

Francis George Rayer G3OGR a deeper look at his work and pen names

Editorial introduction: It seems fitting to round off the 75th anniversary year of *PW* with a further and more detailed tribute to the late Frank Rayer G3OGR. It's especially well timed as far as I'm concerned because – as Stef says – many of us owe much to G3OGR's work. I've made an exception for this article because although Stef only offered it recently – we were able to place it in the very last issue for 2007. We are moving forward in 2008 and this is the last 'looking back' type feature for the foreseeable future. I thank Stef for his work and I must say that I have been astounded at the versatility of Frank Rayer – writing everything from romantic novels to science fiction – he must have been a very exceptional individual. Incidentally, I take the opportunity to thank the anonymous reader who kindly sent me a copy of one of G3OGR's (very *Dan Dare* like) science fiction novels. As an *Eagle* comic fan I thoroughly enjoyed it! Rob G3XFD.

Although Stef Niewadomski is not a Radio Amateur, he is – as a busy technical writer himself – following in the footsteps of the late Frank Rayer G3OGR. Stef's always been fascinated in the man behind the various pen names and presents his findings in yet another fascinating article for *PW*!

The continued interest in the life and writing of Francis George Rayer G3OGR, as shown by recent letters in *PW*, is evidence of how fondly and firmly he is embedded in the lore of the hobby of Amateur Radio. The influence of his writing in the formative years of many long time readers and writers (including me) of the magazine is well recognised.

In the 75th anniversary year of *PW*, the publication of articles by G3OGR and R F Graham has stimulated discussion on Frank Rayer's pen names. Most recently an interesting letter from Dave Porter G4OYX summed up his suspicions as to Frank Rayer's various disguised names

When I started researching this article, I did so with a view of 'proving' the G3OGR = R F Graham connection.

However, I didn't realise the true nature and extent of G3OGR's writing output between the late 1940s and his death in 1981, although this was hinted at in Rob Mannion G3XFD's article *Mr Project – The F G Rayer Story* in *PW* October 2002, written with much input from G3OGR's son, William. The article answered many questions about the man and mentioned his other writings, besides what we saw in *PW* and other radio and electronics magazines during the 1950s, 1960s and 1970s.

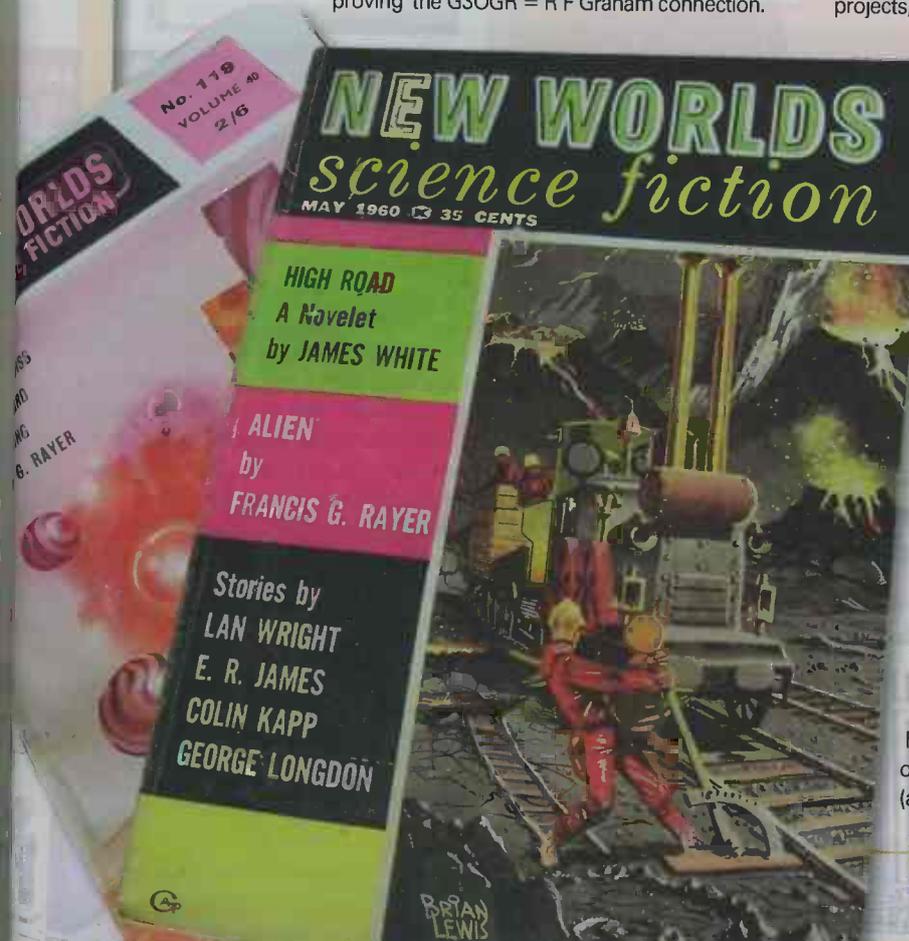
My 'guesstimate' from the 2007 viewpoint, is that what we grew up with in *PW* during the 1950s to 1970s period was much less than half of what G3OGR actually wrote! Although it can be argued that the constructional aspect of his radio/electronics projects (and his DIY projects, see later) must have accounted for more time than 'simply' writing science fiction stories.

