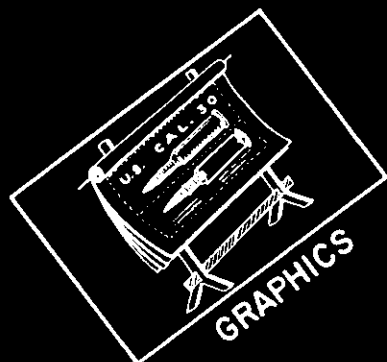
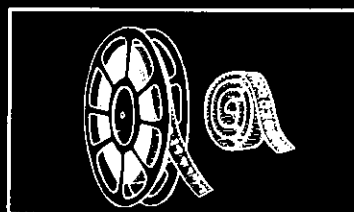


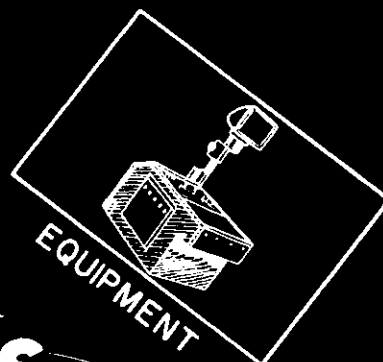
AN AUDIO-VISUAL GUIDE FOR THE ARMY INSTRUCTOR



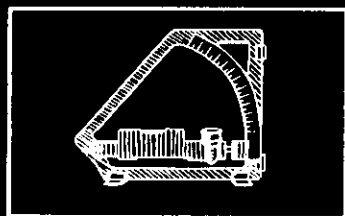
GRAPHICS



FILMS



EQUIPMENT



DEVICES



IDEAS



TRANSPARENCIES

• ACTIVE ARMY

• ARMY RESERVE

• ROTC

• NATIONAL GUARD

Prepared by
FIRST ARMY SIGNAL SECTION
July 1960

WHERE TO FIND IT.....

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REMEMBER.

Every time YOU go before a group of human beings and JUST TALK, the chances are excellent that at least one of the following things will happen:

ABOUT 10% OF WHAT YOU SAY WILL BE REMEMBERED

PEOPLE WILL BE BORED STIFF

YOU WILL BE CONSIDERED A POOR INSTRUCTOR

PEOPLE WILL GO TO SLEEP

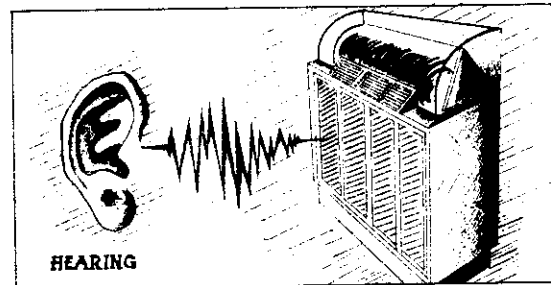
A LOT OF TIME AND EFFORT WILL BE WASTED



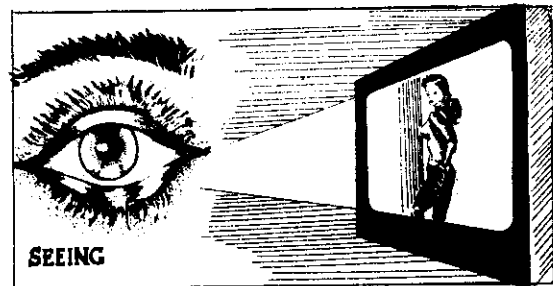
For the secret to avoiding all this, turn the page-----

THE KEY TO GOOD INSTRUCTION.

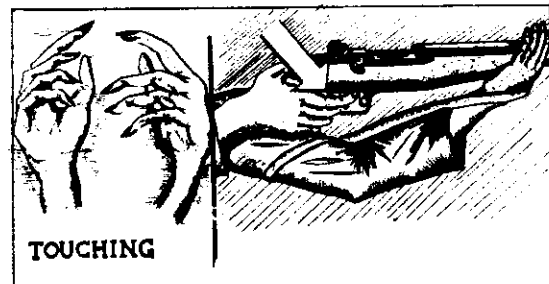
HUMAN BEINGS HAVE 5 PHYSICAL SENSES



STIMULATE AS MANY OF THESE 5 SENSES AS POSSIBLE. BY USING INSTRUCTIONAL AIDS

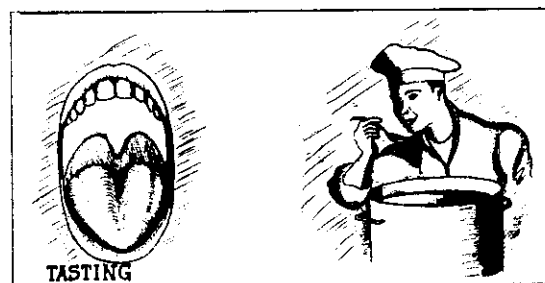


STIMULATE AS MANY OF THESE 5 SENSES AS POSSIBLE SIMULTANEOUSLY. BY USING INSTRUCTIONAL AIDS



THEN HUMAN BEINGS WILL.

1. MAINTAIN INTEREST
2. LEARN MORE RAPIDLY
3. REMEMBER LONGER

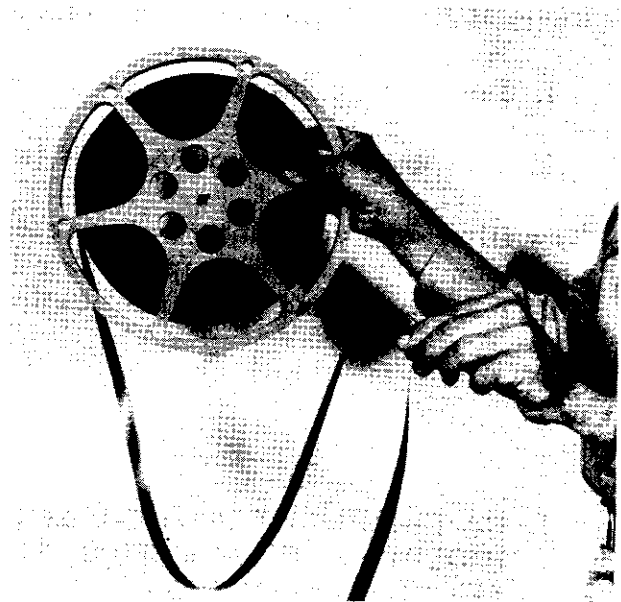


SECTION I.....FILMS

A. 16mm SOUND

The 16mm sound motion picture is unquestionably the most universally popular instructional aid in use today. It has a natural association with the entertainment motion picture, automatically combines sight and sound, and is readily available in thousands of different subjects.

Because of the many apparent advantages which 16mm sound film has to offer, THERE IS A NATURAL TENDENCY ON THE PART OF THE INSTRUCTOR TO USE THE FILM IMPROPERLY, THEREBY REDUCING ITS FULL POTENTIAL AND, IN SOME CASES, ACCOMPLISHING LESS THAN IF THE FILM HAD NOT BEEN USED AT ALL.



UTILIZATION TIPS

BEFORE SHOWING THE FILM.....

1. If possible, preview the film
2. Use the "film reference" as a guide in preparing film lesson plan (see page 7)
3. Ascertain availability of a qualified projectionist
4. Check adequacy of seating arrangement, ventilation, room darkening facilities
5. Introduce film by telling group WHY it is being shown and WHAT TO LOOK FOR

AFTER SHOWING THE FILM.....

