

Radiophonic Workshop: the shadowy pioneers of electronic sound

As pop luminaries queue up to appear on their forthcoming LP, we talk to surviving members of the BBC's Radiophonic Workshop, responsible for the theme music for many classic shows, including Doctor Who

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Delia Derbyshire of the Radiophonic Workshop in a BBC studio in 1965.
Photograph: BBC Photolibrary

As musical legends go, they're a funny bunch. Five well-turned-out but unassuming gents, harrumphing and making small talk, they could easily be retired accountants at the golf club – were it not for the fact that they're busy wiring together enough vintage synthesisers and tape machines to make a young hipster techno producer faint with joy, all while the most peculiar boinging noises emerge from various speakers. Oh, and their manager's on the phone to Hot Chip's people, while the drummer from the Prodigy is sitting in the corner tapping his sticks.

As per usual, though, the veteran tinkerers are mostly concerned with matters electronic. Worried about their antique equipment going out of tune, Paddy Kingsland, 66, mutters, "don't breathe on the autoharp!" There's a sudden electrical buzz; "ooh, that's playing havoc with my pacemaker," deadpans

Roger Limb (who won't reveal his age). "Quick," says 77-year-old Dick Mills, helpfully, "stand in this bucket of water."

This is life with the Radiophonic Workshop – the electronic Buena Vista Social Club, a "band that never was", masters of their craft finally coming together late in life. While their demeanour might occasionally seem a little more Krankies than Kraftwerk, these old colleagues – playing together as a band for the first time, after decades working separately in little studios tucked away deep in the BBC's Broadcasting House – are now getting their due as true pioneers of electronic sound. Deceased RWS members [Delia Derbyshire](#), Daphne Oram and John Baker may have retro cachet already, with Derbyshire, who [recorded the original *Doctor Who* theme](#), beloved of the electronica and record collecting communities, and Oram now the subject of [a Science Museum exhibition](#). But this is a concerted effort to bring their tradition well and truly to life: gigging, remixing and recording new tracks. And generations of musicians are queuing up to work with them, or to simply pay tribute to their music and influence.

Phil Manzanera and Andy Mackay of Roxy Music have recently been in the studio recording new compositions with the RWS, and Manzanera is at pains to point out that it wasn't just Eno who brought electronic influences to bear on Roxy. "As a young musician growing up in south London," he says, "I was very aware that the Radiophonic Workshop were pushing the sound barriers. And when I met Eno and Mackay, it was in the workshop's very British, very Heath Robinson-style tradition of lashing bits of odd equipment together to create innovative sounds that we created a musical context for Bryan Ferry's narratives."

To Human League and Heaven 17 founder Martyn Ware, "when we started out with our two basic keyboards bought on hire purchase, the Radiophonic Workshop represented a kind of dreamland, this magical place where any sound could be made. If someone had said back then 'you could give up everything you've achieved and become part of the Radiophonic Workshop, just click your fingers', I think we'd have done it. That's how in awe of all that stuff we were."

As a teenager Hot Chip's Al Doyle went so far as to write a letter of protest when the RWS was finally closed down by the Beeb in the late 90s. "I hazily remember asking them to reinstate it and put me in charge," he admits. "I wanted to be in the workshop, just like I wanted to be in the Velvet Underground or the Manic Street Preachers." Portishead's Adrian Utley cites the RWS as just as vital to his band's sound as their more usually noted influences such as John Barry and Lalo Schifrin. "There's a real English uneasiness about the sounds they made," he says, "a spookiness that's just part of the fabric of life for anyone who grew up with BBC TV and radio... which is everyone, pretty much."

Iman Yanée, aka Mizz Beats, now a connoisseur's favourite experimental R&B and electronica producer, started out producing for grime MCs – but her first inspiration to make music came from the workshop. "I remember seeing a Delia Derbyshire documentary in my early teens," she says. "I was blown away. Every sound took hours of detailed time and work – you look back to people like that and you have no choice but to respect that work. I've always been fascinated with sonic details, experimenting and manipulating sound – and I'm always looking back to the work that the Radiophonic Workshop did."

All of these musicians, and more yet to be announced, have either recorded or are due to record studio collaborations with the Radiophonic Workshop for a new album next year. But for the moment, the RWS's main focus is on gigging. Their first show as a "band" was a ramshackle but brilliant set in 2009 at the Roundhouse; since then they have been working out how to make themselves a going concern, picking up Prodigy side-man Kieron Pepper on drums along the way (who incidentally says, despite having played alongside the biggest names in current music, that "being involved with these gentlemen has redefined the meaning of cool for me!"). This year – with the 50th anniversary of *Doctor Who* piquing interest in the workshop once again – things have picked up pace with triumphant appearances at [Festival Number 6](#) in Portmerion and at the [London electronic arts festival](#) (Leaf) with the Science Museum show to come.



L-r: Paddy Kingsland, Dick Mills and Roger Limb rehearsing in London last month. Photograph: Katherine Rose for the Observer

Watching them prepare in Paddy Kingsland's west London studio, it's fascinating to see how much they act and feel like a real band. Kingsland himself practises runs on his keyboard looking slightly impatient, while Mark Ayres – their youngest member, formerly the RWS's archivist in its final days at the Beeb, and the dynamo behind the formation of the new group – tries to get everyone into some kind of order. Peter Howell, once a psychedelic folk musician in bands including Agincourt, [whose albums now fetch silly money](#) with collectors, today a rather benevolently vicarish presence, offers sage advice from the corner, and the cheery Roger Limb offers the occasional laconic comment. [Limb's voice, incidentally, is deeply disconcerting](#) in its familiarity – until it is explained that as well as making music, he was one of the BBC's main announcers in the 60s and can be heard on thousands of popular archive clips.