Captain R F Graham?

On the question of whether G3OGR and (Captain) R F Graham were one and the same person, certainly the circumstantial evidence points to a 'yes he was'. When R F Graham first appears in *PW* in the mid-1950s, he seems to be G3OGR's transistor personality, while G3OGR concerns himself almost exclusively with tried and tested valve circuits. So, for example, in the July 1957 issue of *PW*, the second part of *An Amateur Communications-type Receiver* (using good old octal valves) by F G Rayer, and *A Diode and 3 Transistor Portable* (using OC70/71/72 transistors) by Capt. R F Graham are published.

The attachment of F G Rayer to his callsign doesn't occur until *PW* August 1964, with the publication of *End Fed Aerials* by F G Rayer G3OGR, though he received the callsign in July 1960. You'd think that from then onwards Frank Rayer would insist on the permanent attachment of name and callsign. However, there are examples of articles in 1965 onwards where the name F G Rayer and his callsign G3OGR are detached from each other and maybe they were even used to imply different author identities.

The name R F Graham occurs most often when F G Rayer has an article published in the same issue of *PW*. This pattern occurs on no less than 21 occasions between 1957 and 1970 (and maybe beyond this, for which I don't have records).



During the same 14 year period R F Graham has only four articles published in months when G3OGR is not published.

My theory is that the editor of *PW* at the time (the great F J Camm up to his death in February 1959, followed by the anonymous 'The Editor') had a policy of publishing only one article by an author in a given issue of the magazine. In retrospect the use of F G Rayer, G3OGR and R F Graham looks like a crude way of circumventing the rule for such a prolific (and presumably popular) author.

I thought I had F J Camm's rule worked out until I saw the December 1958 copy of *PW*! It's at this point where the whole theory falls apart as F G Rayer has three articles attributed to him, namely: *AC Pre-tuned Superhet*, *Power Transistors* and *The Beginner's Superhet*. Maybe even the great F J Camm or his editorial staff lost the plot sometimes?

Cammm's Admiration?

I suspect that Fred Camm admired G3OGR's writings greatly as both men were prolific authors on a wide range of subjects including, but certainly not limited to, radio and electronics. And Camm helped Rayer as much as possible to accommodate his output. We must remember that G3OGR was making a living from writing and not just treating it as a part-time occupation as most writers did at the time (and still do) in Amateur Radio magazines.

Frank Rayer also had two articles published in the same issue of *PW* a few times in the 1960s, for example in November 1962. So, if the system was in force during Fred Camm's period, it certainly broke down more often after his editorship was over.

The radio frequency (r.f.) section of G3OGR's *Beginner's TRF4* article in the August 1966 issue of *PW*, is identical to that of R F Graham's *TRF5 Pocket Portable* in the May 1968 issue, down to the last resistor and capacitor value! The audio frequency (a.f.) output stages use the same Newmarket NKT251 transistors. Only the 'bit in the middle' is different, with an extra transistor a.f. stage added in the later article, so perhaps G3OGR realised his radio need a bit more gain and corrected this under the guise of R F Graham?

