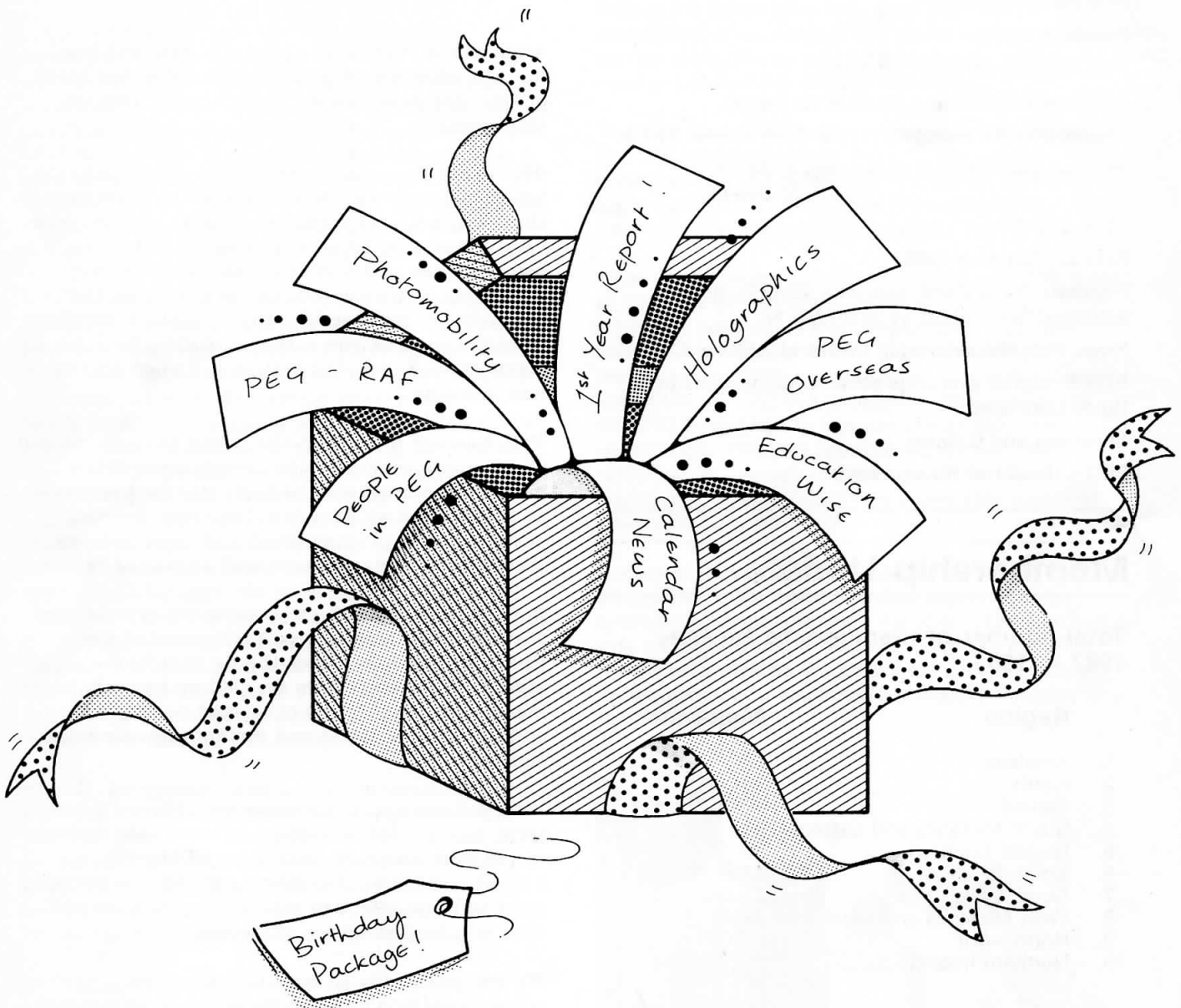


PEG

Newsletter

Photographic Education News



ISSUE No. 3 Summer 1987

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Membership Update

Total number of members to 1st May
1987 — 180

Region	Members
1. Scotland	3
2. North	18
3. Central	17
4. South Midlands and Eastern	31
5. Greater London	30
6. South East	14
7. South West	22
8. West Midlands and West	22
9. North West	23
10. Northern Ireland	—

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"END OF YEAR REPORT"



Although it is difficult to believe, the first few founder members of the Group joined at the start of May last year and we really are one year old this month.

Given that we are an independent group and rely totally on the voluntary efforts of members to do the work, we have made remarkable progress in a very short time. Much still remains to be done before we can claim to have reached all of our objectives, but with 180 members from all the categories of membership, the intentions of twelve months ago to become a representative body for all levels of education and training in photography is now a reality.

This does not mean that the Group has arrived and there are no problems; the development of the membership must still be a priority for everyone, as is the build up of regional activity, but the pattern has been established and there is every reason to be modestly confident about the future.

Once the present industrial problems are resolved there is considerable scope for increasing the number of members from the primary and secondary sectors. There are still many potential members in the schools of art and design, FHE colleges and the adult and community education centres.

More courses and conferences are planned for next term, as our first conference at Sheffield resulted in ten new members signing up on the day, an attractive programme covering all sectors would seem to be an effective means of recruitment as well as a modest source of income.

We are continuing to work on improving communications between members, from regional meetings to the establishing of a "Journal of Photographic Education" later this year. Experience of the last two issues of the Newsletter has shown that its content and quality is above the standard of many such publications. The change of title to "Photographic Education News"; is designed to be less parochial and a more accurate reflection of the quality of the material submitted for publication. The Journal will add

another tier to the range and provide for more lengthy features as well as being a vehicle for publishing the results of research.

