

**G6ACR**  
**TV**

**COLLIER**

# **CQ — TV**

**THE JOURNAL OF**

**THE BRITISH AMATEUR**

**TELEVISION CLUB.**

**NO 96**

**November 1976**



# The British Amateur Television Club.

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## WHO TO WRITE TO

Subscriptions and changes of address should be sent to the Treasurer, and membership enquiries to the Membership Secretary. Please only address your enquiries to the most suitable committee member, enclosing a sae.

## CONTENTS

Committee members addresses	page 1
1976 B.A.T.C. Convention	page 2
B.A.T.C. SSTV U.K. Contest	page 3
Circuit Notebook No 26	page 4
TV on the Air	page 7
Power Supplies	page 8
A Simple FSS	page 11
The Artistic Side	page 13
Subscriptions	page 16
Postbag	page 17
Adverts	page 18

## COVER PHOTO

G6ACR/T as received by G6AHT/T at a distance of 45 km.

## 1976 B.A.T.C. Convention.

The B.A.T.C. 1976 Convention was held at Parkinson Court, Leeds University on Saturday 18th September.

There was a good display of member's equipment, including Slow Scan by Grant Dixon and a fine array of fast scan equipment by Brian Summers, including two Image Orthicon cameras.

A novel display was given by Cyril Chivers of using the timebases from a domestic television set to drive the scans of a vidicon camera and a monoscope.

This year digital techniques were very much to the fore including a Morse to video decoder, RTTY video display and a VDU by Gordon Sharpley.

The commercial side was well represented, including a fine array of components from J. Birkett and ex-commercial gear from M & B Components.

A demonstration of Teletext was shown using both commercial and home-brew decoders.

B.A.T.C. Sales and Publications did well, many new members being enrolled.

### REPORT ON THE BIENNIAL GENERAL MEETING, HELD DURING THE CONVENTION.

Following the AGM held during the afternoon at the 1976 Convention, a few changes have been made which are listed below. Attendance at the meeting was fairly low despite the one to two hundred members present in the Exhibition Hall. Perhaps this means most members are happy with the way the Club is organised?

A short discussion, initiated by the Treasurer, on the subject of admission fees and subscriptions resulted in the meeting giving the committee the power to charge admission fees if necessary, for new members. It was explained that processing new members was expensive, and if they did not remain in the Club after the

first year, B.A.T.C. make a very heavy loss per person. Admission fees helped to reduce this. Most people felt that the fee should be low.

Resignations from the committee came from Geoff Smith G8CPX, Nigel Walker G6ADK/T and Nick Salmon, for whose service to the Club we are all very grateful. In their place were elected M. Cox and Peter Johnson G6AFF/T. Peter is taking over the post of Contest Organiser, and we expect to be hearing a lot from him in the future.

Other officials of the Club remain the same as before - although some were known to be keen to see some new blood. The press-gang was successful in compelling them to remain in office!

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### ANNOUNCEMENT.

Messrs E.M.I. have offered to supply EBITRON low light camera tubes type 9777 (amateur grade). The price to Club members would be £28 including VAT. The vidicon section of the tube is based on a  $\frac{1}{2}$  inch vidicon, but it can easily be operated inside the  $\frac{3}{4}$  inch scan coils which E.M.I. already supply to the Club. Further details can be obtained from Grant Dixon of Club Sales, whose address is on page 1.

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### CORRECTION TO C Q - T V 95.

In the article "A C.R.T. Display" for adjusting fast-slow scan converters the diagram on page 17 should be corrected by adding a link from pin 8 to pin 2 of the 7474; without this, the IC will not act as a \*3 circuit. Please also note that the missing gate is correctly labelled as a 7402 but should be described as a "NOR gate" and NOT an "OR gate".

# The British Amateur Television Club UK SSTV Contest.

- WHEN** The 11th and 12 of December 1976.
- FREQUENCY BANDS** The 3.5 MHz and 144.00 MHz Bands only.
- TIMES** 19.00 to 23.00 on Saturday 11th December on both bands.  
7.00 to 11.00 on Sunday 12th December on 3.5 MHz Band.  
9.00 to 13.00 on Sunday 12th December on 144.00 MHz Band.  
Contacts via OSCAR will also count.
- ELIGIBLE ENTRANTS** All entrants must participate in the contest from a UK location.
- SECTIONS** Section A. Stations both transmitting and receiving SSTV.  
Section B. Stations only logging SSTV signals.
- CONTEST EXCHANGE** The Contest Exchange shall consist of the Callsign, Signal report (RST), Serial number, QRA Locator or QTH. (Of these the last three shall be exchanged in video only. If the location is given in sound then it must be given given in a form different from that given by video eg video Didcot is in Sound 10 miles South of Oxford). Serial numbers shall commence at 001 and advance by 1 during the duration of the contest. Only one contact with each station will count for points.
- SCORING** Section A.  
5 points per station contacted on the 3.5 MHz band.  
10 points per station contacted on the 144.00 MHz band.  
25 points per station contacted via OSCAR.  
Section B.  
As above for each station logged.
- CONTEST LOG** The Contest Entry Log must give the following information: Date, Time, Band, Callsign received, Report and Serial No. sent, Report and Serial No. received, QRA Locator/QTH received, Points claimed and Final Score.
- ENTRIES** All entries should be postmarked not later than the 1st January 1977 and should be sent to: Mr. P.A. Johnson G6AFF/T, 38 Kynaston Wood, Harrow Wealdstone, Harrow, Middlesex. Entries will not be returned.
- GENERAL** Each entry should be accompanied by a brief description of the station together with details of the callsign used, the QRA locator and QTH locations as transmitted on sound and vision together with any other relevant information. Stations entering the contest may only operate from one location for contest contacts. Stations who confirm their video message contents by sound will render themselves liable to disqualification. Results of the Contest will be published in C Q - T V as soon as is practicable.  
Recommended frequencies are 3.730  $\pm$  5Kcs and 144.23  $\pm$  5Kcs and via OSCAR.