Another article published in the May 1968 issue entitled *End Fed Aerial Tuner*, appeared as 'by F G Rayer, G3OGR' and following the rule I've mentioned, G3OGR couldn't have used his own name for the *TRF5* project. Interestingly, G3OGR had another article - *Imperial Transmitter, Part III*, published in the August 1966 issue of *PW*, under the name F G Rayer, G3OGR.

Frank Rayer's writings in *PW* were concerned mainly with Amateur Radio (receivers, transmitters, aerials, etc., for the Amateur bands), signal generators, calibrators, broadcast and communications receivers (valve-based initially and then using diodes and transistors) and radio control. From its inception, *PW* had promoted the home building of broadcast receivers at a time when ready-made receivers were an expensive luxury. And - up to the end of the 1960s - where at this time the designs were almost exclusively transistorised - hardly a month went by without such a project being published, many of them being G3OGR's designs.

Stefan's Library

Although I have a good collection of *PW*s for the late 1950s and 1960s, I don't have many other radio magazines of the period. Rummaging on my book shelves produced just two issues of *The Short Wave Magazine*, and magically G3OGR is published in both! The February 1968 issue has his *Practical Top Band Transmitter Circuits*, and October 1969 has *Second-Channel BCI*, both attributed to F G Rayer, AIERE, G3OGR.

Perhaps other authors could comment more comprehensively on G3OGR's output for *SWM*, and also *Radio Constructor*, *Practical Electronics* and *Practical Television*? Also, I wonder if he penetrated the RSGB's *Bulletin* (and *Radio Communication* as it became later) and *Wireless World*? I'm pretty sure he was published in the USA, but I don't have any details of anything that was published.

I've exchanged E-mails recently with G3OGR's son, William (formerly G8PWR) and he confirms that his father used the R F Graham pseudonym, amongst others, (including George Longdon, see later for

how he used this name). William believes that a list of his father's pen names existed in his old papers but was probably thrown away many years ago. So, sadly we may never know the true extent of G3OGR's pseudonyms in radio magazines.

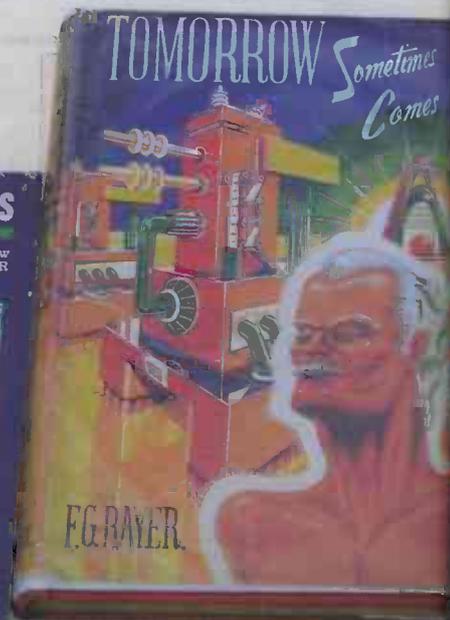
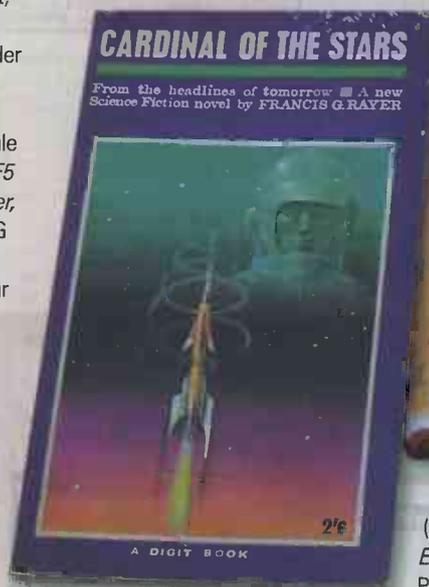
Other Work

So far I've only concerned myself with G3OGR's articles for radio magazines, for which he's well known and respected. In fact he was also a great writer of books. For example, his radio interest gave us: *Amateur Radio* (published in 1964 by Arco Publications, with later re-printings); *Transistor Receivers and Amplifiers* (Focal Press, 1965); and *How to Make Walkie-Talkies* (Babani Publishing, 1977).

