= Doctor Who missing episodes =

The Doctor Who missing episodes are the portions of the long @-@ running British science @-@ fiction television programme Doctor Who no longer held by the BBC . Between 1967 and 1978 the BBC routinely deleted archive programmes , for various practical reasons (lack of space , scarcity of materials , a lack of rebroadcast rights) . As a result of the cull , 97 of 253 episodes from the programme 's first six years are currently missing , primarily from seasons 3 through 5 , leaving 26 serials incomplete . Many more were considered lost until recovered from various sources , mostly overseas broadcasters .

Doctor Who is not unique in its losses, as many broadcasters regularly cleared their archives in this manner. Until the BBC changed its archiving policy in 1978, thousands of hours of programming, in all genres, were deleted. Other affected BBC series include Dad 's Army, Z @-@ Cars, The Wednesday Play, Steptoe and Son, and Not Only... But Also. ITV regional franchises also deleted many programmes, including early videotaped episodes of The Avengers.

Doctor Who is unusual, however, in that each of its 97 missing episodes survives in audio form, recorded off @-@ air by fans at home. Most episodes are also represented by stills or short video clips. Furthermore, after careful restoration, all 1970s episodes exist in full colour, which is not always the case for other series.

Efforts to locate missing episodes continue, both by the BBC and by fans of the series. Recovered episodes have been extensively restored for release on VHS and DVD; surviving soundtracks have been released on cassette and CD. Many missing episodes have had their visuals reconstructed, either through specially commissioned animation or use of surviving footage and photographs.

= = Background = =

Between approximately 1967 and 1978, large quantities of videotape and film stored in the BBC 's Engineering department and film libraries, respectively, were wiped or destroyed to make way for newer programmes. This happened for several reasons, primarily the belief that there was no practical value to its retention.

The actors ' union Equity had actively fought against the introduction of TV recording since the 1950s , when it first became a practical proposition . Prior to the development of workable television recording , if a broadcaster wished to repeat a programme (usually a one @-@ off play) , they had to re @-@ hire the actors to perform it again , live , for additional fees . Equity 's concern was that if broadcasters kept recordings of the original performances , they would be able to re @-@ broadcast them indefinitely , which would reduce the amount of new production and threaten the livelihoods of its members . Although Equity could not prevent recording altogether , it added standard clauses to its members ' contracts that stipulated that recordings could only be repeated a limited number of times within a specific timeframe , and deliberately set the fees for further use so high that broadcasters would consider it unjustifiable to spend so much money repeating an old programme rather than making a new one . Consequently , recordings whose repeat rights had expired were considered to be of no further domestic use to the broadcasters .

Most Doctor Who episodes were made on two @-@ inch videotape for initial broadcast and then telerecorded onto 16 mm film by BBC Enterprises for further commercial exploitation . Enterprises used 16 mm for overseas sales as it was considerably cheaper to buy and easier to transport than videotape . It also circumvented the problem of different countries 'incompatible video standards , as film was a universal medium whereas videotape was not . The BBC had no central archive at the time ; the Film Library kept programmes that had been made on film , while the Engineering Department was responsible for storing videotapes . BBC Enterprises only kept copies of programmes they deemed commercially exploitable . They had little dedicated storage space , and tended to place piles of film canisters wherever they could find space for them at their Villiers House property .

The Engineering Department had no mandate to archive the programme videotapes they held, although typically they would not be wiped or junked until the relevant production department or

BBC Enterprises indicated that they had no further use for the tapes . The first Doctor Who master videotapes to be junked were those for the serial The Highlanders , which were erased on 9 March 1967 , a mere two months after Episode 4 's original transmission . Further erasing and junking of Doctor Who master videotapes by the Engineering Department continued into the 1970s . Eventually , every master videotape of the programme 's first 253 episodes (1963 ? 69) was destroyed or wiped . The final 1960s master tapes to be erased were those for the 1968 serial Fury from the Deep , in late 1974 .

Despite the destruction of these masters , BBC Enterprises held a near @-@ complete archive of the series in the form of their 16 mm film telerecording copies until approximately 1972 . From around 1972 to 1978 , BBC Enterprises also disposed of much of their older material , including many episodes of Doctor Who .

= = = The purge of the archives = = =

Enterprises 'episodes were usually junked because their rights agreements with the actors and writers to sell the programmes abroad had expired. With many broadcasters around the world now switching to colour transmission, it was not deemed worthwhile extending agreements to sell the older black @-@ and @-@ white material.

The BBC Film Library , meanwhile , had no responsibility for storing programmes that had not originated on film , and there were conflicting views between the Film Library and BBC Enterprises over which party held the responsibility for archiving programmes . As each body believed it the other 's responsibility to archive the material , each thought nothing of destroying its own copies as necessary . This lack of communication contributed to the erasure of much of the Corporation 's film archive of older black @-@ and @-@ white programming . While thousands of other programmes have been destroyed in this way around the world , the missing Doctor Who episodes are probably the best @-@ known example of how the lack of a consistent programme archiving policy risks permanent loss .

Following the purges and subsequent recoveries , gaps in the Doctor Who archive are spread unevenly through its first eleven seasons . Major losses mostly affect First and Second Doctor serials ; although two stories are missing just one episode each (The Tenth Planet , Episode 4 and The Web of Fear Episode 3) , other stories are lost altogether . Patrick Troughton 's era as the Second Doctor is particularly affected ; of the fourteen stories comprising his first two seasons , only The Tomb of the Cybermen and The Enemy of the World are complete , and these only exist due to telerecordings later returned from Hong Kong and Nigeria , respectively .

