

2013

Radiophonic Workshop Staff



Desmond Briscoe (1958 - 1983)
Daphne Oram (1958 - 1959)
Dick Mills (1958-1993)
Maddalena Fagandini (1959 - 1966)
Brian Hodgson (1962 - 1972), Organiser (1977 - 1995)
Delia Derbyshire (1962 - 1973)
John Baker (1963 - 1974)
David Cain (1967 - 1973)
Malcolm Clarke (1969 - 1995)
Paddy Kingsland (1970 - 1981)
Richard Yeoman-Clark (1970 - 1978)
Roger Limb (1972 - 1995)
Glynis Jones (1973 - ?)
Peter Howell (1974 - 1997)
Elizabeth Parker (1978 - 1996)
Jonathan Gibbs (1983 - 1986)
Richard Attree (1987 - 1998)

Mark Ayres, now archivist of the BBC Radiophonic Workshop archive, and restoring some recordings.

Desmond Briscoe (1925 – 2006)



Harry Desmond Briscoe (21 June 1925 – 7 December 2006) was an English composer, sound engineer and studio manager. He was the co-founder and original manager of the pioneering BBC Radiophonic Workshop.

Born in Birkenhead, and a drama studio manager for the BBC in the 1950s, Briscoe began to develop an interest in the use of electronic and electroacoustic techniques as a source of material for productions. Along with Daphne Oram, he worked on the BBC Radio production of Samuel Beckett's *All That Fall* (Tx:13 January 1957), Giles Cooper's *The Disagreeable Oyster* (Tx:15 August 1957), and Frederick Bradnum's *Private Dreams and Public Nightmares* (Tx:7 October 1957). These works featured some of the earliest electronic effects used by the BBC and highlighted the need for a facility to provide such material. In 1958, Briscoe and Oram founded the BBC Radiophonic Workshop, with a remit to provide material for use in BBC radio and television programmes.

Some of his first work with the workshop involved providing sounds for the popular science-fiction serial *Quatermass and the Pit*. Under his direction the Workshop grew from being a small back room department to being one of the most acclaimed electronic studios in the world. He remained with the Workshop until 1983, although he stepped back from organisation duties in 1977. In 1983, with Roy Curtis-Bramwell, he wrote a retrospective of the Workshop entitled *The First 25 Years: The BBC Radiophonic Workshop*.

The 1969 BBC album "*Narrow Boats - Voices, Sounds and Songs of the Canals*" (REB 56M) was arranged and produced by Desmond Briscoe, and edited by Dick Mills of the Radiophonic Workshop, using recordings from the BBC Sound Archives.

Daphne Oram (1925-2003)



There would have been no Radiophonic Workshop without Daphne Oram, despite the fact that she worked there for less than a year. She was a remarkable woman and a true pioneer, whose achievements have never been fully recognised. As well as her work in electronic music she also composed many orchestral pieces, all of them as yet unperformed. This year though, Sonic Arts Network (www.sonicartsnetwork.org) are to mount an exhibition and concert celebrating her life and work.

Daphne left the BBC in 1959 and moved to Tower Folly, a Kent oast-house that she had already started converting into a home and studio. Here she produced music for film and theatre, using the techniques of musique concrète and primitive electronics. Over the next years she was to develop her own Oramic Synthesis, an extremely novel way of producing electronic sounds.

At that time, the most advanced electronic instrument in existence was the RCA Electronic Music Synthesizer Mark II. Built in 1957, it consisted of a huge array of steel racks and was bigger than the average living room. The machine (which still exists) was controlled, or 'programmed' by means of a roll of paper, punched with holes. It also offered an alternative: the parameters could instead be drawn onto transparent film that passed over a series of photo-cells. Daphne's Oramic system was similarly controlled by drawing, but for each parameter there was a separate roll of 35mm transparent film (known as 'clear leader' in the film industry). The 10 rolls of sprocketed film were mechanically linked, and passed over a horizontal 'drawing table' where the operator could make marks on the film to control pitch, envelope, intensity, and so on. Additional rolls of sprocketed recording tape or 'mag track' could be used to record the results; this section was referred to as the 'multitrack' recorder.

