



COMPETITION FOR
FREE RENEWAL

405 ALIVE

THE VINTAGE TELEVISION MAGAZINE THAT KEEPS 405 ALIVE

ISSUE 12, October 1991.

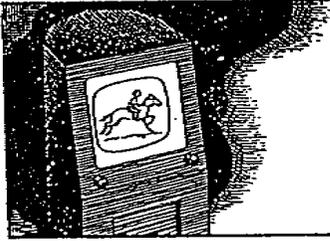
Editor Andrew Emmerson, G8PTH

Don't throw away the envelope this came in - see page 3!



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FROM THE EDITOR ...

PROGRESS isn't everything. For instance, smoke signals never got a Red Indian out of bed in the middle of the night to answer a wrong number.

It's funny how each issue repeats a story, even though the end result is different. I start collating and typing the articles as soon as the previous issue comes from the printers and all goes well until the issue is 50 per cent complete. Great! Two more months to go and half of the mag is already written. Then other things take over and poor old "405" is forgotten about. About four weeks before publication a veritable flood of articles and advertisements arrive and a grand rush ensues to put the magazine to bed on time. Several ads always arrive too late (sorry - please send them in sooner!) and a few articles are held over till the next issue.

Well, as you know, the magazine is usually late and this time I am making a supreme effort to get the mag back on schedule again. That means it will be the last one before Christmas and it's also the time I have to remind you to renew.

For me - and for you - this is very important. Because the magazine is run on a not-for-profit basis, I print only as many copies as I anticipate I can sell. If you are printing, say, 1,000 copies the run-on cost for an extra 100 is minimal, but at the small quantities we have, the cost is strictly pro-rata. The current print run is 200 copies, with 180 subscriptions. The spares are used for publicity and promotional purposes, such as samples sent out to prospective subscribers. Frankly, it is not economic to print dozens of spares, which is also why some back numbers are now out of print.

Fortunately, a high proportion of you do renew, which is gratifying, but some renewals don't come in until February or March. This really is cutting it fine! It's also a bore because I have to type in your details on the mailing list again because they will have been deleted by then. I cannot plan ahead on the assumption that you may not renew until then, so please pay up now! (That's putting it bluntly!) On 1st January your details will be "purged" from the labels file!!!

You know exactly what you'll be getting, so there's no risk element involved. Oh yes, the price has gone up - what a swindle! Not really, postal and raw paper costs have increased. I personally think it is fabulous value for money: after all, you probably buy other magazines at prices around £1.75 to £2 a copy and they contain barely a fraction of the amount of undiluted TV information and nostalgia, but then I must admit I am biased.

The new subscription rates will be £12 inland, £13 (or \$25 air mail) overseas. As a bonus, we have a competition this time: the lucky winner will have his or her subscription renewed an extra year at no charge! So check out our "Twenty Questions", won't you?

Finally, once again I'd like to thank all our contributors sincerely for all their efforts. Without them, this magazine could not exist. And without you, the subscribers it could not exist either. So let's keep it going!

Andy Emmerson

RENEWALS! Check your address label on the envelope.

Unless your address label has 92 or the letter C after your name, it is time to renew your subscription. Please do this promptly and **remember to put your name and address with your renewal payment.** Simpler still, send back the complete envelope with your address label on it: pin your cheque or whatever to the envelope and you don't even have to write a letter. But please do it now! If you are not renewing, send us an abusive postcard and tell us why!

VOLUME 1 REPRINT

Issues 1 to 4 will be reprinted as a single issue this winter. The format will be the same as the issue you are reading now but otherwise will be more or less as the magazines were printed then. There were many interesting articles in this first volume and this will be a good opportunity to have them all together in the newer, handy-sized format. The more glaring mistakes will be corrected and new knowledge added where possible. Small advertisements will be omitted, as they are not really relevant now. If there is an odd number of pages, some old advertisements and pictures will be added to make up the material.

The all-in price (post free) will be £5. There will be only one printing, of as many copies are ordered by 1st December. There has to be a cut-off date sometime, so orders received after this date will not be accepted - sorry! Please include your order with your subscription renewal and write **reprint** clearly on your note. The publication will be posted as soon as it is received from our printers in Nottingham.

LETTERS, WE GET LETTERS ...

From David Boynes, Winlaton:

I think a subject for **405 Alive** might be "Transistors in 405 Receivers". Readers will be familiar with the Perdio Portorama of 1963 and the dual standard Philips TVette of 1966, however, two British manufacturers produced all-transistor sets in 1960. One was the Pye 14" TTI, the other the Ferguson 7" 743T.

Information on these sets appears in

the 1961/2 Newnes **Radio & TV Servicing** books. Although I've no experience of the 743T, I was once asked to repair a Pye TTI back in the late sixties; the tube was low emission so the owner dumped it!

BLS Transformers of Stanley, Co. Durham have completed the rewinding of the mains transformers I gave them. I have fitted the re-wound EHT transformer into the Marconi 702 power supply unit. The other transformer is the power transformer

from my Pye TV-radio-gram combo; the TV section is similar to the receiver which Andrew Redding wrote about in a previous issue of **405 Alive**.

It is worth noting the name of this firm, as not many companies are prepared to do this kind of work nowadays.

From Keith Hamer, 7 Epping Close, Derby, DE3 4HR:

Following on from one of your recent correspondents regarding old BBC test card music being used on RTE-2, I have recently listened to a lot of RTE-2 teletext music (the test card is not radiated as frequently as it used to be). Although there a few pieces of music used bearing the same titles, the versions used with BBC trade test transmissions in the sixties had more "zest". However, I haven't been able to listen to all the RTE-2 music and so there could be some pieces which are indeed identical to those used in the past by the BBC.

Would anyone care to contact me if they have any examples of graphic design (ident captions/symbols, clock captions, test cards, etc.) radiated in the UK prior to 1970? In particular any photographs or videos showing BBC material from the 30s, 40s or 50s. I would like to feature examples of early design work for my quarterly magazine **TV Graphics Review**, which is produced for enthusiasts of trade test transmissions and on-screen identification symbols.

Finally, does anyone have any memories regarding the servicing of an early English Electric projection television system? Someone at work has asked me to make enquiries via **405 Alive**. The receiver used a rounded tube approx. 4" across and the output was reflected onto a screen via a magnifying lens system to produce a screen size of around 19". The final anode voltage was somewhat on the lethal side at around 25kV! These projection televisions were introduced by English Electric during the early to mid-fifties.

From Alastair Jones, Shrewsbury:

*Alastair has sent in a huge list of stuff for sale in **Market Place**. He adds*

When you've had things for so many years and still not got round to doing what you intended with them, as I have, it's time to give someone else a chance! Hopefully it will give me more room to do the other things I'm working on. Keep up the good work: **405** coming through the letterbox is the high spot of the season.

Thanks for the kind words ... and the thoughtfulness to let other folk get their hands on some interesting old apparatus.

From John Wakely, Colliers Wood:

The Kuba Portacolor (page 5, issue 11) was imported and rented by Granada TV Rental in 1968 (very unreliable model!). The 11" screen model was called a "Colorette". With regard to the MW tube code, I took it to mean **Magnetic focus, White screen**.

*Thanks John and to all others who answered the call for info on CRT codes. Apparently this system is (was?) the old version of the pro-electron scheme. Data kindly supplied by Geoff Arnold of **Radio Bygones** and other readers is reproduced starting page 46 of this issue.*

From Brian Renforth, Newcastle upon Tyne:

On the strength of Steve James's review I rushed out and purchased the "Adam Adamant Lives" video despite having (admittedly) not having heard of the programme before. Well - it's brilliant!!! 12 out of 10 for this complete video presentation (perhaps someone at the Beeb has been taking notice of comments re editing, etc.?!?) and let's hope for more.

Did you see the 1959 documentary "A Soho Story" on BBC2 recently? From a 35mm print the quality was superb and could have been made yesterday, it was that good! Especially on a black and white set. Pity that BBC2 omitted the ident on the

intro to the Granada programme on Quentin Crisp that followed. The Granada International caption at the end was interesting - never seen that before.

Yes, I too recorded "A Soho Story" and Quentin Crisp. (The music at the end of the latter was very familiar but I couldn't remember which programme it introduced! I've been put out of my misery since, and it was "World in Action".) The Granada International caption goes on the end of all old programmes when they are dressed up for re-issue. The b/w feature on The Doors shown recently on Channel Four and being sold cheap on sell-through for £5.99 also has it at the end.

From Tony Fell, Kingston upon Thames:

I have sent some info on CRT nomenclature (included in this issue); the information was copied from the Mullard data handbook 1967 and the 1972-3 Mazda Data Booklet. Looking back, it's funny to think how non-conformist Thorn were before the mid 70s.

As usual many thanks for another great issue; I was so engrossed in reading it, it was only then I heard about the events in the USSR!

One of my favourite sections is Malcolm Burrell's Teletalk. It is good to read of someone who had service experience. Although by the time I started in the trade (1976) single standard colour was the order of the day, one did occasionally see single standard 405 sets; most of the owners were older and were quite happy with them. One thing seldom mentioned is the 405 scan being slower often gave a brighter glow to the phosphor. The one thing that did degrade the 405 system was that many sets had rather poor interlace on that standard, i.e. looking closely at the screen lines appeared to be "paired"; I'm sure some better models overcame this.

One design feature of the pre-war sets is that they often had multi-band radios; however, some 50s and 60s sets had FM radio. To give two examples: a 1960 Ultra had H, L, and T (Home, Light, Third) on the turret tuner; in these positions the timebases

were switched off. In a 1965 dual-standard BRC model, again the turret had positions for the three FM networks, again the timebases were off but the 625 sound IF at 6MHz provided FM demodulation. To prevent cathode poisoning of the unused valves in the series heater chain, the HT was set at around 10 volts. This idea seems to have died a death, but did resurface in some of the small portable TVs from the 1970s onwards.

Anyway, enough of these ramblings, I must enjoy the sunshine.

Picking up this point about the high quality radios in many pre-war TVs, Jeff Borin points out that once TV transmissions ceased in 1939, some table model combined TV-radios were sold as radios, which is how the 5" HMV/Marconiphones came to be sold in Cardiff. No doubt some wholesalers were pretty desperate to get some money back and decided they couldn't wait for the end of the war!

From Dicky Howett, Chelmsford (written after watching the BBC's Lime Grove retrospective):

My big gripe about the "Lime Grove" vintage television day (BBC2 26.8.91) was the "funny" interludes. I liked the original "Staggering Stories" series (dubbing witty new dialogue over old footage), and indeed found their "Lime Grove Story" version quite amusing. But not every hour! Okay, so we all realise that the BBC accent was pompous. Sending up the fact to the point of tedium destroyed the point (if any) and tended to highlight the general attitude of the "Late Show" production team (responsible for the whole day).

At least they reined back when the actual programmes were on air and resisted (it must have been an effort) from putting coloured captions or "whizz-bang" graphics all over the place. I did like the "sandcastle" intros, though. Nothing "arty" there, just nice and professional. It goes without saying that if the Late Show team had really looked at the material they were broadcasting, they would have noticed that

just about all of it knocked the spots off modern TV. Rough around the edges? Sure, but then so is real live life. The accent being on live, and not funny accents.

The "Quatermass 2" episode (no. 3) screening probably had modern directors green with envy. How was it, they must have asked themselves, that a wobbly black and white live show with sets and actors that doubtless cost multi-shillings, could have evoked such menace and real "nervous" fear? Answer, a straight-forward presentation, well written and acted. In the "good old days" it all had to be there, up on the screen. That's where it stood or fell. Compare that with, for example, some of the later "Dr Who" shows where they fiddled around during taping, shooting lots of extra scenes, (never used) or re-writing as they went along. Result, a botch-up which they hoped could be rescued in post production. It never was, of course. As a consequence, the "Who" audience retreated in droves, proving the GIGO (garbage in, garbage out) dictum.

Even the dear old "Dixon of Dock Green" recording moved apace. Both that and the "Quatermass" episode were shot using Pye Photicon cameras. This camera, a development of the "Super Emitron" pick-up tube, had the benefit of an electronic viewfinder and a turret of four lenses. However, (as evinced in both recordings) no two cameras produced the same picture quality (lining-up must have been a nightmare!) Indeed, one camera always seemed to be on the point of "going down". Despite technical problems, (valve-driven gear got so hot you could fry an egg on it, and in one instance this was achieved), the show went on. All that now remains is a film and VT-library stocked full of programmes that haven't seen the light of day since they were first transmitted. A monster gold mine that the BBC has, until recently, barely chipped away at. I'm sure we'd all pay for a portion of that! I'll take mine right now, Auntie, preferably wrapped in an old copy of the Radio Times.

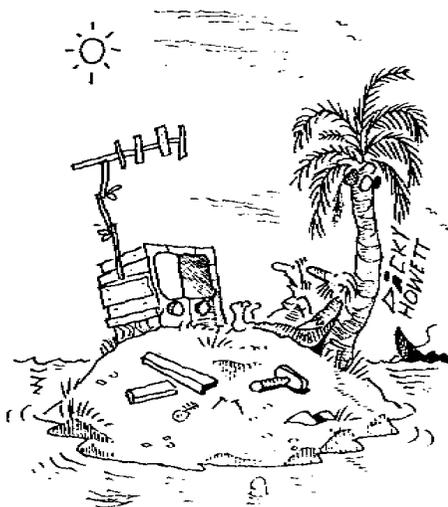
Spoken from the heart, Dicky ... I can only agree with you. As for the sandcastle links, I just hope they realised those Dinky Supertoy

outside broadcast vehicles which they let the salt sea-water lap over were worth £100 each! Or perhaps they were scruffy examples, or perhaps they rinsed them immediately afterwards and dried them with a hairdrier, or perhaps ...

On the "Dixon of Dock Green" telerecording, we got a black bar each time the camera shot changed. Doubtless the cameras were synchronised to each other, but does this imply that the film camera was not frame genlocked to the television transmission? [AE]

From Steve James, West Bridgford:

Apart from a few choice clips, I was fairly disappointed with the Lime Grove day, especially in the Alma Cogan story - too many "experts", not enough clips!! The whole presentation of the day was of the rather unpleasant "look how silly it all was" school of thought. It may have been silly, but let's make our own minds up! One nice thing is that they totally dropped all BBC2 continuity for the entire length of the feature!



ISNT IT ABOUT TIME WE STOPPED FOOLING OURSELVES, ERIC... ?

TELEVISION NEWSREEL

AVENGERS RETURN

According to a report on Radio Northampton in August, Channel Four is to re-screen "the best" of **The Avengers** this autumn. The indication that this would be a selection from the episodes starring Diana Rigg as Emma Peel, and in this I concur most whole-heartedly with Channel Four. Will there be spin-offs this time? Perhaps some self-through tapes? Who knows?!!

NBTV AGAIN

We don't get to mention narrow-band television here very often, so it is perhaps worthwhile giving them a plug. They deal with systems of narrower bandwidth than slow-scan TV but it's not all Nipkow discs and the like. In fact some of the members use state-of-the-art technology to get their picture on the screen. Jeremy Jago of the NBTVA (Narrow Band Television Association) tells me people have even copied broadcast television's sound-in syncs technique. There is room during the frame suppression signal for a little bit of toneburst, leading to the development of (wait for it) morse in syncs! They will, however, strive to avoid being submerged under afflood of naturally incompatible individual modes.

If you'd like to learn more about how much can be achieved with NBTV, send a SAE to NARROW BANDWIDTH TV ASSOCIATION: Mr N Reynolds, 6a Collingbourne Road, London, W12 0JQ.

NEV

Do these initials mean anything to you? They were the abbreviation of the Nottingham Electronic Valve Company, which among other things produced the Telcan video recorder mentioned on page 22. They were also responsible for a range of vidicon closed circuit TV cameras in the 1960s which rejoiced in such names as the Nevecon and the NEV-eye. These were characterised by their simplicity of circuit, indeed it is said that if (as one of their rivals did) you dissolved the epoxy resin potting that surrounded one of the circuit modules, you found it contained nothing at all! This may be a wicked story, however.

Jeremy Jago (of NBTV fame above) has one of their cameras and made it work. He also wrote to say that Norman Rutherford and Michael Turner of the original NEV company are involved in a new company, one of the products of which is an optical video link (1 km range) which uses "monster infra-red LEDs (like 4 watts)". This magazine is actually printed in Nottingham and I think next time I go there to pick up the magazines I shall avoid standing in one place for more than a second. I have no desire to be zapped!

MODULATORS

Wilfried Meier, whose kit and ready-built modulators were featured in the last issue, points out that they carry a three months guarantee. Any unit that fails in this period will be exchanged without charge.