It's clear these are strong personalities, and all admit there can be friction. But moving among them all is Dick Mills, full of avuncular mischief, always ready with a defusing joke if tensions seem to be rising. Seventy-seven-year-old "Dr Dick", as he's known after his honorary doctorate from Bradford University, is the elder statesman of the RWS, having worked there from very shortly after its foundation in 1958. The only non-musician among the five – "a soundsmith rather than a tunesmith", in his words – Mills seems to have become the de facto spokesman for the group, spending more time acting as an MC on stage than fiddling with his reel-to-reel tape machines, and more than happy to give us a history lesson while the others rehearse.

In the 50s, the RWS was seen as something of an indulgence. A set of studios, each with a composer and an engineer, it got referred to, Mills says, as "sounds nobody likes for plays nobody understands – all this very cerebral, in-your-head stuff for the Third Programme, and they'd ask us to create the sound of a spiritual miasma or something like that." Mills made his mark early, though, notably creating sounds for the legendary sci-fi drama *Quatermass and the Pit*, and the [mindbending sound of Major Bloodnok's stomach for *The Goon Show*](#). "The boss never wanted us to do the Goons," he chuckles, "because he was scared we'd get Milligan poking around in the workshop."

The workshop's staff were seen entirely as technicians, never as artists. Perhaps it's not surprising as their working methods began with chalk and razorblades to mark out and cut up half-inch audio tape, and jerry-rigging tone generators originally intended for acoustic testing not for music making. Though in some senses a bad taste clearly remains – after all, none of them got composition credits on their own work, so the BBC kept all royalties even when modern artists copiously sampled the workshop – there is a huge sense of pride, too, in the working methods that developed from the production line system. Mills, his jovial tones still rich with the accent of Rochester, Kent,

where he grew up, compares their work favourably to more academic electronic experimentalists of the time.

"We knew what they were doing on the continent," he smiles, "your Stockhausens and what have you. And we appreciated they worked along the same lines, but the difference was this: they set their own tasks. They'd say, 'I'm going to write a symphony based around the square root of bugger all, and I can take as long as I like about it' – which is entirely different to someone coming in saying, 'I need a short, silly symphony, and I need it for Wednesday'. It's a world away! And all they'd end up with would be a basic product with untold layers of unnecessary polish on it. We just got the job done."

Likewise when Delia Derbyshire made the workshop hip for a while in the 60s, joining American composer David Vorhaus and fellow workshopper Brian Hodgson in the cult band [White Noise](#), while the likes of Syd Barrett and Paul McCartney stopped in for photo-opportunities, most of the RWS staffers kept their heads down. "Well," says Mills, deadpan, "it was nice for Delia to get out there and be hip, and it was nice for McCartney to be a name-dropper and keep mentioning us, but most of us had family commitments and deadlines to meet!"

As the famous 60s and 70s RWS showcase discs – [now repressed on limited vinyl](#) – show, though, this indifference to modishness didn't stop them creating some fabulously cool music. And they continued doing so on through the 80s, with Kingsland's *The Hitchhiker's Guide to the Galaxy* incidental music being a particular high point. But as technology marched on and, as Mills says, "any kid could buy keyboards in Dixons and make funny sounds", the expense of running half-a-dozen state-of-the-art studios became too much for the BBC. Ironically, it was just as the rise of techno and electronica vindicated their musical approach – the Orb, for example, repeatedly paying tribute to the RWS in track titles such as [A Huge Ever Growing Pulsating Brain that Rules from the Centre of the Ultraworld](#) (after an 80s *Blake's 7* sound effect), and Aphex Twin's [Rephlex label](#) released classic RWS material on vinyl – that the workshop finally closed in 1998.



Dick Mills (left) and Brian Hodgson (right) working in the studio during the 60s.

If there's any real bitterness among the RWS members, though, it doesn't show. At the Leaf show in Shoreditch a couple of weeks later, they are basking in adoration from a sold-out crowd that includes dance music luminaries such as Rob da Bank, Andrew Weatherall and Paul Hartnoll of Orbital, as well as a contingent of younger electronica fans. The stage is piled high with the kind of devices that bearded men talk about in hushed tones – [EMS VCS 3s](#), Korg MS20s, Synthis, Arp Odysseys, Kirk modulators and oscillators hand built by Mills himself as well as various whirling tape reels. Their performance, in surround sound, with synced visuals created digitally by the RWS members themselves from old BBC sci-fi footage, perfectly harnesses their workmanlike approach to a truly cosmic scope while retaining very Goon-ish wit and English whimsy. They combine tributes to Derbyshire (a sinister rendition of her robots' march, [Ziwzih Ziwzih OO-OO-OO](#)) and their own classic compositions with brand new pieces written by Limb, Howell and Ayres based on original RWS themes.

Backstage afterwards, there's a festival atmosphere; good wine is flowing, children and grandchildren are milling about, David Vorhaus is enthusing about the possibilities of performing some White Noise tracks with the RWS next year, big festivals are being discussed, and the five members of the band are looking exhausted, dazed, but happy.

"All the time we were down in those studios," says Howell, "we made this stuff to be played through tiny telly speakers, never knowing who was listening.

Now we have bassbins and real people who've paid to be here – this is what we've been waiting for all our lives!"

The remastered BBC Radiophonic Music and BBC Radiophonic Workshop vinyl albums are released tomorrow (Music on Vinyl); the band play a live in-store launch at [Rough Trade East](#), London E1, 7pm. The album of new RWS material is slated for summer 2014