Deck
A.F.O. 5881/44

A.F.O. 4251/43

RESTRICTED

(FOR OFFICIAL USE ONLY)

Not to be communicated to anyone outside H.M. Service

ADMIRALTY FLEET ORDER

INSTRUCTIONAL FILM TRAINING—PROVISION OF CINEMA PROJECTORS, FILMS AND ASSOCIATED APPARATUS

ADMIRALTY, S.W.1,
16th September, 1943.

The following Order having been approved by My Lords Commissioners of the Admiralty is hereby promulgated for information and guidance and necessary action.

By Command of their Lordships,

H. V. Markham

To Commanders-in-Chief, Flag Officers, Senior Naval Officers, Captains and Commanding Officers of H.M. Ships and Vessels, Superintendents or Officers in Charge of H.M. Naval Establishments, and Admiralty Overseers concerned.

NOTE:—The scale of distribution is approximately half that shown in the Admiralty Fleet Order Volume, 1941, Instructions, paragraph 10.

Head of "P" Branch H.P.B.

4251.—Instructional Film Training—Provision of Cinema Projectors, Films and Associated Apparatus

(T.S.D. 2051/43.—16 Sep. 1943.)

NOTE.—The cinema projectors referred to in this Order are for use at all Stations, seagoing ships excepted.

Experience in the use of the film as a medium of instruction has shown that it is eminently suitable for Naval purposes, owing to its interest, value and scope, especially under present conditions when the periods of training have had to be drastically curtailed, and instruction has to be carried out largely under unrealistic conditions, with limited facilities.

This A.F.O. contains a summary of the Orders promulgated to date dealing with instructional films and cinemas.

A summary of Orders dealing with recreational films is also included.

CONTENTS

A.—Introduction

This A.F.O. contains the information given in the following Orders which are now cancelled :—

A.F.O. 901/39	A.F.O. 4508/42	C.A.F.O. 1024/41
A.F.O. 671/40	A.F.O. 4605/42	C.A.F.O. 1485/41
A.F.O. 4025/40	A.F.O. 4163/42	C.A.F.O. 627/42
A.F.O. 2685/41	A.F.O. 5240/42	C.A.F.O. 964/42
A.F.O. 2822/41	A.F.O. 5288/42	C.A.F.O. 1430a/42
A.F.O. 4614/41	A.F.O. 5449/42	C.A.F.O. 1882/42
A.F.O. 1256/42	A.F.O. 5645/42	C.A.F.O. 1634/42
A.F.O. 1527/42	A.F.O. 6073/42	
A.F.O. 2236/42	A.F.O. 263/43	
A.F.O. 3110/42	A.F.O. 355/43	
A.F.O. 3334/42	A.F.O. 1537/43	
A.F.O. 3595/42	A.F.O. 1667/43	
A.F.O. 3805/42	A.F.O. 2237/43	
A.F.O. 4348/42		

Reference should also be made to :—

Gunnery Films, Dome Teacher, etc.	A.F.O. 2989/42	Eye shooting, Parts 10–13—Aiming practice.
	A.F.O. 772/42	Use of tracer.
	A.F.O. 2991/42	Eye shooting and tracer films—Distribution.
	C.A.F.O. 1443/42	Dome teachers.
	A.F.O. 3355/42	Operators of dome teachers—conditions of service.
	A.F.O. 4509/42	New film A.A. gunnery—Photographs of action.
	A.F.O. 3426/42 A.F.O. 2290/43 A.F.O. 286/43	16-mm. projectors for gunnery radar and A/S instructional films.
	C.A.F.O. 2683/42	Dome teachers abroad—Provision of stocks of accessories and spares for replacement purposes.

Gunnery Films, Dome Teacher, etc.—contd.	A.F.O. 949/43	Barrage firing in local control.
	A.F.O. 2724/43	Instruction film " ' 2 ' Rocket Weapon" (A79)—Distribution.
	A.F.O. 3149/43	Instructional film, Bofors 40-mm. gun (Serial No. A.123).
Asdic Film Instruction	C.A.F.O. 1966/41 C.A.F.O. 2420/41	Asdic phenomenon—Replacement of sound film tracks by gramophone records.
	C.A.F.O. 777/42 C.A.F.O. 128/43	A/S instructional film and gramophone records.
	C.A.F.O. 979/43	Instructional film on Asdic, Type 144 (A.136*).
Radar Film Instruction	C.A.F.O. 1027/43 C.A.F.O. 1183/43	Radar instructional films.
Aircraft Recognition Film Instruction.	A.F.O. 4059/43	Aircraft Recognition Films—Revised Distribution.
Miscellaneous Films ...	A.F.O. 1446/43	" Coastal Command " for instructional purposes.
	A.F.O. 2257/43	Instructional film, " Boiler Cleaning " (A.116).
	A.F.O. 2725/43	Instructional films, " Care and Maintenance of Depth Charges " (A.108) and " Depth Charge Release Gear " (A.109).
	A.F.O. 2726/43	" Desert Victory ", for instructional purposes.
	A.F.O. 3002/43	Instructional film, " Decontamination of Aircraft ".
	A.F.O. 3003/43	Instructional film, " Fleet Fighter ".
	A.F.O. 3004/43	Instructional film, " Social Enemy No. 1 ".
	A.F.O. 3005/43	Instructional film, " Vision at Night ".
Cinema Projectors in Ships.	A.F.O. 793/40	Sound reproduction equipment—installation.
	A.F.O. 304/40	Entertainment equipment (armed merchant cruisers).
	(*See also* A.F.O. 3426/42 above.)	
Film Entertainment ...	A.F.O. 900/39	Regulations for cinema performances in H.M. ships.
	A.F.O. 4549/40 A.F.O. 3372/41 A.F.O. 4383/41	Royal Naval Film Corporation—General instructions.
	A.F.O. 16/41	R.N.F.C. training of operators.
	A.F.O. 3953/42	Admiralty Shore Establishments Cinema Fund.
	A.F.O. 1681/43	R.N.F.C. films—Distribution.
	A.F.O. 2256/43	16-mm. recreational films—REPORT.
W.R.N.S. Operators ...	A.F.O. 4864/42	W.R.N.S. advancement of ratings—Procedure.
Care and Maintenance of Films.	A.F.O. 2920/43	Care and maintenance of films—Entertainment and instructional.

2. *Care of Films.*—All matters concerning the use of instructional films are dealt with by the Film Section of the Training and Staff Duties Division of the Naval Staff, Admiralty, to whom enquiries on the following subjects should be sent (letters should be addressed D.T.S.D., Admiralty) :—

(i) Allocation of cinema projectors.
(ii) Production of new film subjects.
(iii) Allocation and distribution of still projectors.
(iv) Production of silent film strips for still projectors.
(v) Training of W.R.N.S. cinema operators.
(vi) Supervision of distribution of all instructional films.

B.—Projectors and Operators

3. *Supply of Projectors.*—(i) Cinema projectors, which are naval stores, can be supplied in either 35-mm. or 16-mm. size, and approval has been obtained for the provision of these to shore establishments where training is carried out for a minimum of 500 trainees per annum. Requests for these projectors should be made to D.T.S.D., Admiralty, and be accompanied by :—

(*a*) Full details of the space or hall in which it is proposed to use the projector, with sketch drawings giving length, breadth and height to eaves or beams, location and size of any platform and projector room ; also the position of exits.

If available, a copy of an architect's plan is preferred.

(*b*) Electric current supply available, *i.e.*, A.C. or D.C. voltages. If A.C., whether single and/or three-phase.

(*c*) Details of complement held, numbers of men trained, subjects in which training is given.

(*d*) Details of subjects in which it is desired to give instruction by film.

(ii) Two projectors will be allowed to each establishment covered by this approval, but difficulties of supply do not permit of this being carried into effect at present. Supply of 16-mm. projectors to sea-going ships is dealt with in A.F.O. 3426/42.

(iii) Appendix II gives particulars of standard equipments for 35-mm. projector equipments for shore establishments, and of 16-mm. " GeBescope " and "Ampro " equipments for H.M. ships and shore establishments. The articles in Table I are supplied for every installation, and Table II shows the equipment which will vary according to the requirements of individual installations. Owing to production difficulties it is not always possible to supply all the items listed at the same time as the projectors. Deliveries of such items will be made without further demand as supplies become available.

Particulars of *35-mm.* cinema equipment supplied to H.M. ships are shown in Establishment List K.1.

4. *Projectionists.—W.R.N.S. Cinema Operators.*—(i) The following instructions regarding the general conditions of service of W.R.N.S. cinema operators (including W.R.N.S. dome A.A. teacher operators) are promulgated for information and guidance.

(ii) W.R.N.S. cinema operators constitute a specialised category and are employed to operate projectors used for instructional films in shore establishments at home where full-time operating is required, and where they can take the place of active service personnel who are, or would be, allocated for this purpose.

(iii) Recruits are at present entered in the W.R.N.S. Central Depot and given a course of technical training at the R.N. School of Cinema Projectionists in the R.N. Barracks, Chatham, prior to being drafted to fill requirements in appropriate naval establishments.

(iv) In those establishments in which W.R.N.S. cinema operators are borne, one or more should be trained locally in the operation of the dome A.A. teacher apparatus with a view to relieving eventually one of the male operators as second dome operator. Wrens selected for this training must already have had at least six months' experience as projectionists and must be above the average in intelligence. They will not be required to carry out any maintenance duties and these will remain the responsibility of the male operator. Leading Wren projectionists, however, where they are allowed (*see* paragraph (vii) below), will be required to take charge of the dome and carry out maintenance duties.

(v) W.R.N.S. cinema operators will, after enrolment, continue on the general duties rate of pay whilst undergoing training and, on satisfactory completion of training, will be granted the lower specialised rate of pay. On termination of a minimum of three months' service on the lower specialised rate, they may be advanced to the full specialised rate of pay if recommended as being competent in the required duties. These are operating, cutting, splicing, and general repair of film programmes and maintenance of cinema projectors.

(vi) Advancement will be from a single roster maintained at Chatham, and, in addition to fulfilment of the qualifications laid down in A.F.O. 4864/42, paragraph 8, will be conditional upon the passing of tests, at stated intervals, to be laid down by the Admiralty. These tests will be open to all Wren cinema operators whether they are employed as assistant operators in dome teachers or in a normal instructional cinema. Wren operators employed in dome teachers who pass the approved test will take charge of the dome teacher and release male ratings in this duty.

(vii) Leading Wren cinema operators will be allowed as follows :—

(*a*) In instructional cinemas where one cinema operator is approved.

(*b*) In instructional cinemas where two cinema operators are approved, one to be a Leading Wren.

(*c*) In dome operating teachers, the W.R.N.S. rating in charge to be a Leading Wren (*see* paragraph (iv) above).

(viii) Demands for W.R.N.S. cinema operators are to be forwarded to the Superintendent, W.R.N.S., The Nore, and those for W.R.N.S. dome A.A. teacher operators to the appropriate Command Superintendent, W.R.N.S., on the usual Form D.1 in either case.

Male Operators.—Male operators are also being trained for use in ships and shore establishments where W.R.N.S. cannot be accommodated. These ratings will form part of the Wireman (C.P.) Branch (A.F.O. 3355/42 refers).

Note (A).—Up to two W.R.N.S. projectionists are allowed for each cinema installation without alteration to complement. (Admiralty Letter N.22577/41 dated 27th November, 1941.)

Note (B).—W.R.N.S. cinema projectionists are for instructional film shows only, but they may be employed in showing recreational films if they wish to volunteer for this duty. Payment for such duties undertaken outside working hours should be made locally.

Note (C).—In the light of experience, it is considered that one projectionist is sufficient for a 16-mm. and two for a 35-mm. installation.

5. *Servicing of Projectors in Shore Establishments and Ships.*—It has been recognised that all projectors, whether in domes, miniature tracer ranges, or training establishments, should be serviced regularly, if possible once every six weeks. The following servicing arrangements have therefore been made and every use should be made of these to avoid damage and breakdowns to equipment.

Cinema Maintenance Officers.—Cinema maintenance officers have now been appointed to the staffs of Commanders-in-Chief, as follows :—

(1) C.-in-C., Rosyth :—
Accommodated in H.M.S. " Cochrane " for Scotland, Northern Wales, Northern England and Ireland.

(2) Admiral Commanding Orkneys and Shetlands, Scapa :—
Accommodated at R.N. Base, Lyness.

(3) C.-in-C., Portsmouth :—
Accommodated in H.M.S. " Vernon " (P) for South, East and West England.

Cinema maintenance officers are responsible for supervising the maintenance and efficiency of cinema projectors in :—

(*a*) Shore establishments.

(*b*) Dome aiming teachers.

(*c*) Ships in the Home Fleet.

In order to maintain the efficient servicing of cinema projectors until such time as the necessary staff can be supplied to assist the cinema maintenance officers, a contract C.P. 4E/69963/42, dated 31st August, 1942, has been placed with Messrs. Gaumont British Equipments Limited for the regular servicing of shore establishments at six-weekly intervals, and in cases where cinema maintenance officers cannot at present service equipments regularly the Gaumont British servicing engineer will be requested by the C.M.Os. to visit stations until such time as it is possible for these officers to undertake the work themselves. The Commanding Officer concerned will be informed of the Gaumont British engineer's visit.

Emergency servicing should, wherever possible, be done by cinema maintenance officers and Commanding Officers should, in the first place, contact their appropriate cinema maintenance officer in a case where repairs, spare parts or maintenance of their projectors is required which is outside the scope of the duties laid down for cinema projectionists, *i.e.*, running repairs and general cleaning.

The cinema maintenance officers, or their representatives, will visit shore establishments as frequently as possible to inspect the cinema equipment, and all facilities should be afforded for this purpose.

Suggestions will be made by the cinema maintenance officer, where necessary, for the improvement of instructional cinemas. Action should be taken upon these suggestions by Commanding Officers in consultation with D.T.S.D., Admiralty, where necessary.

Commanding Officers of ships and establishments are to arrange facilities for these officers to make complete reports on all installations. Copies of these reports should be forwarded to D.T.S.D., Admiralty, by the cinema maintenance officer and one left with the ship or establishment concerned. These reports should include any recommendation for improving the efficiency of the cinema installation which cannot be carried out locally.

Their advice should be sought on the following matters :—

Selection of a suitable room for cinema installation difficulties, improvements to acoustics, quality of projection, etc.

Cinema maintenance officers should demand spares on Forms S.134*d* as follows :—

Home—

35-mm. projectors from S.N.S.O., Portsmouth.

16-mm. GeBescope projectors from S.N.S.O., R.N. Store Depot, Park Royal, N.W.10.

16-mm. Ampro projectors from S.N.S.O., R.N. Store Depot, Stanley Mills, Stroud.

Abroad—

35-mm. and 16-mm.—Nearest Naval Store Officer.

Note.—The supply of cinema mechanical parts is, at present, very restricted. Ships and establishments are, therefore, to observe the strictest economy in their use.

Handbooks.—An instructional handbook is supplied with every new machine, and for 35-mm. projectors. Copies of the handbook for 35-mm. portable projectors may be replaced by demanding handbook, Pattern 7571, from Naval Stores.

Log Books.—Log books are available for use with cinema projectors and should be demanded from Keeper of Stationery and Printing, Admiralty—Form 5—1174 Established February, 1942, T.S.D. 18/42.

These should be kept fully up-to-date and will be inspected periodically by the Cinema Maintenance Officer when visiting establishments.

Causes of Breakdowns.—The two most frequent causes of breakdown in cinema projectors have been found to be over-lubrication and condensation of moisture in the projector.

(1) *Condensation.*—The chief cause of this has been found to be lack of heating accommodation in the projection box; this fault has been prevalent in ships. The projection box should be maintained as nearly as possible at an equable temperature of approximately 60°. Glass windows should be fitted in the operating box apertures in order to retain as much warmth as possible and to exclude the damp, as water condensed on the objective soundhead optical system and also on the picture projection lens will cause serious projection difficulties.