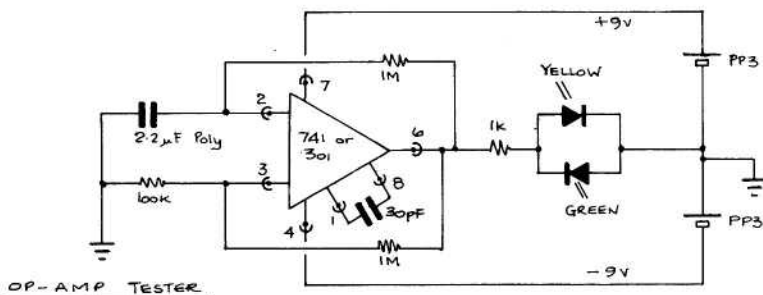
# CIRCUIT NOTEBOOK No 26

J. Lawrence GW6JGA'T

## 741 I.C. TESTER.

The 741 Operational Amplifier Integrated Circuit is as popular today as the OC71 transistor was 15 years ago. It is frequently used in SSTV equipment.

Here is a simple Op Amp tester (due to A. R. Owens) which will test 741's (and the 301 equivalent). If the Op Amp is OK the two LEDs will flash alternately with a one second on period. No illumination indicates an output fault. One LED continuously lit indicates a fault probably on one input. Assymetric flashing is due to unequal input leakage current.



No switch is fitted, the I.C. is inserted in the socket for testing. There is no battery drain with the I.C. removed. If a 14 pin D.I.L. socket is used 709 I.C.s can also be tested.

## PHOSPHORS AGAIN.....

Following the publication of information on cathode ray tube phosphors in Circuit Notebook Nos. 23 & 24, I have received an interesting letter from Ladislav Vig of Switzerland giving more detailed information on the JEDEC range of phosphors, particularly as far as the persistence is concerned.

This information, which is given below, is taken from a data sheet by the Westinghouse Company, to whom acknowledgement is made.

Type	Color (Kelly Chart.)	Spectral Peak (Angstroms)	x	CIE Co-ordinates y	Persistence	Decay to 10% Brightness	Application
P1	Yellowish Green	5250	.218	.712	Medium	24 msec	General Purpose Visual Displays
P2	Yellowish Green	5350	.279	.534	Medium Short	-75 $\mu$ sec	Oscillography & Reduced Flicker in Console Displays
P4	White	4600 5600	.270	.300	Med Short	20 $\mu$ sec 60 $\mu$ sec	60 Hz. Television
P7	Blue Yellow Green	4400 5550	.151 .357	.032 .537	Med Short Long	-50 $\mu$ sec .35 sec	Radar & Oscillography
P11	Blue	4600	.139	.148	Med Short	-50 $\mu$ sec	Photographic Recording
P12	Orange	5900	.605	.394	Long	200msec	Low Frame Rate Displays
P14	Purplish Blue Yellowish Orange	4400 6000	.150 .504	.093 .443	Med Short Medium	25 $\mu$ sec 5msec	Radar
P16	Bluish Purple	3800	.175	.003	Very Short	.12 $\mu$ sec	Flying Spot Scanners & U V Recording
P19	Orange	5900	.572	.422	Long	220msec	Radar
P20	Yellow Green	5600	.426	.546	Med Short	-.2msec	Bright Visual Displays
P24	Green	5100	.245	.441	Short	-1.5 $\mu$ sec	Color Flying Spot Scanners
P25	Orange	6100	.557	.430	Medium	45 Msec	Radar
P26	Orange	5950	.582	.416	Very Long	-10 sec	Radar
P27	Reddish Orange	6350	.674	.326	Medium	27msec	Night Vision Displays
P28	Yellow Green	5500	.370	.540	Long	-.5sec	Reduced Flicker Console Displays
P31	Green	5200	.193	.420	Medium Short	40 $\mu$ sec	Bright Visual Displays & Oscillography
P33	Orange	5875	.559	.440	Very Long	-10 sec	Radar
P36	Yellow Green	5500	.400	.543	Very Short	.25 $\mu$ sec	Flying Spot Scanners
P37	Blue	4700	.143	.208	Very Short	.15 $\mu$ sec	Flying Spot Scanners Photographic Recording
P38	Orange	6000	.561	.437	Very Long	1 sec	Low Frame Rate Displays
P39	Yellowish Green	5250	.223	.698	Long	150msec	Medium Frame Rate Displays & Radar
P40	White	4400 5500	.276	.311	Med Short Long	150 $\mu$ sec -.5 sec	Reduced Flicker Console Displays

One of the leading U.K. manufacturers of precision cathode ray tubes, Ferranti Limited, was unfortunately omitted from the previous list of phosphors. Ferranti have a range of some 35 different phosphors and full details of these can be obtained from them at the Electronic and Display Equipment Division, Gem Mill, Chadderton, Oldham, Lancashire.