Another PEG aim is to liaise with groups having similar objectives overseas, the invitation to join with the AJPI in Germany to hold an Anglo/German Photographic Education day at the next Photokina in Cologne is a good example of the kind of links available to us.

Opportunities for personal and professional development and the advancement of education and training are also key sectors of our proposed activities and we are continually looking for means to implement these intentions. An application has been made to an International Foundation with a view to attracting funding for curriculum development and research projects. The application has been registered but it will be some months before we know if we have been successful.

Now for some pleasing news of PEG's links with industry. The Editor and the Membership Secretary were recently invited to visit Paterson Products Limited at Dagenham where we met the Managing Director Mr Jeremy Parker and his fellow directors concerned with Sales and Product development. We had the most useful discussions about the Group and developments in photographic education generally. We established a number of points of mutual interest and Patersons have asked to be kept in touch with some of our developments with the view of providing appropriate support. We were also provided with copies of "The Book of the Darkroom"; sufficient to send to all existing members with enough in reserve to offer to each new member on joining. As the book has a cover price of £6.00, this was a most generous gesture on the part of the Company which I am sure all will recognise.

Finally, photographic education generally is entering a phase of substantial expansion, CGLI 923 with over 4000 students through to date, GCSE next year replacing GCE and CSE, already schemes with many thousands of candidates, CPVE, YTS and the many local initiatives funded by the Arts Council and the Regional Arts Associations.

Most of these initiatives are the result of a widening public interest and represent new clients taking up photography as part of general education or as a leisure interest. Alongside, we have the established pattern of Diplomas, Higher Diplomas and Degrees. Some of the vocational schemes are under review and are likely to be offered in more flexible modes. Standards too are improving. The end of term report both for photographic education and the PEG must refer to a successful year and an exciting future.

More about

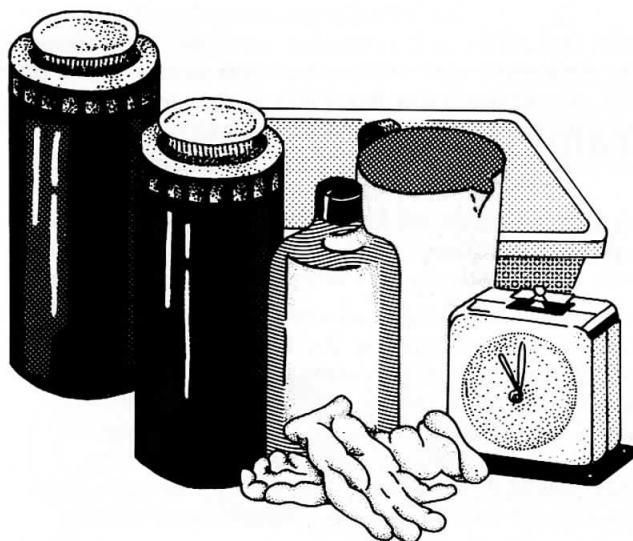
"Photomobility"

The idea of a mobile teaching darkroom opens up all sorts of possibilities for providing access to photography in small communities and schools in remote rural areas. Divorced from the problem of finding the space for a little used darkroom, workshops, short courses and photographic field work can be offered when and where required. When the need is satisfied the caravan moves on.

The East Cleveland project repeated in Newsletter No. 2 is designed around this concept, anxious to know more of the detail and the costing, PEG approached the organisers of Photography Year who have sent the following information.

"The Development Corporation came up with a grant of £3950 all of which was to be spent on the purchase, conversion and equipping of a suitable vehicle. A secondhand 14ft "Sprite Musketeer" was purchased for £500 and converted to a mobile black and white printing and processing darkroom at the NACRO workshops in Newcastle for £950. The remaining funds were spent on equipment, two cameras, an enlarger and a range of ancillary equipment. Also included was a one year supply of chemicals, film and paper.

The caravan is towed to the working location and plugged in to the hirers electrical supply. Due to problems of waste disposal, water is not laid on and a sink originally thought necessary was not installed. For security reasons the caravan is parked overnight in the garage of a local public transport company at a rental of £350 p.a."



PEG Visit to the Joint Services School of Photography (JSOP) RAF Cosford

The eleven PEG members who made the trip to the Joint Services School on Wednesday the 8th of April were given every facility to see and hear about service courses and training methods from both service and civilian instructors. Basic courses for new entrants to all three services last 27 weeks and lead to exemption from the CGLI 744 examinations. There are two week courses on service PR Photography and others for experienced personnel which lead to upgrading and promotion. Students trained at the school are employed in a large number of small (and mobile) photographic units both in the UK and postings overseas.

The visit included a tour of the impressive collection of civil and military aircraft, rockets, flying bombs (the infamous Doodle Bugs and V2s) in the nearby Aerospace Museum. Memorable; splendid kits of equipment, superbly equipped and maintained darkrooms, keen staff and students and not least, very high standards of work covering a surprising range of applications. Thanks are due to the CO for permitting the visit, to David Humphrey for masterminding the programme and to his instructor colleagues for their helpful and interesting explanations of the work of this unique establishment.