The walkie-talkies described in G3OGR's book were designed for Licensed Amateur use in the Amateur bands, typically the 28 and 144MHz bands, though some circuits for 160m and 80m (1.8 and 3.5MHz) were described. This was of course in the days before legal Citizens' Band (CB) operation was permitted.

Frank Rayer dealt with many publishers, but a long and fruitful relationship was maintained with Bernard Babani Publishing, for whom he generated many slim volumes (typically 100 pages).

A little later in his writing career his more general electronics interests gave us the titles: *Electrical Hobbies* (Nutshell Books, 1964), *Electrical Experiments* (Pegasus Books, 1968); *50 (FET) Field Effect Transistor Projects* (Babani Publishing, 1977), *Fifty Projects Using Relays, SCRs and Triacs* (Babani Publishing, 1977), *How to Build Your Own Metal and Treasure Locators* (Babani Publishing, 1978), *Electronic Test Equipment Construction* (Babani Publishing, 1980), *Audio Projects*



(Babani Publishing, 1981); and *Electronic Timer Projects* (Babani Publishing, 1981).

As digital electronics 'caught on' in the late 1960s onwards G3OGR met the need for educational books in this field. Amongst his many books on the subject are: *Popular Electronics and Computers* (Arco Publishing, 1968), *Electronic Game Projects* (Newnes Publishing, 1979), *Counter Driver and Numeral Display Projects* (Babani Publishing, 1980); *Digital Integrated Circuits Projects* (Babani Publishing, 1981); and *Integrated Circuit Projects for Beginners* (Babani Publishing, published posthumously in 1982). Frank Rayer's interest in radio control (as evidenced by his many magazine articles on the subject) also resulted in at least one book, namely *Radio Control for Beginners* (Babani Publishing, 1980).

It's worth noting that G3OGR also tackled a tricky subject in *How to Build Your Own Solid State Oscilloscope* (Babani Publishing, 1979). In this book he describes an oscilloscope using all solid state components (except for the cathode ray tube, c.r.t., itself of course), including high tension (h.t.) and extra high tension (e.h.t.) voltage generation.

First Novel

The novel – *Lady in Danger* – published by Grafton publications – was G3OGR's first published book in 1948, under their series "Exciting Romance". Unfortunately I haven't been able to obtain a copy of the book. The only copy I could track down is in the British Library and they will only allow it to be read on-site. I conclude from this that the book didn't sell too many copies and so isn't generally around in any quantity, though the 1948 publication date gives plenty of time for most copies to be lost or thrown away*.

**The reading on-site rule seems to be the normal policy for the British Library and their policy should not be seen as reflecting how successful a book has been. I now have several copies of G3OGR's science fiction novels and I have been surprised to see just how often his fiction books turn up in second hand shops and on the Internet. G3XFD.*

Science Fiction Writings

Frank Rayer's interest in science fiction writing possibly resulted in four full-length novels, namely: *Tomorrow Sometimes Comes* (Horne and Van Thal, 1951) which starts with the event feared and expected sooner or later by all in the west at the time – atomic war, *Journey to the Stars* (Arcadia House, 1964), *The Iron and the Anger* (Digit Books, 1964); and *Cardinal of the Stars* (Digit Books, 1964). As you can see – 1964 is certainly a significant year in G3OGR's publishing career!

I used the phrase 'possibly four novels' here because *Journey to the Stars* is actually *Cardinal of the Stars* under a different title. According to William Rayer, *Journey to the Stars* is a pirated copy of *Cardinal of the Stars* published in the USA, which is where most second-hand copies of this book now seem to be located. Of course, G3OGR was very upset about this pirating, but the cost of legal action was prohibitive and risky and was not pursued.

Assuming that G3OGR wrote the two unique science fiction books that were published in 1964 in the couple of years previously, there's no obvious slackening in those years in the frequency of his radio articles in *PW* – they continued at the normal prodigious rate!

I'm a fan of science fiction writing and so I was looking forward to reading G3OGR's work in the genre, although I was somewhat apprehensive about its quality. It may seem contradictory, but much science fiction writing dates very quickly and 'old' stories in the genre are sometimes not easy to read. However, I have to say I was pleasantly surprised and his work is not as dated as I thought it might be. It was easy-to-read and built to an exciting climax on the last page.