An abridged list of Ferranti phosphors, having approximate equivalents in the JEDEC range, are given below.

Ferranti Cathode Ray Tube Phosphors (Abridged list)		
Ferranti	Nearest JEDEC	Application
A	P24	Blue/Green. Suitable for flying spot scanner applications, particularly colour.
H	P26	Orange. Suitable for long range radar applications.
J	P 7	Blue flash and orange persistence, suitable for general purpose radar and oscilloscopes.
K8	P39	Green anti-flicker phosphor which is more burn resistant than fluoride phosphors. It has a critical fusion frequency between 20 & 30 HZ dependant upon the application and is suitable for computer generated displays.
L	P33	Orange. Suitable for medium range radar applications.
M	P25	Orange. Burn resistant, suitable for marine radar applications.
P	P11	High efficiency blue phosphor which is suitable for photographic displays.
Q	P16	Blue/Violet, has very short persistence and is suitable for flying spot scanners.
S	P31	Green, has high visual efficiency.
T	P 4	White for television displays.
V	P20	Yellow/Green, suitable for high brightness visual displays.



## TV ON THE AIR

By John L. Wood G6AHT/T G3YQC

The summer doldrums seem to have struck TV activity during recent months. Who can blame anyone for not wanting to spend the evening in the shack when the temperature outside is in the 80s, especially those with large afterburners that emit almost as much heat as an electric fire? Despite this however, there seems to be a lot of constructional work going on in preparation for the winter season.

In a letter, G6AFV/T G5KS reports on a steady increase in activity around the Birmingham area. G6AEI/T G8DIR is on the air every Wednesday at 8pm. G4FDR is putting together a new TV station and should be on the air shortly. G4DYP, who already receives video, is employed in constructing the "VHF Communications" vision transmitter. G8JHZ is ready for receiving fast scan and is looking for contacts. G6RKU/T should be on the air by now adding his signal to the growing number of midlands stations. Finally G6AFV/T is regularly active on both 2m (144.23 MHz) and 70cm vision, Arthur is just putting the finishing touches to a linear which follows his new "VHF Communications" transmitter. Arthur and I have a regular sked on 144.23 MHz SSB each Tuesday and Saturday at 8pm, so if anyone within earshot would like to join in they will be most welcome.

Many people are under the impression that to transmit TV a fairly high output power is required, this may be so if constantly noise-free pictures are required over longish distances, but there still is a very good case for using a low power rig. As an example G6APJ/T has many times transmitted pictures to me over a path which is anything but line of sight and which measures 25 miles, using a peak power of 500mW. Cyril puts in a strong enough signal to perfectly lock a raster which enables bold captions to be read with little difficulty. Using the same power over an 8 mile path good clear pictures (although still with some white noise present) are received regularly. So those not wishing to build a large or high power rig should not be put off, a simple valve transmitter design which works well can be found in C Q - TV No. 71, for those wishing to use transistors C Q - TV No. 72 and 83 should prove interesting.

It is sometimes quite difficult to gather sufficient interesting information for this column. I think people don't consider their own activity as being interesting, well it certainly is for others! In an attempt to alleviate this problem I would like to ask for volunteers to collect any information that may be of use from their own areas; if I could find someone in each part of the country i.e. the South-East, North Midlands, Wales etc., I feel that a much further reaching column can be offered covering activity over the whole of the U.K.

I would not necessarily need a report for every issue and I wouldn't expect you to go out looking for copy, just jot down anything which may be of interest as you come across it during your normal on-air activity. I look forward to hearing from anyone who would like to help in this way. I would also like to see any interesting photographs for possible publication.

The address for letters is: "TV on the air", 54 Elkington Road, Yelvertoft, Northampton



# POWER SUPPLIES

by J. Brown G3LFB

From time to time the constructor needs a decent power supply, and the ones to be described here are all ones the writer has had to build himself. Perhaps they may be of use to someone else too. In most cases cheap components were used, all cheaper than the Integrated Circuit regulators which are available. I must admit, I have not had much success with these - or is it me.

As an LDTV fan I have built the Doug Pitt convertor for LDTV display on a normal scope, but needed a small but good supply to drive it. Figure 1 was the outcome.