Daphne seems to have preferred to draw onto the film using a brush and special ink, but felt pens or sticky tape could be used. Her machine had several oscillators with variable waveforms, again controlled by photo-electric cells. This part of the machine was even more bizarre: a selection of glass

plates, each with a cut-out pattern, could be fixed to 'cathode ray scanners' to change the waveforms. It was effectively an oscilloscope in reverse! Reading contemporary accounts of how the Oramic system worked is confusing nowadays [see photo and diagrams, courtesy Sonic Arts Network, overleaf], as the words analogue and digital are used, but not in the sense that we know them. Continuously variable parameters were regarded as analogue, while those that could only be switched on or off were 'digital'. However, Daphne did eventually go digital in the modern sense.

I met Daphne Oram once, in 1989, and inquired whether she still used the Oramic system. Surprised and delighted that I'd even heard of it, she laughed "Oh no, not that old-fashioned thing!" She then explained that her old Oramic system had been swept away and replaced by something far more modern! She'd been working with 'some clever young chaps' who had helped her to build a new, computer- controlled synthesizer. "It's a huge improvement!" she said. "Now, when you draw the parameters, they're digitally scanned into a micro- processor" Yes, it still used rolls of 35mm film!

Delia Derbyshire (1937-2001)



Although her name will be forever associated with her 'realisation' of Ron Grainer's Doctor Who theme, Delia Derbyshire proved herself to be an extremely original and sensitive composer. She had a degree in Music and Maths from Cambridge that may have accounted for her unusual and analytical approach to sound: she is reputed to have always carried a book of logarithm tables that she used in her work!

During her time at the BBC, the Workshop composers were not always properly credited, so consequently there is no complete catalogue of her music. She also 'moonlighted', producing library tracks under various pseudonyms. Some of her music is available on CD, though, and she has a MySpace tribute page.

Blue Veils & Golden Sands and The Delian Mode, two pieces that she made in the Radiophonic Workshop, are particularly outstanding, featuring organic sounds that seem to 'shimmer' as their harmonics slowly change. She claimed to have made the sounds by analysing the partials of her favourite metal lampshade and replicating them with sine-wave test oscillators! Before Delia, electronic music had a reputation for sounding 'ugly'; she proved that it could also be extremely beautiful.

In 1973 she left the BBC and gave up composing, working for a short time with Brian Hodgson at Electrophon Studios. Then followed a series of curiously directionless moves: she went to Cumbria to work as a radio operator on the gas pipeline; was briefly married; she ran an art gallery, and made a disastrous attempt at teaching music in York. Eventually she settled with a partner who brought much-needed stability.

In the late '90s her interest in electronic music returned and she began working on an album, but sadly, it was never finished, as she died at the age of 64 after cancer treatment. In a 2001 obituary Brian Hodgson wrote of her: "One night many years ago, as we left Zinovieff's studio, she paused on Putney Bridge. 'What we are doing now is not important for itself,' she said, 'but one day someone might be interested enough to carry things forwards and create something wonderful on these foundations.'"

Dick Mills (1936 -)



Dick Mills (born 1936) is a British sound engineer, specialising in electronic sound effects which he produced at the BBC Radiophonic Workshop.

Mills was one of the original staff at the Radiophonic Workshop, joining in 1958 as a technical assistant. At first he was employed to handle the hardware of the Workshop but soon found himself recording effects. Some of his earliest, uncredited sound work was on the 1958 BBC science-fiction serial *Quatermass and the Pit*. Another of his prominent early recordings was the "Major Bloodnok's Stomach" sound effect, a significant part of the popular *The Goon Show*.

Although he recorded much in those early years, it is for his later work on Doctor Who for which he most remembered. In 1972, he took over from fellow BBC Radiophonic Workshop sound effects producer Brian Hodgson, who he had sometimes previously assisted, and continued providing "special sound" for every episode of the programme, with the exception of two four-part stories, until it ended in 1989. He also provided special sound for the Doctor Who spin-off K-9 and Company. As such, he has the distinction of having more on-screen credits than anyone else in the history of the series.

Owing to his technical know-how, he managed to bring to the position new methods of recording sound effects quicker than before. Besides his sound effects on Doctor Who, he also produced and compiled the first of the programme's music compilations Doctor Who - The Music and Doctor Who - The Music II. Over the years, many of his own sound effects have also appeared on various compilations.

Other sound effects he provided included material for the cult series Moonbase 3, produced in 1973 by then-Doctor Who producer Barry Letts, and also occasionally sounds for The Two Ronnies.