AMERICAN SHOWS ON TV

There are some excellent books on TV series (I was going to call them filmographies but that doesn't sound right) published by Boxtree Books for TV Times. In particular **The ITV Encyclopaedia of Adventure** by Dave Rogers and **The Encyclopaedia of TV Science Fiction** by Roger Fulton. What we don't seem to have yet is a listings book of all the USA series shown on British TV. Does anyone have any ideas or would they like to attempt such a task? There are a number of obscure film series made during the 50s, 60s, 70s and 80s for television in America and many of these have been shown either on network TV or in the regions. But a comprehensive listing would be valuable.

THE LIME GROVE STORY (Monday 26th August, 1991)

The BBC seems to have scored a resounding hit with this mammoth session; by all accounts everyone enjoyed it. Nice touches were the use of the BBC's corporate identity alphabet of the early 1960s to caption all the programmes and the slightly irreverent use of interlude films (including the potter's wheel with the sound played forwards and the visual action going backwards).

Musical links were provided by a tantalising snatch of the National Airs and pieces from the Scherzetto for Children, the latter written by James Hartley and played by Eric Robinson. Tony Clayden wonders if Hartley also arranged the National Airs: it's certainly conceivable.

J.R. HARTLEY

Talking of Hartleys (but not of jam), the other Hartley, J. R. Hartley of Yellow Pages "Fly Fishing" fame has had a book ghost-written for him! Yes, from this autumn you will actually be able to find a copy of "Fly Fishing" by J.R. Hartley in the shops - if you get there in time. Unbelievable ... or perhaps not, considering that they made a book ("So you've got an Ology") out of the Beattie television advertisements.

TELEVISION ON BFI SOUTH BANK

There will be a day event on "Sound on Television" on Saturday 5th October, from 10.00am to 3.45pm in NFT2. This is not a vintage "do" as such but if you want to hear two people from the BBC's Radiophonic Workshop speak, this might interest you. Subjects covered include soundtrack music, advertising jingles and broadcast music past and present. Bookings: 071-928 3232. The price is £6.50, with concessions for unwaged. At Christmas there will be a season of cult TV programmes but details have not been published yet.

BOOKS SOLD OFF

Two rather expensive but valuable books on the history of television were published by the IEE (Institution of Electrical Engineers) in 1986. They were **British Television, the Formative Years** by Prof. R.W. Burns and **IEE Conference Publication no. 271, International Conference on the History of Television**. Both are no longer available through IEE publications sales, and if you had any intention of getting either, now is the time to act. Prof. Burns's book is available from our advertiser Chevet Books (see advertisement at end of this magazine), who have purchased the remaining stocks. The IEE Conference Publication, which is full of useful contributed papers, can be had from Dawson UK (back issues service), Cannon

House, Folkestone, Kent, CT19 5EE for £38.50 plus £2.50 post and packing (telephone 0303-850101).

You may well blench at the price of these books: they are aimed at the academic market, where the relatively low total sales have to be offset by higher prices. To compensate, the text is of both books is first class, full of valuable material and references. After these books have sold out, you will not see them again.

ANOTHER HISTORY BOOK

This is a brief notice of an American book which takes a global look at the history of television. The title is **The History of Television, 1880 to 1941** and it is by Albert Abramson (published by McFarland, ISBN 0-89950-284-9). The MOMI bookshop in London have copies of this illustrated hardback at £22.45.

First glimpses indicate this is a detailed and well-researched book. Notwithstanding being written from an American standpoint, this book pays liberal tribute to the genuine innovation of the EMI team at Hayes and puts paid to the stupid but recurrent rumour of Baird's that everything devised at Hayes was merely a re-hash of work already done by RCA in the States. The author provides detailed references which will give subsequent researchers a short cut to finding original source material. A review will follow.

SONY TV9-90

It has probably been said before, but this portable TV is well worth keeping an eye open for if you are in the market for a compact, smart-looking dual-standard TV. Finished in a charcoal grey plastic case with silver trim, it still looks remarkably stylish (in a sixties minimalist way) and is generally a most reliable set. The set hasn't been made for years but it can often be found in second-hand shops and at car boot sales for a modest price and is well worth buying.

Below the 9" screen are twin push buttons, one for 405 lines VHF, the other for 625 lines UHF. A rod antenna is fitted, also a 3mm jack for an external antenna (if you wish to connect a normal antenna or VCR you'll have to make up a lead with a 3mm jack plug one end and a Belling-Lee plug the other; the Sony EAC-9B has not been available for many years). A clever trick you can play is to press in both buttons, which means you have 405 line reception on UHF. You can then tune the set to channel 36 and watch the output of a video recorder playing a 405 line tape, without the need for an additional VHF modulator. Truly a versatile set and worth spending £10 or so on.

There were other transistorised dual-standard portables. One which turns up quite often is the Philips TVette (also found as the Pye Gipsy). This set has a leatherette finish and for me has none of the charm or style of the Sony. You can usually pick them up for a fiver or a tenner.

CREDITS

The photos of the Vintage Radio Circle swapmeet in the last issue were taken by Dave Higginson. The Marconiphone letters which will hopefully find a space in this issue were lent by Mike King. Thanks to both of you and to all contributors.

VINTAGE RADIO CIRCLE

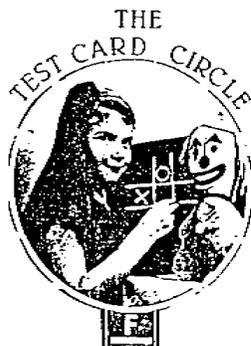
Marie Williams writes: In stark contrast to the sudden peculiar escalation of costs affecting everything connected with old wireless, the Vintage Radio Circle is **REDUCING ITS PRICES!** As you will have seen from the last attendance of 120 visitors and 20 stalls, I am not exactly looking for new guests - in fact, due to possible overcrowding some have been turned away! But please don't ask how I manage to run the swapmeets so often and so cheaply without charging an ever-increasing annual subscription, yet still donate to charity. Instead, when you go to your next swapmeet, wherever it may be, ask why they've increased prices, and if you don't get a satisfactory answer then vote with your cheque book and insist on paying the old subs plus inflation - or none at all. So, for the Winter VRC Swapmeet the admission charge for visitors is reduced to £2 and for anyone wanting a stall the cost is reduced to £7, which includes admission, tables, and help with loading them.

The date is Sunday 1st December and full details can be had by sending a SAE to the address below. Admission is by ticket only to avoid over-crowding. As most people like to stock up with bits and pieces to while away the long winter evenings, it is expected that there will be a rush for this Christmas offer, so to avoid disappointment please send off as soon as possible. The total amount raised for charity is expected to be around £180 by the end of this meeting, the British Heart Foundation has already received £20, with the remainder going to the Radio Amateur Invalid & Blind Club. (Registered Charity No. 802348, Patron Sir Leonard Cheshire V.C.). Receipts will be on display at the next swapmeet. Write to M.E. Williams, 28 Barton Lane, Cirencester, Glos., GL7 2EB or ring 0285-885725.

LATE NEWS

Proof that people who watch old TV programmes are no longer a tiny minority comes from official BARB figures (thanks to Dicky Howett for passing them on).

Around two million people watched the BBC's Lime Grove retrospective, taking it into the Top 30 programmes of that week. "Dixon of Dock Green" attracted 2.5 million viewers, while 1.96 million thrilled to Quatermass. This indicates there are two million people who find old TV more interesting than modern programmes and many thousands of potential buyers for videocassettes of old BBC (and ITV) material.



THE TEST CARD CIRCLE was officially born out of the first ever convention for test card enthusiasts held at Leominster, Herefordshire in March this year.

Then we were a group of around 30 members keen to preserve in the history books the art-form of the test card and its accompanying music, along with service information, trade test colour films, and the days of commercial discs used for Independent Television.

Thanks to the marvellous media coverage we have had this year the group is growing rapidly and now boasts over 60 members all over Britain.

There is a magazine published three times a year and a special supplement recording events at our annual convention.

The subscription for 1991 will be £ 8.00 giving you full membership, three 50 paged magazines (approx.), details of local roadshows and much much more.

In short, if you have ever been fascinated by television trade test transmissions then this is the group for you.

If you would like more information about THE TEST CARD CIRCLE please write to Stuart G. Montgomery, 2 Henderson Row, Edinburgh EH3 5DS.

PICTURE PAGE

by *Martin Loach*

All the latest video reviews ...

BRANCH LINE RAILWAY, BBC Enterprises BBCV 4097, £10.20. B&W

This seems to be a 1987 video which has recently (re-?) appeared on the shelf in most video shops. Although clearly intended for the railway enthusiast, this video contains some choice early TV films. I am no serious steam fanatic, but I find some of these older railway films contain much general interest material.

The most important is the Television Newsreel film of the naming of the first Class 7 4-6-2 locomotive Britannia. Complete with opening Television Newsreel title sequence and original music, this 10 minute film, made in 1951, is a real gem. Coinciding with the policy to cut train services to save coal, we see this locomotive being built at Crewe works. The Minister of Transport names the locomotive which is then seen leaving Marylebone station on her first trip. Other scenes include the testing operations inside the Dynamometer Car.

Another TV news film concerns the Atlantic Coast Express. This was first broadcast in 1960, and much of this film is shot from the footplate on a journey from Waterloo to Salisbury. There are some interesting scenes as we pass through London suburbs and out into the country. The narration by Keneth Kendall is punctuated by the wonderful purring sound of the locomotive at speed.

The main film, indeed the longest, is the 20 minute documentary by Sir John Betjeman. Made in 1963, this was his first documentary. The film covers the journey from Evercreech Junction to Burnham on Sea, via Glastonbury and Highbridge. There are some fine views of both rural and urban England of 30 years ago. Watch out for the traffic scenes in Highbury, and the examination of what the railway did for Burnham, at the end of the film. There are pictures of gas-lit railway station waiting rooms, and the start of the decay resulting from the Beeching Axe. In fact there is a distinct anti-Beeching conclusion to the film, after a number of prophetic references have been made to the fate of the English road traffic chaos in years to come.

The whole thing is linked by introductory sequences of Michael Palin in colour at Quainton Road station. In this work he is deadly serious and I think does a good job, although one could argue it is a job not really needing doing. The only criticism I can make, is that the dubbing of copyright notices on the end of the films is not original, although the effect is not too obtrusive.

This tape is definitely essential for any 405 line enthusiast's collection. You must buy it for the Television Newsreel sequence if nothing else! [ML]

The reason why it has appeared again is that the BBC or one of its distributors is having a clear-out of slow-moving stock, and you will find this tape at reduced price in some shops. If you intend buying it,

slow-moving stock, and you will find this tape at reduced price in some shops. If you intend buying it, get it now before it disappears altogether! [AE]

¶ Feedback from Steve Evans, Lichfield:

As a regular reader of your magazine and also a member of the Whonatics (one of the many Doctor Who clubs) I felt I must write to point out two slight errors occurring in your report covering recent Doctor Who video releases (issue 11, page 12).

Firstly, the Hartnell tape is presented by Sylvester McCoy, the current and seventh Doctor and not by Colin Baker, who was sixth Doctor.

Secondly, the existence of two separate versions of the first episode was not the result of the first episode being screened twice back in 1963. In fact, the first version (included in the Hartnell Years tape) was recorded as a pilot to show department heads at the BBC what the programme was going to be like. These same department heads ruled that this first version was unsuitable to be broadcast partly because hitches with the scenery had resulted in audible hammering by technicians during the recording and partly because William Hartnell's performance as the Doctor was considered too harsh and too unsympathetic. The first episode was then re-recorded to correct these two factors.

It was the second, corrected version which was broadcast twice back in 1963. The abandoned pilot episode was never aired until the recent Lime Grove commemorations, but it is now included in the Hartnell Years tape to allow enthusiasts access to it at last.

¶ Steve James's reviews will re-appear in the next issue, by which time the long-awaited ITC tapes should have appeared. He hopes you will accept his **Television Explained** article as a substitute this time!

BOOK REVIEW

TELEVISION - A DO YOU REMEMBER BOOK, by Burton Graham. Golden Hands/Marshall Cavendish Publications Ltd, 1974. ISBN 0-85685-060-8. 120 pages, hardback.

Although this book is now out of print, it can be found in second-hand bookshops, jumble sales, boot fairs, etc.. The 120-page hardback covers the start of scientific experiments in 1817 to the early days of real TV and up to 1974. Most pictures are black and white and include starts of TV shows, outside broadcasts, etc. This is an interesting book and well worth searching for. [Barrie Portas]

THE 405 ALIVE INTERVIEW

HOW IT STARTED: 405 *Alive* interviews popular contributor Malcolm Burrell

How did you get involved in television?

I don't think there's a simple answer. I'm told that I sat in my cot and stared fascinated at the Victory Parade. At one time there was a cricket match televised from Valentine's Park near where we lived and, as a toddler, I was taken by my father who held me above the railings to see a collection of green vans and a high mast (the RF link). He told me something about how that apparatus was what was bringing us the pictures but I didn't understand. Anyway, probably like most kids of the time, I apparently lived for the children's' programmes which started at five o'clock.

I'm a great believer partly in heredity but also in "instilled thoughts" and I think my father was fascinated, too. He had certainly been a keen amateur cine photographer before the war, also I had two uncles, one with a radio shop in East Ham and another with shops in Upminster. I rarely saw them in those days. I think it was just a kind of "magic" for I seem to have been terrified of someone removing the cover of our old Ultra T22 lest the characters jump out and run away!

What were your favourite programmes?

Crumbs! I know that I liked Muffin, of course. I think I watched early Andy Pandy ... I am beginning to get the impression that, perhaps, my parents were falling into the familiar trap of using "the box" to keep me out of their hair ... I can remember a film series called "Mystery Squadron", I think ... probably ex-cinema plus the one that **really** caused nightmares called "Face at the Window" shown one afternoon. I saw it repeated one night on Channel Four and can quite understand how a three or four years-old kid can be frightened ... and this had been shown in the afternoon, then.

Of course there was Children's Television, the newsreel (I was allowed to stay up to watch the adult newsreel, omnibus edition), and I had a crush on a children's announcer called, I think, Jennifer Gay. I think she had long, fair hair and spoke nicely ... more brainwashing - I'd always go for girls like that!

(You too then ... and Tony C. as well!!!! Does that girl know how many hearts she touched!?)

In fact, I think I'm partly the person I am because I grew up with romantic notions. It must have been all the old films but I'd never dream of going up to a girl and saying "I fancy you" ... I'd always expected moonlight and poetry which meant that kisses in the playground had something missing. I think also that having announcers (presenters) like Mac Hobley, Mary Malcolm and Sylvia Peters - although they were partly divorced from the "real" world, they gave me something to which I could aspire. I think it's a mistake to treat people - or try to communicate with people always on their level. That's where TV is partly failing because whilst a

Scotsman expects a Scottish accent (the world, after all, doesn't revolve around London), particularly in programmes for younger people there's the tendency to get the characters to identify with the audience rather than vice versa. Its like advertising, isn't it? The Kwik-Fit exhaust advert isn't aimed at the owner of a BMW, for example. And, I think, LWT when it introduced Sesame Street was doing its viewers a dis-service. First they learned to spell from "A" to "Zee", then they became aware that the world of cartoon characters revolved around dustbins. It was hardly Walt Disney.

(True, so very true ... but you're not supposed to confirm my prejudices, Malcolm!)

How did you get into engineering?

That's a long story. I wanted the romance of television - to imitate it myself, the long tracking shots of "High Noon" or the sweep of those long shots of Astair and Rogers. I'd only seen them on TV so that was the medium I plumped for. Um, I wanted my "own" television service when I was nine. In those days, the BBC tended to love the occasional "behind the scenes" programme, so I built my imitation Marconi Mk III out of a wooden box. I had a toy truck which I painted green and towed around the garden. I even built a cardboard truck with opening sides, then went as far as making a complete studio out of cardboard with working spotlights made from batteries and bulbs from Woolworths. I had to create my **own** world and my parents didn't, at least, interfere with this.

I saw pictures of American sets in Geographic magazines at school and became fascinated by the seemingly large screens - one advert showed chaps measuring a seemingly gigantic circular CRT. So I wrote to one manufacturer called Stromberg Carlson and **got a reply** with loads of literature! That was just the beginning.

How old were you?

Ten.

What happened then?

I did the same with the English makers. They were great. There was rarely a day when I didn't get something through the post! You see, it wasn't the engineering, it was the medium. I was trying to create my own world, as I said. So out came the glue, balsa wood and paint and I made cardboard TV receivers which I operated through a toy train transformer - what I did was put a picture behind a thin sheet of paper and a bulb behind that. When the supply was "on", you got a picture. When it was "off", you got a blank screen.