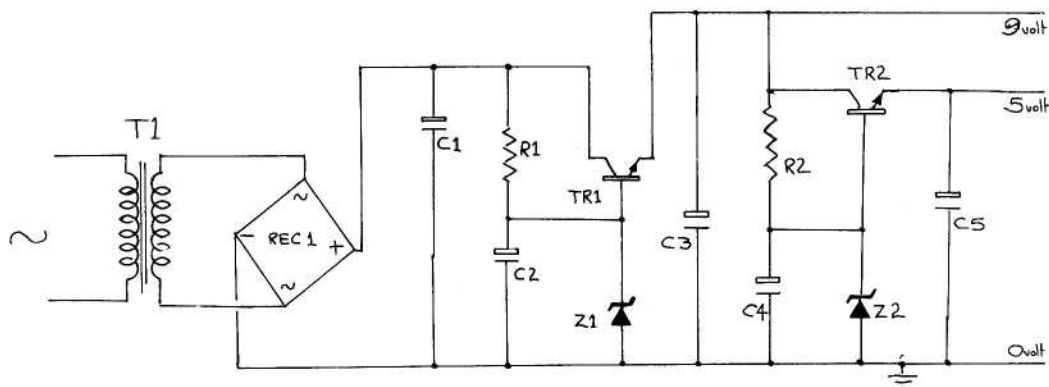


FIGURE 1

This gives us two well regulated voltages; the 9 volt line for the sync. amplifiers and oscillator unit, and the 5 volt supply for the I.C. circuitry. Even on long runs of many hours, the output voltages have never been known to vary. T1 in this case came from a scrap radio, but suitable commercial types are available.

Figure 2 is really a modification of Figure 1, but this time with a "switched output". The idea here was to cater for various cassette recorder voltages. Seemingly, the same value base-collector resistor suits all the voltages OK.

Figure 3 shows a composite power supply to drive the G3RHI Flying Spot Scanner, with apologies to Bert. When building the scanner, I overspent and had to make use of bits and pieces available; the transformers were old Research and Development scrap, but I am told that Radiospares do a suitable type with two secondaries and a 250 volt primary.

In every case the rectifiers may be either bridge types or four 1N4003 in a bridge

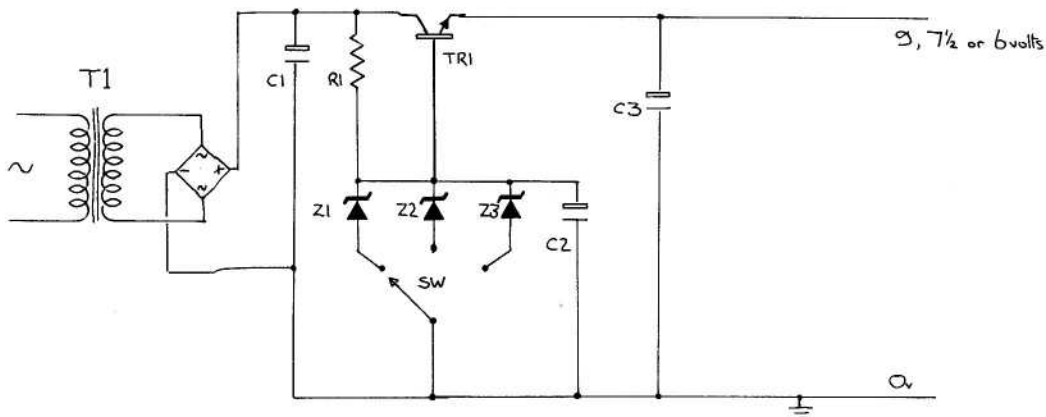


FIGURE 2

set-up. The exception is D1 and D2 in Figure 3, these need to be as states - or better. The output voltages in Figure 3 were very stable and the whole power unit cost less than the regulators would have cost.

All the bits and pieces are available from J. Hartley of 78b High Street, Bridgenorth Shropshire.

FIGURE 1

T1	250 volt primary, 2 x 12 volt secondary.
REC 1	25 volt 1 amp bridge or 4 x 1N4003.
C1,3,5	2200uF 25 vw.
C2,4	470 uF 25 vw.
R1,2	1K 1 watt
Z1	9.1v 400mW zener
Z2	5.1v 400mW zener
TR1,2	AD161 (complete with mica washes and bush insulators)