All stories starring Jon Pertwee as the Third Doctor are complete, though many episodes no longer survive on their original videotapes and have needed to be restored to colour using other methods. In order of original transmissions, the very last Doctor Who master videotapes to be wiped were the first episodes of the 1974 serials Invasion of the Dinosaurs and Death to the Daleks. The latter was recovered from overseas, initially from a tape in the NTSC format, and later in the original PAL format on a tape returned from Dubai.

For four years, Episode 1 of Invasion of the Dinosaurs was the only Pertwee episode to be entirely missing from the archives, until a black @-@ and @-@ white 16 mm copy was returned to the Corporation in June 1983. The story was released on DVD with a partially recolourised version of Episode 1, alongside a higher @-@ quality monochrome transfer of the episode, in The UNIT Files box set. With one exception, archival holdings from Death to the Daleks Episode 2 onwards are complete on the original broadcast videotapes.

Unrelated to the regular archive purges, the final shot of The Deadly Assassin Episode 3 (1976) has been excised from the master copy. The shot was removed after its initial UK transmission, following complaints from Mary Whitehouse of the National Viewers ' and Listeners ' Association. Subsequent repeats and commercial releases have restored the shot from off @-@ air video copies

Internally, the wiping policy officially came to an end in 1978, when the means to further exploit programmes by taking advantage of the new market for home videocassette recordings started to become apparent. The prevailing view had also begun to shift toward the attitude that archive programmes should, in any case, be preserved for posterity and historical and cultural reasons.

The BBC Film Library was turned into a combined Film & Videotape Library for the preservation of both media . The Film Library at the time held only 47 episodes of 1960s Doctor Who; they had once held 53, but six episodes had either been junked or gone missing. Junkings at BBC Enterprises, however, continued until the intervention of lan Levine, a record producer and fan of the programme. Following the transfer of episodes still held by Enterprises, there were 152 episodes of Doctor Who no longer held by the BBC, although subsequent efforts have reduced that number to 97.

Arguably the most sought @-@ after lost episode is Episode 4 of the final William Hartnell serial, The Tenth Planet, which ends with the First Doctor 's regeneration into the Second. The only portion of the episode still in existence, bar a few poor @-@ quality silent 8mm clips, is the final 27 seconds, comprising the regeneration itself and a few seconds leading up to it. The sequence had been shown in a 1973 episode of Blue Peter, and was retained in that show 's archive.

Even after the end of the purge , other archive issues persist . Serials from Seasons 22 ? 26 were shown in Germany , with soundtracks dubbed into German language ; some of these episodes no longer exist in German television archives .

= = = Continuing search = = =

On 20 April 2006 it was announced on Blue Peter that a life @-@ sized Dalek would be given to anyone who found and returned one of the missing episodes.

In January 2007 ITV began a campaign called "Raiders of the Lost Archive" and although the campaign was run by ITV, they were also looking to find Doctor Who episodes and other BBC shows. One episode of the Raiders of the Lost Archive show aired in January 2007 and a further two episodes in July 2009.

In December 2012 the Radio Times listings magazine announced it was launching the hunt for more Doctor Who episodes, to tie @-@ in with the show 's 50th anniversary. The Radio Times issued its own list of missing episodes. The magazine has also set up an email address specifically for Doctor Who missing episodes that the public can use to contact it if they have any information.

= = = Compared with other series = = =

Compared with other BBC series broadcast in the 1960s , Doctor Who is well @-@ represented in surviving episodes . Of the 253 episodes broadcast during the 1960s , 156 still exist ? mainly due to copies produced for overseas sales . For example , Seasons 1 and 2 , the most widely @-@ sold abroad of the 1960s era , are missing only 9 and 2 episodes , respectively . By contrast , the less well @-@ sold Seasons 4 and 5 respectively have no , and only 2 , complete serials (The Tomb of the Cybermen and The Enemy of the World) . Doctor Who 's popularity and high profile have also helped to ensure the return of episodes which , for other less well @-@ remembered programmes , might never have occurred .

Of all ongoing BBC series from the 1960s, only Steptoe and Son has a better survival record, with all episodes existing in some form. Other long @-@ running programmes have few or no surviving episodes; for example, the soap operas Compact (6 out of 43 episodes surviving), The Newcomers (2 out of 375), and United! (0 out of 147).

Doctor Who is also comparatively rare amongst contemporaries in that all of its 1970s episodes exist as masters or telerecordings , while other series such as Z @-@ Cars and Dixon of Dock Green are missing episodes from as late as 1975 .

= = List of missing episodes = =

As of October 2013, 97 episodes are unaccounted for . The missing episodes span 26 serials, including 10 full serials. Most of the gaps are from seasons 3, 4, and 5, which currently lack a total of 79 episodes across 21 (out of 26) serials. By contrast, seasons 1, 2, and 6 are missing a total of just 18 episodes, across 5 (out of 25) serials. Of the missing stories, all but three? Marco Polo, "Mission to the Unknown", and The Massacre of St Bartholomew's Eve? have surviving clips. All episodes also have full surviving audio tracks.