Weren't you into radio?

Not really. I bought an Ivalek crystal set and, after seeing an article in **Practical Wireless**, added a transistor to blast out the Light Programme into my ears when I was in bed. I loved "Easybeat" and, of all things, "The Archers".

So how DID you get into engineering?

I hung around Stanwood Radio at Gants Hill ... I'd also written to them. Boyds Pianos in the High Road in Ilford, then Stanwoods, let me into their workshop.

One engineer taught me ohm's law and helped me build a two-valve TRF radio. But it was always TV. Eventually, a local shop gave me a 9" GEC 2149 or 2147, I think. This went into my bedroom but then I wanted ITV so I built a converter from a kit advertised in **Practical Television**. Somehow I blew the CRT heater. I think I was about thirteen. But I was dedicated to watching experimental colour transmissions. The BBC even kept me quiet by letting me have a test card slide. I treasured it. Then, after seeing an article in **Practical Television**, I wrote to GEC, who took me to see their TT4 405 lines set at Wembley. I watched the usual colour bars slides and Diavolezza. My mum was fascinated, too. I began to think in engineering terms and eventually stopped the paper cutting.

Soon after, I'd visit Manor Park. Now at that time, there was a firm called Duke & Co. who sold second-hand sets. First we bought a bodged up Pye VT4 but eventually I'd trot down on a Saturday and stagger time with a thirty-bob Pye or something.

Then I started buying enormous English Electric sets from Padgett's Radio Stores in Leeds - delivered by BRS!

Those were the days! You could have anything sent anywhere by British Road Services in those days ... I used to send suitcases, my bicycle and goodness knows what else and it never cost more than five or ten shillings! But I'm holding up your story.

I kept being waylaid. I wanted my own camera. I wanted ways to record the pictures. I never had enough money and the technology didn't exist on my level. There again, I wonder what I **would** have done. It's okay to have the equipment but it's rather like all these foreign cartoon films, isn't it? I mean a guy decides to do some animation, then rolls up some plasticine. Fine when it's been done once, but it's animation for the sake of it. I'd have been useless if you'd given me a studio - it would have been TV for its own sake. The important thing is the **idea**. That's what made Spielberg or Disney, plus the knowledge of how to **make it happen**.

Did you do anything with film?

When I was eighteen I formed a film group. We had loads of meetings and did a bit of animation on 9.5mm film, even though it was hard to get. But the equipment was cheap. You can pick up good 8mm stuff at boot sales now, and I'm really just getting started on something. In those days, though, we enjoyed talking more than doing.

What do you think of preserving 405 equipment?

It's great. I'd have kept more but I've had too many crises in my life. I have retained a Murphy with the Bush 161 chassis and a little old Bush TV22 but I try to keep nostalgia in perspective.

Thanks Malcolm for sharing this time with us. I'll bet one or two readers will identify with some of your thoughts and experiences, I know I do. And who will be next for the hot seat?

TELEVISION EXPLAINED, REALLY

A review by Steve James of "TELEVISION REALLY EXPLAINED" by Ronald Tiltman, 6s. 0d.

The year is 1954. Glancing down the list of book titles in the "Know-How" series, we see "200 Ways of Cooking Fish", "How to Be a Lightning Cartoonist", and just above "Peggy Hutchinson's Home-Made Wine Secrets", is "Television Really Explained" written by Ronald F. Tiltman, author of such literary greats as "Television For The Home" and "The A.B.C. of Television". You may not perhaps feel that there was in fact three books-worth of material to be written on the medium in those days, but at the time Television (with a capital T) was basking in post-Coronation glory of a public hungry for more.

Before taking the plunge, people wanted answers, advice, and more answers. "Will it stunt the children's growth?". "Will it affect the cat's boil?". "Does it neutralise OMO?". Chapter 2 of the book in question underlines the increasing popularity of the TV service: *The spread of television over Britain has led to the point where television now has an average nightly audience which far outnumbers the estimated number of listeners to the sound radio of Home and Third Programmes combined; and very soon the Light Programme listeners, at present in the lead, will be overtaken.*

At the time when the book was published, the television licence cost £2 (radio-only being £1). *The British programme times at present cover an afternoon session followed by "Children's Hour", while the main evening programmes usually run from about 7pm until just after 10pm.*

Now, let's suppose you had decided to take the plunge and acquire a television set. Mr Tiltman offers this advice: ... *Let us dispose of the question so frequently asked before people buy a television set these days: "If I buy a set now, is it likely to be out of date soon?" The answer is an emphatic No.*

Oh dear. The correct answer, dear readers, was of course an emphatic two years, with the arrival of independent television.

An interesting reminder of days gone by comes later in this chapter, when we are advised on choosing between different sets in the showroom. *There are very slight differences in the tint of the picture shown on the screen in different makes - it may be bluish, sepia or yellow-green - and you can quite safely exercise your own preference in this matter.*

Here's a bit of advice that should raise a wry smile amongst 405 Alivers: *Be very wary of buying a "cheap" second hand set... There are still pre-war and early post-war models offered second-hand which are minus the major improvements that have been introduced in the modern sets; so do not jump at the chance to save a few pounds on what may turn out to be relatively an antique !!!*

Whilst waiting for the Wigfalls van to glide to a halt outside your abode, you could spend the time well by reading the chapter headed "Installing and Operating". Sound advice here, best summed up in this sentence *Do not ... make a television set just an excuse for knob twiddling. If all is well, let well alone.* Nothing is skimped in this chapter - even the correct way to switch off, i.e. at the set, rather than at the wall, which may leave a bright white spot on the screen. Also in connection with the tube ... *see that the handle of a broom or carpet sweeper does not fall against*

it; this would of course assume you had enough money left to afford the luxury of a broom or carpet sweeper.

"How To View" is the next chapter we alight upon. This time the wisdom of the esteemed Mr Tiltman is aimed in part at Mrs. Television owner: *The television hostess must be prepared to adopt her technique to fit in with this new medium. And how should you go about this? If there is a dramatic play on, the one thing you do NOT want from the audience is noise. So avoid meals that need clattering cutlery and do not serve thin, brittle toast which will crunch very loudly! Also ... it is not advisable to serve crumbly or flaky foods that are liable to fall into armchairs and get well trodden into the carpet.*

A whole chapter is also devoted to televisual accessories. Amongst many wise words on the subject of television tables with castors and swivelling tops, is advice on fluid-filled magnifying screens and that wonder of the time, the coloured filter, tinted blue at the top, green at the bottom and red in the middle portion. Fine on outside shots, but as the author points out: *On studio close-ups, the effect can be slightly incongruous when the speaker has a green chin and blue hair!*

It's all so complicated, isn't it? I wonder how well this type of book (of which it seems there was a plethora) sold...

Perhaps the most apt remark of the book comes under the "How to View" chapter: *Fortunately, television programmes occupy only a few hours each day, and it would be just as well if this remains the case. The prospect of perpetual round-the-clock television would add too much to the perplexities of existence. Hear hear!!*

ACRYLITE—NEW TV LENS

SEPTEMBER 1948

ONE of the most far-reaching television developments to date is the introduction of a plastic lens device, known as "Acrylite," which magnifies the picture area on a standard receiver to double its original size!

The lens, which can be fitted to any television model now on the market, is manufactured by Motor and Air Products Ltd., of Leatherhead, Surrey. It retails at £6 16s. 6d.

This device is undoubtedly the most practical yet developed for magnifying pictures and heightening picture contrast without actually increasing the original screen size and thus making television sets more expensive.

Acrylite lens are now being marketed, and response by dealers within the television area has been enthusiastic.

In the main, Acrylite lenses consist of two pieces of transparent Acrylic sheet (Perspex); a plain, neat surface, and a formed convex front surface.

Oil Filled

The interspace is filled with clear mineral oil of the same index of refraction as the Acrylic.



The magnified picture as it appears through the Acrylite lens, fitted to a standard Marconi television

Different Acrylite lenses are manufactured for different television receivers and, at the present time, they are supplied for almost all popular models fitted with 9-in. or 10-in. tubes.

In some cases, the lenses are fitted directly to the cabinet of the receivers, but, in the case of sets with front escutcheons, the lenses are themselves fitted with an escutcheon which fits snugly around the escutcheon on the set.

Double Magnification

Generally speaking, the magnification obtained is about double—for example, a 9-in. tube is made to perform like a 12-in. tube.

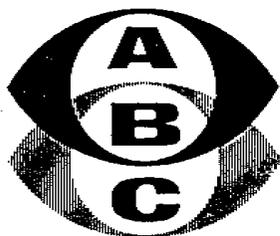
The Acrylite lens has the effect of "rotating" the picture, which means that as the viewer moves from side to side the picture always appears to be facing him.

Thus there is no distortion of the television picture, even when it is viewed from the side of the set.

TWENTY QUESTIONS

No, it's not a revival of the old BBC panel game but a chance to win a year's extension to your subscription ...

Just answer these 20 questions on TV trivia and save yourself £££s! There are no deeply technical questions, so anyone can enter. Please write out your answers on a separate piece of paper when you send in next year's subscription and remember to add your name.



television

1. In which year was the graphic to the left first seen on screens in the London area?

2. What was the name of Steptoe & Son's horse?

3. And what did the H in Harry **H** Corbett stand for?

4. What, or rather, who was the link between the first episode of "Doctor Who" and "Sir Lancelot"?

5. A BBC programme originally called "For Deaf Children" later acquired a snappier title. What?

6. Which ITV programme contractor presented "No Hiding Place"?

7. Who played the chief character in this series?

8. Who said "I'll give it five" ...

9. ... and on which programme?

10. Which ITV contractor presented it ...

11. ... and who introduced the show?

12. Who used to stand next to a shop window when nobody was looking and perform impossible acrobatics reflected in the shop window?

13. What (single word) name do Americans give to what we call telerecordings?

14. They say remotes or remote pickups, we say ?

15. Who was the young, trendy sidekick of Cathy McGowan on "Ready, Steady, Go!"? In other words, not Keith Fordyce but

16. Was RSG pre-recorded or live (normally)?
17. What was their catchphrase or slogan (used as a subtitle to the main title)?
18. Where was it presented from (i.e., which studios?)
19. Which other organisation shared those premises?
20. And what are they now (quite a well-known building)?

Finally, here's a couple of tie-breakers in the event that several people all have the right answers. Tell us in one sentence why you are a 405 Aliver! And who was Winnie Wilts?

OK, so the questions weren't that easy, but they should give you plenty of fun trying to work them out! The winner will be announced in issue 13, so entries must be in by 1st December.

THEME TUNES ON SINGLES

Brian Renforth thumbs through his collection ...

The feature on Manfred Mann's releases of TV advertisement tunes as singles (and yours truly missed the chance of buying the one-sided SKI single some years back!) made me think I might contribute something on releases of TV themes as singles. Unfortunately nearly, or perhaps absolutely all feature totally different versions despite them being performed by the original composers/orchestras. They are still interesting, however, so I present a brief look at a few I have, or have lost over the years.

PINKY AND PERKY - The Velvet Glove (The Pinky and Perky Theme) / Tom Dooley. (Accompaniment directed by Eric Rogers). DECCA 45-F 11095 (issued 1958)

"The Velvet Glove" is of course the original "Ping Ping Ping Ping" theme to the TV series - this is more or less identical to that. The "B" side still sounds funny when taped on a 3-speed open reel tape recorder and then slowed down to reveal the original speed of the vocalist (David Bowie's "Laughing Gnome" is just as funny).

THE LAURIE JOHNSON ORCHESTRA - Theme from the TV Series "The Avengers" / Minor Bossa Nova. PYE 7N.17015 (issued 1965)

An awful version of the theme used from the first Diana Rigg series. Though in the same style, it is totally different from the actual TV theme. The "B" side is a jolly little jazz number in typical Laurie Johnson style.

CYRIL STAPLETON - The theme from The Power Game / 'Lil. PYE 7N.17040 (issued 1966)

An exception, the theme being written by Wayne Hill. This is a "livened-up" version and pretty good. Would sound excellent to introduce a radio show! The flip side (having just played a bit

of it) is Sandie Shaw without the vocals.

RON GRAINER - A Man In A Suitcase / Andorra (Produced by ITC Ltd) PYE 7N.17383 (issued 1967)

The A side label also stated "From the TV series A Man In A Suitcase". A good reproduction of this excellent theme, compiling the variations used during the inner programme credits from the first three episodes "Man From The Dead" (which also features a far better end theme to subsequent episodes), "All That Glitters" and "Sweet Sue". Not authentic of course but a good try. "Andorra" is a pleasant instrumental.

THE RON GRAINER ORCHESTRA - The Prisoner / Happening Saturday(?). RCA VICTOR (issued 1968) (Cat. number unknown). I can only recall this one from memory as I sadly lost this one (unless some kind hearted readers out there could tape it for me). A rather barely recognisable jazzed-up version of "The Prisoner" theme. The "B" side, "Happening Saturday" (or was it Sunday?) featured a kiddie chorus not unlike Keith West's "Teenage Opera" (have you heard "Sam"? - five minutes of magic but let's not get off the point!), with a superb instrumental section with '60s organ and all that - I would love to hear this again.

JOHN BARRY - Theme from "The Persuaders" / The Girl with the Sun in her Hair CBS Records CBS7469 (issued 1972)

Though into the 70s this single is in mono. Another reasonable reproduction of the TV theme. Side B is the theme to the Sunsilk commercials shown at the time (you'll instantly recognise it no doubt but I won't hum it to you!)

HIGHLY LIKELY - Whatever Happened to You? (Likely Lads Theme) / God Bless Everyone. BBC Records RESL10 (issued 1973, stereo)

A full stereo version of the song used to introduce "Whatever happened to the Likely Lads?" (not the 1960s BBC TV series of course), written by Mike Hugg (another Manfred Mann connection) and Ian La Frenais. Side B is composed by Hugg/Bewes (Rodney?) which is generally rubbish but I couldn't say who's on the vocals as my copy is a mile off centre!

THE BBC RADIOPHONIC WORKSHOP - Doctor Who Theme / Reg. BBC RESL11 (issued 1973)

Another one that got lost - a full extended version of the theme used up to 1980 (yet again not identical) with a bit of Tardis noise added. "Reg" was used as incidental music by many BBC local radio stations and I heard it last on the now sadly defunct Veronica Supergold (superb London pirate) in 1989 for advertisements. I recall this came in a picture sleeve with the Tardis on the front.

Well, this shows what is available if you hunt around in junk shops - there must be hundreds of other examples available. I have deliberately omitted recent compilation releases of TV themes and music but as a brief example, the two USA CDs on TV themes use the hideously reprocessed stereo technique that was common in the 70s, also the CD consisting of music from "The Prisoner" is in compressed mono and is unlistenable. The audio head sounds as if it's out of position with wishy-washy sounds and intermittent muffled audio - it's better leaving the mono switch out even if this means the sound varying from channel to channel

This has been a new theme for an article, and we're always looking for something new. Would anyone else like to take up this theme? Otherwise I'll dredge up something on albums like "Take a Break"

(Robert James Orchestra, all commercials) and Manfred Mann's "A B Side" (the Manikin cigars theme).

A FASCINATING MIGHT-HAVE-BEEN

This year saw the 30th anniversary of Canadian TV station CFCF 12 - on Sunday, January 20 1991 to be precise. So what, you may well ask. Well, had events turned out otherwise, Canada might have become a 405 line country ... and if not 405, then certainly a 441 line country. Here, unabridged and unadulterated, is the story of channel 12 in Montreal.

As early as 1938, the Canadian Marconi Company realised the potential of commercial television. It was in that year that they first made application to the Canadian government for a licence to operate a television station, but it was not until March, 1960, after twenty-two years of continuous applications that permission was finally granted. In the meantime, Marconi was in the forefront of television and electronic development.

Nine months after the official confirmation of the licence on January 20th, 1961, at 5:45pm, CFCF TV, Channel 12 began broadcasting from a temporary studio in the Avon Theatre on Laurier and Park Avenue. As Montreal's first private television station, and the second English language station, CFCF TV had a potential of 2,500,000 viewers within a 62-mile radius of Montreal. At the time of the first broadcast, the nucleus of nine men had grown to a full staff of 150, including announcers, technical and operation crews, office staff and an eighteen-man news team.

Among the first programs offered by CFCF TV were seven locally-produced programmes including: the children's show SURPRISE PARTY with magician Tom Auburn; CARTE BLANCHE, a talk show with host Jimmy Tapp; the game show LITTLE WHITE LIE with host Jack Curran; and the movie show, PAJAMA PLAYHOUSE; as well as live news and sports presentations. From the U.S. came over a dozen pre-recorded crime, western, comedy and cartoon shows, among them the popular DONNA REED SHOW, LEAVE IT TO BEAVER and THE RIFLEMAN.