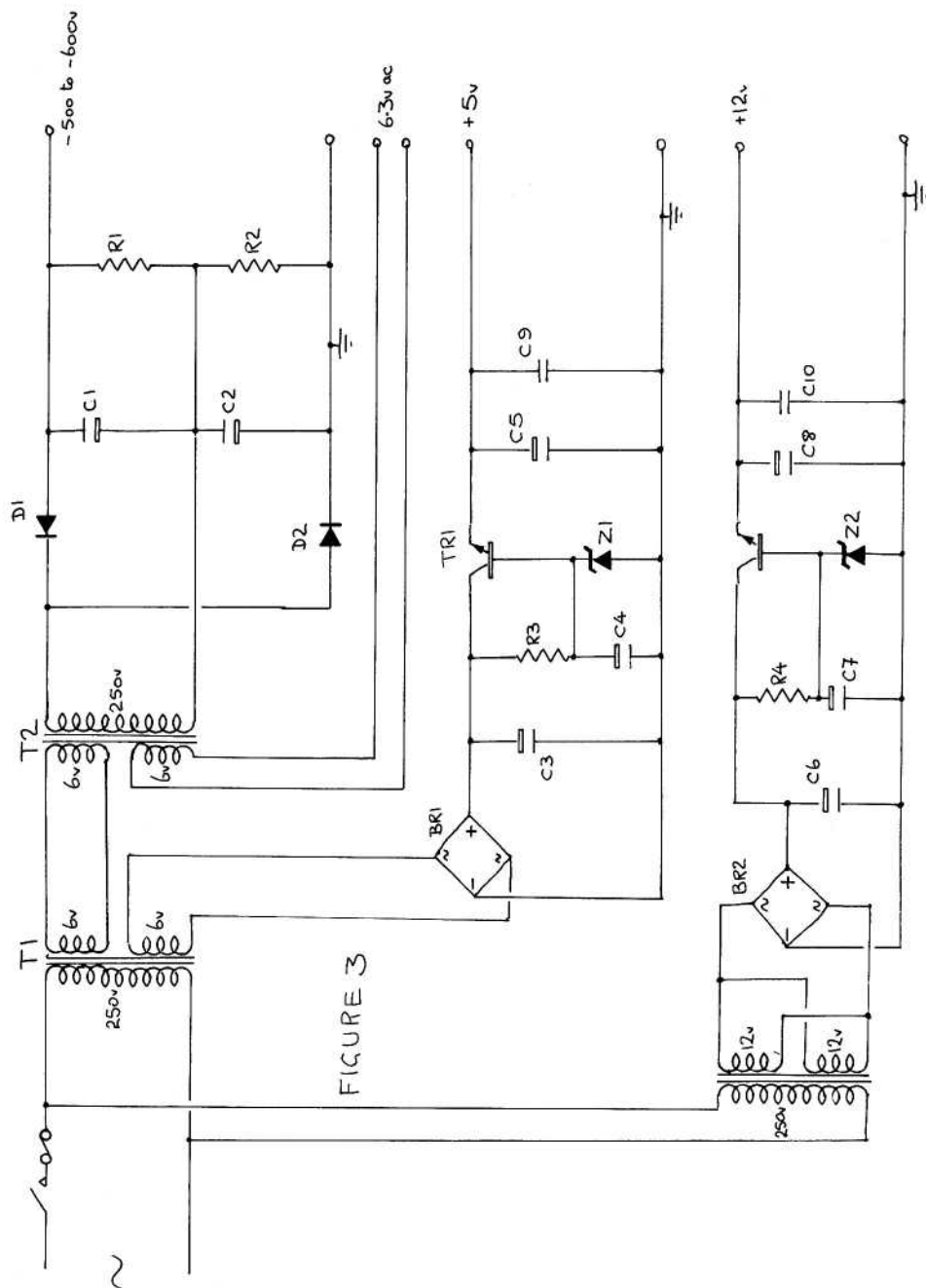
FIGURE 2

As Figure 1 except for the following:

Z1	6 volt zener
Z2	7.5 volt zener
Z3	9.1 volt zener
Switch	1 pole 3-way miniature.

FIGURE 3

T1,2	250v primary, 2 x 6.3v secondary
T3	250v primary, 2 x 12v secondary
D1,2	1N4007 or BY127



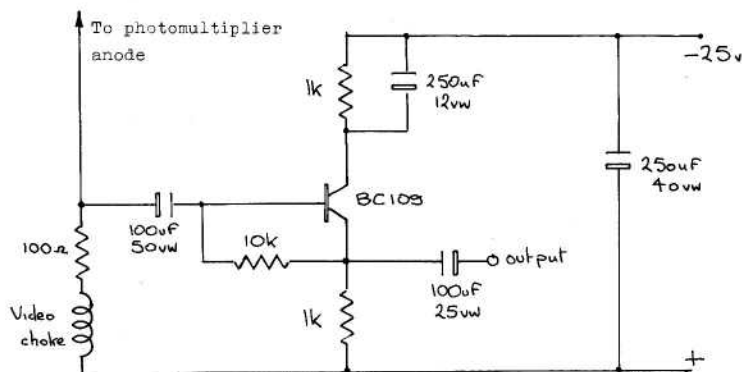
C1,2	32uF 500vw
C3,5,6,8	2200uF 25vw
C4,7	470uF 25vw
C9,10	10,000pF 50vw disc ceramics
R1,2	470K 1 watt
BR1,2	as Figure 1 or 4 x IN4003
TR1	AD161
TR2	2N3055
Z1	5.1v zener
Z2	12v 1w zener

# A SIMPLE FLYING SPOT SCANNER

By Cyril Chivers

This design for an FSS is so simple and works so well that I thought it ought to be described in the magazine. When I finished it I was so pleased with the results I realised I had made a great step forward in my equipment.