Writing Flavour

To provide a flavour of what G3OGR produced in his science fiction works, *Tomorrow Sometimes Comes* starts with an atomic (sic) war. And here, I suppose, G3OGR was simply reflecting the obsession and fear from the early 1950s that sooner or later mankind would suffer this fate. Within the story, a huge centralised computer, the Mens Magna, controls the city where many of the descendants of the survivors live.

The computer appears to be benevolent at first but ultimately concludes with its rigid logic that mankind is unfit to be the dominant life form on Earth and therefore must be destroyed along with the whole planet. The computer also concludes that the only logical alternative is that the past is altered so that it – and therefore its conclusion and its effect – cannot exist. The Mens Magna concept was developed in several of G3OGR's short stories before it put in an appearance in *Tomorrow Sometimes Comes*.

Mantley Rawson, the main character in the book, survived the war by being accidentally placed in suspended animation (actually he is undergoing an operation when the war breaks out and stays under anaesthetic for many years). When Rawson recovers he is hated because his actions (based on false information) started the war. He has to hide his identity from the majority of the population, while he strives to undo what he's done with the help of the Mens Magna via a neat piece of pseudo time travel and creation of an alternative future.

A future with a small number of huge centralised computers was a commonly accepted view in science and science fiction in the 1950s and 1960s of how computing would develop and G3OGR is simply repeating that view. The opinion at the time was that about half a dozen big computers would satisfy the computing needs of the entire planet and no-one seems to have anticipated the massive proliferation of personal computing, which is the way the future actually turned out!

Dark Story

Frank Rayer's science fiction novel *Iron and the Anger* is a dark story also set on a post-nuclear war Earth in the distant future, where a highly regulated three-caste (Masters, Workers and Intellectuals) social system is breaking down. Mankind is threatened to the point of destruction by semi-autonomous machines containing brain-like "Mensite" crystals, under the ultimate centralised control of a large crystal "integrator" (we read it as 'computer' here).

The author's radio background comes to surface every now and then. For example, the machines were originally radio-controlled and when the main character **James Lindley** describes how the crystals work: "It is piezoelectrical (sic). Piezo crystals produce electricity when mechanically stressed. Electrically stressed, they vibrate mechanically. They are much used in electronic devices." As in *Tomorrow Sometimes Comes* James Lindley is another main character who accidentally enabled the crystals to be used against mankind and who therefore has to hide his identity from the masses while he tries to undo what he did!

In fact the Mensite crystals are multi-celled and can store intelligence: perhaps G3OGR was anticipating complex integrated circuits, beyond even what we are capable of producing today, capable of acting like brains. Interestingly, G3OGR also postulates in this book – and in *Tomorrow Sometimes Comes* – that the effect of radiation from the atomic war produces a number of mutated humans now capable of telepathy.

Cardinal of the Stars (also *Journey to the Stars*) is set in a future when mankind has expanded to the stars and is just making first contact with an alien race, initially with disastrous consequences. The "Cardinal" is a Pimpernel-type character, hunted by the authorities but who – in the end – holds the key to mankind's successful co-existence with the aliens.

Frank Rayer brings a fair amount of his radio knowledge into the story, his main character (not the Cardinal) is equipped with a microwave transceiver hidden in a book. It also turns out that the reason the aliens attack earth ships is because they are ultra-sensitive to radio waves and so regard any attempt to contact them via radio as an act of aggression. Strangely, despite inventing faster-than-light travel through "inter-space", the only reliable method of communication between man's space ships is via Morse code! (As an aside, one of the space ships in the story is called *The Mannion*).*
**The name Mannion – in the both original Irish Gaelic and English – means a 'minion' (a type of servant) perhaps it's an appropriate name as a spaceship 'serves' its passengers! Rob Mannion.*

Short Story Magazines

Frank Rayer also wrote many short stories for science fiction magazines from the late 1940s to the mid 1960s, benefiting from the boom in the subject in the 1950s, no doubt stimulated by the appearance of rockets, the space race and unidentified flying object (UFO) sightings. The science fiction magazines included *New Worlds*,



Science Fantasy, *Authentic*, *Nebula* and *SF Adventures*. He kept good company with the greats of the science fiction world; authors sharing the same issues with G3OGR include **Brian W Aldiss**, **J G Ballard** and even the great **Arthur C Clarke**.