On May 19th, 1961, CFCF officially moved to its present facilities at 405 Ogilvy Avenue. In April 1961, Canadian television reached new heights with the formation of the CTV Network. As a charter member, CFCF 12 was instrumental in its development, and it was in 1966 that a new milestone was reached for CFCF 12, when color broadcasting was introduced.

In 1972, the Canadian Radio and Television Commission (CRTC) approved the application by Multiple Access Limited to purchase CFCF 12. Seven years later in July 1979, the CRTC approved the sale of the station to a company controlled by renowned Quebec broadcaster Jean A. Pouliot, who to this date remains Chairman of the Board and Chief Executive Officer of CFCF Inc. [AE]

THE TELCAN STORY

by Doug Pitt

The Nottingham Industrial Museum has recently acquired a "Telcan" video tape recorder. This recorder, the first portable VTR to be offered to the public, was designed by Norman Rutherford and Michael Turner of the Nottingham Electronic Valve Company and shown on a BBC programme on 24th June 1963.

Readers may be interested to know about this exhibit, which may be the last surviving example in the UK. I was able to interview Norman Rutherford (still active in the field of electronics) to check the details of this historic model which is depicted over the page).

The recorder used straightforward longitudinal recording as for audio and the earlier VERA, the BBC's gigantic stationary video apparatus. No carrier frequency was used. The recorder was mechanically rather conventional with most of its weight represented by the huge electric motor necessary to convey the quarter inch tape past the heads at a rather alarming 120 inches per second. The ten inch diameter tapes allowed 30 minutes recording in each direction.

Erasure was by a simple permanent magnet head but the recording head was an extraordinary example of designing and engineering finesse. It would be fair to describe the recorder as designed around this head.

The head was in two separate parts, an electromagnetic portion close to the base side of the tape and an electronically passive portion in contact with the oxide surface. The first was a simple affair made from a ferrite bead and a few turns of wire and virtually everlasting. The other side, mainly of copper, existed solely to determine the magnetic path and define the size of the gap - about 60 microns.

A copper block was split longitudinally into two symmetrical parts then rounded (as a unit) at one end to fit a loop in the tape. Magnetic conduction was via a thin shim of mu-metal. To adjust the gap critically, a most ingenious method was used. The gap was plugged with a pure silver mesh (silver is non-ferromagnetic) which was then crushed between the two halves of the head by tightening a screw. The mesh? This was the silver grid of a vidicon tube, delicately removed from its copper base by an etching process!

The Telcan (TELEvision in a CAN!) was not a commercial success. Financial backing from the prestigious Cinerama company seemed to guarantee success but this firm was, in reality, already on the verge of collapse. By the time this disaster had occurred and passed, the Ampex scanning recorder was already on its way.

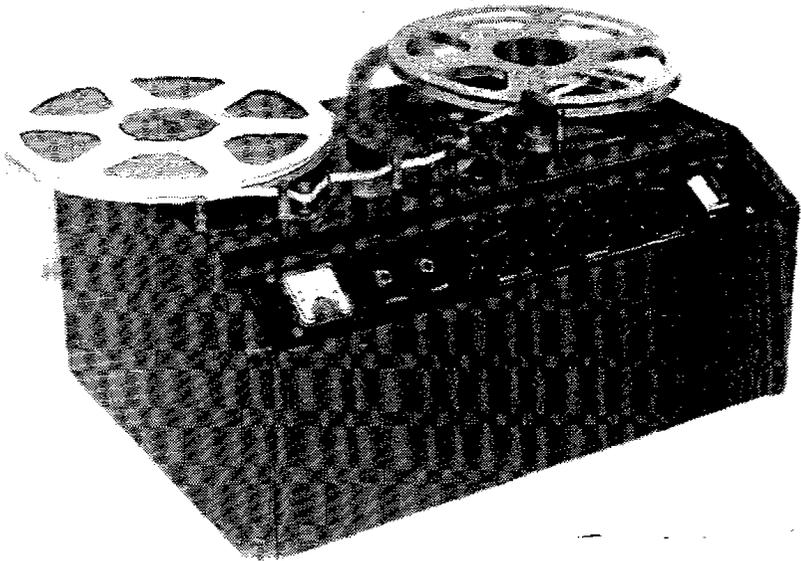
Offered as a kits ("Wesgrove" in the UK, "Telcan" in the USA), this historic model ended up as a constructional novelty. Nevertheless, the Telcan was the first commercially available small VTR, and it worked, giving a "just about acceptable picture".

Norman Rutherford today commands a production unit offering infra-red free-space communication sets. These two-way units can provide links of up to 5 kilometres, carrying 625 line TV signals for security, sports coverage, etc. between line-of-sight points.

His first excursion into television took place in 1949, when, with a school friend, he constructed a 30-line TV camera, using a Nipkow disc and a 931A photomultiplier, displaying the results on a modified oscilloscope with a 56P1 tube. These pictures he remembers as quite successful. They were evidently inspiring!

[Adapted from the original article in "NBTV" vol. 17, issue 2, the newsletter of the Narrow-band Television Association.]

FOOTNOTE: Dave Probert says he remembers seeing a demonstration of Telcan on ATV's lunchtime programme "Lunch Box". He is not sure of the year but presumes it was 1964.



GROVE FAMILIAR

Dicky Howett recalls a bit of Lime Grove studios

Lime Grove has now ceased to be a BBC studio. For 40 years the studios relayed the BBC's most famous (or forgettable) programmes. Of the five studios (acquired in 1949 from Rank), four (D, E, G, H) were converted for TV use. The first into operation was studio D (May 1950) and it was used for children's programmes. This studio was equipped with three CPS Emitron cameras. Likewise studio H. Studio G had four Pye Photicons, while studio E boasted four Marconi Mk 3s. (Delivered with 3" pick-up tubes, but swiftly swapped for 4½" types). The largest studio (F) was used for storage. Another small studio (P) was constructed for continuity.

As a BBC staffer in the mid 1960s, I never actually worked at the Grove although I did visit the place from time to time. It was a rabbit warren on several different floor levels. One never knew what to expect, nor indeed could visitors (or staff) find their way without a route-map.

The studio technical gear was an interesting (and all-British!) mishmash. The Panorama studio had EMI cameras (type 10764 Emitron). One of these models was also in use in the standards conversion suite. Studio G used Marconi Mk 4 cameras. Another studio (H) housed the experimental colour unit (which moved from Alexandra Palace when the News took over both studios). Studio H operated with a couple of those massive Marconi (RCA) three-tube cameras. The technical area promised the shape of things to come with a colour telecine suite. 16 and 35mm machines rattled away. On one particular occasion I watched (on an RCA round-screen TV set) a rather washed-out picture of **Journey into the Weald of Kent**. I say "washed-out", but this was probably due to the set being worn-out. In fact, the Weald of Kent film got worn out too, and when a new print was ordered and run, it was discovered that the telecine machine would only produce a black and white image. All the gear was stripped down, but to no avail. Eventually, and as you might have guessed, the Weald of Kent film proved to have been ordered as a black and white copy.

* *Dicky Howett writes for What Video, Complete CD and Camcorder User magazines.*

Does anyone else have memories of early colour television or recollections of old TV studios? We'll be pleased to print them.

SMALL SCREEN ON THE BIG SCREEN

by Alan Keeling, with acknowledgement to Dave Watkins

During one of my weekly visits to the children's matinée at my local fleapit one Saturday afternoon, a curious monochrome short appeared entitled "Terry and the Pirates". Years later I discovered this was an early 'fifties television series.

In 1986 a Bournemouth hotelier informed me that he had been an avid cinema-goer and whilst living in South Africa during the 1950s and early 1960s, and to my astonishment, told me that the supporting cinema programmes were often compilations of such well-known series as "Dragnet" or "Douglas Fairbanks Presents ...".

Lew Grade's ITC company compiled a number of feature-length films from various 25 or 50-minute episodes of its early and later film series for cinema, television or home video release. Nine episodes of the "Sir Francis Drake" series (1962) were edited to produce "Raiders of the Spanish Main", "Marauders of the Sea" and "Mission of the Sea Hawk". Various episodes of the Canadian series of 1956 "Hawkeye and the Last of the Mohicans", which starred John Hart and Lon Chaney Jr, were stitched together to make "Pathfinder and the Mohican" and "Redman and the Renegades".

"Colonel March Investigates" featured Boris Karloff as John Dickson Carr's chief investigator from Scotland Yard's department of queer complaints in a 1964 compilation of the 1954 crime show "Colonel March of Scotland Yard". The new production re-used the final three episodes, the titles being "Hot Money", "New Invisible Man" and "Death in the Dressing Room".

ITC's compilations of 50-minute shows included "The Fiction Makers" and "Vendetta for The Saint", featuring Roger Moore and taken from the 1968 season of "The Saint" TV show. The first two colour episodes of "Danger Man" ended up being stuck together and titled "Koroshi". "Our Man in the Caribbean" starred Carlos Thompson as "The Sentimental Agent" (1963) and featured Diana Rigg in an early assignment.

"Sergeant Ryker" began as a two-parter in the "Bob Hope Chrysler Theater" anthology series (1963-66) and served as the pilot of ITC's "Court Martial" series, which starred Bradford Dillman and Peter Graves. Western fans were catered for with Screen Gems' "Rin Tin Tin - Hero of the West" and Chuck Connors repeated his Jason McCord role in "Broken Sabre", taken from his "Branded" series (1965-66). Even "Rocky Jones - Space Ranger" (1954) ended up in two compilation forms entitled "Manhunt in Space" and "The Cold Gun", starring Richard Crane battling 21st century interplanetary evil.

[Editor's note: It may just be worth mentioning that television was introduced into South Africa until about ten years ago, hence TV programmes could safely be shown in cinemas without fear of déjà vu on the part of the audience.]

TELETALK

by Malcolm Burrell

THAT TV AGAIN!

That set keeps bouncing back! In any pop video, advertisement or graphics representation, it's always that familiar bakelite cabinet! A couple of years ago Philips used it to promote a video recorder boasting teletext facilities - incorrectly stating that now you could have teletext "on any old tv".

She was operable until recently and battered through my love of the medium. She was once dismantled to form the basis of a crude monoscope camera - a hefty screen grid resistor reducing EHT and line scan by doctoring the characteristics of the PL38. A mains transformer provided EHT, whilst a transistorised video amp from a failed camera project did its stuff to provide impeccable pictures from a Cathodeon Test Card G tube. After restoring her to original condition, that tube was eventually intended to form the basis for a portable transistorised monoscope for field servicing until, having completed the electronics, I found the heater O/C. By that time the BATC had no more tubes.

I later acquired a second Bush TV22 and, complete with instruction book bearing those marvelously naive tuning signal pictures, presented it to a hard-up girlfriend!

My present set was bought by my father in 1951. I replaced the ailing tube and all those "waxy" TCC capacitors together with every electrolytic and she was happy but never used. I kept her because I'd grown up with her - watching the old demonstration film interspersed with "fifteen minutes of Test Card C", complete with Latin American music!

People crowded into the living room on June 2nd 1953 to watch the Coronation

on her little screen - the day the medium reached puberty!

I was banished from the room when Quatermass began his first "experiment" but it was on this set in 1955 I was introduced to the first broadcast "Experimental Colour Transmission" which the BBC slotted into the - then - blank segment between closedown at 6.00pm after children's programmes and the start of evening viewing at (I think) about 7.30pm. Apart from news coverage, the BBC clearly did not take ITV seriously.

I can remember my father (a fellow Aquarian - which speaks for itself) saying that if the CRT could be opened and the screen replaced with something like a colour film emulsion, then we'd see the colour. Gross over-simplification but I believed it when I was nine years old - and dreamed. On this little screen I watched the simulated colour experiments as David Nixon included optical effects on "Its Magic".

On this little screen I also savoured the last true pioneering days of TV. First there were the "inter-continental exchanges" of programmes from France then the rest of Europe. Then there was "Saturday Night Out" where we were invited to "see things as they happened, where they happened" - TV pictures from a lightship, a helicopter, a submarine (probably the first use of a vidicon camera for broadcast purposes) and from a cross-Channel ferry.

I would rush home from school to "monitor" test transmissions in the hope of seeing a new test card, colour transmission or just something "going bump". That's probably (no, *exactly* - AE.) why there's so many test card fanatics around! Anyway, I can remember watching those 2.54 MHz dots crawl up the colour bars to the strains

of a harpsichord or Scottish bands LP, then watch the slow breathing of Sylvia Peters on the Angel's Wings colour tuning signal due to the fact that unlike broadcast monochrome TV, colour transmissions were asynchronous (to the mains) and the poor old smoothing was drying up a bit!

Her last claim to fame was in the December 1979 issue of *Television*, in the Vintage TV spot. I had hoped to use the old girl to photograph images from my new 405 lines pattern generator. She worked beautifully as I concentrated my attention on an article only to look up to be greeted by a blank screen! Is this the end of my Bush TV22? I doubt it, since I'm busily planning a replica. Yes, I did say that I'm an Aquarian!

WHY TEST CARDS?

There are numerous reasons for my designing test cards. I think the first is due to the fact that I saw so much of the test card when I was young. I was probably brainwashed but also appreciated their use as a tool.

Secondly, becoming a service engineer necessitated dealing with numerous customers who might have deficient aerials. They would invariably deny that they lived in a poor reception spot or that their aerials needed servicing. I thought it would be nice to be able to **prove** my point by displaying a wonderful image on their sets when I visited.

Thirdly, in the early days of colour TV - around 1967 - only BBC2 was broadcasting colour and for field use colour bar generators were scarce. I can recollect having a set in 1968 and inviting friends around to see the Midnight Movie on a Saturday night - only to discover it was in monochrome! Without diversifying, though, you needed a pattern generator which gave a bit more than just crosshatch.

I can remember building a very simple pattern which was injected into the video amp of 405 line sets. It worked well in spite of being a simple multivibrator. According to component values it would produce vertical or horizontal bars which

also locked the respective timebase to give a stationary pattern. It wasn't until around 1973 when I lived in North Wales and glimpsed the RTE Philips PM5544 pattern that my mind started churning away at the idea. Previously I'd thought of a portable monoscope and, in fact, had built a pattern generator in the form of a long box with a crude RF modulator, ex-surveillance camera and slide at one end. I used it very little but it was a psychological crutch.

In 1974 I sat down to seriously begin designing a test card. In those days a simple form of geometry assessment together with an indication of the picture extremities and greyscale was considered essential. I was reconditioning mono sets in quantity at two in the morning and needed a pattern. By the time I'd got it down to about thirty BC108 transistors which constantly failed, I shelved the idea until 1977 when I experimented with TTL chips (my version of electronic Lego) to break a lot of rules and produce a working design. It was published in 1978 but I'd rather forget it since my errors were duly pointed out by superior minds. (*Malcolm is being too modest here. The design was a bit of a pig to get going, but it was the first design of its kind to be published and was built by many constructors. In some ways it has not been improved since - AE.*)

In 1978 I was asked to consider a colour pattern generator. John Bolton frequently visited me in my workshop where I worked on a colour encoder which accidentally superimposed colour bars on my monochrome pattern as I played old test card music through a VCR modulator - the whole lot appearing on an enormous old Thorn 2000! My wife left some water on the kitchen floor and rushing to answer the phone, I slipped and broke my leg. I enjoyed every minute for I had months to design an entire generator. That's how the 1979 colour pattern generator emerged after about eight weeks' constant design and re-building - full time - during late 1978!

My philosophy is this. A test card is a tool. It should be aesthetically pleasing but contain the patterns necessary to accentuate probable receiver faults or design problems

rather than simply "look technical". Test Card C was the best mono pattern and Test Card F was the best colour test card because they were designed by those who knew these things. They did their job admirably.

IN MY WORKSHOP

by David Boynes

(David and Gary Platten went to clear some sets from a "Good Homes Wanted" source)

Gary has now got a dual-standard colour TV: it is a Decca CTV25 but is branded "Granadacolour". There was one 405-only set, a 17" Philco of 1960 - very compact and rather americanesque in my opinion and the good news is, it works. I spent about an hour tidying it up, changing capacitors in the timebase, etc.. It has the usual cheapo circuit but does boast a simple but effective line flywheel sync circuit employing an ECC82 valve as a coincidence detector [now, that's a thing ... sorry - AE].