It resolves 400 lines on the E.E. Chart, using just one BC109 transistor, and all the power requirements are met with just five turns on the line transformer. Normal scanning is used for the c.r.t. - I use a 20th Century tube, which is no better than any other except that

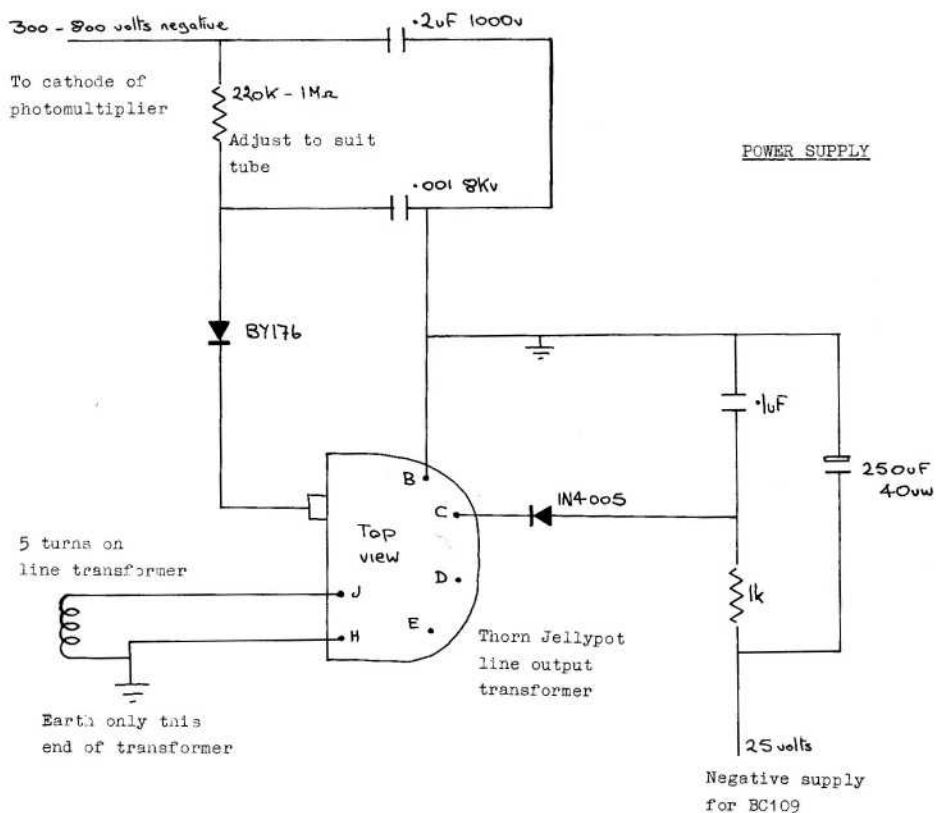


VIDEO AMPLIFIER

it is a suitable size for 35mm slides. Likewise, the photomultiplier circuitry is conventional, getting its power from the Jellypot arrangement shown in the diagram.

In the video amplifier, keep as many turns as possible on the video choke until you just get overcorrection.

The power supply is simple and should work first time. If not, try reversing the winding on the line transformer as only one way is correct.



## The Artistic side By G3LPB.

Whilst primarily for slow scan enthusiasts this also applies to the fast scan operator. Many of us see various presentations both live and recorded, and many of these look professional; this is thanks to imagination and easily obtainable materials.

Letterin, figures and symbols are obtained by using dry print type which are available under various trade names. Among these are BLICK, LETRASET and, recently appeared another with a wide choice named ALFAC. All of these will adhere to almost any surface, even to the actual face of a CRT in the case of one supplying a flying spot scanner. There are many variations of symbols, letters of all sizes. In fact ALFAC have available 80 sizes and types of letters and figures. Sizes from one eighth to about 2 inches. Figures are also available PLUS sheets of other things including some marvellous designs such as chequerboards, lines vertical and horizontal, even diagonal, electronic symbols etc. These are also useful for lettering home-built gear. The method is to lay the sheet holding the required character and after alignment just lightly press with a used ball point pen with gentle strokes across the character. The character is then affixed to the panel etc. If on a metal background, say an instrument panel, there is even a varnish aerosol to protect our work from damage.

Likewise, the characters can be done on transparent sheet and fixed to say, the face of a CRT in the case of a flying spot scanner by pushing the sheet direct on the face.

For camera work, the letters can be fitted in place on a piece of formica or similar material. First however, one has to gently rough up the surface of the formica by lightly rubbing with sand paper (fine grade). This is for two reasons. 1. It assists the character to adhere to the face and, 2. We get no reflection i.e. (overlight) from the polished face of the panel. The characters must be laid out on the correct aspect ratio, or we get funny results.

All the aforementioned brands are packed with the instructions for use; these should be adhered to as deviation makes more work.

In the case of LETRASET, we have marks and lines to align the characters correctly. If one is doing this indoors say on the table, the light MUST be behind you as if it is overhead one cannot see the characters or the judgement lines.

The prices completely depend on where you get your needs, some big stores are a lot cheaper than some of the smaller establishments and the large stores have changing stockes. One bargain to watch out for is "DRT" sheets; this is where the sheets have partially dried out in the stores high ambient temperature over a period of time.