Mills' work was acknowledged in a Doctor Who documentary broadcast on The Lively Arts in 1977. The same year he appeared on the BBC's children's magazine programme Blue Peter to demonstrate how some of the Doctor Who effects were realised and how children could make their own sound effects at home. He also appeared in the 2004 BBC Radiophonic Workshop BBC Four documentary Alchemists of Sound.

He is also the author of many books on aquaria and tropical fish, as well as a former editor of The Aquarist and Pondkeeper magazine and a member of the Federation of British Aquatic Societies Council.

Brian Hodgson (1938 -)



Brian Hodgson (born 1938) is a British television composer and sound technician. Born in Liverpool in 1938, Hodgson joined the BBC Radiophonic Workshop in 1962 where he became the original sound effects creator for the

science fiction programme Doctor Who. His main claims to fame are the sound of the TARDIS (which he created by running the back door key to his mother's house along a bass string of a gutted piano, then electronically treating the recording) and the famous voices of the Daleks, which he created by distorting the actors' voices and feeding them through a device called a ring modulator. He continued to produce effects for the programme until 1972 when he left the Workshop, leaving Dick Mills to produce effects for the remainder of the show's run.

Earlier, in 1966, with fellow workshop musician Delia Derbyshire and EMS founder Peter Zinovieff, he helped set up Unit Delta Plus, an organisation which they intended to use to create and promote electronic music. Based in a studio in Zinovieff's townhouse in Putney, they exhibited their music at a few experimental and electronic music festivals, including The Million Volt Light and Sound Rave at which The Beatles' "Carnival of Light" had its only public playing. After a troubled performance at the Royal College of Art, in 1967, the unit disbanded.

Also in the late sixties, Hodgson and Derbyshire, along with fellow musician David Vorhaus, set up the Kaleidophon studio in Camden Town. The studio produced electronic music for various London theatres and, in 1968, the three used it to produce their first album as the band White Noise. Although later albums were essentially solo Vorhaus albums, the debut, *An Electric Storm* featured collaborations with Hodgson and Derbyshire and is now considered an important and influential album in the development of electronic music.

During this period the trio also contributed, using pseudonyms, to the Standard Music Library. Many of these recordings, including compositions by Hodgson using the name "Nikki St George", were later used on the seventies ITV science fiction rivals to Doctor Who; *The Tomorrow People* and *Timeslip*.

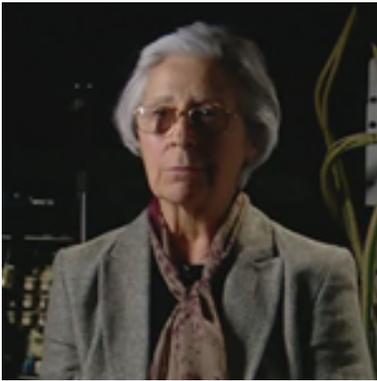
After leaving the Radiophonic Workshop, he set up the Electrophon studio with John Lewis, in Covent Garden, where he was later joined by Derbyshire. In 1973, he worked with the Doctor Who composer Dudley Simpson, under the name "Electrophon", on the album *In A Covent Garden* (sometimes credited to "The Unexploded Myth"). It featured Hodgson and Simpson's arrangements of several classical compositions for synthesisers and a 16 piece orchestra. Their versions of Tchaikovsky's *None But the Weary Heart* and Debussy's "La fille aux cheveux de lin" later appeared in the Doctor Who serial "The Robots of Death". The duo also released the albums *Zygoat*, in 1972, and *Further Thoughts On the Classics*, in 1974. In 1975, Hodgson collaborated with John Lewis, under the name "Wavemaker", on an album of experimental synthesiser work named *Where Are We Captain ?...* and later, in

1977, on *New Atlantis*. Besides records, Hodgson also spent his time at the studio writing scores for ballet and film including, with Derbyshire, the music for the 1973 horror film *The Legend of Hell House*.

In 1977, leaving the Electrophon studio in the hands of Lewis, he returned to the Radiophonic Workshop to replace Desmond Briscoe as its organiser. In 1983, he became the head of the department, remaining there until circumstances forced him to resign in 1995.

In 1983, he appeared at Doctor Who's 20th Anniversary celebrations at Longleat alongside many cast and crew from the series.