Turning now to standards converters, I feel that for satisfactory operation we must use eight-bit digitising. I'm starting on an eight-bit converter, but this time it's got to be FIFOs. To gain some experience in handling these devices I will prepare a PCB to replace the interpolator line store employed in the current (seven-bit) converter. This converter was designed six years ago and employs static RAMs. One important advantage of FIFO chips (FIFO = first in, first out) is the address circuitry is much simpler than that of static RAMs. Another advantage is that these FIFOs have separate in and out ports, which means only one FIFO is required for the primary line store unit. Most of the support circuitry in the existing converter can be employed again.

TELEVISION IN BELGIUM

by Rudi Sillen

In Belgium television started in 1930. A man called ing. J. Vandijck imported 300 Telehor construction kits for making 30 line Nipkow disc receivers. For a few hours he transmitted programmes from Antwerp, but then the local government closed his premises. he has no permit to transmit from the PTT (posts, telephones and telegraphs administration). He sold possibly fifty of these Telehor sets, for both the British and German standards (with a different disk).

As the official government television service did not start here until 1952, things were very bad for television in the mean time. People who lived on the coast could receive the BBC 405 line programmes at times, using imported sets (none of these have been found lately).

More important was a one-hour programme in Flemish from France (Lille transmitter, 819 lines), so some people in the west of the country bought French sets. There was even a Belgian constructor of TVs (called Annex) in the early fifties: these were exported to France.

People in the east could receive German programmes on 625 lines (European standard). Philips constructed their first set in 1949 in the university city of Louvain - see pictures. Some of these were demonstrated in radio shops with transmissions on 567 lines. Not one of these sets has been unearthed yet and they were not commercialised.

After years of political discussions a very complicated television system was chosen for Belgium, generally matching the systems used in neighbouring countries. First of all, an 819 line positive modulation system for the French service (Bruxelles). Second, a unique 625 line positive modulation system for Flemish programmes (Brussel). Receivers were sold catering for these and neighbouring standards, and in the beginning (1952-1958) switching was not automatic, so people had to do the standards switching themselves.

So they had four buttons or switches on the front of the set beside the channel selector:

- 625 lines West European, negative vision, FM sound
- 625 lines Belgian, positive vision, AM sound
- 819 lines Belgian, positive vision, AM sound
- 819 lines French, positive vision, AM sound [different channels and vision bandwidth].

Later the standards switch was linked with the channel switch. 819 line transmissions could also be received from Luxemburg. [Also, once France introduced a 625 line service with positive vision and AM sound, this was another system to contend with.]

There were no sets constructed in Belgium for 405 line reception, as all the transmitters were directed inland, for protection of Continental transmissions. Even in the 1950s it was possible to receive programmes from France, Holland, Germany and Luxemburg. When colour came in the late sixties we had systems PAL and SECAM. At the moment it's very simple as 90 per cent of Belgium is cabled and we can receive 24 channels: England (BBC1 & 2) - France (FR1, A2, FR3) - Germany (1, 2, 3) - Holland (1, 2, 3) - Spain (1) - Italy (RAI uno) - Luxemburg (1 & 4) - Belgium (RTBF1 & 2, BRT1 & 2, TV1 & VTM commercial channels) - satellite channels (Sport, Film, MTV and Super).

Caption for illustrations on next page:

Television receiver prototype TV/CAI.

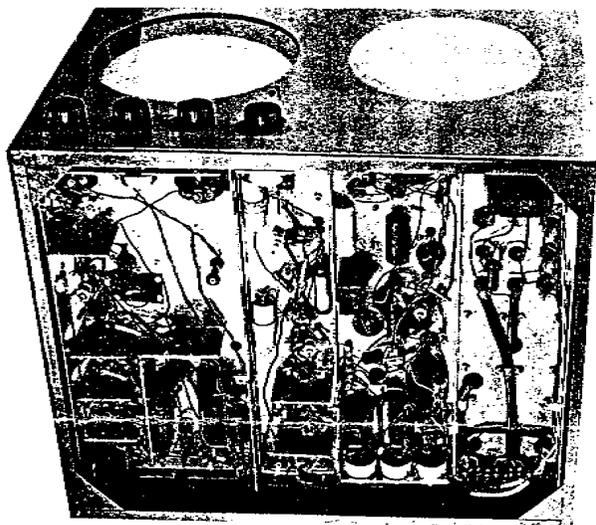
1. View of the chassis from below. From left to right: vision reception unit, sound reception unit, timebase, power supply. Controls from left to right: contrast, brightness, focus, sound volume.

2. Side view of the receiver. In the foreground, the general power supply. Centre, the EHT unit type 10.900. In the background, MW22/7 tube with deflection and focus unit.

TELEVISIE ONTVANGTOESTEL



PROTOTYPE TV/CA I

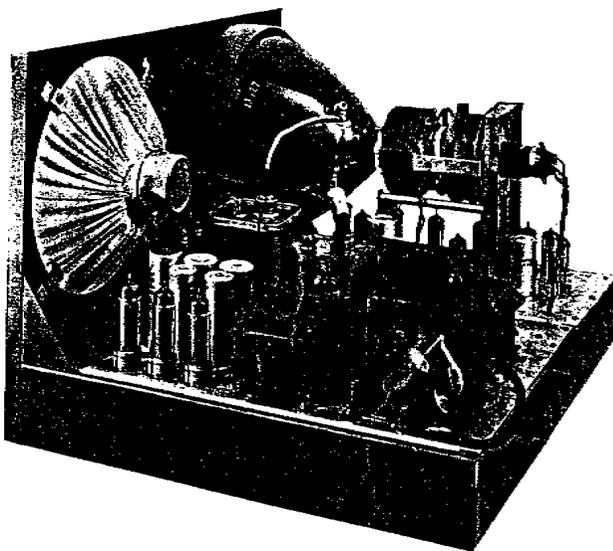


1 Onderaanzicht van het chassis.

Van links naar rechts: "Beeld" ontvangtoestel • "Geluid" ontvangtoestel • Tijdbasis • Voeding • Regelknoppen - van links naar rechts: 1) Contrast - 2) Helderheid - 3) Focalisatie - 4) Geluidsvolume.

2 Zijaanzicht van het toestel.

Op de voorgrond de algemene voeding • In het midden de hoogspanningseenheid type 10.900 • Op de achtergrond: MW 227 buis met afbuigings- en focalisatie-eenheid.



RESTORATION CORNER

HINTS AND TIPS

Although many of our readers also belong to the British Vintage Wireless Society, not all do, so here are some tips taken (with friendly acknowledgement) from the BVWS Bulletin ...

1. Fine details: The modern biological detergents are very useful for cleaning fine details, such as the grooves and mouldings in some plastic knobs. A soak in Biotex for instance will be found to shift almost everything. (Assistance with an old toothbrush may also help; never throw these away!).

2. Cleaning aluminium: The detergent used in dishwashing machines (Sun, Finish) is very good for cleaning aluminium. A soak in hot water and a dash of the detergent will work wonders on coil cans.

Can you help? How about offering us your favourite tip? A very brief note will do, or if you can't even arouse the enthusiasm to do this, leave a message on the answering machine (number on back cover). What is obvious to you may not be to others!

We have also been promised an article on the causes and cure of EHT "brushing" (hint, hint!). We can always do with practical articles of this nature, particularly for newer enthusiasts who are keen but may not be aware of the tricks of the trade - or the dangers lurking among high voltages. Come on you old hands!

405 LINE RECEIVER DESIGN

by Malcolm Burrell

Between 1946, following the reopening of the BBC Television Service, and the close of 405 transmissions, the BBC and ultimately the ITA (IBA) struggled to provide the highest technical quality in their output. This was not always the case with receiver manufacturers.

Receiver design was comparatively simple in the forties. With transmissions initially from the London transmitter at Alexandra Palace on a single channel (channel 1) in Band 1, many sets featured TRF signal circuits with often no attempt to use any form of AGC. The contrast control was often interactive with a "Gain" control and any DC coupling to the CRT grid or cathode was straightforward. On most sets, therefore, black level could be set to the point at which the raster was barely perceptible consistent with adequate resolution of intermediate tones between black and white on a given scene or test pattern.

From 1949 the BBC began to open transmitters in the regions. Since these operated on

different channels the manufacturers had two options: either produce separate RF units for each channel or design a single IF strip with a tuning facility. Early GEC sets, for example were designated London or Midlands. Bush introduced the first multi-channel receiver around 1951 with the TV22. If a user moved house, he no longer needed to scrap his set or buy a new "RF unit". The receiver could be retuned to the nearest transmitter. Manufacturing became easier since a common chassis could be manufactured for use anywhere in the UK on the five allocated Band I channels.

One of the best known sets was the Pye V4 (later known as the VT4 since it was modified to accept a 13-channel incremental switched tuner for Bands I and III). This set, originally a five-channel version, had flywheel line sync in addition to gated AGC (automatic gain control). It was obvious that there would be considerable fluctuation in signal strength between channels and, perhaps due to varying reception conditions, on any given channel. AGC (called APC or automatic picture control by Pye) was the obvious solution and reigned supreme on most of the Pye range throughout the fifties.

A common chassis was often used with price variations according to CRT size and cabinet styling. In the mid to late fifties Pye offered an interesting range, which included a version of the VT4 in a "Continental" style cabinet. Meanwhile the VT4 was available in 17" size and known as the VT7.

Later a distinctive range emerged, designed by Robin Day. There was the famous Pye "Continental" again but a number of sets, usually with 17" tubes, sported light wood veneer cabinets in console, consolette ("Lowboy") and table versions with printed circuit main chassis (boasting "Pye Printed Circuit Reliability" from the "Centre of Scientific Research" at Cambridge, where they originated). Since Mullard were by now making tubes with a slightly tinted faceplate, the famous "black screen" introduced by Pye at the start of the decade disappeared (later to reappear briefly in the dramatic ITT-KB "Deep Scene" television in the late sixties).

Returning to circuit techniques, the 405 line system used positive-going picture modulation. For gated AGC using valve circuitry, complex designs were evolved. The late fifties and early sixties saw the set manufacturers struggling, though, partly for political reasons, partly due to a saturating market. More features were needed at budget prices. The 110-degree "slimline" CRT appeared ("The Slender Sets You'll Love to Live With," said CRT as it introduced the BT302 range) but gone was gated AGC. Instead a different circuit feature was exploited. The large negative bias at the grid of the sync separator valve was largely proportional to overall signal strength and was thus harnessed directly to bias the IF stages. Thus a large signal resulted in greater bias being fed back to the early stages to reduce the gain. It was known as "Mean-level" AGC and its deficiencies were partly compensated by using AC coupling to the CRT.

Mean-level AGC worked fairly well but did nothing to improve the perceived quality of TV transmissions. On scenes with average picture content the picture seemed normal but on bright scenes there was a tendency to excessive contrast - a factor which soap powder commercials exploited - whilst night scenes took on a 'grey' appearance. When black level was transmitted the raster was most definitely visible as a "grey screen".

MORE ON TEST CARDS AND PICTORIAL SLIDES

by Malcolm O'Neill

The slides that were used by the BBC from about 1957 for their experimental colour test transmissions on the 405 line NTSC system from the Crystal Palace transmitter, I seem to remember being used in the mid 1960s on BBC2 trade tests. These views included the well known Eskimo Nell, pair of beach sandals, old-style telephone kiosk, Swiss clock repairer, woman in a flowery hat, coffee/tea pot, plus many others.

In mid 1964, I can recall seeing trade tests on BBC2 for the very first time in the London area and was quite pleased to find that test card "C" was still being used, albeit with CH. 33/625 LINE ident in black with numerical values beside each frequency grating. I can also remember the colour bars being radiated for short periods and the Eskimo Nell slide being shown in the late afternoons. This would then be followed by a trade test film which always seemed to be the now famous National Benzole film *Journey Into The Weald of Kent*, narrated by the late and great Sir John Betjeman. This was of course used later on in the 1960s and early 1970s as a trade test colour film.

When the practice of using slides ceased on the two 405 channels and test card "C" was replaced by "D" (19th April 1964), the use of slides on BBC2 continued until the arrival of colour and test card "F" a few years later.

On the ITA in the London area on channel 9 from the Croydon transmitter, from the mid-1950s (possibly 1955?) until April 1964 two pictorial slides were used in the trade test schedules and shown on alternating days with test card "C"; this was common practice in the other ITV regions too. These b & w stills were supplied by Marconi and distributed around the various ITA transmitters; they were of a very high quality indeed.

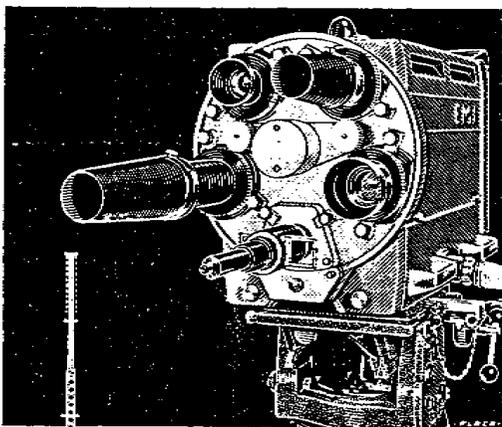
In the early days I remember two views being radiated. The first was a very pleasing scene of Tower Bridge and the other was of boats on the River Thames approaching a lock (I think). In about 1962 these were replaced by two more slides and the views this time were of the Sphinx with Waterloo Bridge in the background and another of Windsor Castle with River Thames in the foreground complete with swans! The Sphinx still would be shown on Tuesdays, Thursdays and Saturdays, whilst the Windsor Castle slide would be used on Mondays, Wednesdays and Fridays.

Neighbouring Southern ITV also used slides and the views I remember were of a village scene (possibly somewhere in Hampshire or Sussex) and another of a boat. I understand from various sources that the latter was sometimes used in later years during the IBA Engineering Bulletins although I stand to be corrected on this. I can only ever recall one slide being used on the Anglia area transmitters and that was a view of a windmill (no doubt in Norfolk). These slides had a very strong regional flavour and featured local landmarks.

When the use of slides on trade tests ceased on BBC1 and ITA in April 1964, life did tend to become somewhat boring and predictable visually, although of course the music played made up for this loss - but that is another story! However, there were the occasional oddities and in late 1965 during an afternoon trade test on ITA Croydon on ch. 9, I can remember Test Card "D" being replaced for one whole hour by Marconi Resolution Chart No. 1 with usual music still

being played. To this day I still have not discovered why this particular pattern was shown. In early 1971 another interesting event took place when the new Philips electronic test pattern (PM5544) was radiated experimentally on BBC1 and 2 and on the ITA (one week on each channel). I did manage to take a rather poor "off-air" photograph of it when it was used on London ITV, and at that time it was quite a novelty to see an electronic test card, although it could never take the place of the extremely pleasing test card "F".

The colour slides that were used by the IBA in the early 1970s were supplied by various organisations and although shown for much shorter periods in the morning trade tests with test card "F" (I think about five minutes?) they were most welcome. Unfortunately, due to excessive programming these slides were to be very short lived and the amount of time in general devoted to the test card on the IBA network was to diminish rapidly and so a very fascinating era was to draw to a close. It would be really nice to see those test cards and slides again.



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405 LINE TV: THE FINAL SEVEN YEARS

Brian Renforth recalls some memories

Up to 1970 as a young child we used a Defiant 9A6IU dual standard receiver for brilliant reception of BBC1 on channel 5 and Tyne Tees Television on channel 8 in a location in County Durham. BBC-2 when it became available was poorly received with the common belief at the time that 625-line UHF pictures gave inferior results to VHF 405. Well, the day came where I noticed the other two services situated close to BBC-2 at similarly poor quality. Little did I know at the time that the Defiant set would be replaced by an early Thorn 1500 set for poor results on all three 625-line services! The sad day arrived where the Defiant went - it was not a very reliable set but most interesting, having the 405/625 switch at the side, a conventional VHF turret tuner but the UHF tuner below was a small knob which had a small window above that changed colours when the dial was rotated. Does anyone out there still have such a set?

Magazines such as **405 Alive** have helped re-promote the 405 line system. Between 1970-78 I was deprived of 405 lines and was eager to own a set capable of receiving such signals. So a GEC 2017 was obtained in April 1978 while living in Chippenham, Wilts.. Such 405 memorabilia immediately returned with this interesting set which also featured FM radio. Reliability was once again questionable but it lasted till mid-1980, when it finally gave up the ghost and I was too young to understand receiver repair at the time.

Signals available on a daily basis were Crystal Palace ch. 1, North Hessary Tor ch. 2 (weak), Rowridge ch. 3 (watchable), Wenvoe ch. 5 (excellent), HTV (general service) Bath ch. 8/St Hilary ch. 10, HTV Cymru ch. 7, Southern (Chillerton Down) ch. 11, ATV Membury ch. 12 and BBC Cymru (Wenvoe) ch. 13. Troops also gave superb Croydon reception on ch. 9 using a home-brew "V" made from old curtain rails!

