



CQ-TV

no 63.

*The Journal of
the British Amateur
Television Club*

THE BRITISH AMATEUR TELEVISION CLUB



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Editorial.

How did you hear about BATC? Chances are you joined after seeing an exhibition, or show, or hearing a lecture, organised by the Club. But have you ever stopped to think who was responsible for this publicity? Well, a very small number of people have, up to now, done all the work. Its about time they had a rest, so how about a few more members having a go?

What do you feel about it? You could organise and run a stand at an exhibition, or a stunt at a summer fete, or any one of a number of possibilities. Several members can, and do, organise these off their own back. But, if you're not involved in something already, volunteer for our "roster of exhibition helpers". This will, after you've all volunteered, consist of a list, by geographical areas, of members who can assist with any BATC event, as it comes up.

Volunteer now to the Hon. Sec. and help show the flag!

You have probably noticed (and I hope not been confused by) the way we now label resistors in circuit diagrams.

This is that we don't say 2.2K any more, we say, 2K2. Saves that little dot getting lost in printing, and you thinking it's 22K!

And, of course, we say 3M3 and 4Q7 etc. - just lose the decimal point.

It's a method which is becoming quite common these days, but we'd like your comments on it before we decide whether to keep it or not.

R S G B

EXHIBITION

This year the R.S.G.B. International Radio Engineering and Communications Exhibition is being held at the Royal Horticultural Society's New Hall, Victoria, S.W.1. The exhibition is open from Wednesday 27th September to Saturday the 30th.

The BATC will, as usual, be represented by a stand where a variety of amateur television equipment will be on display including colour, of course. Also, we will be trying to publicise the club as much as possible, and collect a few new members.

So try to come along - this is a major event in our calendar. Bring as many of your friends as you can and introduce them to amateur T.V. (we will supply BATC membership forms for them too!)

Incidentally, Bob Tebbut would appreciate some more help with the stand - his address is on page one.

Helpful Hint

Copper wire can be used as fuse wire if you know the right size to use. Here are a few useful ones :-

| | | | |
|--------|-------|---------|-------|
| 1 amp. | 47swg | 5 amp. | 38swg |
| 2 amp. | 43swg | 10 amp. | 33swg |
| 3 amp. | 41swg | 15 amp. | 30swg |
| 4 amp. | 39swg | 20 amp. | 20swg |

S.P.G.

Here are just a few of the modifications some readers have told us about.

FURTHER NOTES ON THE TRANSISTORISED S.P.G.

It was a long time ago now that we published Mike Cox's transistor S.P.G. - in CQTV No.48 in fact - and many members must have built it by now. More significant, many members have modified it, to provide more facilities, better performance etc. and this is a sure sign that the circuit has been successful.

G6ACW/T needed a composite sawtooth as against the non-composite waveform provided by the CQTV 48 circuit.

The result is the design in Fig 1, which adds a sync amplifier and mixer to the original, complete with a "sync amp" control. By turning this to zero, of course, the output reverts to the old non-composite signal, if you happen to need it.