6. Lead general discussion of film content
7. Test, if appropriate

SECTION I FILMS

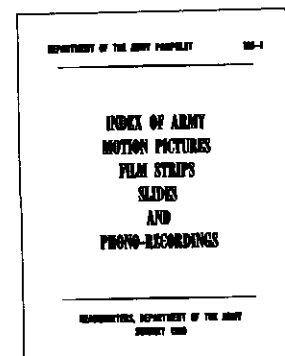
AVAILABILITY

Request films from one of the supporting film & equipment exchanges

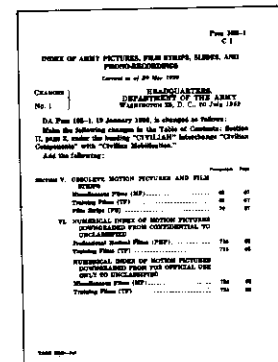
1. See Service Support Chart #1, page 49
2. Use Request Form DA 11-44 (see page 54)

New films are constantly being released and older prints revised or declared obsolete. for complete up-to-date information on what is available, you MUST have on hand these publications:

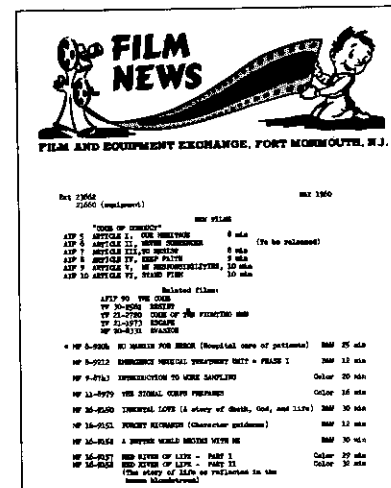
1. DA PAMPHLET 108-1 INDEX OF ARMY MOTION PICTURES, FILM STRIPS, SLIDES, AND PHONO-RECORDINGS



2. Any published CHANGES to the latest issue of DA PAMPHLET 108-1



3. MONTHLY FILM NEWS LETTERS (distributed monthly by film & equipment exchanges, listing new releases and films declared obsolete)



SECTION I.....FILMS

EQUIPMENT TO USE

- a. AN/PFP-1 three-piece projector(see page 16)
- b. AS-2 two-piece projector(see page 17)

PLEASE-----! FOR BETTER SERVICE.....

- 1. **SUBMIT MAIL ORDER REQUESTS FOR FILMS AT LEAST TWO WEEKS IN ADVANCE OF SHOWING DATE----AS FAR AS ONE YEAR IN ADVANCE IF YOU WISH (every effort will still be made to provide films on short notice)**
- 2. **RETURN FILMS PROMPTLY WHEN DUE**
- 3. **DO NOT REWIND FILMS AFTER LAST SHOWING. SPARE REELS ARE AVAILABLE FOR THE ASKING.**
- 4. **REQUEST FILMS FOR ONLY AS LONG AS ACTUALLY NEEDED.**



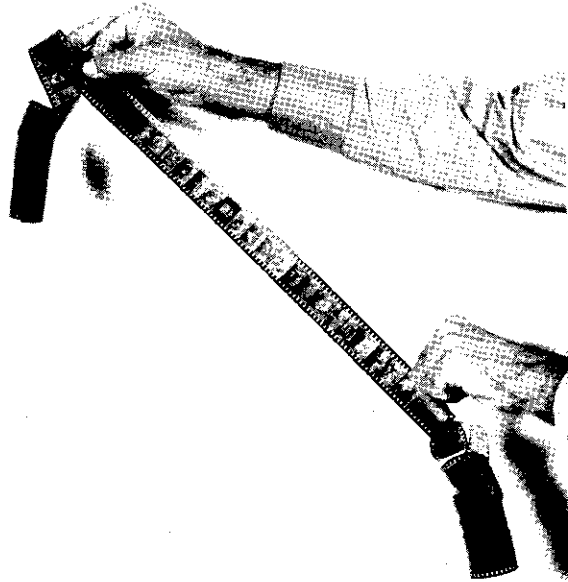
SECTION I.....FILMS

B. 35mm FILM STRIPS

This type of training film consists of a series of still pictures on a length of 35mm film in planned sequence.

The majority of strips are "silent" and are so identified by the prefix letters "FS". There is no sound track on the film and the instructor provides the commentary as appropriate.

A minority of the strips are "sound" in that they are accompanied by phonograph recordings which serve as the sound track and are identified as "SFS"(sound film strip)



SILENT FILM STRIPS OFFER SEVERAL UNIQUE ADVANTAGES:

1. The instructor can set his own pace by projecting the individual pictures as rapidly or slowly as desired.
2. The sequence of projected pictures can be altered at will by manipulation of the projector. This technique is particularly effective for purposes of review.

UTILIZATION TIPS

BEFORE SHOWING THE FILM.....

1. If possible, preview the film
2. Use the "film reference" as a guide in preparing film lesson plan (see page 7)
3. Ascertain availability of a qualified projectionist
4. Check adequacy of seating arrangement, ventilation, room darkening facilities

SECTION I.....FILMS

5. Introduce film by telling group WHY it is being shown and WHAT TO LOOK FOR

AFTER SHOWING THE FILM.....

6. Lead general discussion of film content
7. Test, if appropriate

AVAILABILITY

Request films from one of the supporting film & equipment exchanges

1. See Service Support Chart #1, page 49
2. Use Request Form DA 11-44 (see page 54)

Film strips are included in the same publications listing 16mm sound films.

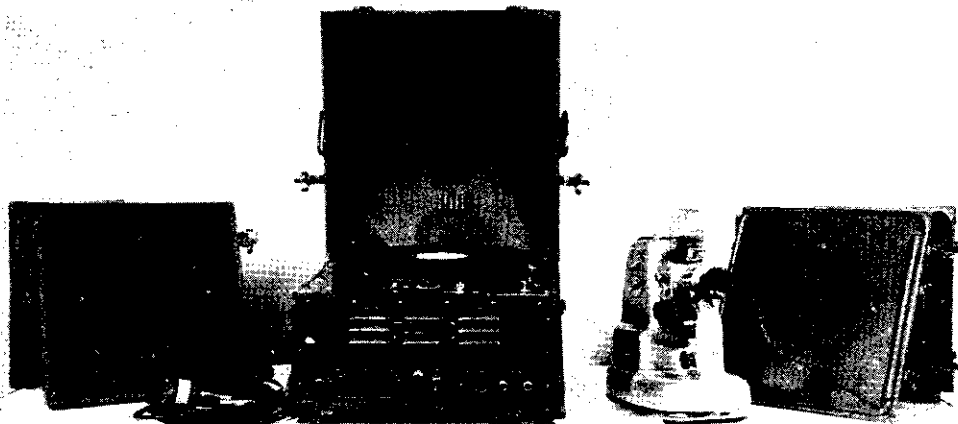
EQUIPMENT TO USE

Silent Film Strips

- a. PH-222-C Projector (see page 18)
- b. AP-6 Projector (see page 19)

Sound Film Strips

- a. Include AN/UIH-2 Record Player (see page 29)