In that area the 405 channels differed significantly from their UHF equivalents. HTV on chs. 8 and 10 was an all-English mixture of programmes made by HTV West and Wales. For example West's "Report West" occupied the part 1 slot where "Report Wales" occupied the part 2 slot, so HTV West was never available exclusively on VHF. ITV schools on those channels would often feature Welsh programmes incidentally. On another occasion during "House Party" Southern on ch. 11 lost vision and was replaced by a chequerboard pattern. On checking UHF this was proven to be a VHF-only fault.

In those days, where reception conditions permitted, the results, especially at Band III were absolutely superb, better than 625 lines I thought for sharpness and definition. It was really only between 1982 to the switch-off, where faults were allowed to occur, that produced defects, especially at Band III with missing picture elements and all that. I was slightly disappointed with my return to 405 lines, however, thinking Test Card "C" would still be shown by BBC1!

In 1982 a KB VC52 was obtained to catch the last few years of 405 lines. Membury was still on the air at the time I left Chippenham in August 1982 and I recall that Chillerton Down (now TVS South) ch. 11 still produced excellent results. Dover ch. 10 (TVS South East) also came p well during troops. Before I forget, in 1979 BBC1 West ch. 5 Wenvoe would cut abruptly to party political broadcasts by Plaid Cymru during "Points West" and on one occasion BBC Wales/Cymru pictures were transmitted with BBC West sound.

Something similar happened with UHF in December 1977 when HTV West relayed HTV Cymru sound over West pictures and vice versa for a while!

So another move in 1982 brought me down to Devon. A 23" Ferguson 3655 was donated but this had been stored in damp surroundings for some time. That set uses the Thorn 1400 chassis and the rest is history, as I still have the set today, along with a HMV 2640 model. Once the set was restored (it was love at first sight to be honest) I was amazed by the brilliance of the picture quality of North Hessary Tor ch. 2, but Stockland Hill ch.9 at that time started to show problems experienced with the ITA (!) network at the time. Due to lack of space this was the only surviving set from the Torquay days on my move north in January 1984. An HMV 2640 was restored, giving good results on Pontop Pike ch. 5 but Burnhope ch. 8 looked as if it was suffering badly.

The time of the final switch-off was a very sad day for 405 enthusiasts everywhere seeing nothing the day after pictures were received. Neville Wandless, continuity announcer at Tyne Tees Television reported the closure of Burnhope ch. 8 stating the loss of an old friend who was getting rather old ...

Finally, viewers in the olden days needed a degree or an IQ of 200 to understand the HTV Wales and West edition of **TV Times**. Programmes were identified as shown below and the complicated line-up is explained here.

- * "HTV General Service & HTV West" = HTV West UHF and St. Hilary ch. 10 & Bath ch. 8.
- * "HTV West only" = HTV UHF only
- * "HTV General Service & HTV Cymru/Wales" = HTV Wales UHF and all VHF channels
- * "HTV Cymru/Wales only" = HTV Wales UHF and all VHF channels except St. Hilary ch. 10 & Bath ch. 8.

This happy situation lasted up to 1981 when St. Hilary 10 & Bath 8 took the HTV West programmes of the UHF channels. Ironic perhaps that HTV West got its own 405 service, albeit briefly!

AUTUMN 1955 COLOUR TESTS

The questionnaire reproduced here was sent to TV receiver manufacturers and others during autumn 1955 and was intended that collaborating viewers could report their findings.

This particular copy was sent to Cossor Radio & TV, and was contributed by Malcolm George. It is a photocopy of a stencil-duplicated original, so it may not reproduce very well. I hope it will be legible, however.

QUESTIONNAIRE A

General Instructions

1. If possible please make a complete series of observations during one transmission. If some of the tests are missed leave the form blank at the appropriate place.
2. Please endeavour to keep the sound and picture settings the same during any one series of tests. In particular do not alter the sound volume control after the line-up during Test 2. Any adjustment of the picture subsequent to Test 2 should be kept to a minimum.
3. Any viewing distance may be chosen for a particular transmission, but, if you have a viewing distance which you consider normal please carry out the tests at this distance. It is important to maintain this distance constant during any one series of tests except during Test 2 when any other desired distance may be used.
4. The lighting conditions in the room during the tests should be those you normally use for programme viewing.
5. Please send your completed questionnaires in batches of a complete week through the organisation to which you belong:

The Secretary,
B.R.E.M.A.,
59 Russell Square,
London, W.C.1.

In the case of B.B.C. personnel, please send to H.D.D.

EXPERIMENTAL COLOUR TELEVISION TRANSMISSIONS FROM ALEXANDRA PALACE

AUTUMN 1955

1. Object of Tests

Experimental colour transmissions to be broadcast from Alexandra Palace during the Autumn of 1955 will use a variant of the N.T.S.C. colour system adapted for British standards* and will have two main objects:

- (i) To see whether this system can give a colour picture of an acceptable standard with sufficient reliability and at an economic cost from both the transmission and the reception viewpoints.
- (ii) To see whether or not the system is compatible.

The probability is that the picture will be good enough on the colour reproduction point of view, and in any case it will not be possible to do many tests on this until satisfactory colour receivers are available in adequate numbers. The initial tests are therefore bound to concentrate rather on the compatibility of the scaled-down N.T.S.C. system. The principal points on which information is required are:

1. The visibility of the dot structure on existing black and white receivers.
2. Whether the "buzz" introduced into the sound of black and white receivers is objectionable.
3. Whether the tonal gradation of a typical colour picture is satisfactory when viewed on black and white receivers.
4. Whether the transmission of a picture on fixed frame and line frequencies will give satisfactory reception on normal receivers in the hands of the public, particularly at times when the power supply frequency is varying.
5. Whether the presence of the colour burst on the post-sync. line suppression is visible on black and white receivers.
6. Whether the presence of colour information at the end of a scanning line causes interference with the synchronising of black and white receivers.
7. Whether the presence of a phase-corrected notch filter in the luminance channel produces any deterioration in the quality of the pictures seen on a black and white receiver.
8. Whether the presence of the phase network, which is inserted between the output of the coded colour signal and the input of the vision transmitter to correct the response of colour receivers, has any noticeable effect on the quality of pictures seen on black and white receivers.

*The colour signal will be in accordance with the specification given in the document entitled "Specification for Colour Television Standards for Experimental Transmissions from Alexandra Palace", issued by the B.B.C. and dated 25th March, 1955.

The first two points are well-known and require no explanation. The third point arises because the gamma correction in the N.T.S.C. system is applied to the R.G. and B. components and these signals are then coded to give the luminance signal. This is not the same thing as if the luminance signal were gamma corrected, and therefore when the signal is applied to a normal black and white receiver, the overall contrast is not correct. The presence of the colour sub-carrier acts to rectify this defect to some extent. This is important as it may influence a decision whether the colour information should be in band or out of band.

Points 4 and 5 are self-explanatory.

As regards point 6, the low bandwidth of the colour information will cause some of this information to continue after the cessation of the associated luminance information, and for a colour at the end of a scanning line this could cause the colour sub-carrier to extend into the synchronising period, or at least into the pre-sync. suppression period. It is desired to test this particular aspect, since, if it causes trouble, a minor redesign of the colour system would be necessary.

Point 7: the presence of a phase-corrected notch filter in the luminance channel improves the colour picture by removing the components of the luminance signal which fall in the colour band. It is necessary to see whether the presence of this filter will distort the pictures viewed on a black and white receiver.

2. Hours of Transmission

Monday and Tuesday 23.00 - 24.00
Wednesday, Thursday and Friday 13.15 - 14.15

The day-time transmissions may have to be cancelled occasionally if programme commitments make this necessary, but the late night tests will always be radiated. They will begin at 23.00 or a quarter of an hour after the end of the public transmission, whichever is the later. It is intended that the tests for which this Questionnaire A is designed shall last for a period of four weeks and will be repeated unchanged on every transmission. This period of four weeks may be extended or curtailed if experience shows this to be necessary. It is expected that the tests will begin on Monday, 3rd October.

3. Sequence of Tests

- Weeks 1, 2, 3 and 4 Compatibility tests with the waveform radiated exactly as in the published specification. If found necessary, these tests could be extended beyond the four week period.
- Weeks 5 and 6 Observation of the effect of a notch filter in the luminance channel and of the effect of the phase compensating network in the input to the vision transmitter.
- Weeks 7 and 8 If found necessary as a result of the tests during weeks 1, 2, 3 and 4, compatibility tests would be repeated with the chrominance information reduced by 3 dB.
- Week 9 If found necessary as a result of the tests during weeks 1, 2, 3 and 4, compatibility tests would be repeated with the burst amplitude reduced by 6 dB.

The tests during weeks 1, 2, 3 and 4 would be the same for each period of transmission. The suggested transmission schedule is shown on Page 3. For obvious reasons it is not yet possible to draw up transmission schedules for the weeks following the initial compatibility tests

4. Transmission Schedule for Weeks 1 - 4

<u>Test No.</u>	<u>Time</u>	<u>Vision Signal</u>	<u>Sound Signal</u>	<u>Purpose</u>
1	"0"	Colour Test Card	Tone	Line-up of colour receivers. Adjustment of gain of black/white receivers.
2	+ 5 mins.	Test Card C	Music	Line-up of black/white receivers and assessment of performance.
3	+10 mins.	Colour slides 1 to 10. Colour information switched on and off at 15 sec. intervals.	Carrier on. No modulation.	Assessment of: 1. "Buzz" on sound. 2. Dot pattern interference. 3. Effect on contrast of colour sub-carrier. 4. Synchronising troubles. 5. Burst interference.
4	+20 mins.	Colour slide 11	Music. Sound carrier switched on/off at 15 sec. intervals.	Assessment of sound signal interference on picture.
5	+23 mins.	Black/white caption.	Carrier on. No modulation.	Assessment of burst inter- ference on most critical picture.
6	+35 mins.	Colour film.	Accompanying sound.	Assessment of: 1. "Buzz" on sound. 2. Dot pattern interference. 3. Effect on contrast of colour sub-carrier. 4. Synchronising troubles. 5. Burst interference.
7	+45 mins.	Same or similar film without colour information.	Accompanying sound.	Comparison with Test 6.

5. Explanation of Compatibility Tests

The tests will be radiated by the low power transmitters at Alexandra Palace so that considerable re-adjustment of sound and vision gain will be necessary during the radiation of the line-up signals. Each test will be announced in sound and the colour slides will be numbered.

For the benefit of those observers whose work has not yet brought them into contact with an N.T.S.C. type of colour signal, a brief and simple explanation of its principal characteristics follows:

The luminance information occupies the frequency band up to 3 Mc/s in exactly the same fashion as on the present black/white transmission. The synchronising information is identical in form except for the addition of a few cycles of the colour sub-carrier on the post sync. suppression period. Two pieces of colour information are used to modulate a colour sub-carrier at 2.66 Mc/s in both amplitude and phase, the carrier itself being suppressed. At the receiving end this colour information is recovered by adding a local carrier at 2.66 Mc/s which is locked in phase and frequency by reference to the colour synchronising burst. This colour information is arranged in such a fashion as to produce minimum visibility on a monochrome receiver. In particular, when there is no colour information in a particular part of the picture no colour signal is sent. In coloured areas, the amplitude of the colour signal depends upon the degree of saturation of the colour. It is the purpose of these tests to find out how much this additional colour information interferes with the picture and sound as observed on a monochrome receiver.

TEST 1

This is a radiation of a colour test card with accompanying tone. It is intended primarily for the adjustment of colour receivers but it can be usefully employed by observers on black/white receivers to make the required adjustments on vision and sound gain. It is designed primarily to check the registration of colour displays and the correct phasing of the colour sub-carrier generated in the receiver.

TEST 2

This is a standard radiation of Test Card 'C' and accompanying music for adjustment and lining-up of black/white receivers. Once the desired sound volume has been decided, this should not be altered during the course of the tests. Slight readjustment of the picture may well be necessary but this should be kept to a minimum. A question is asked to establish the performance of the receiver in general terms.

TEST 3

The ten colour slides to be radiated during this test have been carefully selected to provide a wide range of colour subjects. Slide 10 has a special characteristic in that it has a highly saturated colour at the extreme right hand edge occupying a few lines. This is to establish whether the presence of a strong colour sub-carrier immediately prior to the synchronising pulse causes line sync. pulling. The total colour information is switched on and off at 15 second intervals so that an effective comparison can be made of the effect of this information on the picture and sound. Questions have to be answered in respect of the performance of black and white receivers regarding:

- (i) Buzz on sound.
- (ii) Effect of dots.
- (iii) Effect on picture contrast.
- (iv) Synchronising difficulties.
- (v) Visibility of colour burst.

TEST 4

Slide 11 has been selected to have large areas of colour information so that any beat pattern produced by interaction of the colour sub-carrier and the sound carrier will be present in large areas of the picture. The sound carrier will be switched on and off at 15 second intervals so that this pattern, if present, may be identified. The pattern will be stationary due to the fixed frequency relation between vision and sound carriers.

TEST 5

The slide is a caption with white letters on a black background and has been chosen as the most critical picture to reveal interference by the colour synchronising burst. This interference occurs during the fly-back time of the line time base and appears as a series of vertical white lines.

TEST 6

This is a colour film with full colour information. The questions are the same as for Test 5.

TEST 7

At the time of writing it is hoped that the test will employ the same film as in Test 6, transmitted without colour information. If not the same, a very similar film will be used so that a comparison can be made with the pictures received during Test 6.

Since the signal is not locked to the mains frequency, observers are asked to assess the annoyance caused by the presence of asynchronous hum and/or geometric distortion.

1001 NIGHTS OF TV

Alan Keeling reflects back on the compilation transmitted by Channel Four on 1st January 1991

Wasn't it great to see those lovely nostalgic black and white clips at the start of this three-hour presentation, featuring such diverse classics as the launch of BBC2 in 1964, the first "Doctor Who" episode in 1963, a "meddlesome" Ena Sharples in the first "Coronation Street", Steptoe & Son in Comedy Playhouse's "The Offer" in 1962, two contestants failing the "yes-no interlude" in "Take Your Pick", and three very young "Z Cars" policemen?

Now, that was interesting enough, but I was totally mesmerised when, under the umbrella title "Early Nights", on came a vintage ITC "Buccaneers" clip featuring a youthful Robert Hardy and a ten year old Jane Asher. Another extract showed Kenneth Williams in "Sword of Freedom", followed by a young Nicholas Parsons in "Robin Hood". I was most surprised to see Katie Boyle guesting on "White Hunter", and even more at Judy Dench and Alan Bates in that "Four Just Men" clip.

Now this is the point where I complain, and I mean, complain. It's great to see these lovely old monochrome clips from those great 'fifties telly swashbucklers. But nobody ever seems to want to revive them again as series. Does this mean they are just going to rot away in ITC's archives, to be used occasionally for thirty-second clips in shows like "Telly Addicts"? Or hopefully will some programme company boss decide that 1991 is the year of the vintage TV swashbuckler?

Now that I've got my breath back, wasn't it also great to see that old wide ATV ident, after a long absence, and then that trailer for "Emergency Ward Ten", followed by promo trailers for "The Champions" and "The Saint"?

So, c'mon ITC. How about re-promoting "Sir Lancelot", eh?

[Apology: this article was submitted earlier this year and has now surfaced to the top of the pile!]

NOTES AND QUERIES

THE MYSTERY OF CHANNEL 14

A definitive answer on this can now be supplied, thanks to Mr Ronald Sandell, retired ex-Head of Service Planning in the BBC. He is currently writing the history of service planning in the BBC.

Anyway, during the 1960s there was pressure to expand the number of TV channels,

Old film reels of animatics can occasionally turn up in junk shops, you have got to keep your eyes open. They will not be expensive, say a pound or two.

ITV CONTINUITY

Here's a question that needs a definitive answer before memories cloud over! Until recent times several regional ITV contractors (e.g. Southern Television) opened transmissions with a film of pleasant scenes in their coverage area, accompanied by specially-composed music. In most cases (certainly in the case of Southern Rhapsody), the music ran longer than the film.

So, given that the scenic views were played at the end of the music, what visual image started the musical sequence? And when the film faded out, exactly what did it fade to? In the case of Southern, it had been suggested that the music started off as a background to the transmitter tuning signal, but if that was originated at the transmitter, it would have required human intervention and very accurate timing to switch to the studio output (i.e. the film) at the right moment. Furthermore, it would be difficult to achieve this without momentary picture break-up. But someone must know!