(2) *Lubrication.*—Excessive lubrication of 35-mm. or 16-mm. projectors leads to leakage of oil into the head amplifier, amplifier and electrical circuits, thus destroying the insulation and causing electrical fires. As these projectors have " Oilite " bearings, the chance of seizure from lack of oil is very small and danger lies in over, rather than under, lubrication, and in no projector should the oil applied to oiling points exceed one drop at each application.

Thirty-five millimetre projectors should be oiled once on every running day at the routine oiling points as detailed in the handbook supplied with the projector. Oil should be applied before films are shown and the projector should be run for about twenty minutes without film, after which any excess of oil should be wiped off with a clean cloth. Cross box oil should be changed after every eighty hours' running time.

Sixteen millimetre GeBescope projectors should be lubricated at the six oiling points set out in the instruction book. Experience has shown that the lubrication of GeBescope projectors should be carried out once in every ten running hours (not every five hours as detailed in the handbook).

Sixteen millimetre Ampro projectors should be lubricated at the central oil well as instructed in the handbook.

Experience has also shown that new prints of technicolour gunnery films supplied for use with 16-mm. projectors in accordance with A.F.O. 3426/42 and A.F.O. 3334/42 are liable to jump off the sound drum.

If this difficulty is experienced, the film should be lubricated, vide A.F.O. 2920/43, para. 16, and reference made, if necessary, to a Cinema Maintenance Officer for adjustments to be made to the projector.

Care of 16-mm. projectors.—Considerable damage is being caused by the " stripping " of 16-mm. projectors by ships' personnel.

T.S.D. 8932 " Notes on the Instruction Manual for GeBescope 16-mm. Sound and Silent Film Projector ", is issued to all ships and establishments supplied with 16-mm. GeBescope projectors, and its contents are to be brought to the notice of officers responsible for these equipments.

16-mm. projectors are not to be dismantled other than by Cinema Maintenance Officers or their staffs. Where it is not possible to obtain the services of a Cinema Maintenance Officer (*e.g.*, outside home waters), no part of the projector may be dismantled unless it is absolutely necessary and the responsible officer is present.

Paragraph 4 of Appendix II of C.B. 3078(R) will be cancelled.

6. *Accessories.*—(i) *Spares.*—A reasonable supply of spare parts for running repairs is supplied to all ships and establishments with the original projector and a full list of the equipment so provided is to be found in Appendix II of this A.F.O.

(ii) *CO_2 Cylinders, Pattern 7535—Refillings.*—There is a shortage of CO_2 cylinders, Pattern 7535, which are used with the automatic fire extinguisher fitted to 35-mm. cinema projectors.

When existing cylinders have been used, they are, therefore, to be returned by ships and services to the nearest dockyard or area naval store for refilling which is to be arranged at the earliest possible date under standing contract dated 30th November, 1939, C.P. 57681/39, with the Pyrene Co., Ltd., Great West Road, Brentford, Middlesex.

If more convenient, discharged cylinders may be sent direct from shore establishments, payment for filling being made by the Accountant Officer. A record of the cylinders dealt with in this manner is to be kept in a subsidiary account, Form D. 186, and accounted for in accordance with the procedure contained in B.R.4, Article 13 (9).

The terms of the contract quoted above are as follows :—

(1) Empty cylinders to be forwarded carriage paid.

(2) The price to be paid for refilling and resealing 8 oz. cylinders with CO_2 and returning, carriage paid, to the following distances.

100 miles	*200 miles*	*400 miles*
1 only, 5*s.* 3*d.* each	1 only, 5*s.* 6*d.* each	1 only, 6*s.* each
2–4, 5*s.* each	2–4, 5*s.* 3*d.* each	2–4, 5*s.* 9*d.* each
5 or more, 4*s.* 9*d.* each	5 or more, 5*s.* each	5 or more, 5*s.* 6*d.* each

Stocks of cylinders should not fall below two or exceed six for any installation.

7. *The Use of Instructional Projectors for Recreational Purposes.*—The charge of ½*d.* per head, laid down in paragraph 2 (*d*) of A.F.O. 1795/40, for the use of instructional equipment in shore establishments for recreational purposes is to be paid to the Accountant Officer of the establishment, who will take the amount on charge in his public account as a credit to Vote 8 II J.

8. *The Use of Commercial Cinemas for Instructional Film Training.*—Arrangements have been made through the Cinematograph Exhibitors' Association for certain commercial cinemas in the United Kingdom to be available for showing naval instructional films to naval personnel without charge. This applies only to hours outside commercial cinema showings. In areas where there are a number of cinemas, exhibitions will normally be arranged upon a rota basis. Where, however,

the circumstances are such that it is necessary to use a particular cinema at regular and frequent intervals, payment may be made from public funds for the hire of the cinema concerned, but this should not exceed three guineas for any one performance, except with prior Admiralty approval.

9. *Privately Owned Cinema Projectors—Use of, for Instructional Purposes.*—Their Lordships have had under consideration the question of the utilisation of privately owned cinema projectors for the showing of instructional films to personnel in shore establishments. After consultation with the establishments concerned, it has been decided that where it is necessary to utilise privately owned equipment for instructional purposes, payment may be made from public funds of a fee of 5*s.* for each exhibition of a film, subject to a maximum payment of £1 a month in respect of any one projector, the cost being chargeable to Vote 11 N (8).

C.—Films

Home

10. *Distribution of Films.*—In order to facilitate the distribution of films, and to economise in the use of film stock used for naval instructional purposes, instructional film libraries have been set up.

Requests for copies of films and all correspondence concerning film distribution, should be addressed to the Officer-in-Charge of the nearest instructional film library. These libraries have been established as follows:—

Glasgow (Sherbrooke House)	London (R.N. Store Depot, Britannia Works, Neasden Lane, N.W.10)
Liverpool (H.M.S. " Wellesley ")	Scapa (R.N. Base, Lyness)
Rosyth (H.M.S. " Cochrane ")	Devonport (R.N. Barracks)
Portsmouth (H.M.S. " Collingwood ") (Not yet in full working order)	Chatham (R.N. Barracks)

Instructional film distributing officers have been appointed in the areas noted above, and these officers will hold stocks of instructional films and will provide establishments in their areas with the films they require.

Copies of new films and new parts to existing films will be sent direct to film libraries and to establishments allowed their own copies. Details of each film distribution will be promulgated by A.F.O.

Copies of films will only be supplied on permanent loan to ships and establishments not provided for by this initial distribution if they are required for constant showing, *i.e.*, three times per week.

In all cases, application of films not so provided must be referred to the instructional film distributing officer concerned.

Instructional film distributing officers will maintain and circulate catalogues of the films available in their libraries and those held on permanent loan by establishments in their areas. Copies to be held by individual establishments will be restricted to films which are in constant use, *i.e.*, three times a week. Interchange of films between adjacent establishments is to be encouraged in the interests of economy.

As much notice as possible should be given to I.F.D.Os. when films are required, to enable copies to be reserved. Copies should be returned by the quickest route, immediately after use, as follows:—

16-mm. films ... on their reels, not rewound, *i.e.*, " End " outwards.

35-mm. films ... in their tins, plated off, beginning outwards.

Cutting and joining of reels of film is to be reduced to a minimum.

Eye-shooting films will continue to be distributed in accordance with A.F.O. 2991/42, with the exception of Parts 4a, 6, 7 and 8, which are now obsolete.

Sub-Libraries.—In addition to the libraries referred to above, a series of sub-libraries are being formed when transport difficulties may exist, and information will be promulgated by subsequent Fleet Orders.

Abroad

Distribution to ships in foreign waters and to shore establishments abroad, will in future be arranged through the various Cs.-in-C.

Dome Rolls.—Experience has shown that the maximum number of times that a dome attack film can be shown through the projector fitted in a dome-aiming teacher is about 200, but, however far short of this figure a film has been shown,

it is of no training value to continue using it after it has become so worn that the rating manning the gun-sight cannot see the aircraft clearly through the yellow filter in the eyepiece of his backsight.

A contract, dated 9th April, 1942, C.P. 2A/12279/42, has therefore been arranged with Messrs. Technicolour Ltd., for the supply of dome attack films, known as dome rolls, Parts 1, etc., for use with dome cinema aiming teachers.

The initial issue of dome rolls is two copies of each part to stations at home, and three of each to stations abroad.

These films are naval stores, and demands for parts to replace those worn out are to be forwarded by services at home and abroad to the Naval Store Officer, R.N. Store Depot, Elveden Road, Park Royal, London, N.W.10, who will arrange purchase and direct delivery to services at home, and shipment of requirements for establishments abroad.

Worn out dome rolls are to be dealt with as foliows:—

At Home ... Returned to N.S.O., R.N. Store Depot, 54, Neasden Lane, London, N.W.10, clearly labelled " For Destruction ".

Abroad ... To be destroyed in the presence of a responsible officer.

Certificates of destruction are to be forwarded in all cases to the Instructional Film Distributing Officer, c/o Training and Staff Duties Division, Admiralty, Whitehall, London, S.W.1.

Catalogue.—A complete list of instructional films available to date is given in Appendix I of this Order.

Should a copy be damaged whilst in possession of any establishment the I.F.D.O. should be advised immediately so that arrangements can be made to secure replacement, but the utmost care must be taken of the films while on loan. These will be checked on return to the library, and if damaged beyond repair should be sent to N.S.O., 54, Neasden Lane, N.W.10, clearly labelled " For destruction ".

12. *Confidential Films.*—Films which are starred on the lists should be regarded as confidential, and must only be shown at the discretion of Commanding Officers. If sent by post, these films are to be registered.

13. *Care of Films.*—Reference should be made to A.F.O. 2920/43.

14. *Stowage Cabinets.*—(i) Film stowage cabinets, Pattern 7561 (for 35-mm. films) and Pattern 7618 (for 16-mm. films) are provided for holding an arranged programme of films at the projector position, and not for general stowage purposes. Not more than one such cabinet is to be retained for any one installation.

(ii) When not in use at the projector, instructional films are to be retained in their metal containers and stowed in steel cupboards (subhead E.4) which are to be demanded from storing yards.

(iii) In view of the need for economy in the use of steel, the number of cupboards demanded is to be kept to the minimum necessary to contain films actually held in the establishment.

(iv) Particulars of sizes of suitable cupboards are given in A.F.O. 2596/39, but the maximum height now provided is 6-ft.

15. *Organisation of Instructional Films for the United Nations generally.*—A central library for instructional films has been set up at the Bureau of Aeronautics, in Philadelphia, U.S.A. Copies of all instructional films produced by Allied nations of interest to the Royal Navy are held in the Admiralty viewing library.

Certain American films considered suitable for limited distribution are included in List " G " of this A.F.O. Distribution of these films is being made without demand.

16. *Production of New Films.*—Naval authorities requiring new instructional films to be made should submit proposals through administrative channels to D.T.S.D., Admiralty. These proposals are to include a draft outline of the suggested film, to enable an estimate to be made of the resources required, and the cost. In this connection it should be borne in mind that the production of a film is expensive and a matter requiring a minimum of three months' work. Suggestions should, therefore, be carefully considered before they are put forward to consider their suitability for naval training as a whole, and not simply for local use.

17. *General Plan for New Films.*—A general plan for covering all training syllabuses by instructional films is in hand but it is not considered probable that the films will be available for some long time owing to lack of production facilities at present. In the meantime it is proposed to deal with all outstanding training syllabuses by means of the " Still Synopsis ", which is described under " E " below.

D.—Fire Precautions—Danger of Fire

18. *Necessity for Care in Storing Films.*—It is impossible during the war for all films to be made on a non-inflammable or acetate base. For this reason all films should be regarded as highly inflammable and care must be taken that they are not exposed to naked light. NO smoking is to be allowed in the projection box or film re-winding rooms.

In certain instances in shore establishments, fires have been started owing to carelessness of cinema operators in handling these inflammable films and by failing to observe essential fire precautions in projection rooms and re-winding rooms.

A *Warning Notice* (S.1546) has been issued, two copies per installation to all ships and establishments holding 35-mm. cinema equipment.

These notices should be prominently displayed in the re-winding room and in the projection room and in any other room or space in which 35-mm. films are stored.

Further copies of this notice (S.1546) are obtainable on application to the Keeper of Stationery and Printing.

This danger does not apply to 16-mm. films, all of which are printed on non-inflammable stock.

19. *Training of Operators.*—The danger of fire from films is emphasised throughout the W.R.N.S. cinema operators' training course and fires are actually started, demonstrating this danger, to give every operator practice in how to deal with these outbreaks and to give her confidence in cases of emergency.

20. *Reports of Fire.*—Should a fire occur in the cinema a report on the circumstances should be forwarded to D.T.S.D. without delay. This report should include :—

(*a*) Cause of the fire.
(*b*) Damage caused.
(*c*) Fire precautions existing before the fire.
(*d*) Steps taken to prevent a recurrence of the fire.

Note.—A further A.F.O. dealing with precautions against fire in shore establishments is in course of preparation and will be issued shortly.

E.—The Film Strip

21. Experience has shown that the cinematograph film, although a valuable aid to instructors, is too quick to give a lasting impression to the average man under training.

Experiments have been made and have proved successful in the use of what is known now as a film strip. This is a length of celluloid, which is
either (*a*) made up from illustrations of points raised in the moving film and suitably captioned
or (*b*) is made from a series of independent illustrations and captions, and designed to stand on its own with no moving film to amplify it.

The film strip, therefore, may be considered as an "animated blackboard" and may be met under a number of names, *e.g.*, film strip, still synopsis, instructional still, strip slide, picture roll, etc. "Film Strip" is the term to be generally employed.

The method of use of both moving film and the film strip will be covered by a memorandum issued by D.T.S.D., Admiralty, entitled "Part III—Design and Construction of Instructional Films", and this memorandum will be issued to all training officers, and should be readily available for use by instructors.

Experiments have shown that the still strip is one of the most potent visual aids available to the instructor, and should be looked upon by him as his best link between the subject and the class under instruction.

22. *Distribution of Still Projectors and Strips.*—It is intended to issue a "Film Strip" with each copy of every instructional film supplied to ships and establishments. Synopses of films already issued will be supplied without demand as they become available and still projectors will be issued as they are produced on the basis of one per moving film projector.

F.—Recreational Films

23. Arrangements for the supply of these are made :—

(*a*) In the case of shore establishments : Through the Admiralty Shore Establishment Cinema Fund Committee. Secretary, 19, Tower Street, London, W.C.2. Telephone : Temple Bar 8927. (A.F.O. 3953/42.)

(*b*) In the case of seagoing ships : Through the Royal Naval Film Corporation. Secretary, Royal Victoria Yard, Deptford. (A.F.Os. 4549/40 and 4383/41.)

(*c*) *See also* Section A of this A.F.O.

G.—Notes on the Use of Instructional Films

24. Consideration of the use of the film as a medium of instruction has shown that it is eminently suitable for naval purposes, owing to its interest value and scope, especially when the periods of training have to be drastically curtailed and instruction has to be carried out, largely under unrealistic conditions, with limited facilities.

25. The instructional film can be employed with advantage for the following purposes :—

(*a*) The elementary instruction of new entry officers and ratings.
(*b*) General education—including an insight into the Empire war effort.
(*c*) Technical and scientific instruction.
(*d*) Instruction in tactical subjects and fighting methods.
(*e*) Recognition of ships and aircraft.

26. The instructor should always keep in mind that the film, whether sound or silent, is his assistant and not his master. The film will help him in his teaching, but it will not do the teaching for him. The film will help him because :—

(*a*) The moving picture gives a more vivid and lasting impression than a still picture, and infinitely more than a mere word picture.
(*b*) The magnification possible on the screen provides a clear view of objects and processes for a much greater number of people than could gather round the instructor for observation.
(*c*) Slow motion will make clear what happens on occasions when the actual movement is too rapid for the human eye to follow ; and speeded-up motion will compress into a few seconds events which, in fact, take many days to develop.
(*d*) By means of animated diagrams there can be shown the simultaneous processes involved when, for example, the trigger is pressed or a petrol engine is started.