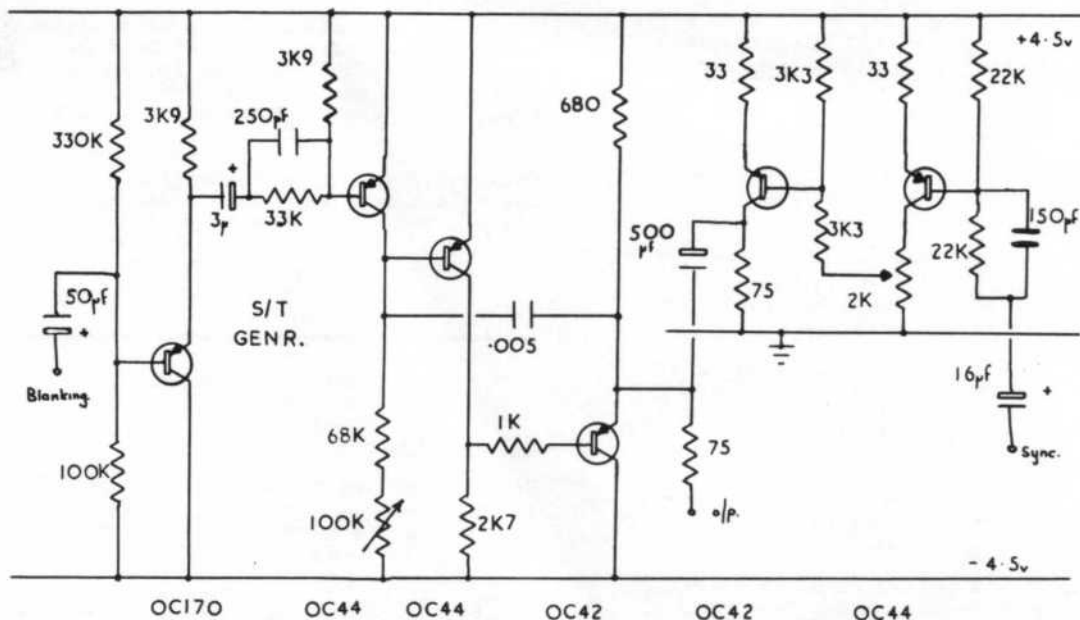


FIGURE 1

The grating generator has also had the G6ACW/T treatment. The resistor from S12 collector to the +4.5 rail is now 68K Ω and the coupling capacitor in the horizontal bar multi-vibrator is 0.15 μ F. A 10 μ F coupling capacitor is inserted in series with the sync input, to remove a slight positive bias which comes from the S.P.G. Lastly, S5 is now an OC 170.

Another suggested circuit modification is a new crystal master oscillator to replace the original S1. Drawn in Fig.2 the circuit provides a very small measure of frequency control. So, if your crystal isn't exactly right, you can tweak it slightly and bring it to the correct figure.

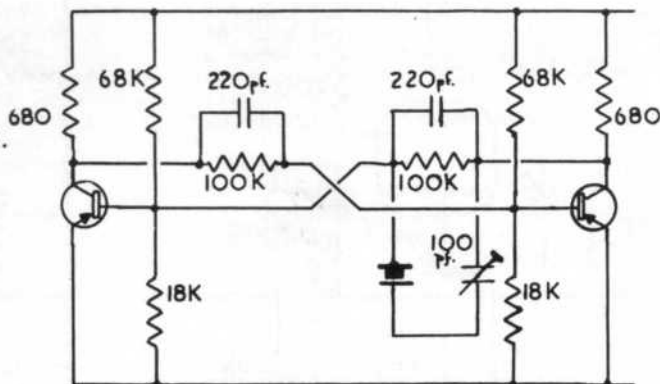


FIGURE 2

AF117

AF117

PROPOSED FORMATION OF A TV GROUP IN WEST LONDON

It is proposed to form a TV group in the West London area with a view to planning and running club exhibitions and demonstrations. Any members, with or without equipment and who are within easy travelling distance of the Western side of London, are welcome to take part in the activities of the new group. Would any members who are interested please write to :

Bob Tebbut,
11 Revel Road,
Woburn Green,
High Wycombe, Bucks.

If there is sufficient interest, those who contact us will be notified in a future issue of CQ-TV of a place and time for a get together. It is