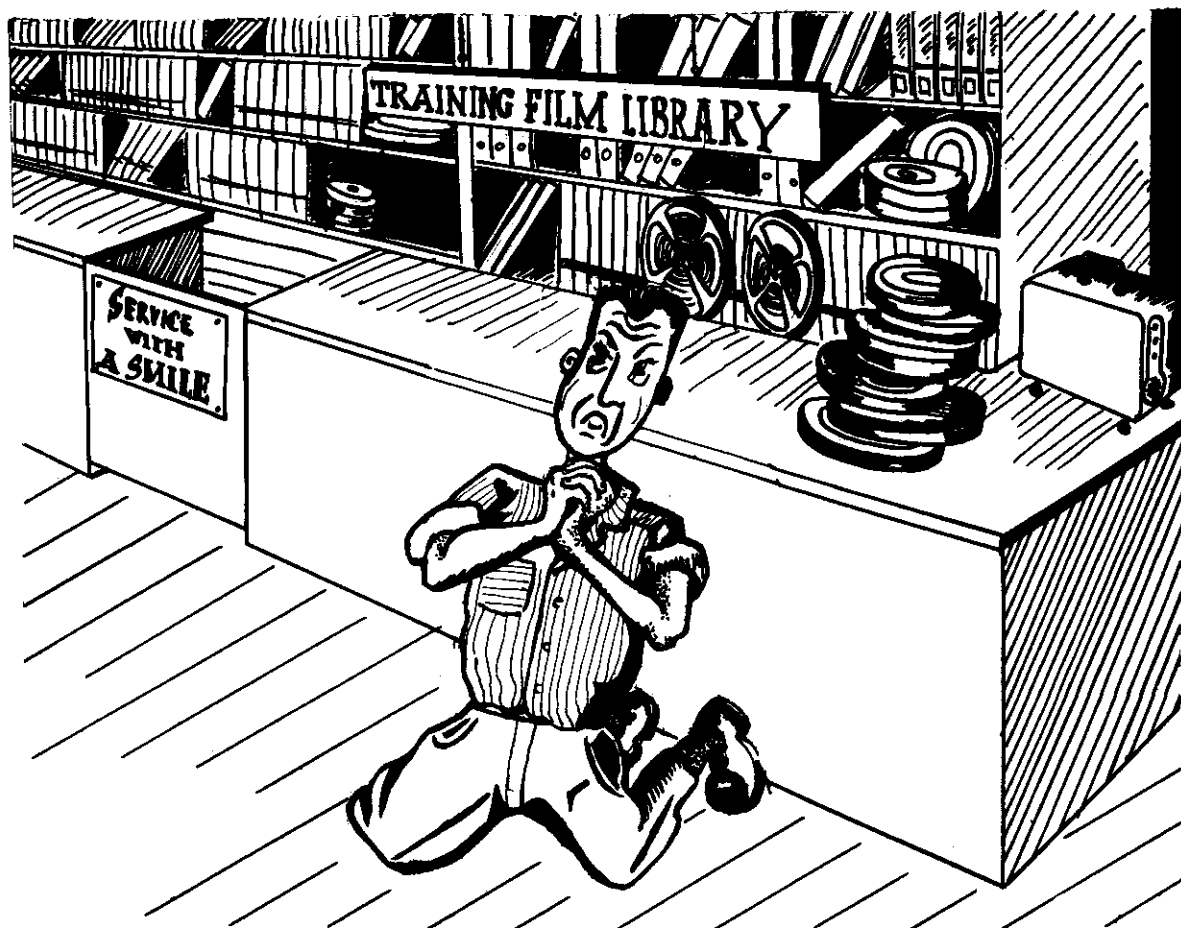


Set-up for projecting sound film strips

SECTION I.....FILMS

PLEASE-----! FOR BETTER SERVICE.....

1. SUBMIT MAIL ORDER REQUESTS FOR FILMS AT LEAST TWO WEEKS IN ADVANCE OF SHOWING DATE----AS FAR AS ONE YEAR IN ADVANCE IF YOU WISH (every effort will still be made to provide films on short notice)
2. RETURN FILMS PROMPTLY WHEN DUE
3. REQUEST FILMS FOR ONLY AS LONG AS ACTUALLY NEEDED



SECTION I. FILMS

C. FILM REFERENCES

The film reference, identified by the letters "FR", is designed to assist the instructor in utilizing a training film with maximum effectiveness.

A typical FR is illustrated on the NEXT PAGE. Note that it provides the instructor with the following information:

1. GENERAL INFORMATION ABOUT THE FILM (such as release date and running time)
2. SUMMARY OF FILM CONTENT (serves to substitute for an actual preview of the film when necessary)
3. SUGGESTED INTRODUCTORY REMARKS
4. USE AND PLACE IN TRAINING PROGRAM
5. SUGGESTED FOLLOW-UP ACTIVITIES
6. CORRELATED TRAINING AIDS (other audio-visual aids related to the same subject)
7. SUGGESTED QUIZ

Occasionally an FR will include valuable information concerning portions of the film which are obsolete or erroneous.

AVAILABILITY

Request FR's from one of the supporting film & equipment exchanges

1. See Service Support Chart #1, page 49
2. Request by letter or on the same form used for films (DA 11-44, page 54)

FR's have been prepared for most, but not all training films. They are referred to in the film catalogs as either **FILM REFERENCES** or **INSTRUCTORS NOTES**.

Check inside film cans---some exchanges automatically include an FR with the film.

FR TF 5-2282

DEPARTMENT OF THE ARMY INSTRUCTOR'S FILM REFERENCE

DEMOLITIONS
M10 UNIVERSAL DESTROYER

Department of the Army, Washington 25, D. C.

6 July 1956

General

Running time: Approximately 7 minutes. Date of release: June 1956.

Film synopsis

This film demonstrates the step-by-step methods involved in the use of the M10 Universal Destroyer. Extreme close-ups cover nomenclature, assembly of component parts, fuzing, and insertion of the M10 Universal Destroyer into different types of ammunition. Additional detailed treatment is given the following operations: fuzing with a priming adapter and electric blasting cap; fuzing with a priming adapter, nonelectric blasting cap, and detonating cord; fuzing with a nonelectric blasting cap and M3 pull release firing device; fuzing with an M1 Pull fuze and M1 activator; and demonstration of the threads on the booster cups of the M10 Universal Destroyer.

Suggested introductory remarks

The M10 Universal Destroyer is a device that is designed to fuze the various types of common ammunition, namely artillery shells, mortars, bombs, etc., which then can be used as improvised mines and boobytraps or as charges to explode deteriorated and/or damaged explosives. Its versatility is due to the unique physical characteristics of this device, which permit its use not only with the various types of ammunition and explosives previously mentioned, but also allow priming by using standard detonators. You will note that these points are clearly defined in this film, which also demonstrates the combined uses of this device. Attention is invited to reference by

narrator to the "M1 Fuse Device" in the film. This reference should be to the "M1 Firing Device."

Use and place in training program

This film is designed to supplement training of personnel in the use of the M10 Universal Destroyer. The audience should have prior training in demolitions.

Suggested follow-up activities

This film should be followed by additional instruction, summary, quiz, discussion, and practical exercise.

Correlated training material

GTA 5-5	Demolitions.
FM 5-25	Explosives and Demolitions.
TM 9-1940	Land Mines.
TF 5-1301	Fundamentals of Demolitions.

Suggested quiz

a. Questions:

- (1) The M10 Universal Destroyer can be used to make improvised mines and boobytraps, or to destroy abandoned or deteriorated ammunition. True
- (2) The booster cups of the M10 Universal Destroyer are not identical. False
- (3) The ammunition bushing, which threads onto the booster cups, has two sets of threads, which lock the M10 Universal Destroyer to different types of ammunition. True