While the Patrick Troughton era is missing more episodes (53 as compared to 44 for William Hartnell), there are more Hartnell stories completely missing (6 as compared to 4). Serials highlighted in red are missing all episodes. Serials highlighted in yellow are missing more than half of their episodes. All others listed are missing at least one, but no more than half, of their episodes

= = = Orphaned episodes = = =

Serials that are over 50 % complete (e.g., The Reign of Terror, The Tenth Planet) are issued as standalone releases, with the missing episodes bridged using animation, visual reconstructions, or narration to the camera. Surviving episodes which form 50 % or less of a complete story? referred to as "orphaned "episodes? have been released by the BBC in compilations (e.g., Lost in Time), or as extras on releases of complete serials. A few four @-@ episode serials of which 50 % remain (e.g., The Underwater Menace, The Moonbase) have also been issued as standalone releases.

= = = Unaired missing episodes = = =

In addition to the official list of missing episodes , also missing is the original Episode 1 of The Daleks . At some point after the recording , it was discovered that a technical problem had caused backstage voices to be heard on the resulting videotape ; in early December 1963 , the episode was remounted with a different costume for Susan . The only surviving portion is the reprise at the beginning of Episode 2 .

Planet of Giants is another odd example , having originally been recorded as four episodes , with the first three directed by Mervyn Pinfield , and the last one by Douglas Camfield . To create a faster @-@ paced climax , Episodes 3 & 4 were combined and reduced to form a single episode , which was credited to Camfield only . This decision , made by then @-@ Head of Drama Sydney Newman , resulted in a one @-@ episode gap at the end of the second production block (leading to the creation of " Mission to the Unknown ") ; the unused portions of Episodes 3 and 4 are believed to have been destroyed .

The serial 's 2012 DVD release features a reconstruction of the original episodes , directed by lan Levine . The production rebuilds the deleted scenes using CGI , footage from elsewhere in the serial , and re @-@ recorded dialogue from Carole Ann Ford , William Russell , and actors impersonating the rest of the cast .

= = Recovery = =

When the BBC 's complete holdings (both the BBC Film & Videotape Library and BBC Enterprises) were first audited in 1978, the following 50 episodes were absent from their collective archives, but have subsequently been returned to the Corporation through various methods. The nine stories highlighted have all episodes existing as a result. Except where indicated, all episodes were returned as 16 mm telerecording negatives or prints.

 When the BBC audited its Film Library in 1977, 47 episodes were found to exist. These Film Library copies were a random sampling of viewing prints for various episodes, along with seven of the nine episodes that had originally been telerecorded onto film for editing and / or transmission, rather than recorded to videotape. These film @-@ originated masters were stored in the Film Library, rather than in the Engineering Department with the videotapes. The presence of the viewing prints is less easily explained.

The Film Library 's remit covers material originated on film , not on videotape? yet it lacked two of the film @-@ originated episodes of Doctor Who , while it held such unexplained material as 16 mm copies of The Tenth Planet Episodes 1? 3 , presumably viewing prints which were mistakenly returned to them at some point instead of BBC Enterprises . Most surprisingly of all , they also retained a 16 mm telerecording copy of the original untransmitted pilot , presumably a viewing print made in 1963 and subsequently lodged at the Library .

The Film Library also held high @-@ quality original film sequences made for insertion into videotaped episodes . Some of these , such as those from Episodes 1 ? 2 of The Daleks ' Master Plan , survive to this day . Other junked sequences were mistakenly entered into a film library computer system , leading to an impression that they had existed for years afterward , and inaccurate speculation that the BBC was still destroying clips well into the early 1980s .

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= = = = Engineering Department = = = = =
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Following the establishment of the Film and Videotape Library , an audit of the Engineering Department found 60 of the 128 Third Doctor episodes starring Jon Pertwee , which in addition to the Film Library 's copies of the film @-@ originated Spearhead from Space , brought that Doctor 's episode count up to 64 out of 128 .

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= = = = = Villiers House = = = = =
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In 1978, Ian Levine located another 65 episodes from the show 's first six seasons (plus fourteen previously existing episodes), at the BBC Enterprises film vault at Villiers House in London. The episodes comprise 17 full serials, mostly from seasons 1 and 2. According to Levine, many of the prints were flagged to be junked that very day.

Levine alerted the new Film and Videotape Library 's archive selector , Sue Malden , who paid her own visit to Villiers House and found every remaining Jon Pertwee episode (albeit as a 16 mm black @-@ and @-@ white telerecording) , except for two from his final season : Death to the Daleks and Invasion of the Dinosaurs , Episodes 1 .

In August 1988, ten years after Levine 's and Malden 's visits, Episodes 1 and 4 ? 6 of the six @-@ part story The Ice Warriors, were discovered in a cupboard at Villiers House when the Corporation was in the process of moving out of the building.

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= = = = National Film and Television Archive = = = =
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Shortly after the junking process was halted and the BBC established its Film and Videotape Library for the purpose of storage and preservation , archive selector Sue Malden began to audit what material remained in the BBC 's stores . When investigations revealed large gaps in the collection , Malden turned her inquiries to the National Film and Television Archive ? which promptly returned three full Second Doctor serials ? The Dominators , The Krotons , and The War Games , adding seven more episodes and completing two of those serials . These all were standard 16 mm film telerecordings with the exception of The Dominators Episode 3 , which was a 35 mm print .