Training Survey

Training needs of the Photographic Industry Survey

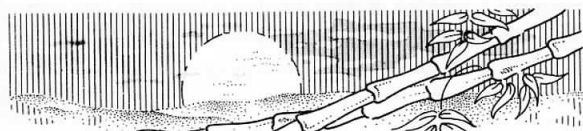
This major MSC funded survey is now well under way, the survey forms for the 1986 college leavers and the college questionnaires were dispatched from the BIPP at Ware early in the year. The Industry Survey forms have now been sent to all employers through their trade and professional associations, (BIPP, AFAEP, MPA, APL and PPLA). All have been asked about their present and forecastable training needs, methods of recruitment, in-company training and links with FHE institutions.

Manpower Services Commission

The survey of college leavers has produced well over 100 responses to date, although, regrettably, some of the advanced courses and the degree sector students are poorly represented in the returns. The college responses have also begun to arrive back at Ware and the analysis should begin over Easter with visits to some colleges being planned for the summer term. If the majority of employers send in their replies in the next few weeks, the Steering Group's target of an interim report by the Summer should be met.

Michael Ng is currently our only overseas member of PEG. He lives and works in Taiwan where he lectures in one of the very few professional photographic schools on the subject of colour processing. He is closely involved with the camera club movement as vice-president of the Photographic Society of Kaohsiung and as a lecturer on photo-theory. He has sent some examples of club magazines, all well produced with full colour reproduction. His own club has over two thousand members, while the largest in Taipei boasts a membership of over seven thousand.

Michael obtained an FRPS in the education category last year and also joined the BIPP, the only member in his country. He has written to PEG several times and would like to know more about our system of FE courses. Could members please send copies of their college prospectuses directly to him in Taiwan, his address is: Michael Ng, c/o Siliconix (TW) Ltd, PO Box 35-83 Kaohsiung, Taiwan.



David Dennison is our Regional Representative in the North West, he lives in Bispham and is a lecturer in the photography department of Blackpool and Fylde College. He writes "The PEG appeals to me as a vehicle for meeting fellow teachers and lecturers, to exchange ideas and experiences. Many of us must have similar professional problems; the opportunity to share these with like-minded colleagues can only lead us to a greater understanding and appreciation of our role within education" Dave is photographic representative on the Visual Arts Panel of Fylde Arts and is a member of the BIPP and RPS.

David Humphrey is a civil servant with the Ministry of Defence. He teaches photography at the Joint Services School of Photography at RAF Cosford. Apart from being the PEG rep for the Midland region, he finds time to tackle charity fund raising events. Working with "Lions International" he helped to raise £1500 for the BBC's "Children in Need" fund. On Saturday the 23rd of May, again with a "Lions International" support team of pacemakers, he starts off at Birmingham's Pebble Mill Studio to walk non stop to the BBC studios at Shepherds Bush, London. He hopes to raise funds for the National Society for Cancer Relief (Macmillan Fund) by commercial and private sponsorship through national and local publicity in newspapers, television and radio. His 105 mile event starts at 9.00 am on the 23rd of May, he will follow the A41 south until it crosses the A5 north of Edgware and then continue on the A5 to Willesden, then due south to Shepherds Bush. David hopes to complete his walk by 9pm on Sunday the 24th of May.

PEG Register of Lecturers

I have had several requests LEA advisers asking whether I can advise on PEG Members willing to lecture on INSET courses. I have been able to recommend names but my information is far from complete.

It would seem appropriate to set up a simple card register of PEG members willing to give lectures and demonstrations on photographic topics not only for INSET but for other course and conference organisers, including our own activities. This would not be an agency or employment register but just a means of supplying a name and address when requested. Fees, expenses etc., would be up to you.

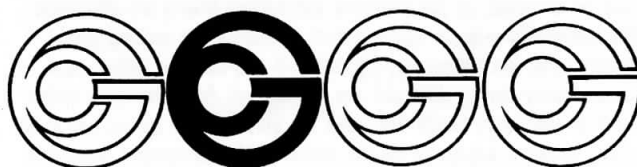
If you are interested, then send me a 5" x 3" file card with your name and address, home and work phone numbers, and qualifications on one side of the card and the topics on which you are prepared to talk/demonstrate listed in alphabetical order on the other.

Reply to F W Hawkins, Broadmeadows, Scotland, Burton Overy, Leics. LE8 0DR.

Careers Conference —

Report

The first PEG conference took place on the 2nd of March at Granville College Sheffield, with an attendance of 80 delegates and 20 speakers from all sectors of education industry and training, including careers advisors from local authorities, teachers from secondary schools and representatives from AFAEP, CGLI, IMBI and the RPS. An action and fact packed day, the result of months of planning and hard work masterminded by Sylvia Barnes. Thanks are due to everyone who took part, either before, or on the day, for their valuable contributions. A full report of the conference by Ted Martin, appeared in the May issue of the British Journal of Photography. An additional benefit was the recruitment of ten new members.



INTRODUCTION

Holography is an area that is steadily gaining recognition for its value as an industrial tool, an intriguing three-dimensional art form or a highly accurate recording medium. An increasing number of holograms are appearing for sale in shops, and some very successful exhibitions have helped to promote the potential of the subject. It is therefore reasonable to assume that there are many educational departments, with limited budgets, who would like to set up a practical teaching facility. However, they may well be daunted by the prospect of a heavy financial commitment and having to deal with complex optical and chemical systems. This article describes a simple, reliable system capable of producing high quality results for a relatively modest outlay.

THE VIBRATION PROBLEM

A prime requirement for producing successful holograms from continuous wave (CW) gas lasers is the avoidance of vibration from the optical components, subject or recording medium. Any movement during the exposure of a hologram causes either a reduction in image brightness, a localised blackening in the image area or in extreme cases, a complete loss of image. This is a very different effect compared to photography, where vibration causes image blurring. Movement of the interference fringes to a level greater than half a wavelength of the recording light will cause complete obliteration. The optimum is considered to be a fringe movement of no more than an eighth of a wavelength. Stability depends on a number of factors which can be summarised as follows.