Maddalena Fagandini



Maddalena Fagandini is an electronic musician and television producer. She was employed by the BBC in the early 50s as part of their Italian Service before becoming part of the pioneering BBC Radiophonic Workshop in 1959.

Her work with the Radiophonic Workshop involved creating jingles and interval signals, using musique concrète techniques, for BBC radio and television. In 1962 one of her interval signals was re-worked by future Beatles producer George Martin and released, under the pseudonym "Ray Cathode", as "Time Beat". She left the Workshop in 1966, following the introduction of synthesisers, to become a television producer and director.

John Baker (1937–1997)



John Baker (1937–1997) was a musician and composer who worked in jazz

and electronic music. He was educated at the Royal Academy of Music where he studied piano and composition. In 1960 he joined the BBC as a sound mixer, before transferring, in 1963, to the BBC Radiophonic Workshop where he remained until 1974.

He was the most prolific of the early Workshop composers, developing a trademark style, creating music by manipulating tapes of everyday sounds such as blowing across the top of an empty bottle. A rare snippet of Baker at work was included in the 1968 documentary film *Music*, which more famously featured the Beatles working on *Hey Jude* in the studio. A jazz pianist, he brought a sense of rhythm to the Workshop which some of the other more mathematical composers lacked. His work included many signature tunes for BBC television and radio. He was also particularly interested in combining recorded electronic music with live musicians.

Baker's private life was affected by alcoholism, which led to his 'retirement' from the Radiophonic Workshop in 1974. He produced very little work thereafter.

Two compilations of his work entitled *The John Baker Tapes* were released in July 2008 by Trunk Records.

David Cain (1941 -)



David Cain (born 1941) was a composer and technician for the BBC Radiophonic Workshop. He was educated at Imperial College London, where he earned a degree in mathematics. In 1963, he joined the BBC as a studio manager, specialising in radio drama.

He transferred to the Radiophonic Workshop in 1967 where he composed various jingles and signature tunes as well as the complete incidental music for the BBC's radio productions of *The War of the Worlds* in 1967, and *The Hobbit* in 1968. He also produced the Workshop's 1973 adaptation of Isaac Asimov's *Foundation* series. He remained with the Radiophonic Workshop until 1973.

His 30-second composition "Crossbeat" was used as the original theme for the Australian Broadcasting Corporation's morning radio current affairs

program AM, which premiered in 1967.

Malcolm Clarke (1943–2003)



Malcolm Clarke (1943–2003) was a British composer, and a member of the BBC Radiophonic Workshop for 25 years from 1969 to 1994.

Clarke proved somewhat controversial when he joined the workshop, due to his views that Radiophonic music should be, in his words, "fine art," a philosophy that was not shared by other workshop members at the time. He composed the soundtrack for the 1972 Doctor Who episode The Sea Devils; only the second score that the workshop provided for the series. Clarke returned to the series ten years later for the serial Earthshock, and continued to work on the series on a regular basis until 1986. His most critically acclaimed work was probably 1976's radio piece August 4th 2026, based on a short story by Ray Bradbury.

Paddy Kingsland (1947 -)



Paddy Kingsland is a composer of electronic music best known for his incidental music for science fiction series on BBC radio and television whilst working at the BBC Radiophonic Workshop. He joined the BBC as a tape editor before moving on to become a studio manager for BBC Radio 1. In 1970 he joined the Radiophonic Workshop where he remained until 1981.

His initial work was mostly signature tunes for BBC radio and TV programmes before going on to record incidental music for programmes including *The Changes*, two versions of *The Hitchhiker's Guide to the Galaxy*: the second radio series and the TV adaptation, as well as several serials of *Doctor Who*. His work on the latter series included incidental music for a number of serials.

Other well known series which contained music composed by Paddy Kingsland are *Around the World in 80 Days* and *Pole to Pole*, both travel series by Michael Palin. Paddy Kingsland also composed music for many schools' television series including *Words and Pictures*, *Rat-a-tat-tat*, *Watch*, *Numbercrew*, *Storytime*, *English Express*, *Music Makers*, *Hotch Potch House* and the Look and Read stories *Joe and the Sheep Rustlers* and *The Boy from Space*.