Episodes 4 and 5 of The Dominators originated from a foreign broadcaster, and had been slightly edited; the missing footage was restored later, through a mix of censor clips and more complete prints held by private collectors.

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= = = = Overseas broadcasters that purchased missing episodes = = = =
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An appeal to broadcasters in other countries who had shown the programme (notably Australia and African nations such as Nigeria) produced "lost" episodes from the archives of their television companies. The Tomb of the Cybermen, for example, was recovered in this manner from Rediffusion Television in Hong Kong in 1992. Of the 50 episodes recovered since the original BBC audit of its holdings, 25 have been returned from overseas broadcasters:

Note that on occasion some broadcasters purchased Doctor Who telerecordings (usually 16 mm) but subsequently cancelled the order .

Nigerian television has been a particularly fruitful source for episode recovery; a total of 15 out of the 50 episodes recovered since 1978 have been reclaimed from Nigeria, leading to the completion of three full serials (The Time Meddler, The War Machines, and The Enemy of the World).

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= = = = Private collectors = = = =
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Several episodes have been returned by private film collectors, who at some point acquired 16 mm film prints intended for sale to foreign broadcasters.

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= = = = The Abominable Snowmen and Invasion of the Dinosaurs = = = =
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Roger Stevens was working for the BBC as a film editor in the 1980s , and one morning , as he was travelling to work by train , he bumped into a BBC co @-@ worker and they began to talk about Doctor Who episodes . The BBC projectionist mentioned that he had nine episodes of Doctor Who that Stevens could buy for £ 25 . In the summer of 1981 , Stevens bought The Space Museum episode one , The Abominable Snowmen episode two , The Moonbase episode four , Invasion of the Dinosaurs episode one , and three episodes of Carnival of Monsters . Stevens then contacted lan Levine to find out what was missing from the BBC archive ; Levine confirmed that The Abominable Snowmen episode two and Invasion of the Dinosaurs episode one were currently missing .

Stevens gave these prints to Levine , who returned The Abominable Snowmen to the BBC in February 1982 , although he held back Invasion of the Dinosaurs from the BBC for a while . This was later returned to the BBC by Levine in June 1983 , who then made a copy and returned the original to Levine .

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= = = = The Reign of Terror = = = =
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The Reign of Terror was recovered by Bruce Campbell when he attended a film fair in the 1980s and began chatting to a stall holder who informed him that one of his regular customers had in their possession The Reign of Terror episode six . Campbell got in contact with the customer , bought the missing episode for \pounds 50 , and then , in May 1982 , donated it to the BBC through lan Levine .

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= = = = The Wheel in Space = = = =
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The Doctor Who Magazine (April 1984, issue 87) ran a story about a rumour of a missing Doctor Who episode that was in Portsmouth; this led to The Wheel in Space episode three being returned to the BBC in April 1984 by David Stead to allow for a copy to be made. The original was returned to Stead and released on VHS in 1992 with poor results. Later the print was borrowed again and a new copy made using D3 videotape. Stead recollects that he purchased the episode for £ 15.

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= = = = The Faceless Ones and The Evil of the Daleks = = = = =
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In 1982, novice film collector Gordon Hendry purchased 16 mm copies of The Faceless Ones, episode 3, and The Evil of the Daleks, episode 2, from a film fair in Buckingham. At that time

Hendry was unaware of the episodes 'value (only one episode of The Faceless Ones and none of The Evil of the Daleks were known to exist).

In 1985, a cinema owner in Brighton persuaded Hendry to lend him the films, so as to screen the episodes for profit during Panopticon VI. Saied Marham, an associate of Hendry 's, visited Panopticon to generate interest in the showing, only to be dismissed as a hoaxster.

After the event, Paul Vanezis spent 15 months attempting to retrieve the episodes from Marham. Eventually in 1987, a charity fundraising convention called Tellycon aired The Faceless Ones, episode 3, in tribute to the recently deceased Patrick Troughton.

In the following weeks, Vanezis and Ian Levine negotiated the return of both episodes to the BBC archive.

Although the New Zealand Broadcasting Corporation received copies of The Crusade, it never broadcast the story due to a prohibitive rating from the censor board. After rejecting the serial, NZBC never returned its film prints to the BBC or actively destroyed them.

In 1998 collector Bruce Grenville purchased a 16 mm copy of The Crusade episode 1 from a stall at a New Zealand film fair, containing various material previously rescued from a rubbish tip. Through a series of chance meetings, the episode eventually was returned to the BBC in January 1999.

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= = = = Galaxy 4 and The Underwater Menace = = = = =
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In 1975, the Australian Broadcasting Corporation returned all eight broadcast prints of Galaxy 4 and The Underwater Menace to the BBC to be disposed of . In the mid @-@ 1980s, former ITV engineer Terry Burnett purchased episode 3 of Galaxy 4 and episode 2 of The Underwater Menace from another collector, unaware of their value (the only extant episode of the former serial, and one of just two from the latter). In December 2011, after a chance encounter with Doctor Who Restoration Team member Ralph Montagu, Burnett returned the episodes to the BBC.

The Daleks 'Master Plan never was sold abroad; only Australia requested viewing copies (excepting Episode 7, "The Feast of Steven"), and eventually declined to purchase the serial. The fate of these viewing prints is currently unknown.