- (a) Floor vibration. Influenced by the type of flooring material, floor level, function of the building and proximity to road traffic.
- (b) Movement of air across the set-up due to air conditioning systems, etc.
- (c) Acoustic disturbances e.g. loud talking, radios and other sounds in the vicinity.
- (d) Rigidity of optical components (beam splitters, beam expanders, mirrors etc.)

All these vibration problems can of course be overcome by the use of short duration pulsed lasers. However, the majority of holographers use relatively low powered gas lasers which necessitate average exposures of several seconds. Suitable precautions therefore have to be taken to isolate the equipment from vibration and movement.

What this means in practice is that split beam work is not possible in the majority of teaching situations without taking very elaborate precautions. Fortunately, the story is very different for single beam work. The secret of success being to ensure that there is no possibility of differential movement between the subject and the recording medium. In other words, as long as the subject and holographic plate are tightly linked together, the above factors become less significant. A relatively high level of general vibration can then be tolerated without any adverse effect on the fringe system, due to the subject and plate moving in unison. A small amount of movement of the laser beam can also be accepted, as the reference and subject beams are effectively the same with a single beam system. Therefore, for making good quality reflection holograms, sophisticated anti-vibration tables, sand boxes, heavy paving slabs etc. are not needed. Any reasonable stable table or laboratory bench will serve the purpose. The author has made many excellent holograms on the kitchen table! Successful holograms are also currently being produced by photography students at Salisbury College of Art, using a system adjacent to a much used E6 processing

line on the second floor of a very busy building. Not to mention being alongside the main Southampton road!

THE HOLOGRAPHIC RECORDING SYSTEM

There are many techniques for producing different types of holograms, from the very simple to highly complex. From the point of view of teaching the rudiments of the subject, whilst achieving impressive results, there is no doubt that a single beam reflection system is the best compromise. This will produce a bright hologram viewable by a suitable white light source, unlike the early holograms that could only be reconstructed using laser light. A suggested layout of components and recording geometry is shown in the accompanying schematic diagram.

Holograms of this type were first introduced by the Russian scientist Yuri Denisyuk in 1961, and are commonly referred to by working holographers as 'Denisyuk' holograms. The system was initially developed to produce high quality records of many of Russia's priceless art treasures. A selection of these prestigious holograms was seen for the first time in the West at a recent exhibition at the Trocadero in London. At a much lower level, the holograms made by the author for the Salisbury Museum exhibition also used this system (edition Number 1 of PEG newsletter refers).

The use of a single beam simplifies setting-up and reduces the need for expensive optical components. Also, the highly efficient concentration of laser light in the area of the recording medium and subject minimises exposure times and reduces adverse vibration effects.

This important system can truly be said to be the most simplistic and the most obviously correct method for the recording of holographic images. The exposing beam travels through the plate to the object and is reflected back to the plane of the emulsion, thereby interfering with the coherent reference wave travelling in the opposite direction. Denisyuk called it "The imaging of an object by its own back scattered light".

EQUIPMENT REQUIREMENTS

(a) **The Laser.** The least expensive laser, and the type used by the majority of holographers doing CW work is of the helium neon (HeNe) variety. This produces a red beam at a wavelength of 633nm. The power of the laser is the main factor governing the required exposure time. Very good Denisyuk holograms can be made using relatively small lasers. The author would recommend a laser in the range 3 to 10 mw, depending on finances. The approximate price range would be in the area of £500 to just over £1000. Lasers of higher power are needed for serious split-beam work and should be at least 15 mw, preferably 25 to 50 mw. Unfortunately, there is a considerable jump in price above the 10 mw range.

Lasers are available with either rectangular or cylindrical casings. The less expensive are usually the cylinders, for which the user needs to build a v-shaped mount. For holographic use, lasers with a linear polarised output give the best results. Vertical polarisation is preferable for use with the system described in this article, which uses a horizontal reference beam.

Choice of manufacturer can be difficult as there is a vast range of lasers available. The best quality lasers are reputed to be made by Spectra Physics Ltd (St. Albans, Herts), although they are also the most expensive. A very good range of small lasers is made by the American Hughes aircraft company, the main UK agents being Barr and Stroud of Glasgow.

Laser safety. As with any other bright source of optical energy, such as the sun or an arc lamp, common sense applies. One should not, under any circumstances, stare directly into the unspread beam or into its reflections from shiny surfaces. Laser beams of 5 mw and above can cause permanent retinal damage. Fortunately, very few accidents occur in this manner with CW lasers, as the probability of the eye being positioned within the narrow beam is small. It is important to ensure that the system is arranged in such a manner that nobody can walk into the room and accidentally look into the beam, whether direct or reflected; and ensure that no unauthorised person can operate the laser in your absence. Remove the switch key, if there is one; otherwise lock the door. Never operate any laser with the cover off. The power supply operates at several thousand volts.

(b) Beam spreading and filtering. The beam can be spread using a 40x microscope objective. This gives adequate coverage for a 5"x4" plate format at a distance of about 1 metre. Most laser beams and spreaders contain small amounts of dirt and other defects which will superimpose across the hologram. The beam can be 'cleaned up' by means of a small pinhole filter of about 25 μ positioned at the front focal point of the objective. This is known as "spatial filtering". The objective and pinhole usually fit into a special device which has full adjustment for positioning the pinhole (spatial filter assembly). Reasonable results can be achieved without this assembly, which can add substantially to the cost, but the optical components must be very clean.