For example, in *New Worlds* 119 (June 1962), G3OGR has *Sacrifice* published, and *Six-Fingered Jacks* by E R James (G3OGR's cousin and also William's 'Uncle Ernest') is present. The well-known science fiction writers Brian W Aldiss and J G Ballard were published in the same issue.

The May 1960 edition of *New Worlds* is interesting in that it has *Alien* by G3OGR, *Sprinkler System* by E R James, and *Continuity Man* by George Longdon, who was in fact our friend again, writing under a pseudonym. So, the practice of using pseudonyms wasn't restricted to radio magazines (Longdon was also the name of the village in Worcestershire where the Rayer house, *The Reddings*, was located).

The cover of this magazine is reproduced on the first page of this article with a fantastic view of a railway system on a volcanically very active planet, which I couldn't resist showing for the delectation of the Editor and other railway fans. The locomotive's design shows a strange mixture of Stephenson's *Rocket*, and features of various vintages of steam and diesel locomotives. You would have thought on this futuristic planet that they would have at least standardised on a single track gauge!

I have to admit I was looking for a character in G3OGR's science fiction writings called Captain R F Graham, maybe the commander of a space ship, worthy of his rank. I have to report that no such person was found. G3OGR was obviously too clever to pull this stunt!

Restoring *The Reddings*

In the October 2002 issue of *PW*, writing on the subject of *The Reddings* (the Rayer family house in Gloucestershire) William Rayer said, "My father gradually restored the house, putting in wiring" and "Heating, a bathroom and an indoor toilet were also installed. My father did much of the work himself ..."

Ever on the lookout for an opportunity to earn his living as a writer, G3OGR must have researched building and domestic wiring practices, planned the work, executed much of it himself and used the practical knowledge he gained to write *Repair of Domestic Electrical Appliances* (Arco Handybooks, 1961); *Electricity in the Home* (Arco Handybooks, 1962); and ultimately *A Guide to Outdoor Building* (Arthur Barker Publishing, 1970).

Incidentally, I believe G3OGR also wrote for *The Reader's Digest*, although I have not (yet) managed to track down any of this writing.

Published Abroad

A whole area of investigation that I haven't looked into in any detail is G3OGR's books and articles that were published abroad in non-English languages. A quick look on the French and German Amazon websites reveals *Le Cardinal des Etoiles*, *Le Lendemain de la Machine* and *Utopia – Zukunftsromane Nr. 370 Gefangen in fremden Körpern*.

So, who knows how much of his work appeared in mainland Europe and further afield?

Teaching Others How to Write

In the October 2002 *PW* article, William Rayer mentioned that his father and William's cousin – **E R James** – ran a training course for prospective writers. I managed to track down a book G3OGR wrote about writing and getting work published, namely *Modern Fiction – Writing Technique*,

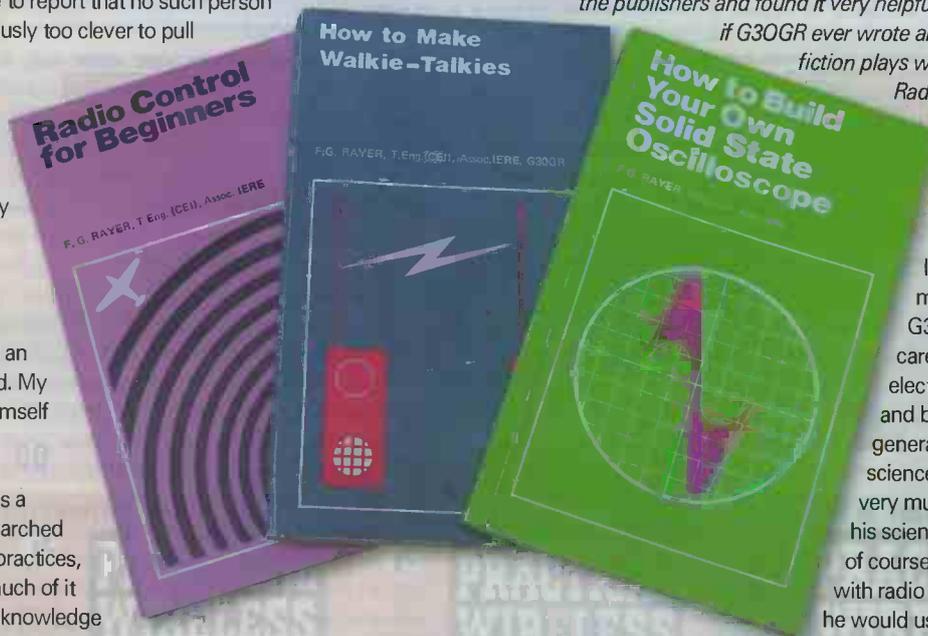
published by Bond Street Publishers Ltd in 1960.