Typical Film Reference

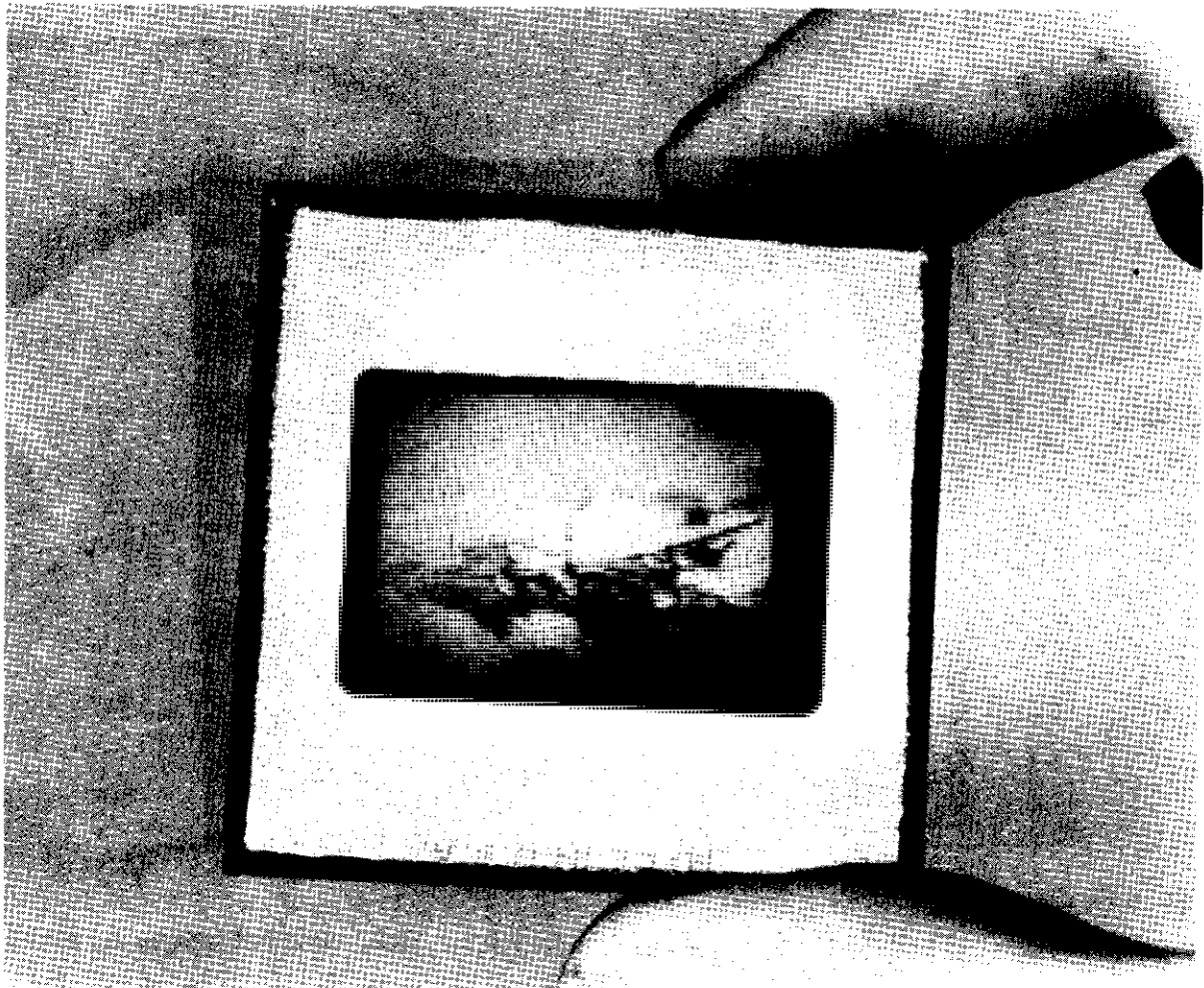
SECTION II TRANSPARENCIES

A. 2"x2" SLIDES

There are no 2"x2" slides in the Film & Equipment Exchange System. However, activities with a specialized requirement for this type transparency may have the slides produced locally, by the supporting Signal Corps Photographic Facility, or obtain them from some other source.

EQUIPMENT TO USE

- a. PH-222-C Projector (see page 18) b. AP-6 Projector (see page 19)



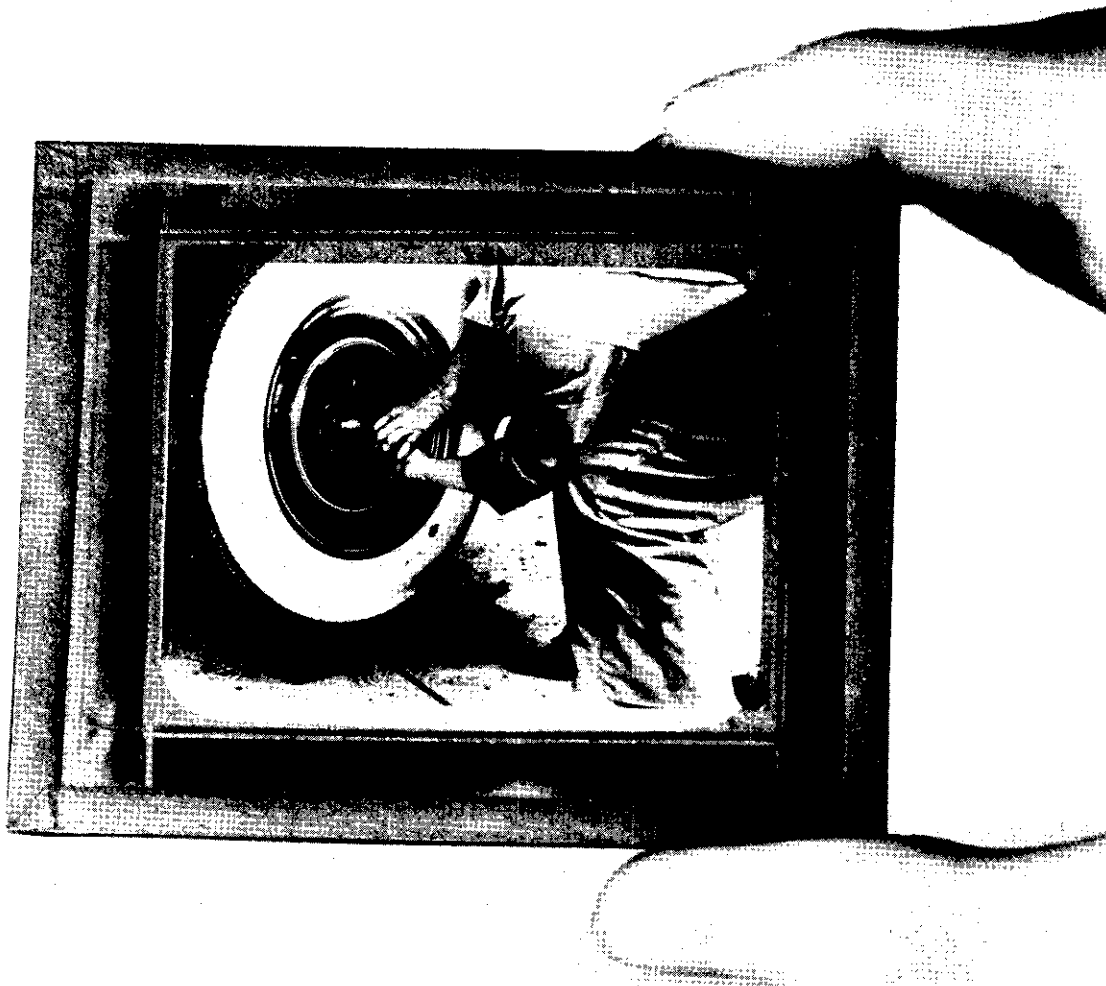
SECTION II TRANSPARENCIES

B. 3 1/4" X 4" SLIDES

There are no 3 1/4"x4" slides in the Film & Equipment Exchange System. However, activities with a specialized requirement for this type transparency may have the slides produced locally, by the supporting Signal Corps Photographic Facility, or obtain them from some other source.

EQUIPMENT TO USE

- a. AP-4 Projector (see page 20)



SECTION II. TRANSPARENCIES

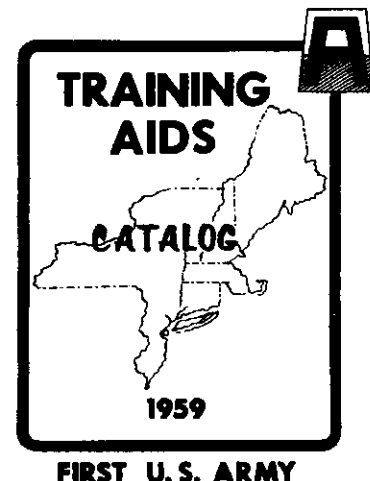
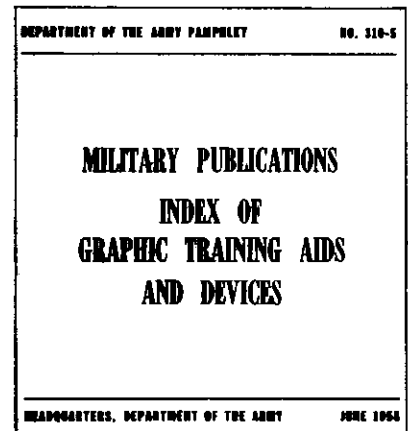
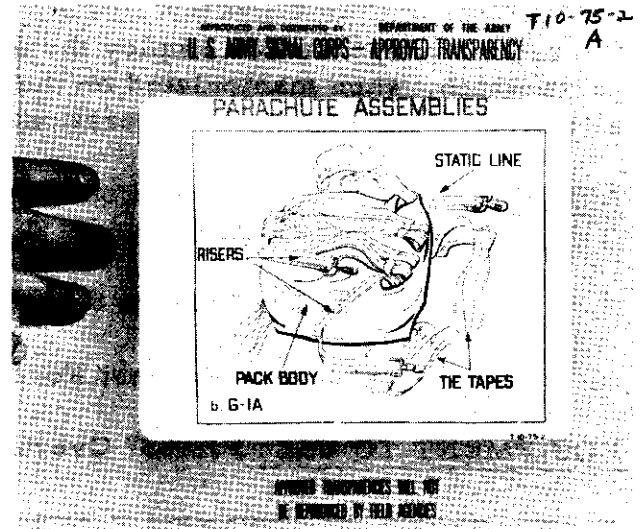
C. 8" X 10" TRANSPARENCIES