Nevertheless , three out of the serial 's twelve episodes have been recovered . 16 mm copies of episodes 5 and 10 were returned in the early 1980s , under unclear circumstances (with rumour claiming they were found in the basement of a Mormon church) . Episode 2 was returned in 2004 by former BBC engineer Francis Watson . He had come across the film in the 1970s , while clearing a projector testing room at the BBC 's Ealing Studios . Instead of disposing of the film as instructed , he brought it home ? eventually to return it to the Corporation when he realised the value of the material .

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= = = = The Enemy of the World and The Web of Fear = = = =
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Following months of rumours , in October 2013 a BBC press conference announced the return of a total of 11 episodes (two previously existing) from a television relay station in the city of Jos , Nigeria . In the course of his work abroad , Philip Morris of Television International Enterprises Archives had discovered episodes 1 @-@ 6 of The Enemy of the World and episodes 1 @,@ 2 @,@ 4 @,@ 5 @,@ 6 of The Web of Fear . The return of the nine missing episodes was the single largest recovery of Doctor Who episodes in 25 years , resulting in only the second full serial from

Troughton 's first two seasons to be restored to the BBC.

Both serials were promptly released on iTunes , with DVD releases following over the next few months . Both on the iTunes and the DVD release , episode 3 of The Web of Fear was represented by a tele @-@ snap reconstruction , edited by John Kelly . Later , in September 2015 , Morris revealed that episode 3 had been part of the same find , but that by the end of protracted negotiations for the return of the film cans , the episode had disappeared from the cache ; he presumes it was sold to a private collector .

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= = = Incomplete recovered episodes = = =
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Of the 50 recovered episodes, several are missing short segments? due either to overseas censorship or to damage to the surviving film print. The following table shows all affected episodes, and the total duration of missing material.

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= = = Clips = = =
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Of the 97 missing episodes , 36 are represented by short " orphan " clips , recovered from various sources . These clips span 17 of the 26 serials affected by missing episodes , 7 of which are otherwise completely missing . The only serials lacking any footage whatsoever are Marco Polo , " Mission to the Unknown " , and The Massacre of St Bartholomew 's Eve . The following table shows all recovered excerpts , together with which pertinent episodes , format of the clips , and the source of recovery . Otherwise missing serials are highlighted in red .

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= = = = Excised clips = = = =
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Some overseas viewing prints were physically edited for content by local censor boards , prior to transmission . Hence , episodes recovered from these sources (Australia , New Zealand) are missing these segments .

Later discoveries turned up a large number of excised clips , held by interested parties as proof of the edits . In October 1996 , Australian Doctor Who fans Damian Shanahan and Ellen Parry discovered a collection in the records of the National Archives of Australia , provided as evidence by the Commonwealth Film Censorship Board (now the Classification Board) . These clips include The Smugglers , episodes 1 , 3 @-@ 4 ; The Highlanders , episode 1 ; The Underwater Menace , episodes 2 , 4 ; The Macra Terror , episode 3 ; Fury From The Deep , episodes 2 , 4 @-@ 5 ; and The Wheel In Space , episode 4 .

The clips from The Underwater Menace, episode 2 were later found to precisely match the edits to the print discovered in late 2011, suggesting that the recovered episode was exactly the same print that had been censored decades before.

In an interview for the fanzine The Disused Yeti , Shanahan stated that although he and Parry had found paper records relating to the censoring of early to mid William Hartnell stories , the excised portions for all stories from An Unearthly Child to The Gunfighters had been destroyed some time prior to Shanahan and Parry 's investigation .

In 2002, New Zealand fan Graham Howard uncovered excised clips from The Web of Fear and The Wheel in Space, episode 5.

A fan in Australia has returned small excerpts of off @-@ screen footage, recorded from repeat showings using an 8mm cine film camera. The missing episodes covered include The Reign of Terror, episode 4; Galaxy 4, episode 1; The Myth Makers, episodes 1 @-@ 2, 4; The Savages, episodes 3 @-@ 4; The Tenth Planet, episode 4; The Power Of The Daleks, episodes 1 @-@ 2; The Macra Terror, episode 3; and The Faceless Ones, episode 2.

Due to the show 's habit of repeating cliffhanger footage, sometimes missing episode material can be found in surviving neighbor episodes. Episode 2 of The Daleks uses a prefilmed reprise from the original recording of Episode 1, which later had to be remounted; the original version of Episode 1 is presumed to have been destroyed.

A brief clip from Episode 4 of The Crusade exists at the very start of The Space Museum . Episode 1 of the latter serial begins with the characters in period costume , briefly frozen in place . An off @-@ camera cough heard on both soundtracks shows that the clip was a filmed insert from the previous (and currently missing) episode .

In its lead @-@ in to an upcoming repeat, The Wheel in Space episode 6 contains a short three @-@ frame clip from The Evil of the Daleks episode 1, alongside a reprise from the existing episode 2 of that serial.

Other episodes contain straight excerpts from earlier serials , such as episode 10 of The War Games , which employs model shots from the first episodes of Fury from the Deep and The Wheel in Space .

= = = = From other television programmes = = = =

Clips from some missing episodes also survive due to their use in other surviving programmes . For example , excerpts from Episode 4 of The Daleks ' Master Plan were used in a 1973 edition of Blue Peter , and scenes from The Power of the Daleks in an Australian programme called Perspective : C for Computer .