(c) The Plateholder. Either cut film or glass plates may be used in the same holder. Commercially made plateholders are quite expensive. But with a small amount of ingenuity or help from a friendly woodwork department, a suitable holder can easily be made up for a few pence.

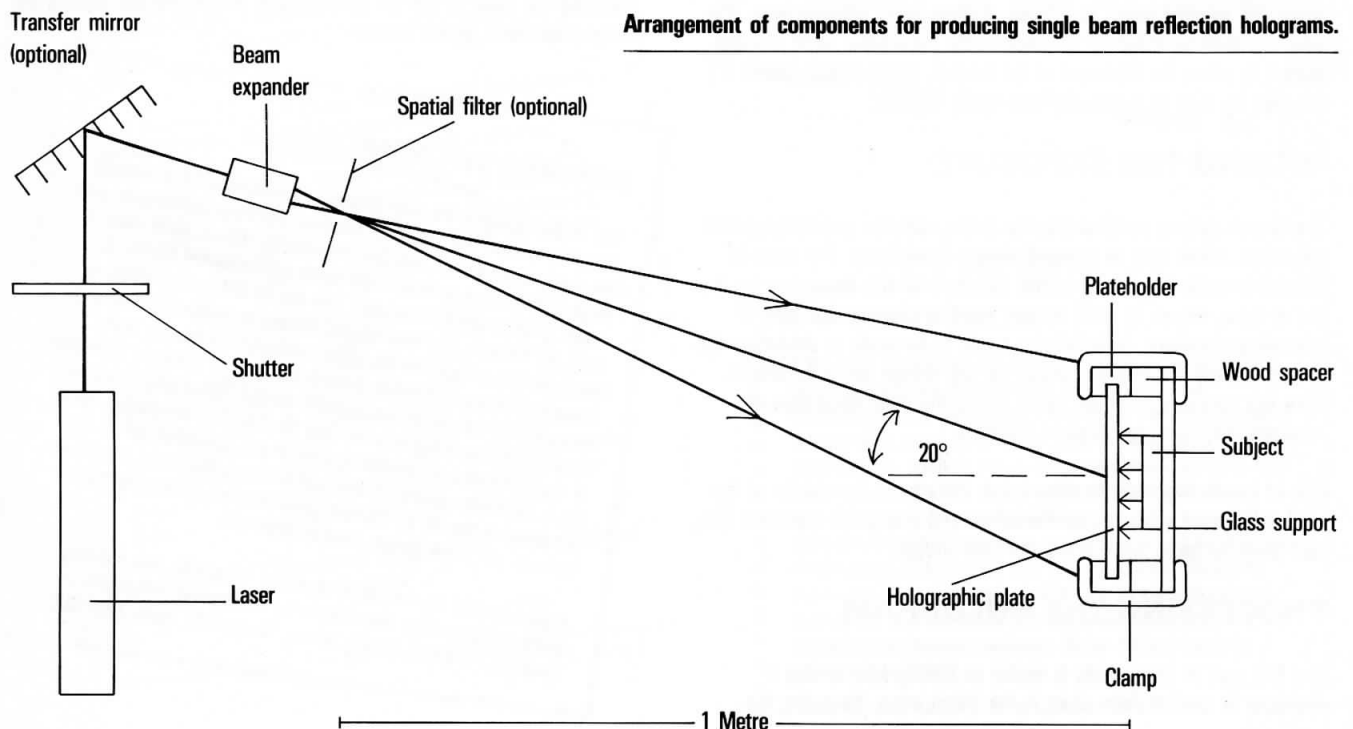
(d) Shutter. A small piece of card to blank off the beam prior to exposure should be adequate for most purposes. For more precise control, an old camera shutter or even a remotely controlled electronic shutter may be used. Any form of mechanical shutter should be mounted away from the work table to avoid the risk of vibration influencing results.

(e) Mirrors. Any mirrors used in the system for deflecting the beam should be front silvered to avoid double reflections, and subsequent light loss. They should fit into stable holders, with height adjustment. Great care must be taken with the general handling and cleaning of front silvered mirrors.

(f) Safelights. Emulsions used with HeNe lasers have a low sensitivity to green light. Therefore, a safelight fitted with a green filter with a transmittance in the region of 500 nm may be used for low level background illumination for both the work table and processing areas.

THE RECORDING MATERIAL

There are several different materials used for holographic recording. The most versatile and widely available material falls into the silver halide group of light sensitive emulsions, as do most photograph materials. The main difference being the very high resolving capability required for holography i.e. greater than 3000 line pairs/mm. The recommended emulsion for making reflection holograms with HeNe lasers is the Holotest 8E75 HD manufactured by Agfa-Gevaert.



Arrangement of components for producing single beam reflection holograms.

Plates v Film. The same Holotest emulsion is available on glass or film. The use of glass plates is strongly recommended for the beginner. They are easier to handle, give less image distortion due to flexing and need a much shorter settlement time prior to exposure. However, the cost of film is about one third that of a plate, and tends to give a marginally brighter image. During exposure, film must be made completely rigid. Two methods can be used. Firstly, film may be sandwiched between two clean sheets of glass. Unfortunately, this usually results in serious interference patterns across the image due to reaction between the various glass surfaces. Secondly, the back of the film can be index matched to a single sheet of glass using white spirit, which has a refractive index close to that of gelatin, film base and glass. This operation needs a fair amount of practice in order to get a perfect result.