IRISH TRADE TESTS

Does anyone recall seeing trade test transmissions with regional opt-outs on BBC in Northern Ireland during the Test Card C and D days? I am curious to know what music and test cards are used in the republic by RTE today. [John Fox].

Can anyone remember the format of RTE test transmissions say during the 1960s? Did they play albums straight through or did they, like the ITA, cut to tone after 30 minutes? [AE].

Answers to the editor please!

CRT DATA

On the next few pages we reproduce what we hope is a handy reference guide to television picture tubes. The chart is by Geoff Arnold of **Radio Bygones**, while the other data is reproduced with acknowledgement to the original manufacturers.

e.g. M W 4 3 - 6 9

or
e.g.

D	G	7	-	6
---	---	---	---	---

V8

MULLARD

Cathode Ray Tubes

OLD SYSTEM

<u>CONSTRUCTION</u>		<u>PHOSPHOR COLOUR</u>	<u>SCREEN SIZE</u>	<u>SERIAL NUMBER</u>
<u>FOCUS</u>	<u>DEFLECT</u>	A } Blue	The diameter or diagonal of the luminescent screen in cms.	
A ES	Mag	B } Purplish Blue		
D ES	ES	C Purplish Blue		
M Mag	Mag	D Orange		
		E Yellow Green		
		H Green		
		J Blue		
		K Green		
		L Orange		
		M Purplish Blue		
		N Yellow Green		
		P Purplish Blue		
		U Blue		
		V Purplish Blue		
		W White		
		X Tricolour Screen		
		Y Yellow Orange		

PRO-ELECTRON

Cathode Ray Tubes

e.g.

A 4 7 - 1 3 W

<u>PRIMARY APPLICATION</u>	<u>SCREEN SIZE</u>	<u>SERIAL NUMBER</u>	<u>SCREEN PROPERTIES COLOUR GROUP</u>	<u>SCREEN PROPERTIES SERIAL LETTER</u>
A Domestic TV D Single Trace Oscilloscope E Multiple Trace " F Direct viewing radar L Display storage M Professional TV (direct viewing) P Professional TV (projection) Q Flying spot scanner	The diameter or diagonal of the luminescent screen in cms.	Two or three figures	A Purple B Blue D Blue-Green G Green K Yellow-Green L Orange R Red W White X Tri-colour screen Y Yellow	Indicating colour shade/persistence etc.

MAZDA

Cathode Ray Tubes e.g.
for Television

C R M 1 7 0 5

<u>CONSTRUCTION</u> <u>MONOCHROME TUBES</u> <u>FOCUS DEFLECT</u> CME E/S Mag CRM Mag Mag <u>COLOUR TUBES</u> CTA	<u>SCREEN SIZE</u> The overall diameter or diagonal of the screen in inches.	<u>SERIAL NUMBER</u> 	<u>SUFFIX LETTER</u> Indicates some modified feature
--	---	------------------------------	---

Mullard cathode ray tubes are normally registered with Pro-Electron. The type number consists of a single letter followed by two sets of figures ending with one or two letters.

The first letter indicates the primary application of the tube:

- A — television display tube for domestic applications.
- D — oscilloscope tube—single trace.
- E — oscilloscope tube—multiple trace.
- F — radar display tube—direct viewing.
- L — display storage tube.
- M — professional television or display tube (except radar)
—direct viewing.
- P — professional display tube—projection.
- Q — flying spot scanner.

The first group of figures indicates the diameter or diagonal of the luminescent screen in cm:

- Thus 7 represents a 7cm (3in) screen.
- 13 represents a 13cm (5in) screen.
- 47 represents a 47cm (19in) screen.
- 59 represents a 59cm (23in) screen.

The second group of figures is a two- or three-figure serial number indicating a particular design or development.

The second group of letters indicates the properties of the phosphor screen.

The first letter denotes the colour of the fluorescence (or phosphorescence in the case of long or very long afterglow screens) according to the regions of the Kelly Chart of Colour Designations for Lights, where applicable:

- A — Reddish-purple, purple, bluish-purple.
- B — Purplish-blue, blue, greenish-blue.
- D — Blue-green.
- G — Bluish-green, green, yellowish-green.
- K — Yellow-green.
- L — Orange, orange-pink.
- R — Reddish-orange, red, pink, purplish-pink, purplish-red, red-purple.
- W — White.
- X — Tri-colour screen.
- Y — Greenish-yellow, yellow, yellowish-orange.

The second letter is a serial letter to denote particular phosphors. For the 'standard' television picture tube phosphors, the letters 'W' and 'X' are used without a second letter. The current Mullard phosphors are listed overleaf.

An internal graticule is indicated by a two-figure suffix separated from the final letter by an oblique stroke, for example, D13-450GH/01.

Examples:

- A47-26W Domestic television picture tube with 47cm (19in) screen.
- D7-190GH Single trace oscilloscope tube having 7cm screen with phosphor 'GH'.

OLD SYSTEM

Some earlier cathode ray tubes have type numbers consisting of two letters followed by two sets of figures.

The first letter indicates the method of deflection and focusing:

- A — Electrostatic focusing, magnetic deflection.
- D — Electrostatic focusing and deflection.
- M — Magnetic focusing and deflection.

The second letter indicates a particular phosphor. Letters in use are listed below.

The first group of figures immediately following the letters, indicates the diameter or diagonal of the luminescent screen in cm.

The second group of figures is a serial number indicating a particular design or development.

Examples:

- AW53-88 Cathode ray tube of 53cm screen diagonal having a 'W' phosphor and employing magnetic deflection and electrostatic focusing.
- DH3-91 Cathode ray tube of 3cm screen diameter having an 'H' phosphor and employing electrostatic deflection and focusing.

DESIGNATION OF MULLARD PHOSPHORS

<i>Pro-Electron designation</i>	<i>Old system</i>	<i>Fluorescent colour</i>	<i>Phosphorescent colour</i>	<i>Persistence</i>	<i>JEDEC designation</i>
BA	C	Purplish-blue	—	Very short	—
BC	V	Purplish-blue	—	Killed	—
BD	A	Blue	—	Very short	—
BE	B	Blue	Blue	Medium short	P11
BF	U	Blue	—	Medium short	—
GB	M	Purplish-blue	Yellowish-green	Long	P32
GE	K	Green	Green	Short	P24
GH	H	Green	Green	Medium short	P31
GJ	G	Yellowish-green	Yellowish-green	Medium	P1
GK	G*	Yellowish-green	Yellowish-green	Medium	—
GL	N	Yellowish-green	Yellowish-green	Medium short	P2
GM	P	Purplish-blue	Yellowish-green	Long	P7
GN	J	Blue	Green (Infra-red excited)	Medium short (fluorescence)	—
GP	—	Bluish-green	Green	Medium short	P2
KA	—	Yellow-green	Yellow-green	Medium	P20
LA	D	Orange	Orange	Medium	—
LB	E	Orange	Orange	Long	—
LC	F	Orange	Orange	Very Long	—
LD	L	Orange	Orange	Very Long	P33
W	W	White	—	—	P4
X	X	Tri-colour screen	—	—	P22
YA	Y	Yellowish-orange	Yellowish-orange	Medium	—

*Used in projection tubes.



NOMENCLATURES for TELEVISION PICTURE TUBES

Two type nomenclature systems are currently in use for MAZDA Picture Tubes. Where applicable, tubes are now dual branded with both MAZDA and European type numbers
e.g. CME1908/A47-14W

MAZDA SYSTEM

Television type picture tubes are designated by a letter classification followed by a number.
e.g. CME2013 R

Letters

- CME** Indicates a monochrome tube having magnetic deflection and electrostatic focus
- CRM** Indicates a monochrome tube having magnetic deflection and focus
- CTA** Indicates a tube for colour television display. (Not now in use for new tubes)

Numbers

The first part of the type number is used to identify the size of the picture tube measured in inches. For round tubes the number indicates the overall diameter of the face, and for rectangular tubes the overall diagonal of the face of the tube. The second part of the type number is a serial number to distinguish tubes in the same size group.

Suffix Letter

A or B, etc., may be added in order to indicate a tube with modified features, as for example a tinted front face as compared to clear glass, or higher voltage ratings.
S or R indicates the type of Sparkguard base fitted.

EUROPEAN SYSTEM

The type nomenclature consists of one letter and number joined by a hyphen to a number and a final letter, e.g. A50-120W/R

First Letter

The first letter "A" indicates a Television cathode ray tube for entertainment applications

First Number

This first number indicates the faceplate dimensions in cm. For rectangular screens the faceplate diagonal and for round screens the diameter

- 47** Represents a 47 cm (19 in) faceplate
- 50** Represents a 50 cm (20 in) faceplate
- 59** Represents a 59 cm (23 in) faceplate
- 61** Represents a 61 cm (24 in) faceplate

Second Number

This second number is a serial number indicating a particular design or development

Final Letter

The final letter indicates the properties of the phosphor screen. For television cathode ray tubes with a white phosphor "W" will be used and for tri-phosphor screens "X" will be used.

Note: Formerly the letter indicating the screen properties followed the initial letter

Suffix Letter

S or R after an oblique stroke indicates the type of Sparkguard base fitted

RECORDING NOTES

VIDEO

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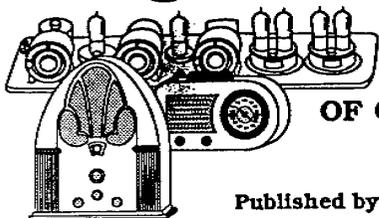
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Two faults here. One is a ghost image caused by TV waves "bouncing" off some object. The picture also needs re-centring

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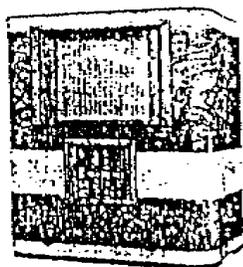
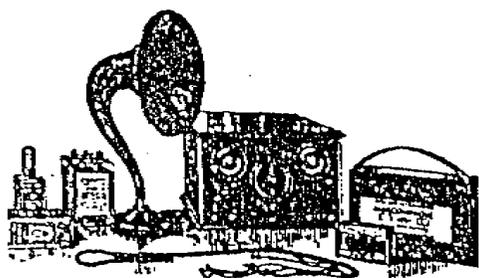
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CLANDESTINE WARFARE. James Ladd and Keith Melton. This interesting and informative book studies the weapons and equipment employed by the SOE and OSS during World War II. Includes a chapter on radio communications equipment, with photos of transceivers, etc. With a chapter on collecting military and industrial intelligence, selection and training, and sabotage. Brand new. Published £14.95, our price £9.95 plus £1.25 p&p.

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A listing of hundreds of unused/new valves of all types 1925 - 1975, including most television valves. SAE for list with your requirements.

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MARKET PLACE

This is the area for buying and selling all kinds of things to do with television, new or old.

Want to join in? Then send us your advertisement: there is no charge, although if space is short we may have to "prune" out the least relevant adverts or hold them over until next time.

Advertisements are normally inserted for two issues: please indicate if you wish your ad. to run longer. There's no extra charge but we try to avoid repeating "stale" material.

Traders are also welcome here but we do require people who are commercial dealers to state this in their advertisements. The letter (T) at the end of an advertisement indicates that the advertisement is "trade".

Test card music is subject to the same rules of copyright as other recorded works and it is unlawful to sell amateur or professional recordings of same. *405 Alive* will not accept any advertisements from persons engaged in this activity.

Also please note that we do not accept any responsibility for dealings resulting from these advertisements, which are published in good faith. Replicas and reproductions may be difficult to identify, so beware of any items "of doubtful origin" and assure yourself of the authenticity of anything you propose buying. And try to have fun, after all it's only a hobby!

We have had a number of ads requesting *405* line recordings and circuit diagrams for standards converters and Band I modulators - why haven't we printed them? Well, the ads for videotape recordings were getting out of hand and there was no response to our idea of a clearing house. Building a standards converter is a major undertaking (parts are likely to cost £300 minimum) but one our members who has built one is now working on a set of printed circuit boards and parts lists. Watch this space! And two designs for modulators have been published in *Television* magazine - see issue 1 of *405 Alive*, pages 10/11. We can supply photocopies at 10p a page.

Please note that we are not in a position to supply circuit diagrams, service sheets or other information on equipment. For this you need to read the small advertisements below and those published each month in *Television* magazine. But we will also print requests for help in this section of the newsletter. Most valves and other components are not hard to find: we recommend **Billington Valves** (0403-210729), **Kenzen** (021-446 4346), **Wilson Valves** (04575-6114) and **PM Components** (0474-560521). For hard-to-find transistors we have heard of **AQL Technology** (0252-341711) **The Semiconductor Archives** (081-691 7908) and **Vectis Components Ltd.** (0705-669885). Would you like to recommend other firms? If you think a firm gives good service please tell us all!

VINTAGE TVs, radios and testgear repaired and restored. Personal attention to every job and moderate prices. Estimates without obligation - deal with an enthusiast! (BVWS and BATC member) Please include SAE with all enquiries - thanks. Dave

Higginson, 28 High Street, Misterton, Doncaster, Yorks., DN10 4BU. (T). Tel: 0427 - 890768.

FOR SALE: Valves for your *405* line TV (and other equipment) can be obtained from

Kenzen, Unit 9, 16-20 George Street, Balsall Heath, BIRMINGHAM B12 9RG. Send SAE for quotation by return or telephone 021-446 4346 or fax (new number - please note) 021-446 4245. Many thousands of new, boxed valves at unbeatable prices. We can also supply components, e.g. "spot-tip-body" colour coded resistors, wirewound resistors, droppers, EHT capacitors, etc. etc. Send for our latest 26 page catalogue of goodies - only £1 plus A4 size SAE with 32p stamp please. Interesting items available now include: ex-IBA UHF television transmitter (parts of), about 1/2 tonne of ex-BBC video and audio equipment (mostly 19" rack mounting) and lots of 19" video monitors. Callers welcome but please telephone the warehouse first.(T)

FOR SALE: Printed circuit board for David Looser's design of Band I modulator. Size 160 x 100 mm, undrilled. £10 including post and packing. Dave Boynes, 12 The Garth, Winton, Blaydon, NE21 6DD. Tel: 091-414 4751.

FOR SALE: I have a new slide-to-video converter, which means I need to sell my old one. Tamron Fotovix III slide and photo negative to video converter, with 3x zoom lens for selective cropping and magnification of images. Absolutely as-new condition, complete with all accessories and paperwork as supplied. Costs about £499 in the shops, sacrifice at £299 - act fast!

* Illuminated dioscope for I.O. camera, new condition, with power supply for lamp. Slides onto lens, takes two 2" x 2" slides (latter not supplied but may be available at cost). £50 or swap.

* Old copies of the **Radio Times**, pages a bit yellow and brittle round the edges but complete with all radio programmes. 6.11.36 and 16.12.49 (North of England edition). £5 each including postage. Andy Emmerson G8PTH, 71 Falcutt Way, Northampton, NN2 8PH.

FOR SALE: Parts to make your own modulator. Rediffusion modulator cans, unmodified - you need a pair for sound and vision. £10 a pair, data supplied (only three pairs available). Crystals for channel B1, pair of sound & vision £12 (only two pairs

available). Black plastic case (two available) £3. All prices include inland postage. Because quantities are limited please order soon and either ring first to check availability or send SAE for return of your cheque if sold out. Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. Tele: 0604-844130.

FOR SALE: Considerable amount of equipment including Advance 405/625 standard TV IF Generator, AVO electronic test meter, Hartley dual beam scope, Cossor 339 dual beam scope, parts of WW2 radar indicator, electrolytic condenser tester/reformer, Marconi-Ekco TF144F signal generator plus spares, Cossor 1940s sig. gen. , Solartron CD518 scope, waveform generator 1405B (1950s), pre-war Taylor valve tester, Murphy V240, RGD 6014/3T, Shibaden 1/2" reel-to-reel video recorder, tapes, plus various 30s/40s/50s radios and lots more. Some items are from the now demolished Decca factory. Most have been stored untouched due to lack of time. Sensible prices. Phone me, Alastair Jones, at work on Shrewsbury 0743-232391 for prices/condition.

FOR SALE: Bush DAC90A bakelite radio, good external condition, no knobs or valves. IF transformer missing, offers. HMV 445 and companion VHF adapter, HMV 1252 working £50. Ring Alan on 0424-893078 (East Sussex).

FOR SALE: Pye 405 line industrial camera (no lens) with large valved CCU, mauve/light blue colour scheme. Not working. Open to offers. WANTED: 2" x 2" slide of Test Card C; McMichael MP17 or MP18 transportable TV. Chris Field, 26 Brookdale Road, Weddington, Nuneaton, Warks., CV10 0BP. - Tele: 0203-326832.