READY-MADE TRANSPARENCIES ARE AVAILABLE FROM TWO SOURCES:

1. DA APPROVED FROM THE FILM
& EQUIPMENT EXCHANGE
SYSTEM, on the following subjects:
Ordnance, Engineer, Quartermaster,
Character Guidance, Code of
Conduct, Observed Indirect Fire
Kit, Signal
 - a. See Service Support Chart #1,
page 49 (ask the supporting Film
& Equipment Exchange for a
complete listing of available DA
approved transparencies)
 - b. Use Request Form DA 11-44 (see page 54)
2. FROM THE TRAINING AIDS SUBCENTER SYSTEM,
on a variety of subjects

Request from supporting training aids subcenter
 - a. See Service Support Chart #4, Page 52
 - b. Refer to First Army Training Aids Catalog and
Changes thereto. This Catalog contains a listing
of the transparencies and complete ordering
instructions.

EQUIPMENT TO USE: PH-637 Overhead Projector
(see page 21)



SECTION II..... TRANSPARENCIES

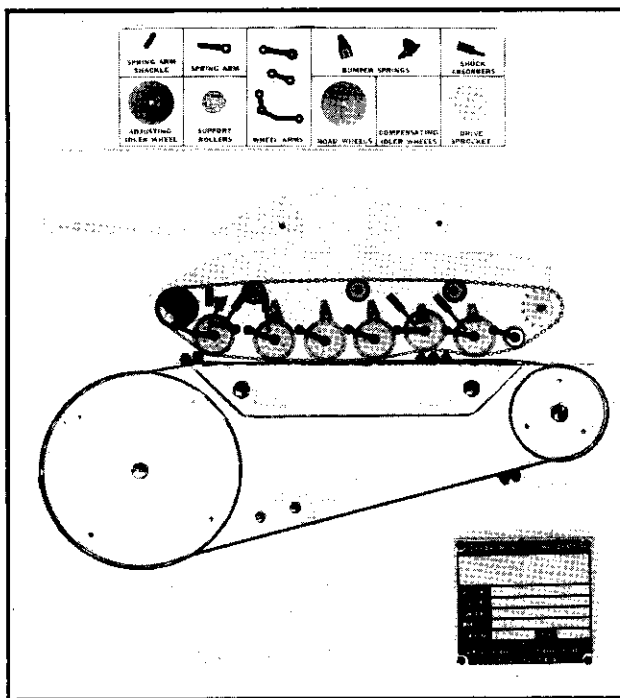
D. OPERABLE TRANSPARENCIES

Operable transparencies employ the use of colored transparent plastic parts which, when manipulated on the stage of the overhead projector, effectively demonstrate the operational principles of mechanisms.

AVAILABILITY: Request from one of the supporting film & equipment exchanges

1. See Service Support Chart #1, page 49
2. Use Request Form DA 11-44 (see page 54)

EQUIPMENT TO USE: PH-637 Overhead Projector (see page 21)



M-47 Tank Track and Suspension Kit

Other Available Operables:

- a. Automatic Pistol Cal .45
- b. 90mm Firing Train for M-48 Tank and M-47
- c. 90mm Breech Mechanism
- d. 57mm Recoilless Rifle
- e. M2 Carbine Trigger Group
- f. Brake Master Cylinder
- g. Planetary Gear System
- h. Telescopic Sight
- i. Battery Laying with Aiming Circle

SECTION III. RECORDINGS

This category of phonograph recordings is separate and distinct from those recordings described on page 4 since they do not accompany film strips.

AVAILABILITY

Request from one of the supporting film & equipment exchanges

1. See Service Support Chart #1, page 49
2. Use Request Form DA 11-44 (see page 54)



These albums were previously issued as Quartermaster items but are now in the Exchange System:

- | | |
|------------------------|----------------------------|
| a. <u>Bugle Calls</u> | d. <u>National Anthems</u> |
| b. <u>Battlenoises</u> | e. <u>Jamming Signals</u> |
| c. <u>March Music</u> | f. <u>CBR Test 1954</u> |

EQUIPMENT TO USE

- a. AN/UIH-2 Record Player (see page 29)

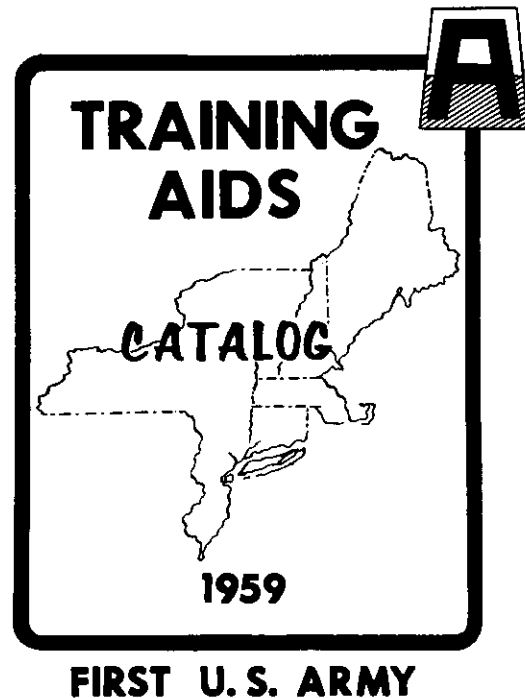
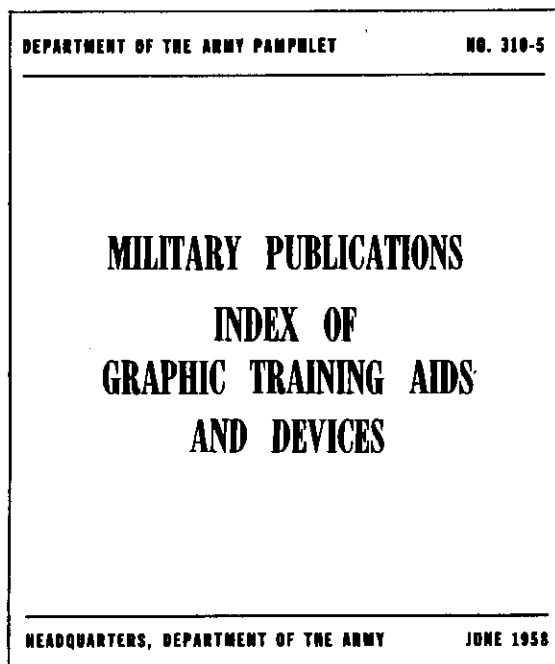
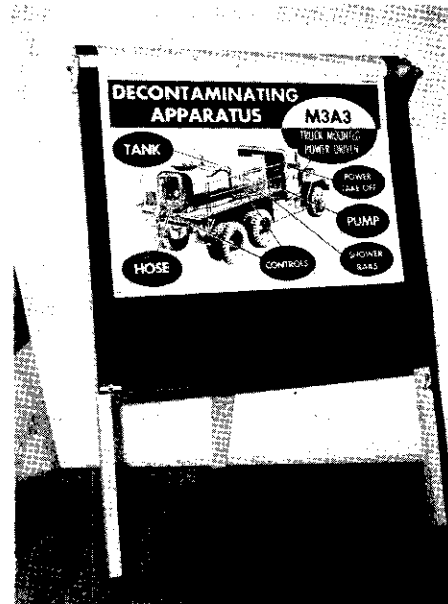
SECTION IV.....GRAPHICS

The term "GRAPHICS" as used here refers to CHARTS and POSTERS.