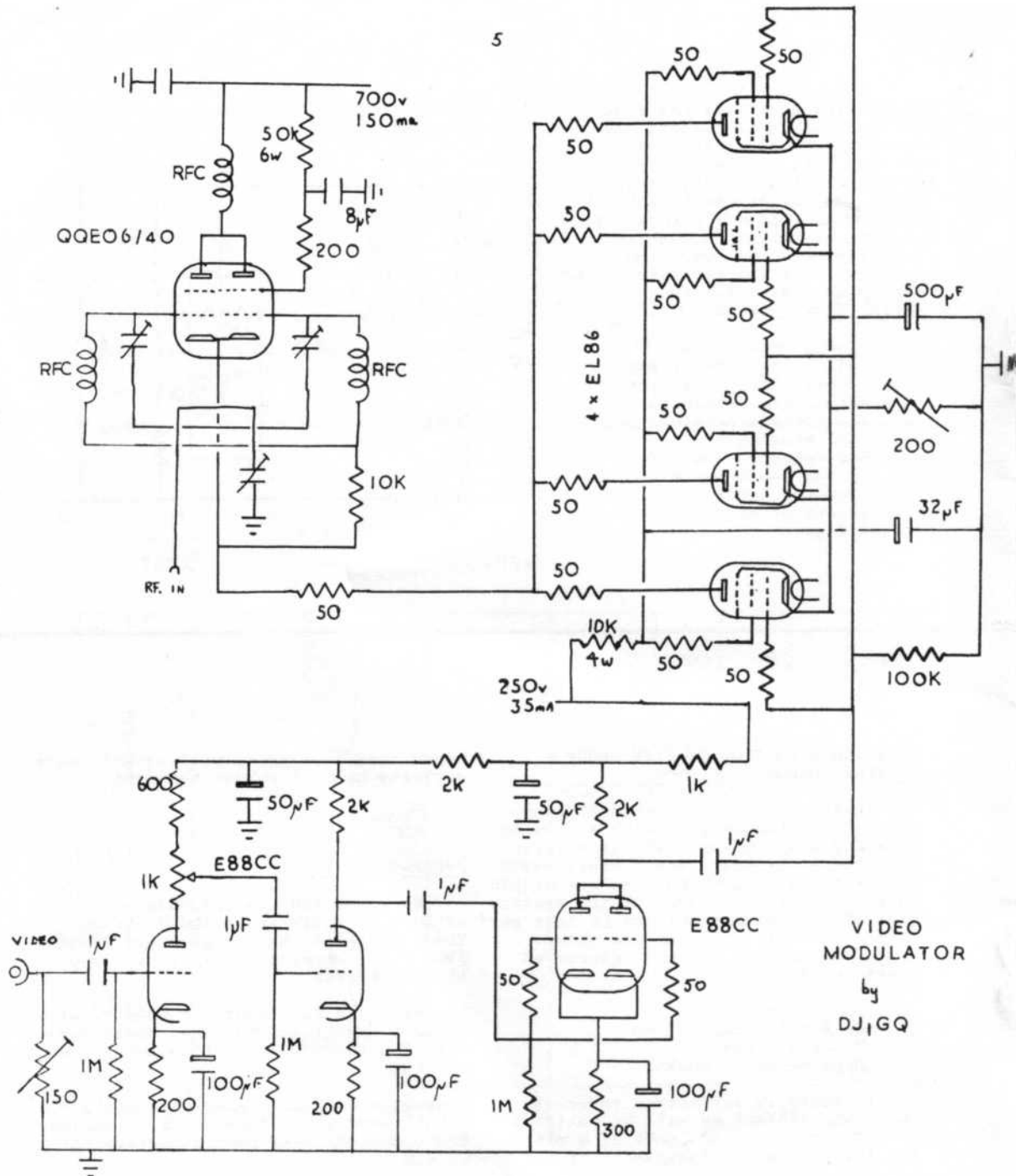
hoped that this group will promote more activity amongst London members.

STOKE-ON-TRENT

We would like to inform members of 70 c.m. activity in the Stoke-on-Trent district. Main nights are Mondays from 8 pm, onwards and Thursday from 10 pm. onwards.

Mondays :- Mike Greenfield G6AAD/T with Allan Bucknall G6TES/T 22w. sound sked with Ron Perry G6OAC/T 150w sound and vision.

Thursdays:- G6AAD/T sked with GWACG/P. Other members of Stoke-on-Trent Amateur Radio Society will soon be active on 70 c.m.



A VIDEO MODULATOR

In these days of transistor supremacy, it may seem strange to publish any design using valves. However, if you're like me, you not only have a scrap box full of the things, but also a sneaking feeling that unless there's a glow somewhere, it can't really be working.

Well, here's a piece of valve gear that's a little unusual. Its

a video modulator using four EL 86's in parallel, cathode modulating a QQE06/40. Thought up by DJ1GQ it produces very good results as it stands, and offers a wonderful opportunity for experiment.

If you get round to building it, let us know how you get on. Especially if you modify it.

PRICE INCREASE

Owing to the increase in the price of processing, the retail price of filmstrips of CQ-TV is now 15s. or £ 2.50 (postage paid).

Six filmstrips are available, covering Nos. 1-10, 11-20, 21-30 31-40, 41-50 and 51-60. Members

are advised that some of the earlier issues of CQ-TV are technically out of date, though they may still have a historical interest.