THE MODEL

The chosen subject must be rigid with good reflective qualities and small enough to come within the 5"x4" plate size. Metal subjects are best suited, such as coins, jewellery and a wide range of brass items.

SETTING-UP

Initially, the unspread beam should be directed at the centre of the plateholder, then the beam spreading objective positioned to give bright even coverage across the plateholder. The spread beam will always be brightest in the centre, gradually reducing in intensity towards the edges. A piece of white card positioned in the plateholder will help with this alignment. The plateholder should be offset at an angle of approximately 20° relative to the beam axis. This will ensure that the reflection of the reconstructing light will be clear of the main field of view with normal viewing.

The object should be placed as close to the empty plateholder as possible, on the side opposite to the laser. A very good method is to attach the selected object to a piece of glass using adhesive wax. The glass can then be linked to the back of the plateholder using wooden spacers to allow the thickness of the subject. Metal clamps (about 2") can then be used to secure the unit tightly together.

MAKING THE EXPOSURE

The film or plate is positioned in the holder with the emulsion towards the object. Plates may be exposed almost immediately, film must be allowed to settle for some minutes. Exposure time is dependant on the size of laser, degree of beam spread, working distance and type of processing chemistry. An initial test needs to be made to determine the time to achieve the brightest image for the chosen set of conditions. Once this exposure has been found, it has the great advantage of remaining constant regardless of subject.

It is of course important to ensure that the area in the vicinity of the work table is as quiet as possible before and during the exposure. Also, care must be taken when lifting the card shutter.

PROCESSING THE HOLOGRAM

The first part of the process is similar to photography in that a developer is used to form silver in the fringe areas, thereafter the

procedure is very different and several possibilities are available. Experiments have shown that the brightest images result from the use of a rehalogenating bleach after development, producing 'phase holograms'. The light-absorbing silver fringes are converted back to a transparent halide structure comparable to a complex system of minute mirror-like surfaces, giving a hologram with high efficiency. Fixing is not recommended as it tends to cause high emulsion shrinkage due to the removal of unexposed material from between the fringe layers and reduces efficiency due to a softening effect on the gelatin. Desensitisation with a very dilute acid solution must be carried out in lieu of fixing, to avoid 'print out'. Further details on the processing of holograms are given in the technical leaflets on holography issued by Agfa-Gevaert, and other specialist suppliers of holographic chemistry.

VIEWING THE HOLOGRAM

For best results, the hologram should be viewed by a spotlight with a clear bulb directed towards the plate at the same angle as the original reference beam at recording (i.e. 20° from the left, or 20° from above for an object placed on its side during recording). Mini-spots marketed by Wotan are the most widely used viewing lamps for holography. They have a powerful tungsten halogen source and cost about £25. A further advantage of the Denisjuk hologram is that it has a wide viewing angle, unlike most other types of display holograms. Although, it must be said that it is sometimes difficult to light Denisjuk holograms in exhibition situations because of the shallow angle required for the brightest results. Unlike exhibitions of photography, special lighting systems always have to be designed and constructed to display any type of hologram.

An interesting effect can be seen by reversing the plate and viewing the pseudoscopic real image. The object appears to come forward from the plate, producing a weird effect due to reversed parallax. Also the object detail and contours are reversed. This effect is sometimes used to advantage by making a hologram using an inside out object, then reversing the plate to use the pseudoscopic image, thereby making the image orientation appear correct.

FURTHER INFORMATION

This article highlights the main practical considerations for a versatile recording system, well suited for teaching beginners. Departments with the appropriate facilities, and financial backing, will no doubt wish to progress onto more ambitious split beam set-ups in due course. But where to go for help and advice? This can be a difficult problem as there are currently very few training courses on holography and hardly any how-to-do-it books on the subject, although plenty of a highly theoretical nature. Fortunately there is a very good American publication recommended for use by the beginner entitled 'Holography Handbook' subtitled 'Making Holograms the Easy Way' by Fred Unterseher. Some of the information on processing chemistry is somewhat out of date, but is otherwise considered very useful. It is published by Ross Books, distributed in the UK by Fountain press and held in stock by Light Fantastic of Covent Garden, London (price £17).

A good contact for the supply of simple holographic kits, including plates and processing chemicals is the Commercial Holographic Company, PO Box 7, Hartley Witney, Basingstoke, Hants RG27 8UD.

AMERICA

The Society for Photographic Education

We have managed to revive contact with the American SPE through the exchange of publications. Some news of interest. The SPE has purchased an Apple Macintosh Plus for desktop publishing. The January edition of the SPEnewsletter was produced on it, the "double" issue consists of six pages, mainly concerned with nomination statements of nominees for the National Board and an eight page membership questionnaire. The quarterly journal "Exposure" has also been received and will be circulated to reps for display at our meetings.

The society has moved its administration centre from New York to New Mexico and now has an Executive Director, Judith Thorpe. The address for correspondence is:

**Society for Photographic Education
University Station
PO Box BBB
Albuquerque, New Mexico
USA**

AMERICA · AMERICA · AMERICA · AM



Sweden

Gunilla Knappe of the University in Gothenburg has written describing the structure of their three year photography course which was established in 1982. The common first year develops into three second year options:

- General - studio, portraiture, advertising
- Mass media - photojournalism and reportage
- Technological - museum, industrial, research and medical

The options are structured around a common core of subjects; history, law, graphics and media communications.

The final year provides for personal specialisation and a major project.

The letter also gives details of other courses; a two year university course in Stockholm, a two year documentary course at Balsta and a one year course in Hemse both Folk High Schools. Three upper secondary schools are also listed as offering courses in photography.