27. It is of first importance that the instructor should be quite clear not only of the subject of the film shown, but how it deals with the subject matter and when to show it with greatest advantage. Consequently, his preparation should include the following points :—

(1) He should always see the film himself before showing it to a class. (It is also of value to see that the film has arrived from the distribution centre properly serviced and spooled.)
(2) He should note carefully the commentary (or in the case of silent films, the captions) and be prepared with explanations of points which are difficult to follow.
(3) He should decide the exact point in the lesson when the film is to be used.
(4) When possible he should use the "Film Strip" after the film has been shown to ensure that the lessons demonstrated have been fully assimilated.
(5) Practical instruction or demonstration must be included after films are shown.
(6) There should be an interval between the parts of a film for the class to ask questions and take notes, as there is no opportunity for doing this while the film is actually being shown.

28. Overloading the lesson with material, however good, or however interesting, will lead to loss of efficiency as well as confusion in the minds of the officers and ratings under instruction. No period should be wholly devoted to watching the screen, and generally two showings of the same short film will be more valuable than a prolonged showing of two or three different ones. If, for instance, there is a series of a dozen films on the working mechanism, drill and inspection of a particular

piece of mechanism, merely to project the whole series one after another without pause is to invite failure.

Subjects such as aircraft recognition cannot be viewed too often. It is recommended that one reel of these should be included as a " short " in every entertainment programme.

Every reel has its own special part to play ; every reel must be used in illustration of the lesson it teaches, and every reel must be fitted properly into the scheme of work. It should be shown when the class has reached the appropriate stage of instruction, not earlier, nor except for revision purposes at other times.

Film instruction should be arranged to take a definite percentage of the time available for the subject being taught and should never be more than 50 per cent. of any one period, except possibly for quick revision at the end of a course of instruction.

It will often be useful at the end of the course to show all the films in proper order, to refresh the memory and revise rapidly the ground covered.

29. Since instructional films have been specially made for the purpose, it is not wise to interrupt the showing for explanations or discussion. To stop a film during projection for such reasons may easily lead to the earlier sequences losing their connection with the later ones, as well as killing the interest which demonstration by films originally evokes. Still strips or blackboard diagrams should be employed to meet such difficulties after the showing. They will not then interfere with the continuity of the film's work.

30. One idea which has proved successful at other naval bases is to run an hour's film programme on the " News Theatre " lines, the object being to enable officers and men usefully to fill in time waiting for ships, etc. The programme should consist of films in List " D " with an occasional instructional film of general interest such as " Combined Operations ", " Vaagso Raid ", " Meeting the U-Boat Menace ", " McGregor Williams Life-Saving ", " Aircraft Recognition ", etc. If available, a " Silly Symphony " Cartoon can be added to make the similarity to a News Theatre as complete as possible. Further copies of Ministry of Information shorts not listed in this A.F.O. can be obtained direct from the Ministry of Information.

Appendix I

Catalogue of instructional films available for use by units of the Royal Navy

This catalogue has been compiled as a *guide* to the instructional films available to Commanding Officers. The procedure for ordering copies of films is summarised in paragraph 10 of this A.F.O. This should be used in conjunction with the information set out below.

The films have been listed under main and sub-headings, in alphabetical order, as follows :—

Main heading	*Sub-heading*
Acoustics	—
Anti-Submarine	Asdics, Depth Charges, General, Hedgehog, Net-Laying, Squid, Tactics.
Balloons	—
Bombs	—
Camouflage	—
Combined Operations	Close Fighting, Craft, Tactics.
D.E.M.S. and Merchant Navy	Anti-Smoke, Gunnery.
Education	Agriculture and the Community, Communications, Education and Youth Organisation, Finance, General Industry, Housing and Town Planning, Industry, Gas and Coal and Electricity and their Uses to the Community, Industry-Steel and its Uses, Local Government : Citizenship, Oil and its Uses to the Community, Public Health, Scientific Progress, The Post-War World.
Electrical	Batteries, Circuits, Compasses, Magnetism and Degaussing, Magnetos and Ignition, Oscillograph, Theory.

Main heading	*Sub-heading*
Engineering	Boilers, Diesel Engine, Hydraulics, Instruments, Lubrication, Petrol Engine, Power, Road Transport, Tools, Welding and Oxygen Cutting.
Fleet Air Arm	Aircraft Design, Air Safety, Bombs and Torpedoes, Catapults, Drill, Engines. Gunnery, Landings, Observer Training, Pilot's Training, Principles of Flight.
Gunnery	Ammunition, Anti-Aircraft (Army), Close-Range Weapons, Coast Defence, Drill, Fire Control, Long-Range Weapons, Tank and Anti-Tank Weapons (Army).
Historical	—
Infantry and Land Forces	Bridging, Drill, Fieldworks, Gas, Obstacles, Signals, Tactics, Weapon Training.
Instructor Training	—
Leadership	—
Marines	Organisation.
Medical	Blood-Circulation, First Aid, Fleet Air Arm, Health, Hygiene, Respiration.
Meteorology	—
Mines and Mining	Land.
Minesweeping	L.L. Sweep, O. and A. Sweeps, Paravanes.
Morale	—
Navigation	Astronomical Triangle, Charts, Compass, Rule of the Road, Time.
New Entry	—
Night Vision	—
P. and R.T.	Combat, Sport, Swimming.
Passive Defence	Anti-Gas, Fire-Fighting.
Pre-entry Training	—
Radar	—
Recognition	Aircraft, Recognition of Aircraft : Quiz Films, Ships, Submarines.
Salvage	—
Seamanship	Boatwork, Compass, Drill, Knots, Ship Handling.
Security	Careless Talk, Interrogation of Prisoners.
Signalling	Land, Morse, Visual.
Submarines	General, Technical.
Torpedoes	Care and Maintenance, Fire Control, Smoke, Depth Charges.

Films are indexed by prefix letter, according to their source of origin, and numbered in sequence of production, as follows :—

A — Admiralty.
B — War Office.
C — Air Ministry.
D — Ministry of Information and British Council.
E — Commercially produced documentaries in the Navy.
F — Commercially produced technical films.
G — United States Navy Department.
H — Commercially produced films suitable for general educational purposes. These films are not always available for both 35-mm. and 16-mm. projectors. The sizes available are indicated against the film title. They are available on loan only from commercial film libraries, and requests for copies should be made well in advance to the film distributing officer concerned (*see* paragraph 10 of this A.F.O.).

Note.—A synopsis of the contents of the film is given after each title, except in cases where the title is self-explanatory, or where considerations of security make this impossible.

In all cases where an A.F.O. or C.A.F.O. regarding the film has been published separately, this is also indicated.

R.N. Serial No.	Title and Description	Date Made	Footage
	ACOUSTICS		
F.702	The Fundamentals of Acoustics		1,000
F.703	Sound Waves and Their Sources		1,000
	ANTI-SUBMARINE		
	Asdics		
A.28*	Asdic Instructional ... ... Showing a submarine hunted, detected and sunk by the Portland A/S Flotilla.	1939	3,000
A.57*	The Elementary Theory of Asdics	1941	2,800
A.75*	Asdic Operating Procedure	1942	
	Part 1—Simple contact procedure. Layout and basic use of equipment.		1,200
	Part 2—Simple sweeping procedure		500
	Part 3—Advanced contact procedure. Holding swing of ship. Lost contact procedure. Bearing drawing rapidly right or left. Final stage of attack, showing types 124 and 128.		1,000
	Part 4—Practical demonstration of an attack		850
A.82*	Asdic Attacks	1942	
	Part 1—The approach to the collision point ...		950
	Part 2—The approach to the firing point ...		1,100
	Part 3—The approach by asdic instruments ...		1,500
	Part 4—The approach by asdic instruments—additional equipment.		1,000
A.136	The Type 144 Asdic Set ... ... An introduction to the type 144 set, with an explanation of the automatic control training unit, the bearing recorder and range recorder, concluding with a demonstration attack. (C.A.F.O. 979/43 refers.)	1943	2,000
	Depth Charges		
A.108	Care and Maintenance of Depth Charges. (A.F.O. 2725/43 refers.)	1942	2,600
A.109	Care and Maintenance of Depth Charge Release Gear. (A.F.O. 2725/43 refers.)	1942	1,800
	General		
A.59*	Meeting the U-Boat Menace ... ... A short film of a light nature designed to encourage ratings to specialise in the submarine detector branch. Suitable for inclusion in entertainment programmes.	1941	2,300
A.68*	U-Boats—Recognition and Attack by Naval Aircraft.	1941	
	Part 1—Types and construction. Appearance in various states of trim when viewed from the air. Examples of traces when left submerging.		700
	Part 2—Method of attack by naval aircraft ...		800
	Hedgehog		
A.126*	The Hedgehog Apparatus	1943	
	Part 1—Introduction. The weapon and method of attack with A/S equipment.		1,500
	Part 2—Instruments. Recorder, centre-bearing disc, modified Vickers clock, and bearing transmitter.		1,100
	Part 3—The attack. Diagrammatic plot and analysis of a Hedgehog attack showing how information from the asdic team is used by the Captain.		900
	Part 4—The Hedgehog team. Mechanics of H/h mounting. Loading and firing drill.		1,700
	Part 5—Care and Maintenance, with explanation of electrical circuits.		2,800

R.N. Serial No.	Title and Description	Date Made	Footage
	Net-Laying		
A.47*	H.M.S. " Guardian " Net Laying and Recovery Trials (Silent).	1935	1,700
	Squid		
A.142*	Introducing the Squid (A.F.O. 4063/43 refers) ... Gives a general introduction to the weapon indicating proposed drill and control by types 144 and 147BX asdic equipment.	1943	900
	Tactics		
A.70*	U-Boats' Attack on Convoys ... ... One reel each part. A series of diagrammatic films based on analysis of actual incidents illustrating the lessons to be learnt from U-Boat attacks on convoys.	1942	
	Reel No. 1		636
	Reel No. 2		620
	Reel No. 3		734
	Note.—Distribution restricted to A/S Establishments only. (C.A.F.O. 128/43 refers.)		
A.115*	Convoy Counter Attacks (Silent) ... ... Special distribution only.	1942	1,000
A.127*	Attack on U-Boat No. 1 (Silent) ... ... Special distribution only.	1942	1,000
G.99	Aircraft Anti-Submarine Warfare.		
	Part 1—The Prey		2,000
	Part 2—Finding and Attacking Factors ...		3,000
	Part 3—Selecting the Final Point of Aim ...		3,000
	Part 4—Anti-Submarine Bombing Attack ...		2,000
	BALLOONS		
C.618	Balloon Drills ... ... Balloon handling.	1941	7,000
C.205	Knots, Splices and Balloon Repairs ... ... (Also useful for instruction in knot tying.)	1939	3,278
	BOMBS		
D.528	A New Fire Bomb ... ... Shows how the new type of explosive incendiary bomb should be tackled and in particular how some former methods of tackling fire bombs are now wrong and dangerous.	1942	900
B.602	Beware Butterfly Bomb (A.F.O. 3924/43 refers)... Shows how to deal with the German S.D.2 Anti-Personnel Bomb. How to avoid casualties and minimise delays.	1943	3,000
	CAMOUFLAGE		
B.139	Camouflage for All Arms ... ... Cover in the field and methods of camouflage. Suitable for land fighting classes.	1941	2,700
F.732	Camouflage ... ... In colour. Forms an introduction to the subject of camouflage of buildings.	1940	1,000
B.220	Camouflage—Air View ... ... In colour. This film shows how, by careful siting and by avoiding shine and shadow, military positions may escape detection from the air.	1942	2,000

R.N. Serial No.	Title and Description	Date Made	Footage
	COMBINED OPERATIONS		
	Close Fighting		
A.106	Close Combat ... ... How to defend yourself even though unarmed.	1942	2,500
B.202	Unarmed Combat ... ... Methods of attack and defence, showing how an unarmed man can deal accurately and quickly with a ruthless enemy.	1941	2,800
G.21	Hand-to-Hand Combat ... ... Showing the American method of close combat.		4,459
	Craft		
G.65	Handling Landing Craft Alongside and Aboard Ship.		2,000
	Tactics		
A.87*	The Vaagso Raid	1942	3,000
D.513	Lofoten		564
E.613	Dieppe		1,000
	D.E.M.S. AND MERCHANT NAVY		
	Anti-Smoke		
A.112	I Don't Smoke, Thank You ... ... Designed to show merchant navy personnel the dangers of making smoke and methods of prevention.	1942	2,000
	Gunnery		
A.79*	The 2-in. Rocket Weapon. (Formerly entitled U.P. Mounting.)	1942	
	Part 1—Introduction shows the weapon being successfully used against a dive-bombing attack, and explains its advantages for certain purposes.		755
	Part 2—Ammunition. Shows by picture and diagram the functions of charge, fuze, shell and fins. Testing and maintenance. The effects of wind on flight.		927
	Part 3—Trough mounting. Shows by picture and diagram the testing of the electrical circuits loading, sighting, firing and misfire procedure.		
	Part 4—Gymbal mounting (as for Part 3) ...		826
	Part 5—Pillar box mounting (as for Part 3) ...		871
	Part 6—Blast. The effects of blast from each type of mounting; shows that the machines can be handled with confidence. (A.F.O. 2724/43 refers.)		412

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION		
	(A series of films of general educational interest)		
	Note.—See special method for ordering " H " films.		
	Agriculture and the Community		
H.105	Animal Husbandry... ... ... Detailed survey of livestock farming in Scotland.	35 Sd. 16 Sd. St.	1,000
H.106	Autumn on the Farm ... ... Work on the farm in Autumn.	35 Sd. 16 Sd.	1,500
H.107	Country Fare ... ... Production of eggs, milk and barley on Cotswold farms, for use in a modern food factory.	35 Sd. 16 St.	2,300

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Agriculture and the Community—contd.		
H.108	Devon Beef Cattle Farming ... ... Survey of beef cattle farming in North Devon.	35 Sd. 16 Sd. St.	1,200
H.109	Devon Dairy Farming ... ... After an analysis of the geographical conditions of South Devon this film shows daily work on a dairy farm.	35 Sd. 16 Sd. St.	1,200
H.110	Fruitlands ... ... Fruit growing in Kent.	35 Sd. 16 Sd. St.	1,200
H.111	Farming in E. Anglia ... ... Series of 1 reel films illustrating various farm activities, undertaken in rotation with the seasons (commentary in local dialect).	35 Sd. 16 Sd. St.	1,200 each
H.112	Fighting Fields ... ... War-time farming in Scotland.	35 Sd. 16 Sd.	1,200
H.113	Farm Factory (1936) ... ... Organisation of a farm as an industrial unit.	35 Sd. 16 Sd. St.	2,000
H.114	Grain Harvest ... ... Part 2 of this film shows 10 mins. distribution of the best farm land and the respective areas in which various grain is grown.	35 Sd. 16 Sd. St.	1,000
H.115	Great Harvest ... ... The story of how everyone helped with the harvest in 1942.	35 Sd.	800
H.116	Harvest Shall Come ... ... Story of British agriculture from 1900 to today, seen through the life of a farm worker.	35 Sd. 16 Sd.	3,800
H.117	Hoplands ... ... Methods of hope growing, directing emphasis to the sources of labour.	35 Sd. 16 Sd. St.	1,200
H.118	Harvests of the Soil—Occupations of the agricultural districts of Scotland.	35 Sd. 16 Sd. St.	1,000
H.119	Life in the Highlands ... ... Shows typical life of a crofter related to his physical surroundings (Scotland).	35 Sd. 16 Sd. St.	1,000
H.120	New Acres ... ... The story of the second great ploughing-up campaign of millions of acres.	35 Sd. 16 Sd.	900
H.121	Somersetshire Dairy Farming ... ... Shows geographical factors which make Somerset a good county for dairy farming.	35 Sd. 16 Sd. St.	1,200
H.122	Southern Uplands ... ... Activities of the Southern Uplands (Scotland).	35 Sd. 16 Sd. St.	1,000
H.123	Spring Offensive ... ... Work done by the Suffolk War Agricultural Committee in reclaiming a derelict farm.	35 Sd. 16 Sd.	2,100
H.124	Salute to the Farmers ... ... Work of farmers in increasing the production of milk, wheat, vegetables and fruit, helped by the Land Army, school-children and townspeople at weekends.	35 Sd. 16 Sd.	1,700
H.125	Spring on the Farm ... ... Shows preparation of the land, spring sowing and rolling, also how the agricultural research station helps the farmers.	35 Sd. 16 Sd.	1,500
H.126	Summer on the Farm ... ... Farm work in summer and how a big town gets its vegetables.	35 Sd. 16 Sd.	1,500