In 2005, two further short clips from The Power of the Daleks? along with a higher @-@ quality version of one of the extant scenes? were discovered in a 1966 episode of the BBC science series Tomorrow 's World . The clips , lasting less than 10 seconds each and on film (as opposed to film recordings) , came to light when the Tomorrow 's World segment was broadcast as part of the 11 September 2005 edition of the clip @-@ based nostalgia show Sunday Past Times on BBC Two . After being alerted to the footage , Paul Vanezis of the Doctor Who Restoration Team tracked down the uncut version of the clip .

The 1977 documentary Whose Doctor Who indirectly led to a lengthy excerpt from "Four Hundred Dawns," episode 1 of the 1965 serial Galaxy 4. The film 's producers used an excerpt from a viewing print of the episode, which they further cut down in the editing. Rather than discard the unused portion, the film 's advisor Jan Vincent @-@ Rudzki asked to keep the film trims. Later in the 1990s, Vincent @-@ Rudzki returned the clip to the archives. At a total of 5m 53s, this clip is the longest piece of surviving footage from an otherwise missing episode, accounting for a quarter of the total running time.

Apart from actual episode footage, rare behind @-@ the @-@ scenes material also was discovered for The Smugglers, The Evil of the Daleks, The Abominable Snowmen, and Fury from the Deep. Also from the latter serial exists some raw footage from the filming of Episode 6, featuring some alternate camera angles from what was eventually broadcast.

= = = Audio soundtracks = = =

Though numerous episodes are still missing, full @-@ length audio soundtracks for all missing episodes are held by the BBC. These come from off @-@ air recordings made by fans, often made by use of a microphone attached to a tape recorder placed close to the television set. While the quality of these off @-@ air recordings varies greatly, multiple fan recordings exist for every episode.

Starting in the early 1990s, the BBC began to release existing audio of serials with missing episodes, with linking narration provided by former series actors such as Jon Pertwee, Tom Baker, Colin Baker, Peter Purves, and Frazer Hines. By December 2005, the soundtracks for all of the missing episodes had been released, albeit with copyright @-@ uncleared music replacements

where necessary (e.g., a Beatles song in Evil of the Daleks), slightly rejigged sequences for reasons of clarity, and with overdubbed narration.

Between 2010 ? 12 BBC Audiobooks collected the individual narrated soundtracks in a series of five CD box sets , entitled " Doctor Who : The Lost TV Episodes . " For the sets , some serials (such as The Evil of the Daleks) were re @-@ released with improved audio restoration , changed linking narration , and in some instances with scenes unavailable in the first release . In addition to the soundtracks , the sets include special features such as the Archive on 4 documentary , " Doctor Who - The Lost Episodes " and high @-@ quality scans of the original camera scripts in PDF format

For more information, see List of Doctor Who audio releases.

= = Restoration = =

For the first eleven seasons of Doctor Who , often the surviving materials are in a very different format or condition from their original broadcast masters . Surviving 1960s material is recorded on film stock of varying quality , while early 1970s material is available in a patchwork of professional and consumer formats . To present the material in a form approximating its original broadcast masters requires extensive technical work , and a certain amount of invention .

= = = Motion restoration = = =

In its original form , the videotape used to record Doctor Who captures images at 50 interlaced fields per second , resulting in a smooth , " live " feel to motion . To transfer the episodes to film , the film camera is timed to combine two video fields in each frame , converting 50 fields to 25 frames per second ; on playback , the omission of in @-@ between images results in a choppier " film " style motion . To recreate the original " live " video feel , early telerecorded episodes are processed through a digital tool known as VidFIRE , which approximates the missing motion between film frames .

In addition to the telerecorded material , some early 1970s material survives only , or in color only , on NTSC videotapes produced for North American transmission (e.g. , TV Ontario and CKVU in Vancouver) . NTSC runs at a different framerate than PAL video , and has a different number of scanlines . The conversion process used in the 1970s was primitive by modern standards , resulting in a noticeable amount of picture and motion loss . Converting the NTSC tapes back to PAL introduces more artifacts , creating a blurry picture and juddering motion . To rectify the problem , in 2005 a new Reverse Standards Conversion process , which attempts to unpick the original video conversion , was introduced for the DVD release of The Claws of Axos .

= = = Colour restoration = = =

Several early 1970s colour serials, starring Jon Pertwee, were retained only as black @-@ and @-@ white film prints. In addition to the motion issue shared by all telerecorded episodes, for years the loss of colour presented a major challenge for restoration.

Some of the telerecorded Pertwee episodes also survive on NTSC colour videotapes , recorded over @-@ air on consumer hardware . In the early 1990s , an early form of the Doctor Who Restoration Team attempted to pair the low @-@ resolution colour signal from these sources with the high @-@ resolution black @-@ and @-@ white signal from the black @-@ and @-@ white film recordings . In this way , several Jon Pertwee stories were returned to a rough form of colour : Doctor Who and the Silurians , Terror of the Autons , and The Dæmons . Off @-@ air NTSC colour tapes were also recovered for all of The Ambassadors of Death , but were considered of too poor a quality to permit more than a partial restoration .