Sweden · Sweden · Sweden · Sweden · Sw

Out and About

It is good to see the PR emerging from some of the colleges. Just a sample of items which have reached PEG this term.

Nine second year BA students at Harrow have spent the term at the Bazalel Academy of Arts and Design in Jerusalem on a specially negotiated academic exchange. The group, tutored by Moshe Caine (ex-Harrow student, now full-time lecturer at Bazalel Academy) have been concerned with exploring and photographing different cultural identities as well as regional history and archaeology.

Two Harrow film students Suj Ahmed and Peter Thorn won first prize in the "Best Short Film" category of the Cork Film Festival with their film "An East End Story". The same pair came second in the Best overall Production category of the Fuji Film Awards with "Reflex Action". Writer/directors Andrew Graham and David Kerr also gaining the Steenbeck Award for Best Editing and special mention in the Euston Film Awards for Best Original Script.

Salisbury HND students have spent a second period at the University of Gotenburg in Sweden.

**PEG at PHOTOKINA
October 1988**

PEG has received an invitation to join with the German Photo Education group AJPI at Photokina for an Anglo/German Photographic Education Day sometime during the week of the exhibition which runs from Wednesday the 5th until Tuesday the 11th of October 1988.

Whether or not we decide to go to Cologne is something the regional reps will want to discuss with their groups in the near future. Siegfried Remann the chairman of AJPI is awaiting our reply, so if you have an interest in going to Photokina please register your intentions in good time. FWH.

Photography in Cambridgeshire Schools

"Photography in Cambridgeshire Schools" is the title of a report produced by Brian Martin a teacher of Art and Photography at the City of Ely College, an 11-18 year old mixed comprehensive school.

The Report, produced during a one term secondment to Homerton College Cambridge, reviews the present status of photographic education in educational institutions within the county, makes recommendations for in-service training, identifies curricular developments which indicate the need for improved facilities and makes suggestions for the improvement of the layout and design of darkrooms.

(Mr Martin's secondment was supported by Mr R D Bell, Senior Area Inspector and Senior Art and Design Inspector for Cambridgeshire.)

Responses were obtained from 39 establishments of which 35 were from secondary schools, 4 were from further education colleges.

26 of the secondary schools taught photography as part of an examination syllabus — typically as part of Art and Design (24), but also on Science courses (5) and as part of Media Education (2).

Only one school in the sample is currently offering Photography as an examination subject in its own right, while 18 schools involve Photography as an extra curricular activity. 6 schools have non-examination courses using photography for less able pupils.

The age group involved in photography ranges from 11-18 years and the ability range is equally wide.

32 of the schools have darkrooms of which 27 are located in an Art Department and 11 are situated in Science Departments (some schools have two darkrooms) — 3 schools have no darkroom facilities. Though some are little more than large cupboards, the majority of darkrooms are of a reasonable size with space to accommodate 6-8 pupils.

The extent to which photographic facilities are utilised in the schools is very varied. Some make little or no use, while others have devised programmes of tuition, beginning with the very youngest pupils, aimed at making each individual reasonably competent to work unsupervised in the upper school.

Several teachers involved in photography felt a sense of isolation and would welcome more contact with

others sharing the same interest. (*This seems to be a situation where the PEG could provide the necessary support — Editor*).

The appointment of peripatetic teachers is recommended as a means of providing the required level of expertise.

With the development of GCSE, photography is placed in a position equivalent to other areas of study; Drawing, painting, graphics, textiles and 3D. This and the introduction of Media Studies and TVEI will require improvement in the facilities available in many schools. Making programmes of in-service training available to staff encounters the difficulty of large distances. The staff at Huntingdon College have expressed interest in offering the RPS Certificate of Further Professional Study.

The report then looks at the problems of organisation and supervision including the design of darkroom entrance mazes.

Comment: *In spite of the difficulties identified, this is a positive report. Photography is said to be in good heart with much innovative work being done.*

The report has identified several significant features. The first being the scale of involvement. Although only one school offers an O level in Photography, a total of 31 examination courses are on offer, in which photography is part. Six non-examination groups are taught and 18 schools offer the subject as an extra-curricular activity. Extrapolating the position in Cambridgeshire gives a very rough guess estimate for the country as a whole of about 150,000 pupils taking photography in schools. The need for teacher support in the minority subjects is a constant problem but the peripatetic approach suggested offers hope for improvement — (Editor).

News from the Examining Bodies

Associated Examining Board — 1986 Report, statistics and comment

The total number of candidates sitting the examinations in Photography at Ordinary and Advanced levels in the June Examinations in 1986 increased by approximately 14% over that for 1985. Entries from both schools and further education went up by about the same proportions with the exception of A level entries from schools, where the numbers jumped from 99 in 1985, to 171 in 1986. Advanced level entries increased by 111 to 897 with those obtaining grades A B C D and E forming 66.8% of the total, against 68.6% in the previous year.

Another very welcome and continuing trend is the increase in the number of Ordinary level candidates achieving passes in A B and C grades. 69% of the entry from schools and 78% from further education, an average for the whole examination of nearly 75%. This quite remarkable 7% improvement on the results of last year has been achieved at a time of shrinking resources and, so we are told, falling standards in schools.

The A level examination has been given further recognition in the form of an annual award given by the Royal Photographic Society for the best exam performance. The award takes the form of one year's free membership of the Society. The successful candidate in 1986 was Andrew Woods, a student of the City and East London College.