The foreword of the book says "Author of 1,000 published stories and articles in British and overseas periodicals and magazines ..." Maybe a slight exaggeration?* The slim book gives practical advice on plots, characters, dialogue, action story settings, etc., as well as advice on where and how to submit manuscripts with the best chance of success.

There's an interesting comment in the 'Pen Names' section of the book: "Occasionally an editor will choose and suggest a pen name. For example, he may wish to use two stories by the same writer in a single issue of his periodical or magazine but to conceal this from readers by placing a pseudonym on one." Incidentally, I can't find this title on the British Library Catalogue, so maybe it was not published for general distribution, but only for those attending the training courses?

**Perhaps it wasn't an exaggeration Stefan! As I've discovered when working (as a freelance writer) and researching transport and technical topics for the area, along with his magazine and book writing I found that G3OGR also wrote for county magazines, weekly and daily newspapers in Worcestershire and what is now vaguely known as the 'West Midlands'. However, it's not surprising that his newspaper work is not so well known as, unlike magazines, old newspapers rarely survive. Modern Fiction Writing Techniques once appeared in the BBC's Guide For Writers For Radio (I had a copy myself some years ago) and G3OGR's booklet on the list of suggested reading. I purchased a copy direct from the publishers and found it very helpful. I often wonder*

if G3OGR ever wrote any of the science fiction plays we heard on BBC Radio 4 – perhaps under yet another name? Editor.



Shed More light?

I hope I've shed more light on G3OGR's writing career, both in radio and electronics magazines and books, but also more generally in the world of science fiction and DIY. I very much enjoyed reading his science fiction looking, of course, for his connection with radio which I wondered if he would use in his stories!

In fact, suppose it's true to say that from the point of view of long-term recognition he was more successful in our world of radio and electronics than in the science fiction orbit, though clearly his interest in science fiction was very important to him. By the early 1960s G3OGR seems to have realised that the science fiction pulp-boom was over (driven to the wall by popular television) and so he starts to concentrate on writing radio and electronic books, as well as keeping up his magazine article output.

It's said that Frank Rayer was encouraged to write on radio subjects by F J Camm after he wrote a letter to *PW* in 1939 and maybe this also triggered his writing on other subjects? Overall, his writing career lasted for some 40 years or so, pretty much up to his death in July 1981 and some of his books were published posthumously.

I've avoided giving a full list of his books here, just a representative summary that shows the depth and breadth of G3OGR's output (I can supply a full list to the Editor if readers request it). As far as I can see, Frank Rayer had at least 36 books published (or 35 if you don't count the pirated *Journey to the Stars*) about radio, electronics, electricity, DIY, romantic fiction, science fiction and the art of writing itself. I say at least 36 because to some extent the total depends on how you define a book. For example, G3OGR is attributed as author of *Coming of the Darakula*

(Hamilton & Co, 1952), a science fiction pulp-fiction magazine/booklet, and other similar publications.

Often, de-mystifying a person reduces the sense of awe felt for them but this is certainly not true for me in the case of Frank Rayer and I hope it

isn't for you. As it is for many other radio enthusiasts, he will always be a great hero of mine and he's someone to aspire towards when I'm looking for inspiration for that next project to start, or perhaps more importantly, when I'm trying to finish a project, which is often much harder to do.