= = = = Colour recovery = = = =

In 2007 , BBC archive specialist James Insell established the Colour Recovery Working Group , an online project to find new ways of restoring black @-@ and @-@ white telerecordings to colour . In 2008 , Reverse Standards Conversion inventor Richard Russell , developed a technique involving the use of chroma dots embedded in the black @-@ and @-@ white signal to recreate the missing color . The technique was pioneered , enhanced by traditional computer colourisation , on episode 3 of Planet of the Daleks .

Subsequently, chroma dots were used to restore the colour to Episodes 2? 4, 6, and 7 of The Ambassadors of Death and episodes 2? 5 of The Mind of Evil. Episode 1 of Invasion of the Dinosaurs presented a unique challenge, in that the chroma dots only contained red and green colour information, requiring that blue be added manually. Given the rough result, the DVD includes both the reconstructed colour and the black @-@ and @-@ white version.

Unfortunately , episode 1 of The Mind of Evil contains no colour information . In principle , BBC engineers were supposed to filter out the chroma dots upon telerecording , to create a cleaner picture . In most cases they failed to do so , allowing the colour recovery process to work . For this one episode , the filter had been correctly applied ? so there was no colour to recover . To complete the serial for DVD , the episode was manually colourised by Stuart Humphryes and Peter Crocker ? thereby returning the final Pertwee episode to its original colour presentation .

= = = Reconstruction = = =

In addition to short video clips and audio soundtracks , for many episodes off @-@ screen photographs ? known as " tele @-@ snaps " ? exist , taken by photographer John Cura . From the 1940s to the 1960s , Cura was hired by various interested parties to document the transmission of many popular TV programmes , including Doctor Who . Typically the photographs were used for promotion , or as keepsakes for cast and crew in the days before home video recorders . In many cases , they form the only remaining visual record of missing television programmes .

Since the late 1990s , fan groups such as Loose Cannon Productions have reconstructed the missing episodes , using original camera scripts to match Cura 's tele @-@ snaps and other visual material to the surviving audio tracks . Although technically infringing copyright , these " recons " generally have been tolerated by the BBC , provided they are not sold for profit .

"Official " high @-@ quality recons have also been used on commercial releases, including cut @-@ down reconstructions? The Ice Warriors VHS (a 12 @-@ minute " highlights " reconstruction bridging the missing Episodes 2 and 3); and Marco Polo (a 30 @-@ minute reconstruction on The Beginning DVD box set)? and full @-@ length presentations, including The Tenth Planet VHS (containing a full reconstruction of the missing Episode 4); Galaxy 4 (a reconstruction of the three missing episodes to accompany the recently recovered episode 3, " Air Lock, " presented on The Aztecs Special Edition DVD); The Web of Fear digital and DVD releases (containing a reconstruction of Episode 3, alongside the rest of the newly rediscovered serial).

In June 2005, BBC Audio released a reconstruction of The Power of the Daleks as part of their "MP3 CD" line. When played on a home PC, the disc contained the same audio content as the previous audio CD release, synchronized with a Macromedia Flash slideshow of tele @-@ snaps and publicity photographs. For technical reasons, the surviving clips could not be included. Due to poor sales, future planned releases in this format were abandoned.

= = = = Animated episodes = = = =

In several cases, to "complete "serials with only one or two missing episodes, producers of the Doctor Who DVD range have commissioned original black @-@ and @-@ white animation, synced to the programme 's original audio tracks.

The first such effort, Cosgrove Hall 's animation of The Invasion episodes 1 and 4, was released to DVD alongside the surviving episodes in November 2006. The animation had been paid for by an earlier surplus in the Doctor Who website budget, allowing it to be used in the DVD release as a test for the concept, at no extra cost. Despite the DVD 's success, the sales were not high enough

to offset the animation cost for any future collaboration . Eventually other animation studios were commissioned to continue the reconstruction . In June 2011 , 2 Entertain announced that the missing episodes 4 and 5 of The Reign of Terror would be animated by Planet 55 Studios , using the "Thetamation "process . The serial was released on DVD in January 2013 . Planet 55 would later go on to animate Episode 4 of The Tenth Planet (November 2013), and episodes 1 and 3 of The Moonbase (January 2014).

In August 2013, BBC Worldwide announced that episodes 2 and 3 of The Ice Warriors would be animated by Qurios Entertainment for a DVD release later that month.

In December 2013, 2 Entertain commissioning editor Dan Hall mentioned that Planet 55 had again been commissioned to complete The Underwater Menace, for what he hoped would be an early 2014 release. However, in September 2015 Doctor Who Magazine confirmed that the much @-@ delayed DVD, now scheduled for October 26, was instead to contain tele @-@ snap reconstructions of the missing episodes 1 and 4.

= = = = Unreleased and unofficial animations = = = =

In 2008 , after future collaboration with Cosgrove Hall had been rejected due to expense , 2 Entertain was approached by David Busch of US animation studio Titmouse , Inc . , who offered to do the work more cheaply as a result of the favourable exchange rate between the UK and the US , and put together a test trailer of scenes animated from various missing serials , including The Power of the Daleks , The Moonbase , The Macra Terror , The Web of Fear , and Fury from the Deep . While 2 Entertain decided not to commission anything from Titmouse , the trailer was eventually seen by Ian Levine , who offered to try and raise the money for a full episode reconstruction to serve as a prototype . The episode chosen was " Mission to the Unknown " , as it was a self @-@ contained episode featuring the Daleks with a limited number of characters and sets , thus keeping the budget down . Although completed , the animated version of " Mission to the Unknown " has never been officially released , although it has been posted on various video streaming sites .