Since leaving the BBC, he composed music for the KPM music library, television, commercials and corporate videos. He also owns his own studio, PK Studios. He composed the music for the CITV series *Blips* produced by Ragdoll Productions.

In 1973, *Fourth Dimension*, a compilation of his early signature tune work for the Radiophonic Workshop, was released and in 2002 his incidental scores for the *Doctor Who* serials *Meglos* and *Full Circle* featured as part of the *Doctor Who at the BBC Radiophonic Workshop* compilation series. Eight albums of his library music work have been issued by KPM.

Richard Yeoman-Clark



Richard Yeoman-Clark is a British composer and sound engineer who worked at the BBC Radiophonic Workshop from 1970 to 1978.

Richard joined BBC Radio direct from school as a technical operator at Broadcasting House moving to the Experimental Stereo Unit as the recording engineer a couple of years later. There he was involved with the integration of stereo operations from just test transmissions into the regular output of Radio 3 in the late 1960s. As stereo proliferated across BBC Radio he transferred to

the Music Department as a studio manager. There his technical expertise was in demand for the presentation of electronic music concerts working with contemporary composers such as Stockhausen, Berio, Boulez etc. This experience led him to join the BBC Radiophonic Workshop where he produced the special sound for the science fiction series Blake's Seven, amongst other programmes. Later he became the technical coordinator for the Workshop when electronic synthesizers started taking over from musique concrete.

He left the BBC in 1978 to become the chief technical engineer at Roundhouse Recording Studios and oversaw the installation and operation of one of the first 3M Digital Multitrack Mastering System in the UK. Leaving Roundhouse Studios in the early 1980s he joined FWO Bauch as a field service engineer, later becoming service manager for their Professional Broadcast products.

In the 1990s he set up and ran his own corporate video shooting and editing facility, also spending some time teaching at and providing technical support to the Media Department at West Herts College. He was recruited to the BFI National Archive in 2002 to supply audio expertise for access to the 35,000 Parliamentary Sound Recordings that the BFI had just taken over. Since then he has expanded the Audio department to cater for sound restoration of the optical soundtracks of films being restored by the BFI for new theatre and DVD release. This includes the special David Lean Centenary collection of ten of the best known Lean films rereleased in 2008.

Roger Limb



Roger Limb is a British composer, specialising in electronic music. He is best known for his work on the television series Doctor Who whilst at the BBC Radiophonic Workshop. He joined the BBC as a studio manager, before going on to become a television announcer. In 1972 he left this position to join the Radiophonic Workshop, where he remained until 1995. Although he had received formal music training, he also spent much time in pop and jazz bands, the influence of which can be heard in much of his music.

Limb is best known for his work on Doctor Who, for which, between 1981 and 1985, he composed the music for the serials The Keeper of Traken, Four to Doomsday, Black Orchid, Time-Flight, Arc of Infinity, Terminus, The Caves of Androzani and Revelation of the Daleks.

Limb also contributed music to the television series, The Justice Game, Aliens in the Family, The December Rose, Thinkabout, The Box of Delights, Kevin and Co, Martin Luther: Heretic, Storytime and the Look and Read serials Fair Ground!, Dark Towers, Sky Hunter, The King's Dragon, Cloud Burst, Geordie Racer, Through The Dragon's Eye and Earth Warp. For the latter programme he also composed the cult favourite Magic E song as well as the popular education songs Bill The Brickie, Dog Detective and The Punctuation Song.

He also composed and played Swirley, a cheerful piece of electronic music that was used as the theme to the BBC's Service Information news bulletins in the late 70's/early 80's.

His recording Passing Clouds was included on the 1976 LP Out Of This World, a compilation of sound effects. This track was used by Prince (musician) at the beginning of Eye No, the opening track of 1988's Lovesexy. Out Of This World was reissued in 1991 on CD as the Essential Science Fiction Sound Effects, Volume 2.

In 2005, Limb discussed his score for Revelation of the Daleks in Revelation Exhumed, a special feature on the DVD release of the story.

Glynis Jones



Glynis Jones was a composer, musician and member of the BBC Radiophonic Workshop. She joined the Workshop in 1973.

In 1976, she produced the album Out of This World, on which some of her material appears. Her compositions also feature on the album The Radiophonic Workshop.

Peter Howell (1948 -)



Peter Howell is a musician and composer. He is best-known for his work on Doctor Who as a member of the BBC Radiophonic Workshop.

