going around the Horn. It’s not just rain, it’s freezing rain, so you have to have that stinging, brittle water hitting you, and that’s very frequency-oriented, too. The challenge was to make it all into an organic whole: a big, single monster storm, instead of specific moments. Years ago, I worked with a director on a huge battle scene and he told me something I’ve never forgotten. He said the more detail you put in, the smaller the event begins to seem. So that’s the paradigm for the storm. There are instances when you want to hear the detail and you focus on something, but the way you make it more of a whole piece is to make it more impressionistic, staying away from the fine detail.”

FUN WITH CANNONS
Supervising sound editor Richard King: “At first, we couldn't find any large-bore cannons — 12-pounders and 24-pounders — that could fire live rounds. Then, through one of the technical consultants, we found these historians and collectors in Michigan who had [the cannons that we needed] and also had a relationship with a National Guard base in northern Michigan that has a howitzer range. It was January, and the base was basically closed for the winter, so John Fasal, Eric Potter and I flew to Michigan for four days and we fired cannons. If you read back in the history, you find that they fired all kinds of things out of the cannons: not only round shot, but also chain shot, bar shot, grape shot. These collectors did the research to find out how the shot was constructed and then they actually made it for us; they spent a month casting shot. They were really into it.

“For every shot, we had up to six machines rolling. We had a Deva 4-channel 24-bit machine and several DAT machines and an analog Nagra because we were curious to
see what kind of crunch we could get by really hammering [the analog machine]. With loud sounds like weapons, you can sometimes get good analog distortion. So we had the Nagra and a couple of DAT machines set up close to the guns and various mics — some large-diaphragm mics, some PZMs — set up at different distances. Eric would be down-range 300 or 400 feet, and he had mics set up in the line of fire and then very long cables back through the snow.

"I was on a snowmobile with a portable DAT rig and a Neumann 190 stereo mic. I drove around getting distant shots to get that low end. Later, we went back to the cutting room and we lined up the [recordings of each shot] in Pro Tools and got this incredible range of colors: from the crack from the close mics to the great, deep boom from my roving half-a-mile-away mic, and the shots going overhead from Eric's mics. The scream-bys are amazing. And the bar and chain shot whizzing through the air at various speeds is something most people have never heard. It's very powerful."

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