With the advent of ever @-@ more @-@ powerful home computers and more specialist programs for them , many fans are also working on unofficial animations of the missing episodes , and this is widespread with many clips being shown on @-@ line .

= = = = Narrated links = = =

In some cases missing episodes are bridged by narration to the camera? often by a surviving actor from the serial, occasionally in @-@ character. For their VHS releases, The Reign of Terror and The Crusade were presented by actors Carole Ann Ford and William Russell? while Episodes 1 and 4 of The Invasion were bridged by Nicholas Courtney.

Although not strictly a missing serial , production of the 1979 Tom Baker story Shada was curtailed by a technician 's strike partway through recording . To prevent the half @-@ finished material from being junked , incoming Doctor Who producer John Nathan @-@ Turner placed a preservation order on it with an intention to later finish the production . Although repeated attempts to remount the serial failed , a clip from Episode 1 was later used in the 1983 story The Five Doctors after Tom Baker declined to reprise his role .

Eventually in 1992, the surviving material was released on home video, accompanied by in @-@ camera narration by Tom Baker to bridge the unrecorded content. In later years, Shada was reinterpreted in several forms including an audio play featuring Eighth Doctor Paul McGann (also presented on the Web, accompanied by basic Flash animation) and a novelization by Gareth Roberts.

= = = Recreations = = =

Although the BBC has invested in the reconstruction of episodes using animation, it has never attempted to do anything in the way of complete re @-@ staging of missing episodes; the closest

that it has come to this was the recreation of parts of various serials , including the completely missing Marco Polo , in the docudrama An Adventure in Space and Time produced for the 50th anniversary in 2013 . However , in 2012 a reimagined version of The Power of the Daleks , written by , directed by , and starring Nick Scovell , was released on YouTube in three parts prior to being shown in its entirety at the Power : Reimagined convention in September 2012 .

= = Further research = =

= = = Books and periodicals = = =

Between 1973 and 1994, each missing Doctor Who serial was novelized and published by Target Books.

Richard Molesworth 's Wiped! Doctor Who 's Missing Episodes (Telos Publishing, 2010) explores in detail the paper trail and recovery efforts surrounding the hunt for missing episodes. A revised edition was published in March 2013.

= = = Nothing at the End of the Lane = = =

Issue # 1 of " Nothing at the End of the Lane " (July 1999) includes articles about fan @-@ made reconstructions of the missing episodes, audio of missing episodes, and the archive status of footage from Seasons 1 @-@ 3.

Issue # 2 (June 2005) includes articles about John Cura (the photographer behind Doctor Who 's Tele @-@ snaps) , recent discoveries of missing episodes , Junking of videotapes in the 1960s and '70s , a look at telerecordings , and the archive status of footage from Seasons 4 @-@ 6 .

Issue # 3 (January 2012) includes articles about the 26 off @-@ screen photographs taken by Chris Thompson (Production Designer) from The Evil of the Daleks episode one , and new location photographs .

= = = Doctor Who Magazine = = =

Issue # 444 of Doctor Who Magazine (February 2012), titled "How the Daleks Exterminated Doctor Who 's History ", examines the overseas sales of the missing episodes and the chances of their survival.

Issue # 466 (October 2013) focuses on the rediscovery of " The Enemy of the World " and " The Web of Fear " by Philip Morris .

Three special editions of Doctor Who Magazine (# 34 @-@ 36) , titled " The Missing Episodes? The First Doctor " , " The Missing Episodes? The Second Doctor Volume 1 " , and " The Missing Episodes? The Second Doctor Volume 2 " , were released between March? December 2013; each issue features a 100 + page guide to the missing episodes which exist in tele @-@ snap form , with details how they came to be wiped .

= = = Documentaries = = =

Doctor Who ? Missing in Action (1993)? a documentary about the missing episodes, featuring lan Levine.

The Missing Years (1998)? a documentary about the lost Doctor Who episodes and recovery attempts, available on Doctor Who: The Missing Years VHS and (in an updated form) on the Lost In Time DVD box set.

The National Lottery: Amazing Luck Stories (1999)? a short segment about the recovery of the Doctor Who episode from New Zealand.

Time Shift? Missing Believed Wiped (2003)? a general documentary about archive television, featuring some clips and discussions about Doctor Who.

WOTAN Assembly (2008)? a short DVD featurette about restoring The War Machines, which shows how the Doctor Who Restoration Team manages to create a near @-@ complete version this serial using clips from various sources around the world. Narrated by Anneke Wills.

Colour Silurian Overlay (2008) ? a DVD featurette about restoring Doctor Who and the Silurians , using the surviving 16 mm telerecordings and an off air NTSC Betamax recording as a colour source

Multi @-@ Colourisation (2009)? a DVD featurette about how chroma dots were used to restore Planet of the Daleks episode three back to full colour.

The One Show (2013)? the 11 October edition of the show featured a short documentary about how Doctor Who episodes became lost, the recovery of audio from episodes, and the finding of episodes from The Enemy of the World and The Web of Fear.

"Restoring Doctor Who " (2014)? a 4 @-@ minute documentary by "Paul Vanezis " of the Doctor Who Restoration Team, which shows the process of cleaning and restoring the nine episodes recovered in 2013.