All orders to the Librarian, Grant Dixon, who would also be grateful if members who have borrowed back numbers of CQ-TV from him would return them as soon as possible, so that others may have them.

HELPFUL HINT.

The transistor type coding used, among others, by Mullard, is :-

First letter

- A Germanium
- B Silicon

Second letter

- A Diode

- C Low power audio frequency transistor
- D Audio frequency power transistor
- E Tunnel Diode
- F Low power high frequency transistor
- L High frequency power transistor
- S Low power switching transistor
- U Switching power transistor

Any other letter or number is on individual type serial number.

Letter From AUSTRALIA

20 Henley Beach Road,
Henley Beach.

Dear Sir,

Last year Rich Mathews, Andrew Pierson and myself transmitted from Willurga Hill to the South Himmocks (1 way only) to Edwin Schoells and Jim Wilcox.

The gear was my TX at 20W and the receiver was a transistor Sony with a transistor convertor and a 16 element colliner aerial.

Rich Mathews provided 2 meter F.M. at our end. The photo of the sign was our first stop about 60M and signals were much stronger than we ever have with the home stations at 5M.

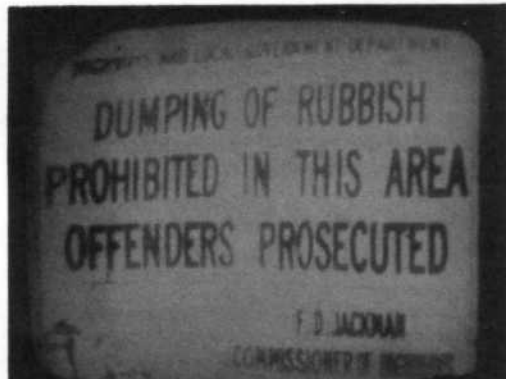
George Usher has his 3 vidicon colour camera going, it is an all valve system, di-plexed to a 16mm and 35mm movie projectors. The receiver was built by me and financed by George Usher, John Ingham and myself. It is a three gun shadow mask tube Japanese type, deflection components are American.

It was demonstrated at the 1966 Royal Show the average crowd was approximately 40 people. Colour films were continuously shown and it proved the best ever for us and spectators alike.



A monochrome receiver was alongside of the colour TV. The resolution in the centre of George's camera is approximately 4Mc, better than can be obtained with the shadow mask tube.

73 Maitland Lane,
VK540



POSTBAG

John Cronk, G3ME0, G6ME0/T, writes to tell us of a new QTH, and asks us to thank all the stations with whom he had vision contacts - G60PB/T, G6NDT/T, G60U0/T, G6AAQ/T, G6GDR/T, G6ABA/T, G6APV/T, G6RAX/T, G6AOL, G6AEJ, G6RNX and G6APJ. John hopes to have his new station on the air just as soon as possible at Plot 5, Anvil Avenue, Littleington, Nr. Royston, Herts.

Ian would be very grateful for the loan of them. He's also in the market for a shadow mask tube - if anyone's got one going spare....

J.R. Burnell-Jones - VK2ZJV/T from New South Wales, has just joined BATC, and is in the middle of constructing two monitors and a camera. These will add to his station which operates on 625 line negative modulation at 150 watts with simultaneous 15 watt FM inter-carrier sound. And a transistorised SPG, which is almost finished.

A.M. Dix from Bristol, fresh from a year of studying colour TV for C & G, is now devoting a lot of time to monochrome amateur TV. Future projects include a new camera and video tape recorder, and his current vidicon camera has just been used for an outside broadcast of a Donkey Derby.

Paul Franklin, Statesboro USA has completed a vidicon camera and now operates a closed-circuit set up. He hopes to become licensed soon. Also, he thinks we ought to publish prices in dollars as well as pounds. Well, I suppose we ought, Paul, so we'll do it this issue.

Dennis Bloxham writing as a follow up to the article on his astronomical telescope in CQ-TV 62 (apologies for calling you 'Dave', Den!) asks us to credit the Portsmouth Astronomical Group who have had a lot to do with it. Their journal is available from Den at 1/6d to members interested in astronomy.