AVAILABILITY

Request graphics from supporting training aids subcenter

1. See Service Support Chart #4, page 52
2. Refer to First Army Training Aids Catalog and DA Pamphlet 310-5 Index of Graphic Training Aids and Devices for listings and ordering instructions.



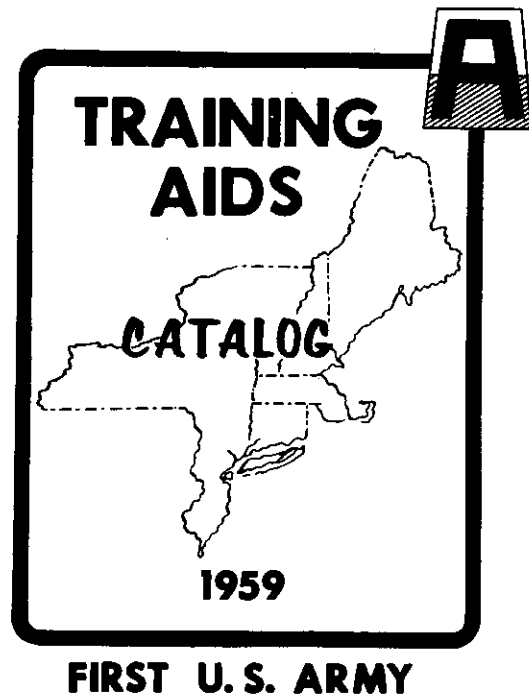
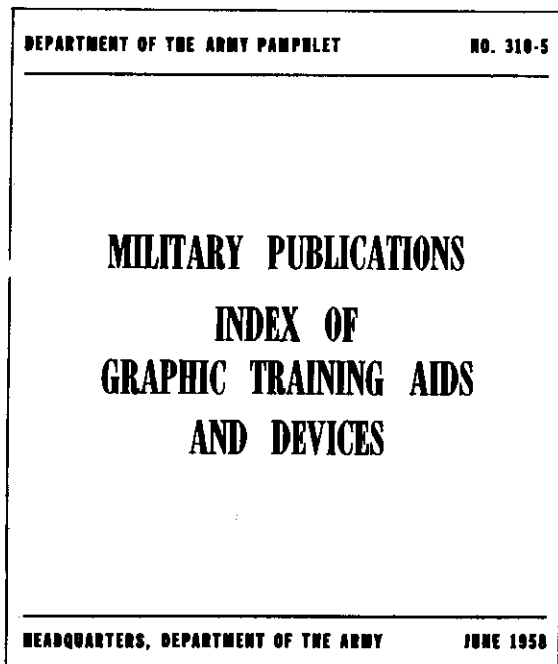
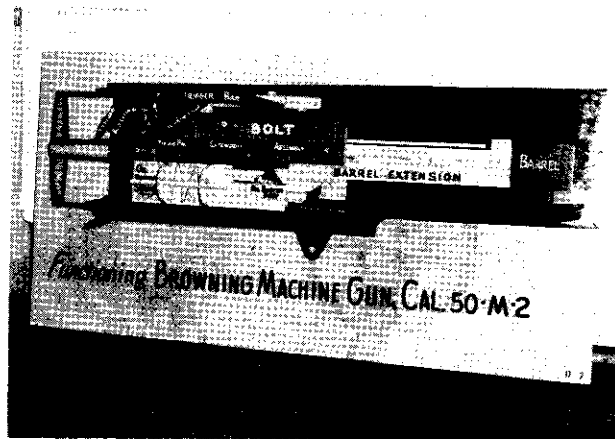
SECTION V.....DEVICES

The term "DEVICES" as used here refers to MODELS, MOCKUPS, and related types of specialized training equipment.

AVAILABILITY

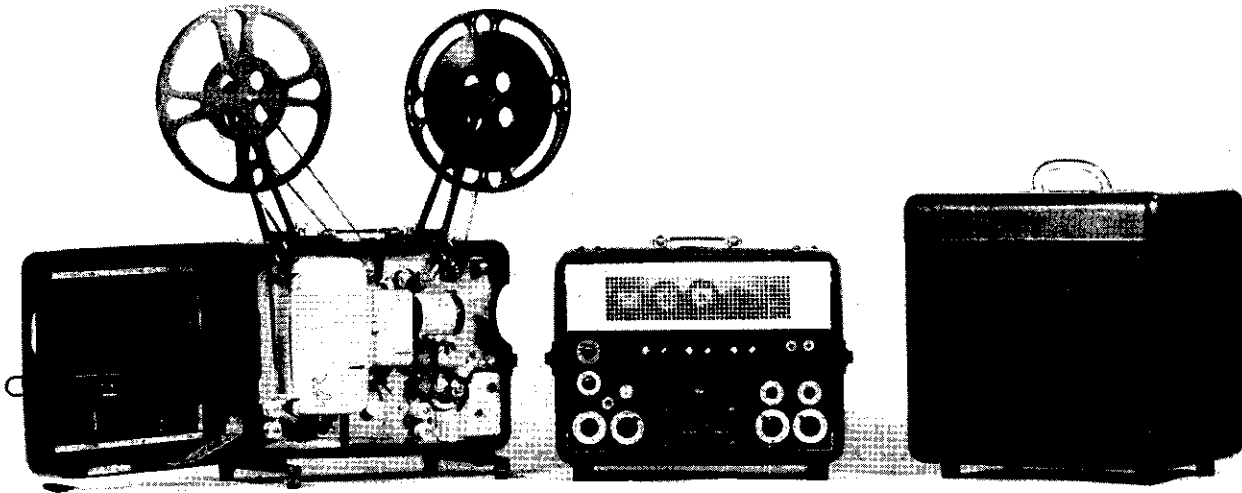
Request devices from supporting training aids subcenter

1. See Service Support Chart #4, page 52
2. Refer to First Army Training Aids Catalog and DA Pamphlet 310-5 Index of Graphic Training Aids and Devices for listings and ordering instruction



SECTION VI.....EQUIPMENT

A. 16mm SOUND FILM PROJECTORS



DESCRIPTION

The AN/PFP-1 is a three-piece projector consisting of separate projector, amplifier, and speaker.

UTILIZATION: Use this equipment for projecting 16mm sound films when:

1. Audiences are large
2. Maximum volume is desired
3. Maximum sound fidelity is important
4. Operating two projectors in tandem to effect a continuous showing by the "switch-over" method
5. The projection set-up is relatively permanent

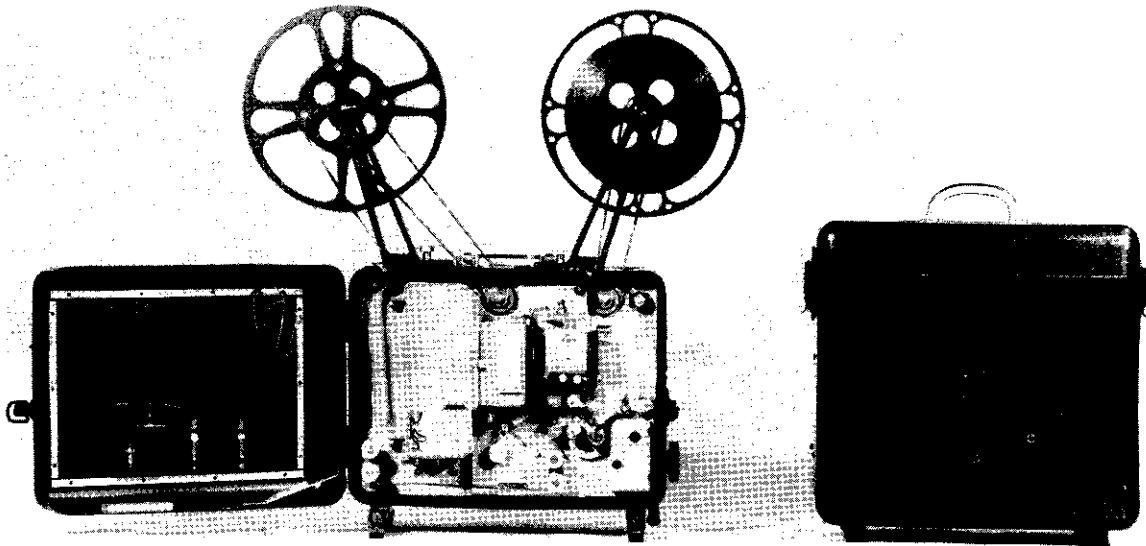
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment.