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Agriculture and the Community—contd.		
H.127	This was England ... ... Describes chronologically the continuous agricultural tradition existing in Suffolk from the Stone Age to the present day.	35 Sd. 16 Sd. St.	2,200
H.128	Turn of the Furrow ... ... Shows the jobs that can be done by different types of tractors suited to the needs of different types of farms.	35 Sd. 16 Sd.	2,000
H.129	Welsh Plant Breeding Station ... ... An account of Sir Reginald Stapledon's work at Cahn Hill, Aberystwyth, in production of special grasses to improve grasslands.	16 Sd.	850
H.130	Winter on the Farm ... ... The different kinds of jobs done all the year round on a mixed farm at Uploders, Dorset.	35 Sd. 16 Sd.	1,500
	Communications		
H.1	A.1 at Lloyd's ... ... Lloyd's services to world shipping.	16 Sd.	550
H.2	Cable Ship ... ... Demonstration of complex system of telephone cables between England and overseas countries.	35 Sd. St. 16 Sd. St.	1,000
H.3	Conquering Space ... ... Revised and sound version of Methods of Communications.	35 Sd. 16 Sd.	1,000
H.4	Development of Railways ... ... Shows by maps and moving diagrams the development of railways.	35 Sd. 16 Sd.	1,000
H.5	Gateways to the West ... ... Activities of the 12 miles of wharfage of the River Clyde, dockside handling and distribution, and river traffic.	35 Sd. 16 Sd.	1,000
H.6	Locomotives ... ... Second chapter in history of communications.	35 Sd. St. 16 Sd. St.	1,000
H.7	Merchant Ship ... ... Loading of cargo into merchant ships in London Docks.	16 St.	800
H.8	North of the Border ... ... Sketch of the Scottish postal system showing the communication problems created by scattered population, seasonal employment rushes, and the different physical characteristics.	35 Sd.	1,000
H.9	Shipyard (1935) ... ... Building of S.S. " Orion " and the sociological and economic effects on the life of the town.	35 Sd. 16 Sd.	2,200
H.10	6.30 Collection (1934)	35 Sd. 16 St.	1,500
H.11	Story of the Wheel ... ... Evolution of the wheel.	35 Sd. St. 16 Sd. St.	1,000
H.12	Under the City (1934) ... ... Beneath the city streets shows the various communications : gas, electricity, water, underground railway and Post Office cables.	35 Sd. St. 16 Sd. St.	2,000
H.13	World Exchange ... ... Telephone systems were formerly isolated by national barriers—now radio has united them into a world system.	35 St. 16 St.	700

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Education and Youth Organisation		
H.26	Cally House ... ... At Cally House the Glasgow Education Committee has established a new kind of co-educational boarding school for boys and girls evacuated from Glasgow secondary schools.	35 Sd. 16 Sd.	1,000
H.27	Children at School ... ... A review of the systems of public education in this country (1937).	16 Sd.	1,250
H.28	Children's Story ... ... Education and care of children in Scotland.	35 Sd.	1,500
H.29	Citizens of the Future (1935) ... ... A survey of public education in this country, showing how the activities undertaken in various types of schools are fitting children to employ their leisure time in useful occupations and preparing them to take their proper place in a world demanding high standards.	35 Sd. 16 Sd.	2,200
H.30	Dinner at School ... ... Large numbers of children are now given good midday meals at school at a small charge or, where necessary, for nothing. The progress so far made should be increased until dinner at school is a normal feature of school life for all children.	35 Sd. 16 Sd.	1,000
H.31	Men of Tomorrow ... ... While they still carry on their normal training Boy Scouts find new jobs to do now and new tasks ahead of them.	35 Sd. 16 Sd.	1,000
H.32	Our School ... ... Bampton School, Devon, is a kind of rural senior school where lessons spring from and are related to the character and work of the village. A London school is evacuated to Bampton and finds it has something to learn about education.	35 Sd. 16 Sd.	1,700
H.33	Oxford ... ... Student life in the university city.	16 Sd. St.	400
H.34	Out and About ... ... Walking at the week-end is one of the best ways for boys and girls to relax and keep fit ; the youth hostels are still open for walkers.	35 Sd. 16 Sd.	900
H.35	People With a Purpose ... ... Made to celebrate the jubilee of the educational work of the Royal Arsenal Co-operative Society —shows typical aspects of this work—a political meeting, training classes in music, drama and light opera, instructions in various trades, etc. At the end come various shots of the " Woodcraft Folk ", a youth movement founded by the society on the lines of the Boy Scouts and Girl Guides, and which how has some 7,000 members.	35 Sd. 16 Sd.	2,600
H.36	Tomorrow is Theirs ... ... Two stories of the ways in which secondary schools have faced the problems of providing a good education in spite of the war.	35 Sd. 16 Sd.	1,000

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Education and Youth Organisation—contd.		
H.37	They Speak for Themselves ... ... A report of discussion by a group of young people of the war and the future for themselves and Britain.	35 Sd. 16 Sd.	900
H.38	Venture Adventure ... ... An outline of the training for the R.A.F. available for boys of fourteen to eighteen in the Air Training Corps.	35 Sd. 16 Sd.	700
H.39	Village School ... ... A picture of the school in Ashley Green, Bucks., increased in size by evacuated children and looked after by a woman teacher (who wrote and speaks the commentary) and one woman assistant.	35 Sd. 16 Sd.	1,000
H.40	Young Farmers ... ... Every boy and girl should grow up in knowledge of the land. In Young Farmers' Clubs in town and village they can learn the first lessons in what for some will be their future career and for others can be a constant source of interest and enjoyment.	35 Sd. 16 Sd.	1,400
H.41	Youth Marches On ... ... Oxford Group film with youth building a new world as the theme.	16 Sd.	1,050
	Finance		
H.100	Big Money ... ... Shows the machinery of Post Office finance. In the Budget sequence it illustrates the relationship of the Post Office finances and those of other Government Departments to the financial affairs of the nation as a whole.	35 Sd. 16 Sd.	1,600
H.101	Unemployment and Money (1938) ... ... Diagrammatic film outlining the monetary system.	16 St.	1,250
	General Industry		
H.73	Clothes Makes the Man ... ... Historical film of the design of men's clothing from ancient times to the present modern styles	16 Sd.	500
H.74	Industrial Clydesdale ... ... Using diagrams, working models and actual scenes, outlines the industrial developments of the Lanarkshire coalfields and seaport town of Glasgow.	16 Sd.	750
H.75	Industrial Scotland ... ... Part 1—*Raw Materials.*—An educational film dealing with the activities of the industrial midlands, including coal mining and smelting. Part 2—*Heavy Industries.*—A continuation of Part 1 from Pig Iron to Steel, and the use of steel in the engineering shops and shipyards of the Clyde and Forth.	35 Sd. 16 Sd.	1,000
H.76	Industrial Britain ... ... Story of craftsmanship in British industry.	35 Sd. 16 Sd.	2,500
H.77	Machines and Masters ... ... Glimpses of labour conditions that existed many years ago are illustrated and the fear of the " machine " by the workers of those days is proved by unrest and strikes.	16 Sd.	300

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	General Industry—contd.		
H.78	Timber ... ... Produced for the Timber Development Association, this film gives a survey of some of the activities of the timber industry—from the growing tree, typical felling in Sussex, loading of timber from abroad at a Surrey dock, and manufacture into different articles.	16 St.	800
H.79	Textiles ... ... A survey of the Textile industry of Scotland, showing the relation between the centres of the various industries and the sources of raw materials, and driving power for the mills. The processes of manufacture of tweed, linen, sailcloth from jute, and cotton and silk thread are seen in detail.	35 Sd. 16 Sd.	1,000
	Housing and Town Planning		
H.42	Big City (1940) ... ... The varied working-and-living districts of London and the structure of the transport system.	16 Sd.	600
H.43	City Bound ... ... London's transport system.	16 Sd.	500
H.44	Country Currents ... ... Showing how valuable a public supply of electricity is in rural areas and how electricity can be used on the farm, in the farmhouse and cottage, and in the development of rural industries.	16 Sd.	750
H.45	Face of Britain. *See* Industry Section (Gas and Coal and Electricity).		
H.46	Hot Evidence ... ... Electric water heating system.	16 Sd.	850
H.47	Housing Problems (1937) ... ... Story of the slums from the inside.	35 Sd. 16 Sd.	1,600
H.48	Kensal House ... ... Life in a new housing estate in London, 1937.	35 Sd. 16 Sd.	1,500
H.49	Mediaeval Village (1936) ... ... Social history of Laxton, where the open-field system still survives.	35 Sd. 16 Sd.	1,900
H.50	Motion Study in the Kitchen ... ... Best way of placing kitchen equipment.	16 St.	800
H.51	Pots and Pans ... ... Film on kitchen planning.	35 Sd. 16 St.	1,300
H.52	Smoke Menace. *See* Public Health Section.		
H.53	Silver Lining (1935) ... ... The rehousing of a family from the slums to a modern labour-saving flat.	35 Sd. 16 St.	1,400
H.54	The Great Crusade (1936) ... ... Housing problems among the working classes.	16 Sd.	900
H.55	The Village That Found Itself ... ... The varied problems of electrical development in rural areas—removing prejudices, giving expression to the known and unknown needs of our rural population—in their workaday social and domestic spheres.	16 Sd.	1,750

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Housing and Town Planning—contd.		
H.56	The Londoners ... ... Work of the L.C.C. during the last 50 years.	35 Sd. 16 Sd.	3,600
H.57	Town Settlement ... ... Geographical conditions which have contributed to the development of a market town.	16 Sd.	550
H.58	Warming Up ... ... Problems of suitable heating in the home.	35 Sd. 16 Sd.	900
	Industry—Gas and Coal and Electricity and Their Uses to the Community		
H.85	Face of Britain, The (1935) ... ... Natural and scientific planning of Britain with reference to the respective power of coal and electricity.	35 Sd. 16 Sd.	2,000
H.86	It Comes from Coal ... ... Coal as a source of mineral wealth, motor spirit, explosives, fertilisers, sprays, plastics, and its use as a new drug.	35 Sd. 16 Sd. St.	1,100
H.87	Lancashire, Home of Industry ... ... Development of industrial Lancashire from the days of water power to modern days of electricity.	35 St. 16 St.	1,000
H.88	Manufacture of Gas ... ... Detailed description of what happens at a modern gas works.	35 Sd. St. 16 Sd. St.	1,500
H.89	News by Wire ... ... Story of electricity in the world today.	16 Sd.	450
H.90	New Worlds for Old ... ... Shows how gas has become the great heat-and-light-producing industry.	35 Sd. 16 Sd.	1,100
H.91	Romance of a Lump of Coal ... ... Scientific treatment of coal to produce greatest number of useful by-products for the benefit of the community.	16 Sd.	250
H.92	Water Power ... ... Turbine in action and the uses in which the resultant power is employed.	35 St. 16 St.	500
H.93	Water Power ... ... Modern methods of utilising water power to generate electricity.	16 Sd. St.	550
	Industry—Steel and Its Uses		
H.80	Furnaces of Industry ... ... Story of production of different steel alloys for different types of munitions.	35 Sd. 16 Sd.	1,200
H.81	Heavy Industries ... ... Casting, forging, and use of steel in engineering shops and shipyards of the Clyde and Forth. (*See* also General Industry.)	16 Sd. St.	500
H.82	Propeller Making ... ... Manufacture of propellers for large liners at Deptford.	16 Sd. St.	500
H.83	Steel ... ... Process of manufacture of steel from ore to finished product.	16 Sd. St.	500
H.84	Steel Goes to Sea ... ... Shows each stage in construction of a ship and emphasises the importance today of the traditional skill of British shipbuilders.	35 Sd. 16 Sd.	1,600

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Local Government, Citizenship		
H.59	Ask C.A.B. ... ... Work of the Citizen's Advice Bureau.	35 Sd. 16 Sd.	800
H.60	All Those in Favour ... ... How a rural district council in Devon dealt with various problems arising from the war, and how an American discusses with them the implications of their experiments for the future of democratic local government.	35 Sd. 16 Sd.	2,200
H.61	British Made ... ... Traces craftsmanship from the Mediæval system of apprenticeship to present-day improvement.	16 Sd.	450
H.62	Control Room ... ... Showing organisation of the Civil Defence during a Blitz, and the co-operation necessary between all the services to carry it through.	35 Sd. 16 Sd.	2,500
H.63	Countrywomen, The ... ... History of the Women's Institutes and their aims and methods of working.	35 Sd. 16 Sd.	1,400
H.64	Changes in the Franchise (1937) ... ... Changes since 1812 shown by means of cine diagrams, maps and statistical symbols.	35 Sd. 16 Sd.	1,100
H.65	Living with Strangers ... ... Problems of evacuation and of the various solutions which have been attempted.	35 Sd. 16 Sd.	1,200
H.66	The Londoners. (*See* Housing Section.)		
H.67	Post 23 ... ... Work at a Wardens' Post where men and women see what they can do for others in war-time and discuss the necessity of co-operation between people like themselves after the war.	35 Sd. 16 Sd.	1,000
H.68	They Speak for Themselves. (*See* Education Section.)		
H.69	War and Order ... ... Work of the police in war-time.	35 Sd. 16 Sd. St.	1,200
H.70	W.V.S. ... ... Work done by W.V.S.	35 Sd. 16 Sd.	2,200
H.71	Wartime Factory ... ... Workers in an aircraft factory organise their own discipline and welfare and defence against raids and invasion.	35 Sd. 16 Sd.	1,000
H.72	Wales—Green Mt., Black Mt. ... ... Before the war, many people in Wales were out of work ; this film now shows how things have changed in the towns and villages and how everyone has plenty of work.	35 Sd. 16 Sd.	1,200
	Oil and Its Uses to the Community		
H.94	Cargo for Ardrossan ... ... A picture of the uses of oil in two highly contrasted communities : industrial Glasgow and the island of Islay.	35 Sd. 16 Sd.	1,800
H.95	Pipeline ... ... The story, told by a Texan, of the construction of an oil pipeline in the U.S.A. from Fall River to Boston.	16 Sd.	650
H.96	Vital Service. (*See* Health Section.)		

Sd. = Sound. St. = Silent.