All stationers such as Smiths, Wymans, Menzies etc. stock these, also some good stockists of art materials stock LETRASET and ALFAC.

Should one make a mistake, the mistake can easily be scratched off and replaced quite easily.

After a character has been placed into position, hold it and gently rub the holding

face, after the character has been affixed, place the backing paper on top of character and gently rub this, we now get on even adhering surface. The letters are obtainable in BLACK, WHITE, GOLD, and some in RED, GREEN etc. The types available are normal, old English, very bold, light and are in sheets. These sheets contain a number of each of the letters, figures and some sheets contain symbols, emblems, etc.

I think it should be mentioned in passing of the transfers available from Radio Constructor (Data Publications). Here we have booklets of transfers of letters, single and setups like 100, 78, 33½ etc., plus complete words for lettering equipment, plus danger transfers, etc. Here we have a completely different method. We cut out our required character/s, ease lightly off the tissue paper back, and gently wet the character and lay it in position on the instrument in the case of gear, allow to completely dry, then wet the tissue paper and gently pull it off. This leaves our character stuck to the panel. We can now after a good dry out, spray with some laquer to protect it or if small characters use cheap nail varnish. For those who have access to Radispares (R.S.) or Doram, they also do a set of dry transfers in two sheets including letters and figures, and symbols. After these have been used, the same firm also do a laquer aerosol for protecting the panels. I feel sure there are catalogues available, but as yet I have only seen one, so I can only pass on information from what I have seen, there are probably many firms that do the same materials. Many uses can be made for these materials which are easy to affix and comparatively inexpensive.

If one wants to get better class results there are magnetic letters and figures which allow use over and over for long periods. For the more artistic of operators there are things like crayons (oil type) even Pentel Pens or Magic Markers. These allow captions, reports etc. to be done quickly on postcards and placed into the holder on the camera setup. This ensures that all will be in the same focal plane and distance each time.

If one draws diameter circles on a white sheet using a black magic marker, when these are scanned by the camera we get an excellent effect, commonly known as "The Rings" are quite unique. B.A.T.C. have also available from the Sales Dept. a very excellent test card printed on hard card. There is even a space for one to put the call sign in. This is a valuable asset for identification for the station even for the S.W. Viewer and there are a few of these about.

Again, the off-cuts of formica or similar from any D.I.Y./handyman shop, preferably white, roughed up, make an excellent background for call sign cards, even to station announcements i.e. sound is on another frequency, the op is so and so, the next set up takes place at a certain time. There is no end of uses. These materials can be stuck with araldite easily so we can make a free standing card holder.

Lighting is a thing that must be watched, remembering the vidicon sees more than we think. Damage can be made to the face even by sunlight or any bright source can ruin a tube. Another thing often done which is harmful to a vidicon, that is not using it horizontally. If used vertically, the face can be damaged or even ruined by the cathode, heater or electrodes flaking and falling on the face internally. Again if I can advise or assist in obtaining materials please write with S.A.E. Regret cannot supply samples (have contacted the suppliers to see if they are available).



BLICK Hobby shops or art shops

R.S. Boram Ltd. P.O. Box8, Wellington Road Industrial Estate, Wellington Bridge, Leeds LS12 2UF,  
or any radio dealer would probably get them from R.S. Ltd. for you.

PENTEL Pens any art shop.

Magic Markers any engineering dealer, suppliers toolshop.

Both these have a very dense ink content and will mark on almost any material i.e. glass, plastic cloth etc. and last a very long time with normal use.

The 1st Albatross SSTV Contest held in September proved so successful that it has been decided to repeat it next year. Discussions as to the date are now taking place, but so far the most likely time is the second weekend in September, 1977.

IATG announce the 9th "Giant" RTTY Flash Contest from 1500-2300 GMT on January 15th 1977 and from 0700-1500 GMT on January 23rd 1977. Full details are available from the organiser, Prof. Franco Fanti, Via A.Dallolio 19, 40139 Bologna, Italy.

**to be Published in December**



# A GUIDE TO AMATEUR TELEVISION

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THE BRITISH AMATEUR TELEVISION CLUB

# SUBSCRIPTIONS.

Once again it is necessary to remind members that all subscriptions are due on the 1st of January 1977. Please try to remember to pay on time as the expense of reminders only increases the cost of running B.A.T.C. Just send your cheque or GIRO order (a/c 25 612 4000) to the Treasurer whose address is on page 1.

Many members have asked for Banker's Order Forms, so we print one below. Just fill it in, cut it out and send it to the Treasurer, or send it direct to your bank and inform the Treasurer that you intend paying this way in future.



THE BRITISH AMATEUR TELEVISION CLUB  
BANKER'S ORDER FORM

To the Manager

Date \_\_\_\_\_

Member's Bank \_\_\_\_\_

Please pay on my behalf IMMEDIATELY AND SUBSEQUENTLY on the first day of January each year, commencing 1st January 197\_\_\_\_ the sum of TWO POUNDS to the account of:

The British Amateur Television Club a/c 0101260  
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Signature \_\_\_\_\_

Delete the words in heavy type if the current year's subscription has already been paid.