FREE - YOUR AD COULD BE HERE
There's no charge at all if you're a subscriber ...

INTERESTED in telephones and telegraphs? The Telecom Heritage Group is for you then, with four magazines and a swapmeet a year. Send SAE to THG, P.O. Box 499, Bishopbriggs, Glasgow, G64 3JR.

WANTED: I am looking for examples of early colour TVs, especially dual-standard Bush, Murphy, Thorn, Pye or Decca models. Anything unusual would be of particular interest. I am also seeking examples of two early post-war GEC models, BT7092 and BT2147, and of course anything pre-war (isn't everyone??). My telephone number is Coddenham 0449 79-366. Mike King, Crowfield Cottage, Stone Street, Crowfield, Ipswich, Suffolk, IP6 9TA.

WANTED: Mirror-lid TV, any condition considered. Details and price to Barrie Portas, 4 Summerfield Avenue, Waltham, Grimsby, DN37 0NH. Tel: 0472-824839.

WANTED: buy/borrow/swap old TV programmes on 16mm film. I'm gradually building up an interesting archive! Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. 0604-844130.

WANTED: Peto-Scott 8" vision monitor (c. 1960-ish); *Basic Television* part 2 (Technical Press). Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH (tel: 0604 - 844130).

WANTED: Who wants to sell me a pre-war TV set? I can offer in exchange a Telehor Nipkow disc set of 1932. I prefer a table top set. I also wish to buy the GEC 9" television and radio receiver from 1947 (SETMAKERS page 307). I offer a good price for a good set (not a ridiculous price, I am still a collector). Rudi Sillen, Limberg 31, B-2230 HERSELT, Belgium. Tel: 010 32 14-546889.

WANTED: Pre-war TV, any make, any condition. Pye B16T. CRTs 3/3, 3/16 and 3/1. I can collect. Pre-war books on TV. Data on Ekco TX275. Please help me with standards conversion (625->405 and/or 625->819). If you have a Philips 663A or know of it, please exchange findings with me. Offered: help with documentation. Some crystals 41.5MHz at cost (£6 each plus postage, or I can bring them to a swapmeet). Jac Janssen, Hoge Ham 117d, 5104JD DONGEN, The Netherlands. Tel. (evenings) from UK: 010 31 1623-18158. Thanks!

WANTED: Pye V4 or VT4 TV, Pye broadcast equipment, the mauve and light blue valve type. What have you? Information on the Pye Broadcast Staticon camera, type 2130 D6Y. Need manual, lenses, any info. Michael Bond, 0733-53998.

WANTED: old **ATV Television Show Books**, number 2 and up. Also wanted 16mm opt. sound ATV logo, starts. Mr D.W. Probert, 16 Woden Road East, Wednesbury, West Midlands, WS10 0RG.

WANTED: ITV year books from first edition (?1962) to the last. Also prints/slides of test cards/tuning signals used by the BBC/ITA. Malcolm O'Neill, 80 Welbeck Road, Carshalton, Surrey, SM5 1TA.

WANTED: *The Authority's Transmitters* (an early ITV publication) and BBC television publicity handouts of the 1950s and 60s. Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH.

WANTED: OLD CAMERA TUBES and similar imaging devices of various types and age (and related data, etc.) sought for historic (!) collection. Particularly welcome would be an Orthicon, EMI 9831 vidicons, an Ebitron, an Image Isocon or a 1.5" vidicon. Tubes that are not operable are suitable, so if you replace tubes in cameras please don't throw the old ones away but contact Peter Delaney, 6 East View Close, Wargrave, Berks., RG10 8BJ (tel: Wargrave 0734-403121).

WANTED: Any 405 line video tape VHS or Betamax and any highly qualified electronic technician to make me a modulator to put sound and vision on old set. J. Pinner, 88 Macaulay Avenue, Great Shelford, Cambridge, CB2 5AF.

WANTED: 405-625 system switch slider for Thorn 1400 chassis (scrap chassis will do). Also new CRT type A59 25W/S 23" mono or equivalent (not urgently required but would be nice to have if ever needed!). Costs will be met. Write to Brian Renforth, 174 Helmsley Road, Sandyford, Newcastle-upon-Tyne, NE2 1RD.

SWAP: I have user handbooks for the Cossor models 930T and 934, also Bush TV24 (the last is a bit dog-eared). I'll be pleased to swap all three for the Bush TV22 instructions (I don't want to sell them). Andy Emmerson, 0604-844130.

WANTED: Cream rubber mask for VCR97 tube. Ring Alan on 0424-893078.

TELECINE (standard 8, super 8, 9.5 and 16mm) and 525/625 PAL/SECAM/NTSC standards conversion work. Personal service using professional equipment, by a 405 enthusiast at competitive prices. Send large SAE for full details or describe your specific requirements. We regret we cannot handle 405/625 conversions! Lionel Fynn, Plato Video, 70 Richmond Hill, Bournemouth, BH2 6JA. Tel: 0202-24382.

CALLING ALL DXers! Keep up to date with *Teleradio News*, the only magazine for dedicated enthusiasts. Six issues a year cost you just £7.50 post paid, so send your name and address with a cheque made out to HS PUBLICATIONS, 7 Epping Close, Derby, DE3 4HR.

AND IF YOU'RE AFTER THE VERY LATEST INFO ON SATELLITE TELEVISION ... you should be reading *Transponder*, the definitive subscription newsletter. For details ring 0270-580099 or send SAE to *Transponder*, P.O. Box 112, Crewe, Cheshire, CW2 7DS.

RECOMMENDED SHOP: J. & N. Bull Electrical, 250 Portland Road, Hove, Sussex has old TV servicing equipment from time to time, also obsolete and spare parts at reasonable prices - Albert Pritchard.

MOMI - THE WORLD'S MOST EXCITING CINEMA AND TELEVISION MUSEUM. South Bank, London SE1. Tel 071-928 3535 (switchboard) or 071-401 2636 (recorded information line).

NOTHING to do with vintage TV but if you are interested in the "alternative" video and independent TV production scene, you may care to read *Independent Media*, a thick monthly magazine costing £1.25. Full details from Independent Media, 7 Campbell Court,

Bramley, Basingstoke, Hants., RG26 5EG. Telephone 0256 - 882032.

ON THE AIR Vintage Sound and Vision is a new venue for vintage broadcasting enthusiasts. Situated in Chester's major antiques centre, **ON THE AIR** has a constantly changing stock of vintage wireless, television and related items. Please write (enclosing SAE) or phone for further details and to ensure personal attention before calling. Open Monday to Saturday 10.00 - 5.30. **ON THE AIR**, Melody's Antique Galleries, 32 City Road, Chester. Tel: 0244 - 328968 or 661062.

TEST CARD VIDEOS FOR SALE: 55 minute video presentation made for the BATC "The Development of the TV Test Card". Andrew Emmerson interviews George Hersee, designer of Test Card F. Lots of old test cards included.

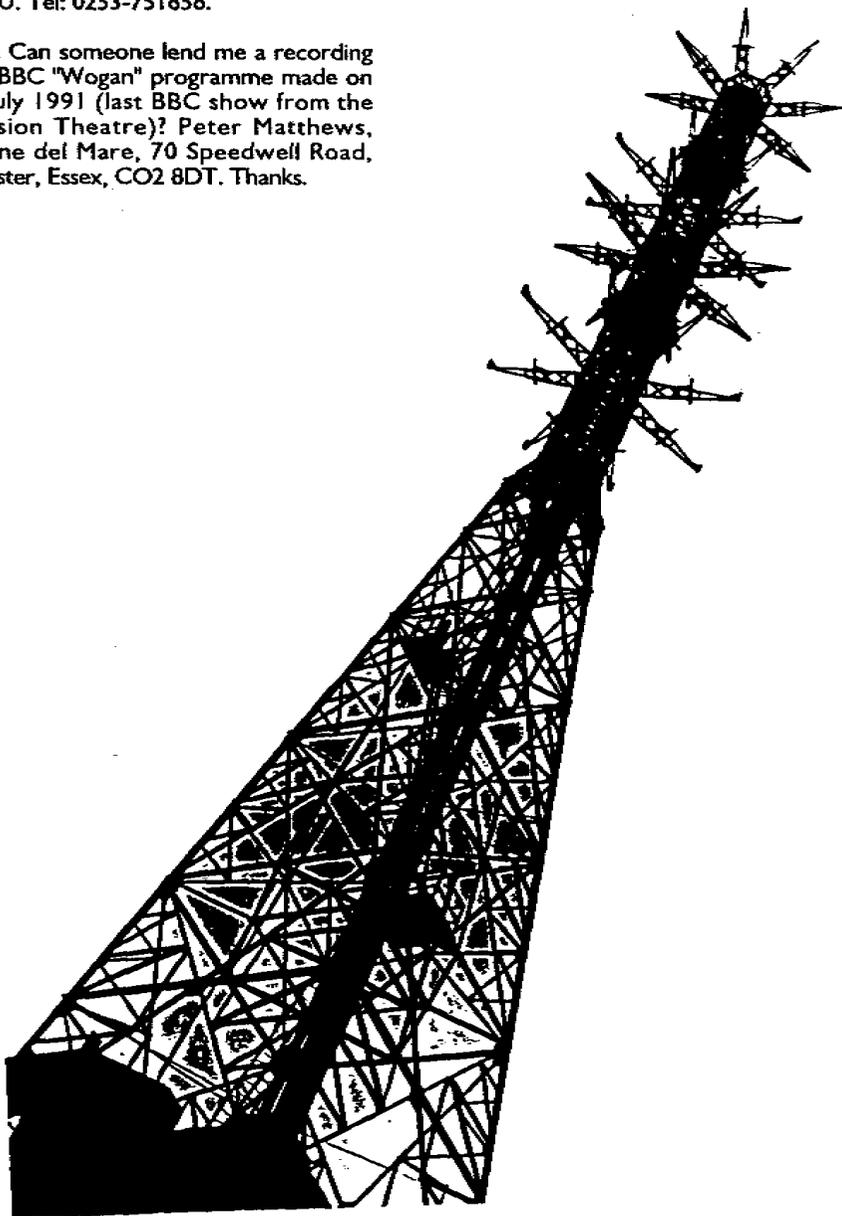
Also ... "Exotic TV Idents" but that is an understatement. For this tape covers East Germany, USSR, Poland, Czechoslovakia, Estonia and Romania plus other exotic locations such as Mongolia, Libya, Algeria, New York, "BBC London" and many west European countries and satellite channels. In all there are over 80 test cards, station idents, news programmes and start-of-day recordings, lasting 49 minutes in all. Explanatory captions describe each segment and the recordings were made on broadcast equipment in a TV studio "somewhere in Eastern Europe".

Both titles cost £9.99, VHS PAL only. Please allow 14 days for delivery. Andy Emmerson, below.

TELECINE: At last - an affordable telecine service! If you want 16mm films (not other gauges, sorry) transferred to VHS but cannot afford the usual charges, how about giving me a call? You can collect/deliver and supply your own tape to save money if you prefer. Quantity prices are available, too. Equipment has 430 lines resolution (better than S-VHS!) and handles optical and magnetic sound. Ring or send SAE for details. Andy Emmerson G8PTH, 71 Falcutt Way, Northampton, NN2 8PH. Tel: 0604-

BOOKS! Large new catalogue of second-hand radio and TV books. Send four first class stamps for one issue or £2.25 cheque or postal order for next four issues. Chevet Books, 157 Dickson Road, Blackpool, Lancs., FY1 2EU. Tel: 0253-751858.

HELP! Can someone lend me a recording of the BBC "Wogan" programme made on 24th July 1991 (last BBC show from the Television Theatre)? Peter Matthews, Canzone del Mare, 70 Speedwell Road, Colchester, Essex, CO2 8DT. Thanks.



GOOD HOMES WANTED!

The following items have been offered free of charge or almost free by their generous owners, though they will doubtless accept small donations if you are pleased with what you get! This latter kind of gesture goes down well since in many instances the advertisers are not members of our group and are pensioners, widows, etc.. Where no phone number is given please enclose SAE with your letter, it's only fair.

In each case the advertiser has agreed to hold the items for one month from publication - after then it's probably the corporation rubbish dump or an antique shop. You have been warned!

* Cossor dual standard 405/625 set, 19" screen, beautiful cabinet - unmarked! Peter Watts, Southall. 081-843 2003. Free but donation/swap not refused.

* KB KV066/1 VC53 complete, not working. Ferguson 3821 single standard 625 complete. two Pye 310, one complete plus spare tube. HMV 180 cabinet modified to 14" tube. White-Ibbotson projection console cabinet, veneer peeling - joiner's delight? Samwell Hutton motorised wobblator in pieces. Cossor 1065 'scope. Two Cintel inductance bridges. Stella Band I channel I RF chassis. Two Pye frame o/p transformers. Two Pye VT4 line o/p transformers, working? KB Featherweight dismantled, two tubes and scan coils. All very low cost or free, you collect (near Hastings, east Sussex). Ring Alan on 0424-893078.

* Ultra Bermuda, 19". Free! Ted Ballinger, Swindon 0793-495097.

* Philips 1512 VCR (video + RF in/out) and many tapes. Gordon Sharpley, Manchester. Tel. 061-748 8031.

HOW TO CONTACT 405 ALIVE

We want to hear from YOU! This is **your** magazine, so please send in your letters, notes and articles; don't be bashful, other people **will** be interested in what you're doing! As we do this for fun, not profit, we regret that we cannot pay for contributions but authors are encouraged to retain their copyright and are free to publish their articles in other publications as well. Send us your advertisements too.

If at all possible, please **TYPE** your contributions using a dark, black ribbon. This enables them to be read straight into the word-processor by a document scanner. Magic!

Contributions on computer disk are particularly welcome and your disk will be returned. I can handle most variations of IBM PC and CP/M disks in 3.5" and 5.25" size but please process your words as an ASCII or WordStar file. Through the good offices of **Radio Bygones**, we can handle Amstrad PCW and Macintosh disks, but not BBC format. If in doubt please ring first on 0604-844130. Thanks. You can now also fax your letters, ads and articles on 0604-821647.

THE BACK PAGE

405 Alive is an independent, not-for-profit magazine devoted to the study and preservation of old television technology and programming. It is sold by subscription only and thus has no cover price: it is not subsidised by any other organisation. Publication is at approximately three month intervals, normally in January, April, July and October.

Correspondence is welcomed: write to the editor, Andrew Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. If your letter is not intended for publication please indicate this clearly. All letters are gratefully received and will be acknowledged in the next issue if not sooner. If you are expecting a reply you **must** include a stamped addressed envelope and preferably also your telephone number (in case it is quicker to telephone a reply) - thanks.

Editorial policy. We print readers' addresses only in small advertisements or when asked to. We will always be happy to forward letters to contributors if postage is sent.

Advertising rates. Classified: free to subscribers, £1 per advertisement for others. Display ads, using your artwork: £5 per half page.

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Exchange publications. You may wish to contact the following allied interest groups (please send SAE with all enquiries).

BRITISH VINTAGE WIRELESS SOCIETY: Gerald Wells, Vintage Wireless Museum, 23 Rosendale Road, London, SE21 8DS.

BRITISH AMATEUR TELEVISION CLUB: Dave Lawton G0ANO, Grenehurst, Pinewood Road, High Wycombe, Bucks., HP12 4DD.

NARROW BANDWIDTH TV ASSOCIATION: Mr N Reynolds, 6a Collingbourne Road, London, W12 0JQ.

TEST CARD CIRCLE: 2 Henderson Row, Edinburgh, EH3 5DS.

IRISH VINTAGE RADIO & SOUND SOCIETY: Vincent Farrell, 39A Lower Drumcondra Road, Dublin 9.

We also read and recommend these other specialist publications of interest:

RADIO BYGONES, 9 Wetherby Close, Broadstone, Dorset, BH18 8JB.

THE RADIOPHILE, "Larkhill", Newport Road, Woodseaves, Stafford, ST20 0NP.

TELERADIO NEWS, 7 Epping Close, Derby, DE3 4HR.

WOULD YOU LIKE YOUR OWN COPY OF 405 ALIVE?

Perhaps you are reading a friend's copy - now you can't wait to receive your own copy four times a year. This is what you do ...

Send a cheque for £12 (inland), sterling or Eurocheque for £13 (abroad) or made out to Midlands Mediatech or \$25 cash (world air mail), which will pay for a year's subscription (four issues). The address is 71 Falcutt Way, Northampton, NN2 8PH.