SECTION VI.....EQUIPMENT

A. 16mm SOUND FILM PROJECTORS



The AS-2 is a two-piece projector consisting of built-in amplifier, built-in 5" speaker, and separate 8" speaker.

UTILIZATION: Use this equipment for projecting 16mm sound films when:

1. Portability is desirable (may be used as a one-piece unit without separate speaker when audiences are relatively small)

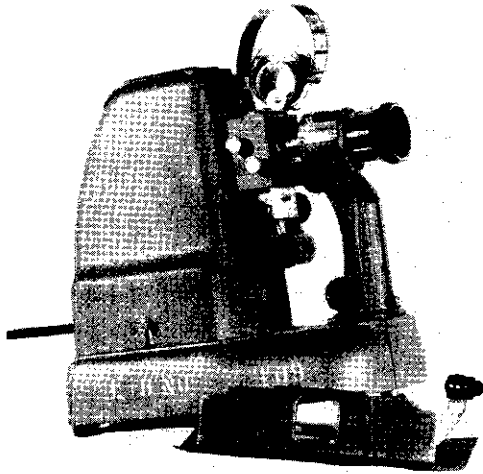
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

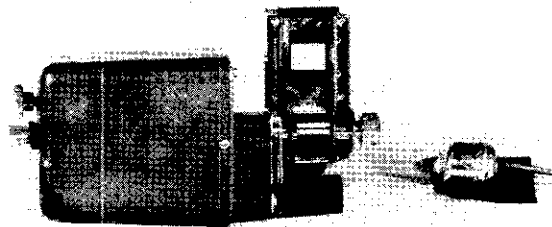
PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment.

SECTION VI.....EQUIPMENT

B. 35mm FILM STRIP-2"X2" SLIDE PROJECTORS



PH-222-C



BP-1

DESCRIPTION

The PH-222-C is a 500-Watt projector equipped to accept both 35mm film strips and 2"x2" slides. The BP-1 Remote Control Unit is an accessory attachment for the PH-222-C which provides for automatic advancement of film strips by pushing a remote control button at the end of a 25' extension cord. The device enables the instructor to operate the projector from the front of the classroom.

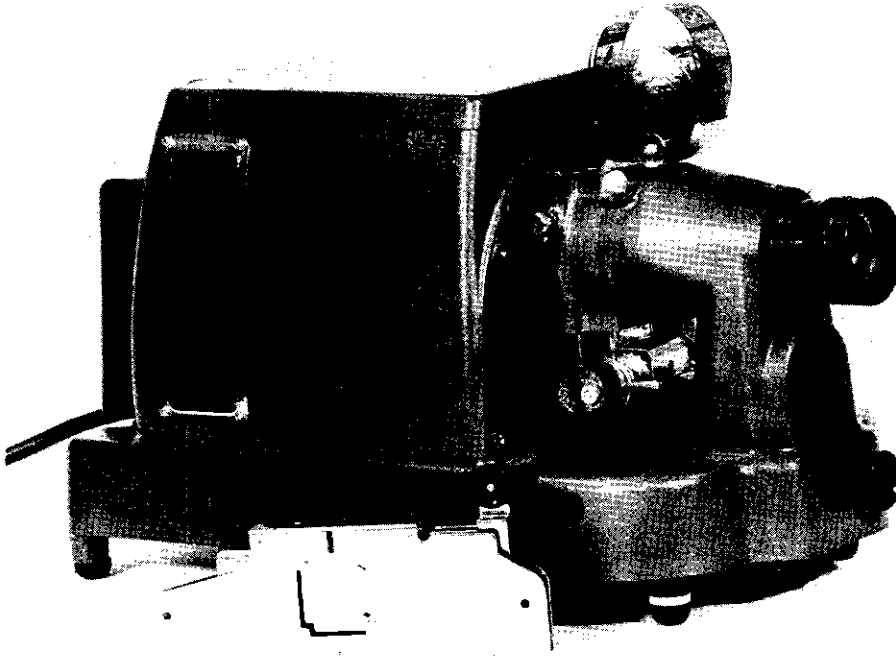
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment.

SECTION VI.....EQUIPMENT

B. 35mm FILM STRIP-2"X2" SLIDE PROJECTORS



DESCRIPTION

The AP-6 is a 1000-Watt projector equipped to accept both 35mm film strips and 2"x2" slides.

UTILIZATION

Use this equipment under conditions which require maximum light output, e.g., a satisfactory image can usually be projected in a normally lighted room.

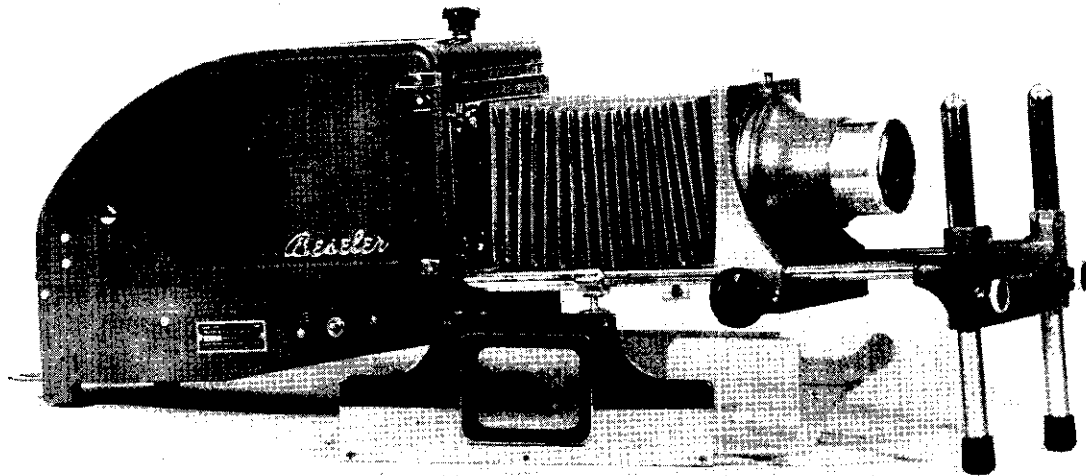
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army-Army Reserve-ROTC - See Service Support Chart #2, page 50
2. Use Request Form DA 11-43 (see page 55)

PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment.

SECTION VI.....EQUIPMENT

C. 3 1/4" X 4" SLIDE PROJECTOR



DESCRIPTION

The AP-4 is a 750-Watt projector equipped to accept 3 1/4"x4" slides only.

AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army-Army Reserve-ROTC - See Service Support Chart #2, page 50
2. Use Request Form DA 11-43 (see page 55)

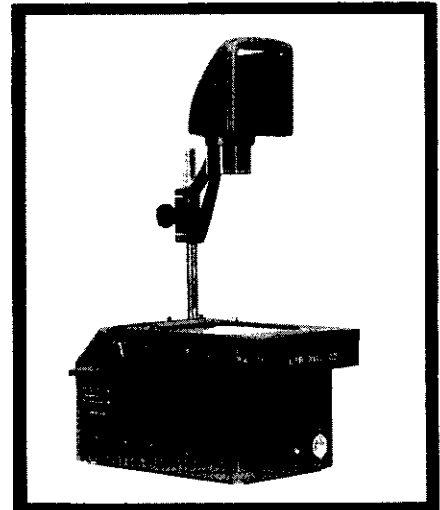
PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment.