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	Public Health		
H.14	Action ... ... Games provide training and exercise for character-forming in wartime.	16 Sd.	900
H.15	Carry on, Children ... ... Health services for children from birth to adolescence.	16 Sd.	1,100
H.16	Dinner at School ... ... Provision of a good meal at midday.	16 Sd.	1,000
H.17	Fear and Peter Brown ... ... An understanding of fear leads to the beginning of courage.	16 Sd.	1,500
H.18	Health in War ... ... Exposition of the plans in operation on the outbreak of war to care for raid casualties and plans to improve the health services.	16 Sd.	1,300
H.19	Malaria ... ... Enquiry into problem of malaria, and various methods used to combat the mosquito.	16 Sd.	1,500
H.20	Mother and Child ... ... Maternity and child-welfare services.	16 Sd.	500
H.21	No Accidents ... ... Accident risks in factories and how they can be prevented.	16 Sd.	500
H.22	Smoke Menace ... ... Story of a campaign for a cleaner atmosphere.	16 Sd.	700
H.23	The Red Army ... ... Propaganda film for the extermination of the Bed-bug.	16 Sd. St.	500
H.24	Vital Service ... ... Survey of a modern hospital showing some of its less familiar aspects and the importance of controlled heat. Routine of an emergency operation is studied impersonally and prominence given to the scrupulous care taken.	35 Sd. 16 Sd.	700
H.25	War without End ... ... Record of some of the wonderful achievements of medical science and of the work of our hospitals today.	16 Sd.	1,500
	Scientific Progress		
H.97	Land of Invention ... ... Tells of Scotland's many inventors: Macadam, roads; Watt, steam engine; Mundock, gas lighting of our cities; Nasmyth, the steam hammer; Telford, builder of Caledonian canal; Harry Bell, the first steamship; Alex. Bell, the telephone; Simpson for the use of chloroform; Rose, who conquered malaria, and many others.	16 Sd.	550
H.98	Progress ... ... General survey of developments in mechanical sciences during the last 25 years.	35 Sd. 16 Sd.	2,000
H.99	Transfer of Power ... ... The story of the transfer of power by means of the lever, from the wooden cog-wheels of wind- and water-mills to the case-hardened gears of motor cars and turbines, showing the place in this story of iron and steam, steel and petroleum.	35 Sd. 16 Sd.	2,200

R.N. Serial No.	Title and Description	Sizes available	Footage
	EDUCATION—*contd.*		
	The Post War World		
H.102	Atlantic Charter ... ... Newsreel account of the meeting between Mr. Churchill and Mr. Roosevelt.	16 Sd.	450
H.103	Common Cause ... ... An American and a Chinese pilot in China, a Russian and a British sailor at Murmansk discover beneath the surface differences of national character and custom a common outlook and a great common purpose.	35 Sd. 16 Sd.	1,200
H.104	They Met in London ... ... At the 1941 meeting of the British Association statesmen and scientists of the United Nations plan victory and a New World of freedom and plenty.	35 Sd. 16 Sd.	1,200

R.N. Serial No.	Title and Description	Date Made	Footage
	ELECTRICAL		
	Batteries		
A.15	Submarine Battery (Silent)	1924	3,000
B.86	Battery and Dynamo	1937	
	Part 1—Elementary primary and secondary cell to evolution of accumulator.		1,100
	Part 2—Generation of current by elementary mechanism and builds up dynamo.		900
F.733	The Acid Test ... ... Shows the care and maintenance of batteries.		1,000
	Circuits		
A.83	Tracing an Earth ... ... Shows a repair party tracing and locating an earth in one section of the rung main.	1942	1,700
A.110	*Compass*		
	The Gyro Compass (A.F.O. 4062/43 refers) ... (Care and maintenance, starting and stopping routines).	1942	
	Part 1—The Admiralty Sperry (3 reels) ...		2,000
	Part 2—The Sperry, Mark XIO, Model 0 (2 reels).		1,600
	Part 3—The Sperry, Mark XIU, Model 1 (2 reels).		1,350
	Part 4—The Brown (3 reels)		2,500
	Magnetos and Ignition		
B.85	Magneto Ignition	1937	
	Part 1—Deals briefly with elementary magnetism. Shows main components and condenser.		1,000
	Part 2—Examination and faults		1,000
C.211	Ignition. Deals with ignition in aircraft engines		1,000
C.245	Magnetos. Types of magneto in aircraft engines		1,000
F.729	Ignition. Made by B.T.H. Research Laboratory for the Bristol Aircraft Company.		3,000
	Oscillograph		
F.701	The Cathode Ray Oscillograph ... ... Demonstrates the working of the C.R. oscillograph and its use in radio research and D/F.		2,000
	Theory		
C.52	Current of Electricity	1935	2,105
C.160	Thermionic Valve	1934	3,228

R.N. Serial No.	Title and Description	Date Made	Footage
	ENGINEERING		
	Boiler Work		
A.76	Raising Steam ... ... Shows the process in a "J" Class destroyer, with a description of the Admiralty 3-drum water tube boiler.	1942	2,000
A.116	Boiler Cleaning ... ... Shows the routine in a destroyer. (A.F.O. 2237/43 refers).	1942	2,000
	Diesel Engine		
A.89	The Diesel Engine ... ... Theory of operation—2 and 4 stroke types. Construction and oiling systems. Diesel engines in marine craft.	1942	5,000
F.734	Two Speed Supercharger		3,000
G.39	The Diesel Engine ... ... The film explains the basic principles of Diesel Engine operation, illustrates the 4-stroke cycle, 2-stroke cycle, double-acting and opposed piston engines, and shows in a general way how various scavenging supercharging and fuel injector systems work.		2,800
G.40	Diesel Lubrication and Cooling Systems ... This film shows the parts of Diesel lubricating and cooling systems, and how they work in relation to each other.		873
G.41	The Construction of Diesel Engines ... ... Shows the general structure of several types of Diesel engines and the different frame types, cylinder parts, pistons, piston rings, connecting rods, crankshafts, bearings, camshafts and rocker level assemblies.		1,627
G.50	Marine Diesel Engines for Power Boats		1,464
G.51	Diesel Engine Governors		1,257
G.64	Progressive Maintenance ... ... Diesel Propulsion, Disassembly of the 8–268A Engine 1.		4,000
G.94	Scavenging and Supercharging the Diesel Engine		2,000
	Hydraulics		
C.449	The Dowty Hydraulic System	1941	3,000
	Instruments		
C.187	Orthographic Projection	1938	3,000
C.273	The Micrometer	1940	1,000
C.413	The Vernier Scale	1939	1,000
D.527	How the Telephone Works		810
F.704	The Micrometer		1,000
F.705	The Vernier Calliper		1,000
	Lubrication		
A.27	The Inside Story of Lubrication		4,000
F.725	Lubrication of the Petrol Engine		2,000
F.724	First Principles of Lubrication		1,000
	Petrol Engine		
A.122	The Ford V-8 Marine Engine ... ... Care and Maintenance in small craft.	1942	2,014
C.175	Internal Combustion Engine ... ... Heat and Work.	1935	1,000

R.N. Serial No.	Title and Description	Date Made	Footage
	ENGINEERING—*contd.*		
	Petrol Engine—contd.		
C.176	Four-Stroke Cycle		1,000
C.177	Valve Timing		1,000
C.210	Claudel Hobson Carburettor		1,000
C.212	Two-Stroke Cycle		1,000
C.242	Cooling		1,000
C.243	Elementary Supercharging		1,000
C.244	Principles of Carburation		1,000
F.706	Maintenance of Sparking Plugs		2,000
F.720	First Principles of the Petrol Engine		1,000
F.721	First Principles of the Compression Ignition Engine.		1,000
F.725	Lubrication of the Petrol Engine		2,000
F.726	Maintenance of the Poppet Valve Cylinder Assembly.		2,000
F.727	Maintenance of the Sleeve Valve Cylinder Assembly.		3,000
F.728	Master Control Carburettor		3,000
	Power		
F.722	Transfer of Power		2,000
F.723	Springs		2,000
	Road Transport		
B.82	Brakes	1937	
	Part 1—Object of brakes on M.T. vehicles. Components of internal expanding brakes.		1,000
	Part 2—Deals with girling, hydraulic and servo systems. Touches on brake efficiency.		1,000
B.83	Gears	1937	
	Part 1—Builds up from simple levers and wheels the principle of gear-box.		1,000
	Part 2—Shows gears and shafts in crash type gear-box and deals with the selector mechanism.		1,000
B.85	Magneto Ignition	1937	
	Part 1—Deals briefly with elementary magnetism. Shows main components and condenser.		1,000
	Part 2—Examination and faults		1,000
B.81	Steering	1937	
	Part 1—Builds up and explains components of Ackerman steering as applied to motor vehicles.		1,000
	Part 2—Deals with various steering boxes and shows some faults.		1,000
B.318	War Time Journey ... ... Shows importance of road sense and avoidance of careless and dangerous driving.	1942	3,600
B.293	Task 16—Care of Tyres ... ... Depicts the manufacture and re-conditioning of tyres, their care and maintenance.	1942	1,800
	Tools		
F.730	How to File		1,000

R.N. Serial No.	Title and Description	Date Made	Footage
	ENGINEERING—*contd.*		
	Welding and Oxygen Cutting		
A.90	Oxygen Cutting (Silent) ... ... Some industrial applications. Part 1—Cutting a ship in two. The hand cutting blowpipe. Part 2—Oxygen cutting by automatic machine. Fabrication of ship's parts by various types of machine.		3,000
A.91	The Oxy-Acetylene Welding of Non-Ferrous Metals (Silent). Construction of aluminium and copper tanks, etc.		1,000
A.92	Depositing Stellite with the Oxy-Acetylene Flame (Silent).		2,000
A.93	Oxy-Acetylene (Silent) ... ... An impression of the production and application of these gases. Suitable as an introduction to the use of oxy-acetylene.		2,000
A.94	Cast Iron Welding (Silent) ... ... Repairing fractured and worn castings.		1,000
A.96	Steel Tank Construction (Silent) ... ... The rightward and two-welder vertical upward methods of welding.		1,000
A.97	The Shorter Process of Surface Hardening (Silent) Methods of application, with many practical examples of shortenising on gear wheels, shafts, etc.		2,000
A.98	Fabricating a Steel Angle Bracket (Silent) ... Cutting plates to size and shape and welding with the electric arc.		1,000
A.99	Elementary Oxy-Acetylene Welding (Silent) ... Part 1—Correct procedure for setting up and handling the equipment. Part 2—Instruction in elementary welding, emphasising mistakes likely to be made.		4,000
A.100	Bronze Welding of Light Gauge (Silent) ... Copper tubing, fittings and heating and hot water installations.		3,000
A.101	Fabrication of Steel Parts (Silent) ... ... Production by means of oxygen machine cutting and electric welding of a bell crank and spur wheel.		1,000
A.102	Oxy-Acetylene Welding in Automobile Engineering (Silent). Body chassis and casting repairs. Building up of worn parts.		2,000
A.103	Bronze Welding of Cast Iron (Silent) ... ... Examples of the extensive use made in Australia of bronze welding for the jointing and repairing of iron castings.		3,000
A.104	Application of Oxygen in the Steelworks (Silent)		3,000
A.105	Cutting Heavy Section Cast Iron (Silent) ... Showing the removal of a large cast iron spider from a steel shaft by oxy-acetylene cutting.		1,000

R.N. Serial No.	Title and Description	Date Made	Footage
	FLEET AIR ARM		
	Aircraft Design		
F.707	Aircraft Design ... ... A study of the research work of the National Physical Laboratory in connection with improvements in aircraft design. Shows research work in the Metallurgy and Aerodynamics Departments.		1,000
	Air Safety (R.A.F.)		
C.589	Lindholme Dinghy ... ... For rescuing crews.	1941	2,000
C.778	Prepare for Ditching ... ... Ditching drill as applied to a Halifax.	1942	4,638
	Bombs and Torpedoes (R.A.F.)		
C.416	Aircraft Torpedo	1941	5,000
	Catapults		
A.55*	Launching and Recovery of Aircraft in Ships Fitted with Catapults.	1940	3,100
	Drill		
A.80*	Daily Inspection of Naval Aircraft ... ... Part I—The Walrus.	1942	3,300
A.117	Defence of Shore-Based Aircraft Against Gas. Protection from spray. Methods of decontamination; steam jenny, swabbing, weathering. (A.F.O. 3002/43 refers).	1943	3,200
C.314	Daily Inspection of a Spitfire (R.A.F.) ... Shows duties of wireless electrical mechanic, rigger, armourer, mechanic.	1940	4,684
C.407	Defence against Gas (R.A.F.) ... ... As applied to R.A.F. Stations.	1940	4,000
C.259	Fire Fighting (R.A.F.) ... ... In relation to aircraft.	1939	920
	Engines		
C.175	Internal Combustion Engine ... ... Heat and Work.	1935	1,000
C.176	Four-Stroke Cycle		1,000
C.177	Valve Timing		1,000
C.210	Claudel Hobson Carburettor		1,000
C.211	Ignition		1,000
C.212	Two-Stroke Cycle		1,000
C.242	Cooling		1,000
C.243	Elementary Supercharging		1,000
C.244	Principles of Carburation		1,000
C.245	Magnetos		1,000
C.187	Orthographic Projection	1938	3,000
C.273	The Micrometer	1940	1,000
C.413	The Vernier Scale	1939	1,000
C.449	The Dowty Hydraulic System	1941	3,000
C.690	Hydromatic Airscrews (Hamilton)	1941	1,505
F.731	Variable Pitch Airscrews		
G.60	Metal Forming in Aeroplane Production ... Forming methods.		4,000

R.N. Serial No.	Title and Description	Date Made	Footage
	FLEET AIR ARM—*contd.*		
	Gunnery		
A.12	Lewis Gun Mechanism (Silent) ... ... Shown by sectional models.	1933	1,100
A.56*	A.A. Gunnery—Eyeshooting (in colour) :—		
	Part 1—Introductory. Meaning of " aim-off "	1941	1,000
	Part 2—Approach angle	1941	1,500
	Part 3—Shows how amount of aim-off to be applied is affected by approach angle and speed of target. Use of the cartwheel sight.	1941	1,800
	Part 4—Respective responsibilities of layer and trainer.	1941	750
	Part 5—Maximum effective range	1941	900
	Part 9—Demonstration attacks	1492	1,100
	Part 10—Aiming practice (typical attacks) ...	1942	1,000
	Part 11—Aiming practice (German attacks) ...	1942	1,000
	Part 12—Aiming practice (Italian attacks) ...	1942	1,000
	Part 13—Aiming practice (Japanese attacks)	1942	1,000
A.69*	A.A. Gunnery—Use of Tracer Ammunition ... Part 1—Observation of tracer. Part 2—" Hosepiping ". Part 3—Tracer-assisted eyeshooting.	1941	4,800
A.81	Air Gunner ... ... A " cautionary tale " taking three air gunners through their training and demonstrating mistakes of all types which are commonly made by them due to their negligence and thoughtlessness.	1942	8,000
C.604	Re-Arming a Bomber (R.A.F.)	1942	2,000
C.728	Re-Arming a Fighter (R.A.F.)	1942	4,000
C.251	Lessons in Aiming for Air Gunners (R.A.F.) ...	1940	2,473
C.471	Turret Drill (R.A.F.) ... ... Frazer Nash and B. and P. Turrets.	1941	5,154
C.502	Lessons in aiming for Machine Gunners (R.A.F.)	1941	2,160
	Landings		
A.77*	Deck Landing ... ... Layout of flight deck. Ranging. Taking off. Accelerator. Landing. Use of bats. Controlled landings.	1942	2,200
	Observer Training (R.A.F.)		
C.321–322	Lessons for the Bomb Aimer ... ... Elementary Theory.	1941	2,000
C.323–324	Finding Wind Speed and Direction by 3-Course Method.	1941	2,000
C.325–326	Finding Wind Speed and Direction by Timing Head and Wind Gauge Bar.	1941	2,000
C.327–328	Bombing Procedure	1941	2,000
C.329–331	Dive Bombing	1941	3,000
C.33	Course Finding	1938	2,579
C.170	Map Projection	1938	2,284
C.197	Fixing Position	1938	2,408
C.700	Cross Country Map Reading	1942	3,500