ORDINARY LEVEL CANDIDATES

	Entry		A B C Grades		
UK Schools	1775	(1577)	1225	(992)	69.0% (62.9%)
UK FE	2452	(2122)	1917	(1513)	78.2% (71.3%)
UK External	86	(59)	65	(46)	75.6% (78.0%)
UK Total	4313	(3758)	3758	(2551)	74.4% (67.9%)
Overseas		(12)		(8)	(66.7%)
All Males	2669	(2448)	2006	(1716)	75.2% (70.1%)
All Females	1644	(1322)	1201	(843)	73.1% (63.6%)
Total	4313	(3770)	3207	(2559)	74.4% (67.9%)

ADVANCED LEVEL CANDIDATES

	Entry		A B C D and E Grades		
UK Schools	171	(99)	96	(83)	56.1 (63.6%)
UK FE	670	(633)	483	(452)	72.1 (71.4%)
UK External	21	(17)	16	(14)	76.2 (82.4%)
Total UK	862	(749)	595	(529)	69.0 (70.6%)
Overseas	35	(37)	4	(10)	11.4 (27.0%)
All Males	627	(584)	417	(411)	66.6 (70.4%)
All Females	271	(202)	182	(128)	67.2 (63.4%)
Total	897	(786)	599	(539)	66.8 (68.6%)

(Figures in parenthesis refer to 1985 results)

City and Guilds

The Working Party of the Photography Advisory Group has commenced a review of the existing schemes with the intention of introducing a more flexible modular structure. In line with City and Guilds policy for all new schemes and revisions, the new proposals are to be competence based.

The 923 scheme continues to attract students of all ages with something in excess of 3000 through the new scheme to date. The first four students to complete five modules and become eligible for the Group Course Certificate, which is offered in association with the Royal Photographic Society, were presented with their awards at a special lunch held at 76 Portland Place on the 7th of April. Their certificates were presented by the Director-General of the CGLI, Mr J A Barnes and the President of the RPS, Mr Arthur Downes. The Ilford Photo Company and Kodak Ltd presented each student with packs of photographic paper and film.

Work continues on the development of additional modules and minor changes to the assessment procedures. (Note: Day Conference on 923, 6th January 1988).

PEG "Resource Exchange"

One of our aims is to share professional experience by means of conferences courses etc. Dave Dennison has come up with his own interpretation, a teaching resource exchange scheme. He suggests that we all send in copies of our OHP diagrams, and handouts. Dave will classify, publish lists and make copies available. He has made a start by listing and describing several examples of existing material.

Title	Description
Subject magnification (Handout, 2 sides A4, with diagrams)	Calculating subject magnification with particular reference to 35mm users includes table to convert filter factors to exposure increase in stops.
Camera movements (Handout, 3 sides A4, with diagrams)	Intro to movements, Scheimpflug principle and controlling depth of field.
Lens coverage (Handout, 3 sides A4, with diagrams)	Principles of lens coverage, maximising lens coverage, data on image circle, diameter for various lenses.

PEG members may obtain photocopies by sending SAE (A4) to Dave Dennison, The Photography Division, Blackpool and Fylde College, Palatine Road, Blackpool.

(More material is available space does not permit listing here - Editor.)

He would like material sent to him for listing, so please send in your examples even if not professionally prepared or typewritten. If there is sufficient response we may be able to have the material drawn up and printed. David suggests the following condition: all material may be edited or copied directly; there will be no copyright restriction on the use of the material contributed when used for non-profit making educational purposes.

Museums and Galleries

Lacock-Fox Talbot Museum and Exhibitions

May 6th - June 30th *Landscape Photographs by Michael Kenna*

July 9th - October 31st *A major exhibition of the work of three photographers using the 19th century Gum Bichromate process (Terry King, Paul Brewer and Ken Waugh).*

"Young Photographers" in the upper gallery.
June 5th - July 31st : Sara Hodges.
August 5th - September 30th : Tony Jarrett.

For those likely to find themselves in mainland Europe then there are many specialist collections some recently established museums are:

Musee D'Orsay built in the former Gare D'Orsay in Paris houses a large photographic collection including the contents of the Kodak Pathé Museum donated by the French Kodak Company.

The Fotomuseum Burghausen in South East Bavaria, Established in 1983 Director Robert Gerlich. This museum was recently designated as a specialist regional collection for the breadth and quality of its exhibits.

The Museum of Holography at Pulheim. Established in 1979 claims to be the first European museum of holography. Has displays of all forms of holography and an archive of over 300 holograms from the first decade of holography. Director, Matthias Lauk. Pletsch, Mühlenweg 7, 5024 Pulheim.

The Photocollection of Hamburg. New galleries opened in February in the North wing of the Art and Trades Museum Hamburg. Reputed to be one of the top collections in Germany.

Future PEG Events

Our programme of events is beginning to take shape. Arrangements for national courses and conferences for the next two terms are as follows:



Central Region — visit to Trent Polytechnic during Diploma Exhibition, Wednesday 1st July, 2.30 pm.



Harrow College of HE is the venue for a day conference on developments in the CGLI 923 scheme on Wednesday the 6th January 1988.



The GCSE in Photography will form the subject of a day conference organised jointly by PEG and Hertfordshire College of Art and Design at St Albans on Thursday 2nd of July. Discussion will take place on the schemes published by The Southern Examining Group, The London and East Anglian Group and the endorsed scheme of The Midland Examining Group.



"Photography, Graphics and Printing" a look at education in the light of developments in New Technology. This is a joint event organised in conjunction with the Association of Teachers of Printing and Allied Subjects (ATPAS). The day will be held at South Nottinghamshire College, West Bridgeford, Nottingham. Date to be finalised about the end of October or early November.