## POSTBAG

Lewis E. Waldeck in Leonia, U.S.A., wrote about some of his constructional projects when he sent his subscription in. He offers to send a description of some of them, when "de-bugged" which is very kind of him. They may be 525 but that won't matter much - conversion would add to the interest.

Mark Atherton G8JVT G6ANI/T in Bickley, Kent, writes of atv activity in the south-east of London. He reports the two main stations transmitting in the area are G6AGA/T G8CQF Ian and G6AMD/T G8GKQ Dave, and Mark hopes to be a third very soon. Other licences nearby are G6ALB/T, G6TDG/T and G6AMS/T, but in recent months no activity has been observed from them. Perhaps in the near future they will start radiating?

### Frequencies used by ATVers

Recently a B.A.T.C. sub-committee has presented to the RSGB VHF Working group some views on frequencies used by amateur tv. This document was compiled by Malcolm Sparrow G6KQJ/T G3KQJ in consultation with licenced committee members, including G6AHJ/T, G6AEC/T, G6ABE/T, G6AFF/T and G6LEE/T and others. Discussion by the RSGB, who negotiate with official bodies on behalf of British amateurs, will take into account both the views of the committee and any other views put forward by B.A.T.C. members.

The basic suggestions from B.A.T.C.'s committee include recommendations for 144.230 MHz as SSTV calling frequency, 144.750 as a fast scan calling frequency, and 144.170 as fast scan talkback.

On 70cm, it is recognised that vision carriers will tend to be sited nearer to 434 as 625 lines becomes more common, and difficulties are going to exist in terms of sideband filters as well as the interference problem with repeaters and OSCAR.

Time sharing is suggested as a possible cure.

For FAX a frequency of 144.70 is recommended, although comments by active members will be appreciated here.

All these points are subjects for discussion, and John Wood will be continuing the story in "TV on the Air" in future issues of this magazine.

## ADVERTS

B.A.T.C. Equipment Registry exists to help members of the Club who have equipment for disposal, or who want some specific piece of gear. Send a list of your "wants" or "disposals" including suggested prices to the address on page 1. During the six months for which your application is valid, the Registry will attempt to put you in touch with someone who will buy your surplus or sell you your needs.

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Full back cover	£12
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Small ads	10p per line

(Free small adverts are inserted for members of B.A.T.C.)

## Club Sales Price List

		<u>Price</u>	<u>Post &amp; Packing</u>
Camera tubes $\frac{1}{2}$ " 9777 E.M.I. Ebitron		£28.00	nil
1" P849 English Electric	Amateur Grade	£11.55	nil
9677 E.M.I.	Amateur Grade	£11.00	nil
9728 E.M.I.	Amateur Grade	£11.00	nil
$\frac{3}{4}$ " 9831 E.M.I.	Amateur Grade	£11.00	nil
$4\frac{1}{2}$ " Image Orthicons E.M.I. 9565		£10.00 for two	buyer collects
Coils 1" B.A.T.C. coils		£11.50	48p
$\frac{3}{4}$ " E.M.I. coils		£11.50	48p
Paxolin vidicon sockets		.20p	8p
C mount for lens		.50p	10p
Lapel Badges		.40p	8p
Adhesive Badges		.15p	8p
Paper and envelopes		£ 2.00	46p
Reporting Charts		. 6p	8p
EEV Camera Chart		£ 1.65	30p
B.A.T.C. Test card		.50p	6p
Film strips of past CQ-TVs		£1.20	10p
Windscreen Stickers		. 6p	6p
CQ-TV SPG printed circuit boards undrilled	£1.75	Drilled £2.75	8p
CQ-TV SPG genlock pc boards undrilled	£1.75	drilled £2.75	8p

Rapidly increasing postal charges have compelled us to quote the above post and packing charges. Will overseas members please ask for a quotation before sending cash. Obviously for small items such as lapel badges, adhesive emblems, windscreen stickers etc. one can send several items for the same price as one - please try and estimate the right amount. Our thanks go to those members who estimate on the high side and suggest that any balance can be put to club funds.

Please send orders to C.G. Dixon (B.A.T.C. Club Sales)

"Kyrles Crossa"

Peterstow,

Ross-on-Wye, Herefordshire.

### CLUB PUBLICATIONS

This is a separate department of the Club, do not send orders for publication to Club Sales, send orders to B.A.T.C. Publications

64 Showell Lane

Penn

Wolverhampton

Staffordshire.

Slow Scan Television by B. J. Arnold G3RHI published by B.A.T.C. 2nd edition. 35p + 8p p&p

Slow Scan Television Handbook by Don Miller & Ralph Taggart £2.50 + 35p p&p (overseas post rates on request)

C Q - T V back issues are post free in U.K. Currently available Nos 66-71 & 73-92 25p each, current, (93 onwards) 50p.

Any article which has appeared in C Q - T V can be supplied in photo copy form at 5p per sheet. (One sheet will reproduce any two facing pages of the magazine.) A list of all the main articles which have appeared in C Q - T V giving details of how many sheets are required to reproduce it is also available on request. Please send a 9" x 3" s.a.e. when using this service.

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