Frank Rayer G3OGR on the Internet

There are many references to G3OGR's radio, electronics and science fiction writings on the Internet. A brief summary of his science fiction work can be seen at: www.fantasticfiction.co.uk/r/francis-g-rayer/

A more comprehensive list of G3OGR's science fiction book and magazine writing can be seen at: www.zone-sf.com/frangrayer.html

The British Library's interactive catalogue at: http://catalogue.bl.uk/F/?func=file&file_name=login-bl-list will list most of G3OGR's books if his name is entered as author.

The second hand book dealers on www.amazon.co.uk/ and www.amazon.com have many G3OGR books in stock.

Another source of Frank Rayer's books is www.ebay.co.uk/ and www.ebay.com/

Francis G Rayer books

Title	Year	Publisher	Category
<i>Lady in Danger</i>	1948	Grafton Publications	Romance
<i>Worlds at War (G3OGR and others)</i>	1950	Tempest Publishing Company	Science Fiction
<i>Tomorrow Sometimes Comes</i>	1951	Home and Van Thal	Science Fiction
<i>Coming of the Darakula (book?)</i>	1952	Hamilton and Co	Science Fiction
<i>Modern Fiction-Writing Technique</i>	1960	Bond Street Publishers Ltd	Writing
<i>Repair of Domestic Electrical Appliances</i>	1961	Arco Handybooks	Do-it-Yourself
<i>Electricity in the Home</i>	1962	Arco Handybooks	Do-it-Yourself
<i>Electrical Hobbies (The Pegasus Book of ..)</i>	1964	Nutshell Books	Electronics
<i>The Iron and the Anger</i>	1964	Digit Books	Science Fiction
<i>Journey to the Stars</i>	1964	Arcadia House	Science Fiction
<i>Cardinal of the Stars</i>	1964	Digit Books	Science Fiction
<i>Amateur Radio</i>	1964	Arco Publishing	Radio
<i>Transistor Receivers and Amplifiers</i>	1965	Focal Press	Radio
<i>Electrical Experiments (The Pegasus Book of ..)</i>	1968	Pegasus Books	Electrical
<i>Popular Electronics and Computers</i>	1968	Arco Publishing	Electronics
<i>Radio Experiments</i>	1968	Pegasus Books	Radio
<i>A Guide to Outdoor Building</i>	1970	Arthur Barker Publishing	Do-it-Yourself
<i>Electronic Experiments (The Pegasus Book of ..)</i>	1971	Pegasus Books	Electronics
<i>Two Transistor Electronic Projects</i>	1976	Babani Publishing	Electronics
<i>Handbook of IC Audio Preamplifier and Power Amplifier Construction</i>	1976	Babani Publishing	Electronics
<i>Fifty Projects Using Relays, SCRs and Triacs</i>	1977	Babani Publishing	Electronics
<i>Fifty Field Effect Transistor Projects</i>	1977	Babani Publishing	Electronics
<i>How to Make Walkie-Talkies</i>	1977	Babani Publishing	Radio
<i>How to Build Your Own Metal and Treasure Locators</i>	1978	Babani Publishing	Electronics
<i>Electronic Projects for Beginners</i>	1978	Babani Publishing	Electronics
<i>How to Build Your Own Solid State Oscilloscope</i>	1979	Babani Publishing	Electronics
<i>Electronic Projects in Hobbies</i>	1979	Newnes Technical	Electronics
<i>Electronic Game Projects</i>	1979	Newnes Publishing	Electronics
<i>Electronic Test Equipment Construction</i>	1980	Babani Publishing	Electronics
<i>Counter Driver and Numeral Display Projects</i>	1980	Babani Publishing	Electronics
<i>Radio Control for Beginners</i>	1980	Babani Publishing	Radio
<i>Electronic Timer Projects</i>	1981	Babani Publishing	Electronics
<i>Digital Integrated Circuits Projects</i>	1981	Babani Publishing	Electronics
<i>Audio Projects</i>	1981	Babani Publishing	Electronics
<i>Projects in Amateur Radio and Short Wave Listening</i>	1981	Newnes Technical	Radio
<i>Integrated Circuit Projects for Beginners</i>	1982	Babani Publishing	Electronics
<i>Beginner's Guide to Amateur Radio</i>	1982	Newnes Technical	Radio

Finale

That's the final part of our very special supplement, which has been running all through 2007! We hope you have enjoyed joining the PW team as we looked back through 75 years of *Practical Wireless* and beyond!