R.N. Serial No.	Title and Description	Date Made	Footage
	FLEET AIR ARM—*contd.*		
	Pilots Training		
A.118*	Fleet Fighter (8 reels) ... ... Another " cautionary tale " which follows a class of fighter pilots through their course explaining what is expected of them, and showing what may happen to those who disregard the lessons taught at a Fighter School. Includes cockpit drill, R/T instruction, pinpointing practice, homing practice, sighting practice, Hudson trainer, Link-Fisher trainer, gunnery practice and formation flying. (A.F.O. 3003/43 refers.)	1943	5,296
A.118 (*a*)*	Fighter Tactics ... ... Reel 4 of A.118 (above), which deals with fighter tactics in diagrammatic form, can be shown as a separate film under this serial number. (A.F.O. 3003/43 refers.)	1943	1,072
C.201	Interpretation of Aircraft Instruments	1938	3,000
C.366	Tactical Use of Clouds	1941	2,000
G.42	Fighter Direction		2,800
G.79	Dive Bombing ... ... Part 1—Introduction to Dive Bombing.		3,000
	Principles of Flight		
C.92–6	Principles of Flight (Part 1)	1938	
	Reel 1—Airflow		900
	Reel 2—Airflow		900
	Reel 3—Streamlining		500
	Reel 4—Cambered wings		500
	Reel 5—Lift and Drags Co-efficients		1,400
C.98–104	Principles of Flight (Part 2)	1938	
	Reel 1—Scale Effect		1,000
	Reel 2—Scale Effect		400
	Reel 3—Aspect Ratio		700
	Reel 4—Equilibrium and Stability		1,000
	Reel 5—Methods of representing the Air Forces on an Aeroplane.		1,000
	Reel 6—" Weather-Cock " or Static Stability...		1,000
	Reel 7—Effect of a Tailplane in obtaining equilibrium in steady level flight.		600
C.185–186	Principles of Flight (Part 3)	1938	
	Reel 1—Directional Stability in Level Flight...		400
	Reel 2—Fore and Aft Control		500
C.168–169	Principles of Flight (Part 4)	1938	
	Reel 1—Aileron Drag		1,000
	Reel 2—Balances Control		800
	GUNNERY		
	Ammunition		
A.19*	Magazine Rounds (Silent) ... ... Daily routine by Officer of Quarters.	1924	1,000
	Anti-Aircraft (Army)		
B.108	Field Clinometer and Secondary Battery " Bubble and Juice ".	1940	
	Part 1—Tests and adjustment to clinometer.		900
	Part 2—Testing and maintenance of battery, with some remarks on cables.		900
B.116	Guns—3·7-in.	1940	
	Part 1—Breech mechanism		900
	Part 2—Recoil system		800
	Part 3—Recoil system (contd.)		700
B.104	Height Finding—Principles of	1940	1,000

R.N. Serial No.	Title and Description	Date Made	Footage
	GUNNERY—*contd.*		
	Anti-Aircraft (Army)—contd.		
B.109	Height Finding—Conversion Gears	1940	2,000
B.112	Mechanical Mathematics. A.A. Instruments ...	1940	
	Part 1—Addition and subtraction		800
	Part 2—Multiplication and division		600
	Part 3—Solution of triangles		700
	Part 4—" Memory." Explains graphic range tables and three-dimensional cams.		900
B.144	Predictors. The No. 1	1941	
	Part 1—The gunnery problem and its theoretical solution.		1,000
	Part 2—Method and mechanism		1,000
B.142	Predictors. The No. 2		
	Part 1—The gunnery problem and its theoretical solution.		1,000
	Part 2—Method and mechanism		1,000
B.101	Predictors. The Sperry	1940	
	Part 1—Examination of equipment		1,500
	Part 2—Tests and adjustments		1,000
B.102	Predictors. The Vickers	1940	
	Part 1—Examination of equipment		1,200
	Part 2—Tests and adjustments		1,000
B.113	Searchlight—A.R.C.	1940	
	Part 1—Speed and directional control ...		1,100
	Part 2—The projector driving motor and impulser.		900
	Light A.A. Series	1941	
B.173	Layout and remote control		1,000
B.175	Ordnance Q.F. 40-mm.		1,000
B.176	Ordnance Q.F. 40-mm. (contd.)		1,000
B.177	The gunnery problem and theory of its solution with No. 3 predictor.		1,000
B.178	Method of solving the gunnery problem with Predictor No. 3.		1,000
B.180	Mechanism of the Predictor No. 3		1,000
B.265	Barr and Stroud Range Finding	1942	1,500
	Theory, drill and mechanism as applied to 9-ft. Barr and Stroud range finder.		
	Close Range Weapons		
A.56*	A.A. Gunnery—Eyeshooting (in colour) ...		
	Part 1—Introductory. Meaning of " aim-off "		1,000
	Part 2—Approach angle		1,500
	Part 3—Shows how amount of aim-off to be applied is affected by approach angle and speed of target. Use of the cartwheel sight.		1,800
	Part 4—Respective responsibilities of layer and trainer.		750
	Part 5—Maximum effective range		900
	Part 9—Demonstration attacks	1942	1,100
	Part 10—Aiming practice (typical attacks) ...	1942	1,000
	Part 11—Aiming practice (German attacks) ...	1942	1,000
	Part 12—Aiming practice (Italian attacks) ...	1942	1,000
	Part 13—Aiming practice (Japanese attacks)	1942	1,000
A.69*	A.A. Gunnery—Use of Tracer Ammunition ...	1941	4,800
	Part 1—Observation of tracer.		
	Part 2—" Hosepiping."		
	Part 3—Tracer-assisted eyeshooting.		

R.N. Serial No.	Title and Description	Date Made	Footage
	GUNNERY—*contd.*		
	Close Range Weapons—contd.		
A.79*	The 2-in. Rocket Weapon	1942	
	Part 1—Introduction. Shows the weapon being successfully used against a dive-bombing attack, and explains its advantages for certain purposes.		755
	Part 2—Ammunition. Shows by picture and diagram the functions of charge, fuze, shell and fins. Testing and maintenance. The effects of wind on flight.		927
	Part 3—Trough mounting. Shows by picture and diagram the testing of the electrical circuits loading, sighting, firing, and misfire procedure.		952
	Part 4—Gimbal mounting (as for Part 3) ...		826
	Part 5—Pillar box mounting (as for Part 3) ...		871
	Part 6—Blast. The effects of blast from each type of mounting ; shows that the machines can be handled with confidence. (A.F.O. 2724/43 refers.)		412
A.120	Barrage Firing in Local Control (in colour), 2 reels Purpose of barrage—size of area affected by shellburst. Setting deflection and range. Fixed ranges. When to open fire. Observation and correction of initial aiming errors. Importance of high rate of fire. Battle scene illustrations. (A.F.O. 949/43 refers.)	1943	1,716
A.123	The Bofors Gun	1943	
	Part 1—General handling. Deals with ammunition, loading, firing, misfire procedure and general aspects of the mounting (2 reels).		1,967
	Part 2—Mechanism. Function of mechanism, whether in single or auto-fire (2 reels).		1,467
	Part 3—Stripping and maintenance. Starts with unshipping the barrels and shows complete stripping of mechanism, lubrication, and final assembly (3 reels). (A.F.O. 3149/43 refers.)		2,721
B.115	Lee-Enfield Rifle. ·300, Pattern 17	1940	
	Part 1—Introduction. Parts and mechanism		1,000
	Part 2—Demonstration of firing positions ...		1,000
E.609	Malta Convoy		1,000
	Shows guns' crews in action against aircraft on a typical Malta convoy.		
A.12	Lewis Gun Mechanism (Silent)	1933	1,100
	Shown by sectional models.		
	Coast Defence		
B.265	Barr and Stroud Range Finding	1942	1,500
	Theory, drill and mechanism as applied to 9-ft. Barr and Stroud range finder.		
	Drill		
A.61	Duties of Look-outs...	1941	2,300
	Arcs of sweep. Use and care of binoculars. Methods of reporting. What to look for. A.A. Look-outs. Look-outs at night.		

R.N. Serial No.	Title and Description	Date Made	Footage
	GUNNERY—*contd.*		
	Fire Control		
A.4	Assessment of Inclination (Silent)	1924	900
A.16*	Spotting Practice (Silent)	1929	900
A.23	Observers Spotting (Advanced) ... ... Exercises for naval observers in aerial spotting and control procedure.	1939	3,600
A.24*	Distribution and Control of Gunfire ... ... Part 1—Animated diagrams showing co-operation of aircraft with Battle Fleet, with all wireless signals. Part 2—Selection of targets by each ship. Spotting by aircraft. Part 3—Enemy changes course. Redistribution of fire. Emergency procedure in low visibility.	1938	2,900
A.26*	Observers Spotting (Elementary) ... ... Part 1—Salvoes, Mean point of impact, over and under, comparison of 15-in., 8-in. and 6-in. splashes. Part 2—Single ship 15-in. shoot, with commentary and all wireless signals. Part 3—Full calibre firing by " Southampton " class cruiser at " Leipzig " class cruiser.	1940	3,300
A.134	Ratekeeping ... ... Shows by picture and diagram the methods of assessing enemy inclination and speed; correcting assessment; " not apply " procedure. Examples for exercising in inclination and speed estimating (3 reels).	1943	2,873
	Long Range Weapons		
A.5	Breech Mechanism, 15-in. (Silent)	1924	350
A.6*	Cut-off and Compensating Gear (Silent)	1924	500
A.7	15-in. Chain Rammer (Silent)	1924	700
A.13	Pusher Hoist, 8-in. (Silent)	1933	850
A.17	Safety Depression Control Gear (Silent)	1933	650
A.20	Recoil System (Silent) ... ... Arrangement of 15-in. gun in and out.		700
A.29*	Twin Ammunition Supply, 6-in., Mark XXI ... Shown by animated diagrams and working models.		3,000
A.30	6-in. B.L., Gun Drill	1939	1,100
	Tank and Anti-Tank Weapons (Army)		
B.162	Tank Weapons—Besa and 2-pdr. ... ... General description.	1941	900
B.193	Besa Gun ... ... Reel 1—Stripping the Besa machine gun. Reel 2—Care and cleaning. Reel 3—Mechanism. Reel 4—Immediate action Reel 5—Immediate action (contd.).	1941	4,500
B.194	2-pdr. Gun ... ... Reel 1—Stripping and assembly. Reel 2—Mechanism. Reel 3—Care and cleaning.	1941	2,700

R.N. Serial No.	Title and Description	Date Made	Footage
	HISTORICAL		
A.31	Rule Britannia ... ... A brief survey of naval activities in peace time.	1937	500
A.54	Full Tilt ... ... The story of the Fairmile patrol boat. Shows how these craft are built by mass production methods.	1941	3,200
A.60	The Gun ... ... Primarily designed to inform American opinion on the necessity for arms production in relation to the Battle of the Atlantic. Suitable for preliminary instructions of H.O. ratings as a film of general war interest.	1941	2,000
A.95	The Demolition of the " Mauretania " (Silent) ...		1,000
A.22	Funeral of H.M. King George V.	1936	1,800
	INFANTRY AND LAND FORCES		
	Bridging		
B.135	Assault Bridge ... ... Reconnaissance, organisation and construction of a complete kapok bridge.	1941	3,800
B.118	Box Girder Bridge—Small ... ... Reconnaissance of site, erection.	1941	1,800
	Pontoon Equipment, Mark V	1942	
B.284	Part 1—Construction and use of rafts		2,000
B.305	Part 2—Construction and use of trestles, sliding bay and half floating bay.		3,300
B.306	Part 3—Construction and use of pontoon landing bay.		2,000
	Drill		
B.123	On Parade ... ... A demonstration of foot and arms drill.	1941	1,800
	Fieldworks		
B.278	Use of Mechanical Equipment in Defence ... Shows mechanical methods of excavation, levelling and haulage.	1942	2,000
B.151	Water Purification ... ... Deals with the filtration, sterilization and distribution of water in the field and the training of water duty personnel.	1941	3,700
B.129	Provision and Replenishment of Petrol in the Field.	1941	2,700
	Gas		
B.163	Gas ... ... Dealing with the care and maintenance of gas equipment and its employment in the field.	1941	4,700
	Obstacles		
B.132	Anti-Personnel Obstacles (Elementary) ... ... The erection of, protection obtained from and methods of overcoming wire.	1941	1,800
B.133	Anti-Personnel Obstacles (Advanced) ... ... Booby traps.	1941	1,800
B.146	Anti-Vehicles Obstacles (Elementary) ... ... Showing the use of tank obstacles, including road blocks, wire rope obstructions, ditches, slopes and trees; and defensive tactics.	1941	4,000
B.147	Anti-Vehicles Obstacles (Advanced) ... ... Erection of road obstacles, such as rails and concrete blocks.	1941	1,800

R.N. Serial No.	Date and Description	Date Made	Footage
	INFANTRY AND LAND FORCES—*contd.*		
	Signals		
B.124	Cable Laying—Cable " D " 8 ... ... Employment of mechanical cable layer No. 1 and showing the duties of personnel.	1940	1,800
B.126	Corps Signal Office, Establishing of	1941	2,700
B.125	Divisional Signal Office	1942	1,800
	Tactics		
A.8	Civil Disturbance (Silent) ... ... Military platoon quells native riot. Emphasising that only minimum force necessary must be used, and an accurate record of events kept.	1937	1,200
B.153	Infantry Reconnoitring Patrol by Night ... ... Deals with orders for patrol, preparation, bounds, methods of movement over varying types of country and finally the return to report information.	1941	1,800
B.221	River Crossing ... ... A diagrammatic analysis of the planning, deployment and conduct of a typical river crossing operation by an infantry division. (N.B.—For Senior Officers only.)	1942	1,800
	Weapon Training		
B.115	Lee-Enfield Rifle, 0·300, Pattern 17	1940	
	Part 1—Introduction—Parts and mechanism...		1,000
	Part 2—Demonstration of firing positions ...		1,000
	INSTRUCTOR TRAINING		
A.130	Tips on Training ... ... An edited version of the two American films, " Military Training " and " Tips for Teachers ".	1943	3,000
	Part 1—The teaching method of instruction, contrasted with a " bare lecture ".		
	Part 2—Other methods of instruction, the demonstration, group performance, " County Fair " (or Museum of Errors), coach and pupil.		
G.22	Tips for Teachers ... ... A lecturer describes some of the characteristics of good teachers and some of the procedures which they should and should not use. These are demonstrated and, in some cases, dramatized in a humorous way.		1,700
A.137	Hints for Instructors ... ... Demonstrating the basic principles of good instructional technique summarised under the broad headings of :— 1. Personality. 2. Preparation. 3. Presentation.	1943	3,000
G.136	Military Training ... ... An American film showing the methods of instruction employed by the U.S. Army. Describes a number of useful aids to instructors.	1942	4,500
	LEADERSHIP		
A.8	Civil Disturbance (Silent) ... ... Military platoon quells native riot. Emphasising that only minimum force necessary must be used, and an accurate record of events kept.	1937	1,200

R.N. Serial No.	Title and Description	Date Made	Footage
	MARINES		
	Organisation		
A.113*	Advanced Base ... ... Shows the organisation and work of an M.N.B.D.O.	1942	7,200
	MEDICAL		
	Blood Circulation		
F.711	The Blood ... ... Its functions and constituents.		1,000
F.712	Circulation ... ... Circulatory system of the heart and arteries.		1,000
	First Aid		
A.78	First Aid in the Royal Navy	1942	
	Part 1—Types of unconsciousness. Concussion, intoxication, fits and fainting.		1,600
	Part 2—Simple anatomy. Bones of the skeleton		2,100
	Part 3—Common forms of fracture. The Neil Robertson stretcher. The Thomas splint. Application of slings.		3,000
	Part 4—Bleeding. Circulation of blood, stopping haemorrhage, use of St. John's tourniquet.		2,000
G.19	Essentials of First Aid ... ... Shows some of the first aid facilities and procedures employed afloat. The film describes some of the medical facilities afloat, precautions to be observed to avoid injury aboard ship, methods of transporting and protecting injured men, rescuing and reviving men overcome by smoke, contents of Navy first aid kits, steps in the examination and treatment of the wounded, application of splints to arms and legs, treatment of casualties with burns, dressing arm and chest wounds, where to apply pressure to prevent arterial bleeding and how to use a tourniquet.		2,900
G.81	Skeletal Fixation by the Stader Splint		2,000
	Fleet Air Arm		
C.445	Use of Oxygen in High Altitude Flying		3,000
C.505	Effect of Centrifugal Force on Crews ... ... Effects of " G " on air crews.		1,687
	Health		
F.713	The Filter ... ... Necessity for using pure water.		1,000
	Hygiene		
B.209	Mosquito and Malaria ... ... Demonstration of preventative equipment.	1942	1,800
B.210	Housefly ... ... Showing cause of dysentery and other sickness.	1942	1,800
B.211	Louse ... ... Decontamination of personnel. Effects of lice as regards typhus, etc.	1942	1,800
E.611	Social Enemy No. 1 ... ... A film sponsored by the Ministry of Health dealing with the dangers of Venereal Diseases. (A.F.O. 3004/43 refers.)		6,690
	Respiration		
F.710	Breathing ... ... The effect of good breathing on health.		1,000