Howell's musical career began in the late 1960s working with John Ferdinando in various psych folk bands including Agincourt and Ithaca. His psych folk work also included a musical version of Lewis Carroll's *Through the Looking-Glass* and a comedy musical entitled *Tomorrow Come Someday*. Howell and Ferdinando recorded five albums before Howell became a member of the Radiophonic Workshop.

In 1970 he became a studio manager at the BBC and in 1974 he joined the Radiophonic Workshop with which he would associated until 1997.

His work on Doctor Who began in 1975 when he provided incidental music for *Revenge of the Cybermen* and special sound for *Planet of Evil*. When John Nathan-Turner became producer of Doctor Who in 1980, he decided that the music needed to be updated and commissioned Howell to provide a new arrangement of the Doctor Who theme to accompany a new title sequence. Whereas the original arrangement of the theme (written by Ron Grainer) had been realised by Delia Derbyshire using *musique concrète* techniques, Howell arranged Grainer's theme on analogue synthesisers.

Howell's new arrangement first appeared in 1980 on *The Leisure Hive*, for which Howell had also recorded the incidental score, and was used throughout Tom Baker's final season on the programme as well as Peter Davison's tenure as the Doctor. For Colin Baker's first season in 1984, Howell altered the theme slightly in pitch and this version continued to be used until Baker's 1985 story, *Revelation of the Daleks*. Between 1980 and 1985 Howell also provided incidental music for ten stories of Doctor Who.

In 1986, Nathan-Turner commissioned a new theme arrangement by Dominic Glynn which ended Howell's association with Doctor Who on television, although he did provide music for the radio series *The Paradise of Death* and *The Ghosts of N-Space* as well as a new version of his theme for use in the *Big Finish* audio dramas.

Aside from Doctor Who, Howell's Radiophonic Workshop work includes an album of original recordings in 1978 entitled Through A Glass Darkly (credited to Peter Howell & The Radiophonic Workshop) and Greenwich Chorus, a piece which accompanied an episode of Jonathan Miller's popular The Body in Question which was controversial at the time for its use of the vocoder.

Howell composed the theme tunes to The Machine that Changed the World (1992), a 5-part television series on the history of the electronic digital computer, to Robert Hughes' 1979-80 8-part series on Modern art (The Shock of the New), and to the Badger Girl and Spywatch series of the long-running BBC schools' programme, Look and Read.

In recent years Howell's incidental music for the Doctor Who stories The Leisure Hive and Meglos has appeared on volumes 3 and 4 of the Doctor Who at the BBC Radiophonic Workshop compilation albums and much of his early folk material with John Ferdinando has also been re-released on CD.

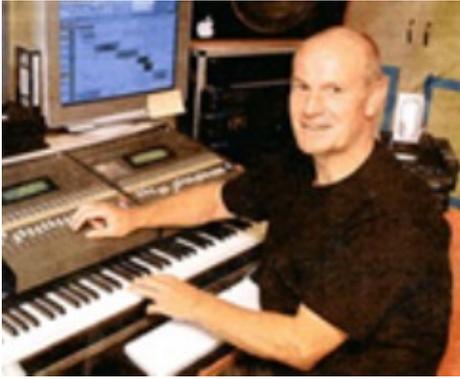
Jonathan Gibbs



Jonathan Gibbs is a British composer. Between 1983 and 1986 he worked at the BBC Radiophonic Workshop.

His work at the workshop included providing the scores for the Doctor Who stories The King's Demons, Warriors of the Deep, Vengeance on Varos and The Mark of the Rani.

Richard Attree



Richard Attree is a British TV and Film composer. He attended Highgate School, and then studied electronic music at the Royal College of Music following a degree in computer science. Whilst completing these studies he played as a keyboard player with various bands. He also worked as a freelance composer, producing music for dance and theatre productions at the London Contemporary Dance Theatre and Royal National Theatre.

In 1987, he became the last composer to be recruited at the BBC Radiophonic Workshop, where he remained until the department's closure. Following his departure from the BBC, he returned to freelance work.

Attree's credits include music for *Horizon*, *Wildlife on One*, *Timewatch*, *Hardware*, *Watt on Earth*, and the first three series of *The Demon Headmaster*. He has also produced music for various BBC idents and promos.