S.A.C. Ian Newcombe at RAF Locking is building a viewfinder using an MW22-18 c.r.t. and a simple SPG. If anyone has any suitable circuits

Bill Walker WA4SCW writes from USA about his activity at the moment - AM sound on 144 MC/s and 80-40-20-15-10 meters and RTTY on 40-80meters. But Bill is working furiously to rectify the one omission - video. Pictures will come from a vidicon Camera, Flying Spot Scanner (using a 4FP7 electrostatic c.r.t.), and a war surplus image orthicon camera. The transmitter will use a 4 x 150A. Should be a fine rig when finished.

SLOW SCAN

Three American slow scan enthusiasts, Dr. T. J. Cohen W9VZL/3, Capt. T. Polluck KH6BXS/4, and Capt D. Veazey W4ABY, have just produced a comprehensive progress report on slow scan support of a very important claim.

This is by the American Radio Relay League, and is to amend the F.C.C. Amateur Radio Service to allow S.S.T.V. transmissions in two extra bands, namely 21.25-21.45MHz and 28.50-29.70 MHz with a view to increasing the scope of slow scan, both in long distance transmission and development of techniques and equipment.



These photographs show the camera and monitor used by Theodore Cohen in his experiments.

To this end the report quotes the work done in Britain by B.A.T.C., Belgium by the Amateur-televisie-werkgroep, and India by the Amateur Radio Club of Bangalor, as well as that of Americans such as Cop Macdonald WAØNLQ, Don Miller W9NTP and many others. It also quotes the standards used by the various experimenters and indicates that a compatible standard used by everyone would be a good thing - but does seem to assume that everyone is going to choose the American standards.



It is a report that shows just how keen S.S.T.V. enthusiasts really are and we are very grateful to Dr. Cohen and Capts. Veazey and Polluck for allowing us to mention it.

ADVERTS

400ft Marconi Mk. II Camera cable £10.

E.J.Brett:,
25 The Meadway,
Buckhurst Hill,
Essex.

For Sale.

4 Video Distribution Amplifiers, 3
Outputs 75Ω loads. 30/- each.
Contact, J. Hart
144 Chiswick Village,
London W.4.

If anyone knows of a colour monitor
or receiver of any description for
disposal please contact:

G.A.Hamilton,
48a Chertsey Road,
Woking,
Surrey.

Telequipment 405 line SPG. These are
230V 9C mains valve units producing
standard BBC/ITA mains-locked pulses,
together with several patterns.

Details from :

T.R.Wiltshire G8AKA
12 Leslie Road,
Winton,
Bournemouth, Hants.

HELPFUL HINT

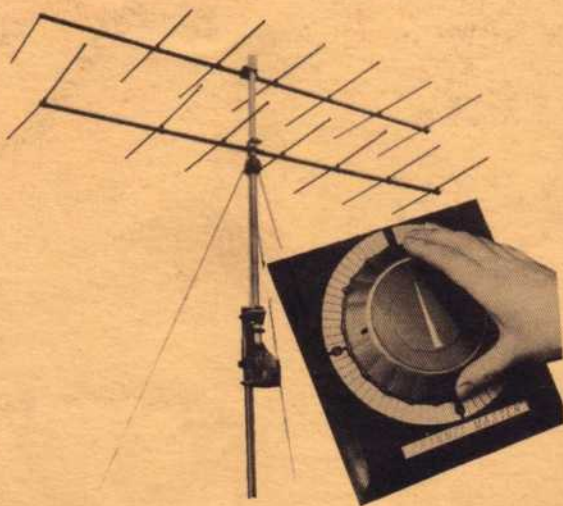
If you can never remember the correct
size drill for B.A. bolts, here they are :

| <u>BA Size</u> | <u>Clearance</u> | <u>Tapping</u> |
|----------------|------------------|----------------|
| 0 | C | 9 |
| 1 | 3 | 17 |
| 2 | 10 | 24 |
| 3 | 18 | 30 |
| 4 | 25 | 32 |
| 5 | 29 | 37 |
| 6 | 31 | 43 |
| 7 | 36 | 46 |
| 8 | 42 | 50 |
| 9 | 46 | 53 |
| 10 | 49 | 54 |

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AMATEUR TELEVISION ACTIVITIES

CQ-TV



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