R.N. Serial No.	Title and Description	Date Made	Footage
	METEOROLOGY		
C.78	Fog	1939	2,139
C.82	Ice Formation	1939	2,936
C.191	Temperature, Pressure and Wind	1940	3,816
C.264	Synoptic Meteorology	1940	2,449
G.82	Aerology Series—Thunderstorms (A.F.O. 3550/43 refers.)		5,000
	MINES AND MINING		
	Land		
B.133	Anti-Personnel Obstacles (Advanced) Booby traps.	1941	1,800
	MINESWEEPING		
	L.L. Sweep		
A.73*	Magnetic Minesweeping—The LL Sweep	1941	
	Part 1—First Principles		1,200
	Part 2—Handling the gear		550
	Part 3—Operation of the sweep		1,800
	Part 4—Formations and turns		1,900
	O. and A. Sweeps		
A.25*	Minesweeping Part 1—"A" and " O " Sweeps. Sweep channels, use of dan buoys. Part 2—" O " sweep in fast vessels. Part 3—"A" sweep in fast vessels. Part 4—" O " sweep in trawlers. Part 5—"A" sweep in trawlers. Part 6—Formations and turns with "A" sweep. Part 7—Formations and turns with "O" sweep. Part 9—Bow defence gear in trawlers.	1940	7,400
	Paravanes		
G.16	Streaming and Recovery of Paravanes Employing straight photography and animated diagrams the film shows the operations involved in streaming and recovering paravanes, and how paravanes cut mine cables.		889
	MORALE		
D.501	Atlantic Patrol		895
D.504	Corvettes		699
D.505	Ferry Pilot		2,279
D.506	Fighter Pilot		701
D.507	Food Convoy		927
D.508	Heroes of the Atlantic		1,389
D.509	H.M. Minelayer		736
D.512	Keeping the Fleet at Sea		993
D.514	Men of the Lightships		2,372
D.515	Merchant Seamen		2,179
D.516	Naval Operation		662
D.517	Royal Australian Navy		602
D.520	Seaman Frank Goes to Sea		657
D.521	Target for To-night		4,468
D.522	The Pilot is Safe		780
D.523	W.R.N.S.		746
D.524	The North Sea		2,700
D.525	Night Mail		2,110

R.N. Serial No.	Title and Description	Date Made	Footage
	MORALE—*contd.*		
D.526	Speaking from America		950
D.530	H.M.S. " King George V "		1,600
D.531	Coastal Command. (A.F.O. 1446/43 refers)		6,600
D.532	City Fire—December 29th, 1940		1,300
D.535	Desert Victory. (A.F.O. 2726/43 refers)		5,465
D.555	So This is London		1,320
D.556	London River		1,500
D.559	S.O.S.		1,180
D.560	Sailors without Uniform		927
D.561	Steel Goes to Sea		1,531
E.602	Battlefleets of Britain An American film showing in general survey the striking force of the Navy.		2,000
E.603	A Naval Occasion An account of the maiden voyage of H.M.S. " Aberdeen " to join the Mediterranean Fleet.		1,000
E.604	Mastery of the Sea The Navy's watch of merchantmen.		2,000
E.605	Unconquerable Minesweepers		2,000
E.606	The British Navy		2,000
E.607	Voyage of the "Ashanti "		1,000
E.608	Raising Air Fighters		1,000
E.609	Malta Convoy		1,000
E.612	In Which We Serve (A.F.O. 4060/43 refers)		10,295
E.613	Dieppe		1,000
F.708	Steel Scenes of general interest taken in forges and foundries.		1,000
G.23	Men of the U.S. Navy Shows something of the Navy Department organisation, training activities at a naval training station and typical activities aboard ship.		2,600
G.25	Cavalcade of Aviation This film shows important and unusual events and people in the history of aviation from Kittyhawk until the present time.		2,000
G.26	Ships of the U.S. Navy Representative types of ships in the U.S. Navy, some of the activities aboard these ships, and the function of each type of ship.		2,000
	NAVIGATION		
	Astronomical Triangle		
G.46	Astronomical Triangle Shows how the astronomical triangle is formed and demonstrates its use in determining the position of ships on the earth's surface.		1,673
	Charts		
G.13	Celestial Navigation—Charts This film explains the meaning, advantages and limitations of mercator, gnomic and Lambert conformal projections, and indicates how they may be used in plotting a course.		1,687

R.N. Serial No.	Title and Description	Date Made	Footage
	NAVIGATION—*contd.*		
	Compass		
A.110	(*See* Electrical Training Section.)		
	Rule of the Road		
G.45	Rules of the Nautical Road ... ... Shows how the Halifax disaster was caused by misinterpretation of a ship's whistle signal, describes international rules, stresses the importance of taking bearings, gives definitions of some nautical terms, and explains the meaning of proper lookout, good seamanship, inevitable accident and marine collision law. Animation is used throughout. (In three reels —further reels to come.)	1943	2,600
	Time		
G.53	Consideration of Time in its various aspects, leading up to the working of astronomical sights by the Greenwich Low Angle method. (In three parts.)		2,000 (each part)
	NEW ENTRY		
A.111*	Meet the Ship ... ... For the New Entries. Shows the lay-out of a modern cruiser.	1942	3,000
D.518	Sam Pepys Joins the Navy ... ... Shows typical joining routine of the New Entry.		734
	NIGHT VISION		
B.549	Vision at Night (A.F.O. 3005/43 refers)	1943	1,000
C.1082	Night Vision	1942	2,000
	P. AND R.T.		
	Combat		
A.106	Close Combat ... ... How to defend yourself even though unarmed.	1942	2,500
B.202	Unarmed Combat ... ... Methods of attack and defence, showing how an unarmed man can deal accurately and quickly with a ruthless enemy.	1941	2,800
G.21	Hand to Hand Combat		4,459
	Sport		
C.43	Boxing Do's and Don'ts	1936	3,000
	Swimming		
A.62	The McGregor Williams Method of Life-Saving ...	1941	600
F.709	Swimming and Diving ... ... Part 1—Back and Breast stroke. Part 2—Life-saving. Part 3—The crawl. Part 4—Floating and ornamental swimming. Part 5—Development of speed. Part 6—Water polo. Part 7—Diving (elementary). Part 8—Diving (advanced)		8,000

R.N. Serial No.	Title and Description	Date Made	Footage
	PASSIVE DEFENCE		
	Anti-Gas		
A.48	Passive Defence ... ... Part I—Types of gases and their effects.	1940	900
A.117	Defence of Shore-based Aircraft against Gas ... Protection from spray. Methods of decontamination. The steam jenny, swabbing, weathering (A.F.O. 3002/43 refers).	1943	3,200
C.407	Defence Against Gas ... ... As applied to R.A.F. stations.	1940	4,000
D.529	Decontamination of Streets ... ... Shows the proper method of decontamination after liquid gas bombs have fallen.	1942	1,500
	Fire-Fighting		
A.53	Fire Fighting (Shore Establishments) ... ... Part 1—Equipment and personnel. Part 2—First aid fire fighting. Stirrup pump, 2-man manual, hydrant, chemical extinguishers. Part 3—Drill. Heavy trailers, heavy unit, relaying water, light trailer pump, spray nozzles, hose ramps, flag and hand signals. Part 4—Practical demonstrations on a burning house. Part 5—Oil fuel fire fighting.	1942	6,400
B.155	Everybody's Business ... ... Fire prevention.	1941	1,800
C.259	Fire Fighting ... ... In relation to aircraft.	1939	920
D.533	Water Relaying	1942	3,300
D.534	Mobilising Procedure of N.F.S.	1942	2,100
G.88	Damage Control Chemistry of Fire		5,000
	PRE-ENTRY TRAINING		
A.85	"One Company" ... ... Y entry recruiting film, showing entry and training of three boys destined for pilot, observer and executive officer.	1942	4,000
D.519	Sea Cadets		715
D.558	Sea Scouts		1,000
E.610	Find, Fix and Strike		4,000
	RADAR		
A.74*	Radiolocation (Radar) (C.A.F.Os. 1027/43 and 1183/43 refer).		
	Part 1—Elementary principles	1942	900
	Part 2—Types 285 and 286 in a destroyer ...	1942	1,000
	Part 3—Types 281 and 285 in a cruiser (high angle).	1942	1,457
	Part 4—Typical echoes	1943	1,600
	Part 5—Type 271 in a frigate	1943	
	Part 6—Observation of fall of shot	1943	
	Part 7—Types 273 and 284 in a cruiser (low angle).	1943	3,104
	Part 8—Height finding—Types 278 and 281 ...		
	Part 9—Cathode ray tube } In		
	Part 10—Auto barrage unit } preparation		
	Part 11—P.P.I.		

R.N. Serial No.	Title and Description	Date Made	Footage
	RADAR—*contd.*		
	A.S.V.		1,638
	L.R./A.S.V. ...		1,146
	Use of A.S.V. ...		
	Use of A.I. ...		
	I.F.F. ... ... (C.A.F.Os. 1027/43 and 1183/43 refer)		823
	H.M.A.		1,018
	A.I., Mark IV ...		1,623
	A.I., Mark V ...		782
	A.I., Mark VIII ...		
G.57	Operation of Fire Control Radar—Mark IV, Type FD.		1,000
G.58	Operation of Radar, Type SC1		3,000
G.59	Operation of Fire Control Radar—Mark III, Type FC.		2,000
G.95	Operation S.G. Radar (C.A.F.O. 1741/43 refers)...		3,000
	RECOGNITION		
A.32*	Recognition of Aircraft—Series II—(A.F.O. 4059/43 refers).		
	Part 10—Introduction I	1942–1943	
	Part 11—Introduction II		
	Part 12—Spitfire		
	Part 13—Hurricane		
	Part 15—Hudson III		
	Part 17—Blenheim IV and Ju. 88		
	Part 18—Heinkel III, Mark V		
	Part 20—Junkers 52		
	Part 22—Typhoon		
	Part 24—Junkers 87B		
	Part 25—Me. 109E, Me. 109F		
	Part 26—Martlet		
	Part 28—Wellington I.C.		
	Part 29—Gotha Glider D.F.S. 230		
	Part 30—Stirling		
	Part 31—Halifax and Junkers 90		
	Part 34—Boston I and II		
	Part 35—Beaufighter I and II		
	Part 36—Me. 110 (Insert of 210)		
	Part 38—Whitley V		
	Part 41—Focke Wulf 200K		
	Part 42—Lancaster		
	Part 43—Defiant		
	Part 44—Focke Wulf 190		
	Part 46—Mosquito		
	Part 47—Sunderland III		
	Part 48—Liberator II		
	Part 50—Catalina and Dornier 18K		
	Part 51—Dornier 217E		
	Part 53—Master III		
	Part 54—Mustang		
	Part 56—Heinkel 177		
	Part 57—Horsa (Glider)		
	Part 58—Baltimore		

R.N. Serial No.	Title and Description	Date Made	Footage
	RECOGNITION—*contd.*		
	Recognition of Aircraft—Series II—*contd.*		
	Part 59—Vigilant and Fieseler 156	1942–1943	
	Part 60—Focke Wulf 189		
	Part 62—Mitsubishi T96, Navy Bomber ...		
	Part 63—Mitsubishi T97, Army Bomber ...		
	Part 64—Mitsubishi T00, Navy Fighter ...		
	Part 65—Macchi C.202		
	Part 66—Mitchell N.A.B.25		
	Part 67—Re 2001		
	Part 68—Lightning		
	Part 69—Barracuda		
	Part 70—Aichi T99		
	Part 71—Henschel 129		
	Part 72—Gotha 242		
	Part 73—Raggio		
	Part 74—Kawanishi 97		
	Part 75—Cant Z.1007		
	Part 76—Me. 210		
	Part 77—Marauder		
	Part 78—Blohm and Voss 138		
	Part 79—Mitsubishi 01		
	Part 80—Avenger		
	Recognition of Aircraft—Quiz Films		
	Part 101—Spitfire, Hurricane, Ju. 88, Blenheim IV, Halifax.		
	Part 102—Hudson, Tomahawk, Airacobra, Wellington, Ju. 87B.		
	Part 103—Defiant, Catalina, Beaufighter, Stirling, Manchester.		
	Part 104—Me. 109E, Boston III, Maryland, Sunderland, Whitley.		
	Part 105—Mustang, Fulmar, He. IIIK, Beaufort, Me. 110.		
	Part 106—Typhoon, Lancaster, Ju. 52, F.W. 190, Mosquito.		
	Note.—The approximate length of each part of Aircraft Recognition films is 500-ft.		
A.71	The Luftwaffe ... ... An aid to aircraft recognition, showing German aircraft in action.	1941	2,800
G.1	*Recognition of Aircraft—*		
	Part 1—Weft System (Basic Principles) ...		1,000
	Part 2—Weft System (Special Characteristics)		1,000
	Part 3—F.4.F. (Wildcat)		700
	Part 4—P.B.2Y		900
	Part 5—S.B.D. (Dauntless)		800
	Part 6—P.B.Y. (Catalina) ...		800
	Part 7—F.4.U. (Corsair)...		800
	Part 8—T.B.F. (Avenger)		800
	Ships		
A.107	The Kriegsflotte ... ... Complementary film to A.71 (The Luftwaffe) showing German warships and naval aircraft.	1942	1,300

R.N. Serial No.	Title and Description	Date Made	Footage
	RECOGNITION—*contd.*		
	Submarines		
A.68*	U-Boats—Recognition and Attack by Naval Aircraft—		
	Part 1—Types and construction. Appearance in various states of trim when viewed from the air. Examples of traces when left submerging.	1941	700
	Part 2—Method of attack by naval aircraft ...	1941	800
	SALVAGE		
A.72	Let's Talk Rubbish ... ... The salvage of waste materials in the Navy.	1941	900
B.208	Salvage Sense ... ... Showing importance of salvage and method of collection within the unit.	1941	1,700
B.287	Economy of Fuel ... ... Economy of coal, gas and electricity.	1941	1,800
	SEAMANSHIP		
	Boatwork		
A.64	Boatwork	1942	
	Part 1—Introduction. Types of boats in use in the Navy and their construction.		1,000
	Part 2—Preparing a seaboat. Lowering and hoisting a whaler under way.		1,200
	Part 3—Lowering and hoisting in harbour. Landing on a beach.		1,000
	Part 4—Boat pulling		1,000
	Part 5—Sailing		1,600
	Compass		
A.110	The Gyro Compass (Care and maintenance, starting and stopping routines) (A.F.O. 4062/43 refers).	1942	
	Part 1—The Admiralty Sperry (3 reels) ...		2,000
	Part 2—The Sperry, Mark XIO, Model 0 (2 reels).		1,600
	Part 3—The Sperry, Mark XIU, Model 1 (2 reels).		1,350
	Part 4—The Brown (3 reels)		2,500
	Drill		
A.66	Taking Soundings ... ... The hand lead and Kelvin machine.	1941	2,500
A.84	Anchor Work (A.F.O. 4061/43 refers)	1942	
	Part 1—Introduction. Shows by diagram the gear on the focsle. of a warship, and explains its functions (2 reels).		1,329
	Part 2—Coming to Anchor. A modern battleship from the moment she enters harbour till she is secured at eight shackles.		896
	Part 3—Weighing Anchor. A modern battleship from shortening in to leaving harbour.		968
	Part 4—Securing to a buoy. Shows the operation of cutting anchor in a battleship and then securing to a buoy.		1,004

R.N. Serial No.	Title and Description	Date Made	Footage
	SEAMANSHIP—*contd.*		
A.84(b)	Wires and Fenders	1942	
	Part 1—Securing alongside; shows by picture and diagram a destroyer coming alongside her berth, and securing, with particular attention to the function of each wire, positioning of catamarans and use of fenders.		965
	Part 2—Casting off. Destroyer casting off from alongside and proceeding to sea. Demonstrates the use of springs in casting off.		765
A.63	Duties of the Helmsman ... ... Principles of steering, wheel and course orders, use of telegraphs and engines.	1941	2,500
	Knots		
C.205	Knots, Splices and Balloon Repairs	1939	3,278
C.73	Knots, Lashings and Lifting Gear	1939	3,000
G.14	Useful Knots ... ... Demonstrates the tying of the overhand square, granny, thief and sheet bend knots, two half-hitches, slippery hitch, clove hitch, rolling hitch, securing a line to a cleat, bowline on a bight.		2,178
	SECURITY		
	Careless Talk		
A.58	Next of Kin ... ... Full length feature film dealing with security. A Brigade Group is trained and equipped for a raid on the French coast. The whole operation is given away to the enemy through careless talk, espionage, etc.	1942	10,000
A.128	Jig-Saw. ... ... Showing the danger of careless talk and actions likely to help the enemy.	1943	3,236
D.502	All Hands (Anti-gossip) ... ... A sailor in a cafe tells his girl when his boat is due to leave. The information is passed step by step to a U-Boat commander.		1,032
	Interrogation of Prisoners		
B.107	Name, Rank and Number ... ... Interrogation of prisoners of war. Shows various German methods of obtaining information from prisoners.	1940	3,600
C.339	Interrogation of Prisoners of War ... ... In the form of a narrative dealing with pitfalls which await prisoners in enemy's hands.		3,000
	SIGNALLING		
	Land		
B.124	Cable Laying—Cable "D" 8 ... ... Employment of mechanical cable layer No. 1 and showing the duties of personnel.	1940	1,800
B.126	Corps Signal Office, Establishing of	1941	2,700
B.125	Divisional Signal Office, Establishing of ...	1942	1,800
	Morse		
C.333	Morse Signals—Without interference	1941	5,000
C.350	Morse Signals—With interference ... ... Morse signals at 18 w.p.m. with or without interference.	1941	5,000

R.N. Serial No.	Title and Description	Date Made	Footage
	SIGNALLING—*contd.*		
	Visual		
A.88	Practical Visual Signalling ... ... Flag hoists—common errors and avoidance. Care of telescopes. Semaphore—mechanical and hand flag. Signal projectors—20-in., 10-in., 6-in., Aldis, intermediate box and trigger lanterns. Signalling torches. Signalling to A/C. The Verys pistol.	1942	3,445
	SUBMARINES		
	General		
A.141	Submarine on Patrol ... ... Shows a submarine leaving the depot ship and proceeding on patrol. Includes a torpedo and gun action with diagram of submarine construction. (Edited from "Close Quarters".)	1943	2,000
	Technical		
A.15	Submarine Battery (Silent)	1924	3,000
	TORPEDOES		
	Care and Maintenance		
G.61	Preparation of a Fully Ready Torpedo—		
	Part 1—Preliminary adjustment		5,000
	Part 2—Final adjustment		3,000
	Part 3—Adjustment at the plane		1,000
	Fire Control		
A.35*	Torpedo Control (Exercise "A.C.1") (Silent) ...	1937	700
A.36*	Torpedo Control (Exercise D.A.) (Silent) ...	1937	450
A.37*	Torpedo Control (Low Visibility) (Silent) ...	1939	750
A.38*	Torpedo Control (Night Exercise S.N.) (Silent)	1937	1,200
A.42*	Torpedo Control (Bruce Live Practice) (Silent)	1939	450
	Smoke		
A.45*	Smoke Floats (Silent)	1939	450
	Depth Charges		
A.108	Care and Maintenance of Depth Charges (A.F.O. 2725/43 refers)	1942	2,600
A.109	Care and Maintenance of Depth Charge Release Gear (A.F.O. 2725/43 refers)	1942	1,800

APPENDIX II

Standard List of 35-mm. cinema equipment to be provided for cinema installations at all shore establishments.

TABLE I

Pattern No.	Description	Quantity (including spares)
7518	Film rewinding outfit	1
7508	Cell, photo-electric, C.M.G. 25	2 (1 spare)
7571	Handbook	1
7585	A.N. amplifier	1
7586	Stand for cinema projector	1
7503	Lamp, exciter, 6 volts, 6 watts, for cinema projector	3 (2 spare)
16021	Lamp, pilot, 12 volts, 6 watts, for cinema projector	3 (2 spare)
7535	Cylinder, C.O.2, 8-oz., for fire extinguisher	2
931	Oil, lubricating, for use in cross boxes (pint tins)	2
932	Oil, lubricating, for use in gears (pint tins)	2
7560	Oil can	1
7523	Film, test, 8,000-cycles, 20-ft. length	1

APPENDIX II—*contd.*

TABLE I—*contd.*

Pattern No.	Description	Quantity (including spares)
7522	Film cement, 2-oz. bottles	12
7552	Key, grub screw, 4BA	1
7553	Key, grub screw, 2BA	1
7521	Bobbin, wood, for spool, Pattern 7520	2
7520	Spool, split, 14-in. diameter, for cinema projector	1
7519	Spool, 14-in. diameter, for cinema projector	10
7564	Cabinet for film spool stowage, 12-way	1
W.1533	Valve, wireless, Type 6J7G or equivalent, for head amplifier and main amplifier 1st stage.	6 (4 spare)
W.1295	Valve, wireless, Type 6L6G or equivalent, for main amplifier—2nd and power stages.	7 (4 spare)
W.4000	Valve, wireless, Type 5U4G or equivalent, for main amplifier—rectifier.	3 (2 spare)
7536	Cine, auto-celluloid bands, for fire extinguisher	4
7537	Cine, auto fuzes for fire extinguisher (in bottle)	4
	Tin box for fuzes and bands	1
7558	Brushes, carbon, for blower motor	1 pair (spare)
7584	Blanket, asbestos, 6-ft. x 6-ft., in metal container	1
7550	Gear, tufnol, for vertical shaft	2 (spare)
7566	Inserts, rubber, for motor coupling	2 (spare)

LIST OF ITEMS WHICH WILL VARY ACCORDING TO THE INSTALLATION BEING CONSIDERED.

TABLE II

7570	Projector mechanism, N. type, Series III, complete with spool boxes, A.C. driving motor, sound-head amplifier and fire extinguisher. For use with incandescent filament lamp, A.P. 7529.	1
—	Projector mechanism complete as above with addition of arc lamp attachment. For use with arc lamp carbons.	1
7529	Lamp, incandescent, 100 volts, 1,000 watts, for cinema projector, Pattern 7570.	3 (2 spare)
7562	Arc lamp carbons, positives, 6-mm.	100
7563	Negatives, 5-mm.	100
	Arc lamp mirror, 5½-in. diameter	1
—	Arc lamp resistance ... ... For use with arc lamp.	1
—	Arc lamp control panel ... ... For use with arc lamp.	1
7574	Mercury arc rectifier (3-phase) ... ... For provision of D.C. supply to arc lamp when A.C. mains only are available. Complete specification depends upon voltage of A.C. supply.	1
7575	Mercury arc rectifier (1-phase) ... ... For provision of D.C. supply to arc lamp when A.C. mains only are available. Complete specification depends upon voltage of A.C. supply.	1
—	Screen ... ... Sizes vary according to projection distance and picture size desired.	1
—	Lens ... ... Sizes vary according to projection distance and picture size desired.	1
7577	Converter of 1 KVA capacity, single wound type with starter and regulator (input 220-volts, D.C.). Required where supply is D.C. for producing the A.C. supply for amplifier and driving motor.	1

TABLE II—*contd.*

7576	Converter of 1 KVA capacity, single wound type with starter and regulator (input 110 volts, D.C.). Complete specification depends upon voltage of D.C. supply.	—
7573	Transformer. Universal 1½ k.w., 230/110 volts ... ... Required for use on A.C. supply to provide 110 volts supply for projector lamp, A.P. 7529.	—
7526	Resistance, regulating, 11 ohms, 10 amps. ... ... Required for use on 220-volt D.C., supply in order that the 100-volt, 1,000-watt, projector lamp, A.P. 7529, may be used.	1
—	Loudspeaker ... ... The number and type of these depends upon the size of the hall used for projection.	—
4480R	Monitor loudspeaker, 1·5-watts, complete with lead and one in number plugs, A.P. 4315. Required when the projector is located in a cinema projection compartment.	1
	Necessary leads for linking up with cinema projector, A.P. 7570	As necessary

16-MM. SOUND AND SILENT FILM CINEMA PROJECTOR, AMPRO TYPE UAB.
STANDARD LIST OF EQUIPMENT TO BE PROVIDED FOR ALL CINEMA INSTALLATIONS.

TABLE I

Pattern No.	*Description*	*Quantity (including spares)*
7660	Projector, 16-mm., sound and silent, Ampro type, U.A.B., complete with 100/120-volt A.C. amplifier, 100/120-volt A.C./D.C. motor, photo-electric cell, valves, lamps, and lens. (*See* Table II regarding lens size.)	1
7661	Loudspeaker, complete in carrying case with 50-ft. speech lead and 10-ft. mains leads.	1
7662	Cell, photo-electric C.E., No. 20	1 (spare)
—	Valve, wireless, Type 6L6G or Pattern W.1295 (N.R.77) ...	2 (spare)
—	Valve, wireless, Type 6N7	2 (spare)
—	Valve, wireless, Type 5V4G	1 (spare)
—	Valve, wireless, Type 6J7	1 (spare)
7663	Lamp, incandescent, 120 volts, 750 watts, biplane filament prefocus cap.	5 (spare)
7664	Lamp, dial, 6–8-volt, M.C.C. cap	2 (spare)
7665	Lamp, pilot, 115-volt, 6-watt, candelabra cap	2 (spare)
7666	Lamp, exciter, 6-volt, 6-watt, special prefocus cap	6 (spare)
7667	Oil, lubricating, in bottle	1
7668	Brush, cleaning	1
7669	Oiler	1
7617	Spool, 1,600-ft. capacity	2
7616	Spool, 800-ft. capacity	2
7615	Spool, 400-ft. capacity	2
7670	Spring belt, rewind	2 (spare)
7671	Spring belt, take-up	4 (spare)
7672	Spring belt, feed	2 (spare)
7673	Instructional book	1
7674	Triple-claw shuttle assembly	1 (spare)
7675	Motor governor assembly	1 (spare)
7676	Motor brushes (pair)	1 (spare)
7677	Fuses	6 (spare)
7678	Spring, motor brush (pair)	1 (spare)
7679	Cleaning outfit, lens	1
7680	Belt, motor-drive	1 (spare)
7604	Film rewinder	1
7603	Stand for projector, metal folding	1
7618	Cabinet stowage, for spools	1
7611	Film cement (non-flamm.), 1-oz. bottles	4
7607	Film splicer	1

Pattern No.	*Description*	*Quantity (including spares)*
	LIST OF ITEMS WHICH WILL VARY ACCORDING TO THE INSTALLATION BEING CONSIDERED	
	TABLE II	
7681	Lens, projection, 2-in. focal length ... ... Usually supplied to shore establishments. Throw required is 35-ft.	1
7602	Screen, collapsible, 6-ft. 8 ins. x 5-ft. 0-in. ... ... Usually supplied to shore establishments. Throw required is 35-ft.	1
7682	Lens, projection, 1½-in. focal length ... ... Usually supplied to ships. Throw required is 19-ft.	1
7683	Screen, collapsible, 5-ft. 3-in. x 4-ft. 0-in. ... ... Usually supplied to ships. Throw required is 19-ft.	1
7684	Rotary converter, 150-watt, "Janette" type. Input 110 volts D.C. Output 110 volts A.C., 60 cycles. Required for use on 110 volt D.C. supply for producing 110-volt A.C. supply for amplifier.	1
7685	Auto transformer, 1,200-watt. Input 200/250 volts, A.C., 50 cycles. Output 110 volts, A.C., 50 cycles, with 10-ft. mains lead, complete with 5-amp., 3-pin., plug. Required for use on 200/250-volt A.C. supply for producing 110-volt A.C. supply for amplifier, motor and projector lamp.	—

GEBESCOPE 16-MM. SOUND AND SILENT FILM CINEMA PROJECTOR, TYPE L516
STANDARD LIST OF EQUIPMENT TO BE PROVIDED FOR ALL CINEMA INSTALLATIONS.

TABLE I

7600	Projector, 16-mm., sound and silent, complete with 200/250-volt A.C./D.C. motor, photo-electric cell, valves, lamps, barretter, lens (*see* Table II regarding lens size), and 8-watt amplifier.	1
7601	Loudspeaker, complete in carrying case with 50-ft. speech lead and 25-ft. mains lead.	1
7603	Stand for projector, metal folding	1
7604	Film rewinder, 1,600-ft. capacity	1
7607	Film splicer, 16-mm.	1
7608	Cell, photo-electric, G.A. 16	1 (spare)
W.6026	Valve, wireless, Type E.F.36 for amplifier—1st stage ...	1 (spare)
W.6025	Valve, wireless, Type C.L.33, for amplifier—output	2 (spare)
W.6024	Valve, wireless, Type C.Y.31, for amplifier—rectifier ...	1 (spare)
7605	Lamp, incandescent, 110-volt, 500-watt, biplane filament, 3-pin, bayonet cap.	3 (spare)
7606	Lamp, pilot, 16-volt, 3-watt, M.E.S. cap	1 (spare)
W.6023	Barretter, Type C.I.C.	1 (spare)
7610	Oil, lubricating, in tin for ready application (2-oz.)... ...	1
7611	Film cement (non-flam.), 1-oz. bottles	4
7612	Plug, speech, Type P.9	1 (spare)
7613	Sockets, mains, Type P.73	1 (spare)
7614	Cleaning brush	1
7615	Spools, 400-ft. capacity	4
7616	Spools, 800-ft. capacity	4
7617	Spools, 1,600-ft. capacity	4
7619	Take-up belt	1 (spare)
7618	Cabinet stowage	1
7625	Grease, Tegraphine, 1-oz. box	1

LIST OF ITEMS PROVISION OF WHICH WILL VARY ACCORDING TO THE INSTALLATION BEING CONSIDERED.

TABLE II

Pattern No.	*Description*	*Quantity (including spares)*
—	Lens ... ... Sizes vary according to projection distance and picture size permissible.	1
—	Screen ... ... Sizes vary according to projection distance and picture size permissible.	1
7626	Resistance for projector lamp ... ... Required for use on 200/250 volts D.C. supply, in order that the standard 110-volt. 500-watt, projector lamp may be used.	1
7620	Transformer for projector lamp ... ... Required for use on 200/250 volts A.C. supply, in order that the standard 110-volt, 500-watt, projector lamp may be used.	1
7621	Rotary converter, 200 V.A. capacity single wound type for direct operation. Input 90/110 volts D.C. Output 230 volts A.C., 50 cycles. Required for use on 90/110 volts D.C. supply, for producing 230 volts A.C. supply for amplifier and motor.	1
7622	Transformer, 200 V.A. Input 90/110 volts A.C., 50 cycles. Output 230 volts, A.C., 50 cycles. Required for use on 90/110 volts A.C. supply, for producing 230 volts A.C. supply for amplifier and motor.	1
7627	Plug, resistance, shorting... ... ... Required when either a transformer or a rotary converter is supplied.	—

(*A.F.Os. 901/39, 671/40, 4025/40, 2685/41, 2822/41, 4614/41, 1256/42, 1527/42, 2236/42, 3110/42, 3334/42, 3595/42, 3805/42, 4348/42, 4508/42, 4605/42, 4163/42, 5240/42, 5288/42, 5449/42, 5645/42, 6073/42, 263/43, 355/43, 1537/43, 1667/43, 2237/43 are cancelled.*)

(*C.A.F.Os. 1024/41, 1485/41, 627/42, 964/42, 1430/42, 1882/42, 1634/42 are cancelled.*)

(*A.F.Os. 900/39, 2569/39, 304/40, 793/40, 1795/40, 4549/40, 16/41, 3372/41, 4383/41, 772/42, 2989/42, 2991/42, 3355/42, 3426/42, 3953/42, 4509/42, 4864/42, 286/43, 949/43, 1446/43, 1681/43, 2256/43, 2257/43, 2290/43, 2724/43, 2725/43, 2726/43, 2920/43, 3002/43, 3003/43, 3004/43, 3005/43, 3149/43 and 3550/43.*)

(*C.A.F.Os. 1966/41, 2420/41, 777/42, 1443/42, 2683/42, 128/43, 979/43, 1027/43, 1183/43.*)

(64403) Wt. 8153/2290 8 pfs. 9/43 Hw. G.338/10.