SECTION VI.....EQUIPMENT

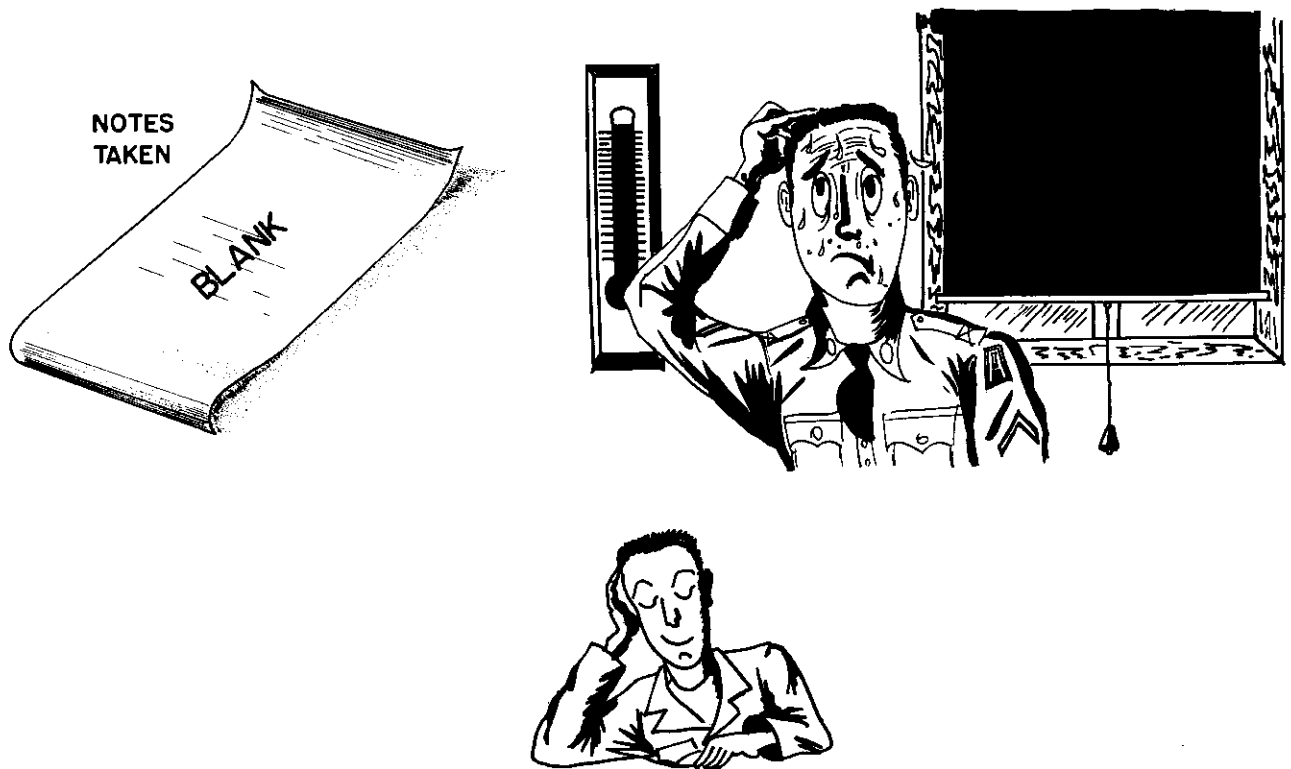
D. OVERHEAD TRANSPARENCY PROJECTOR

The PH-637 is designed primarily for projection of transparent materials up to 10"x10" in size. However, as is described below, the equipment is by no means limited to the use of transparent media.

Several inherent characteristics of the overhead projector have firmly established it as one of the most versatile teaching tools available to the Army instructor:



1. PROJECTION OF A SATISFACTORY IMAGE IN A NORMALLY LIGHTED ROOM: This feature automatically eliminates the standard disadvantages associated with darkened classrooms.

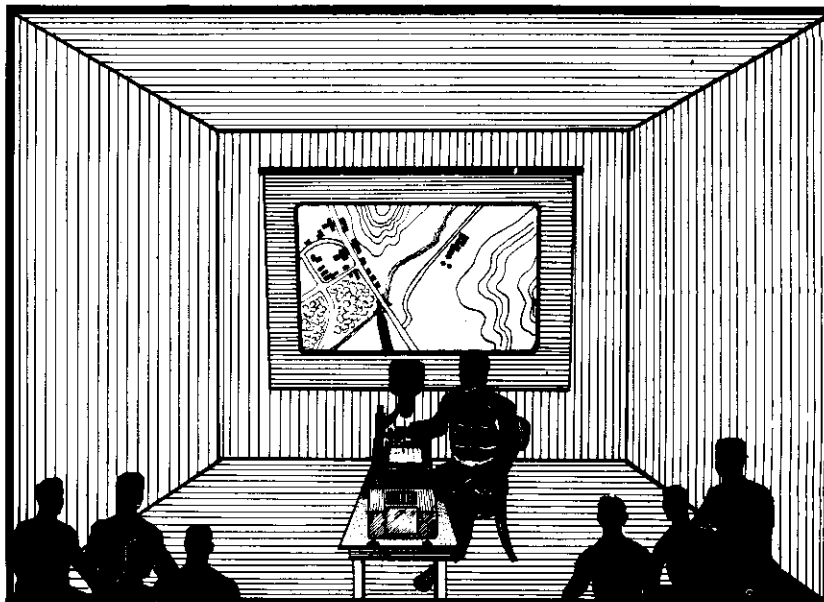


Typical student reactions in a darkened classroom

SECTION VI.....EQUIPMENT

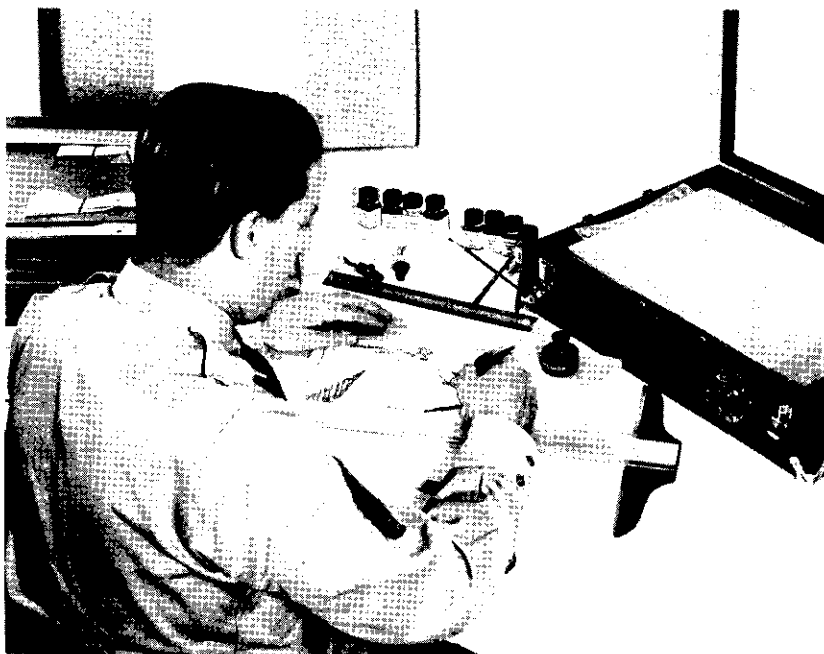
2. INSTRUCTOR FACES CLASS

By maintaining eye contact with his students, the instructor is able to assert effective classroom control while at the same time serving as his own projectionist. A large image is projected at a short distance, e.g., if the projector is 12 feet from the screen, the projected image is approximately 8 feet square.



3. MATERIALS TO BE PROJECTED ARE EASILY PREPARED

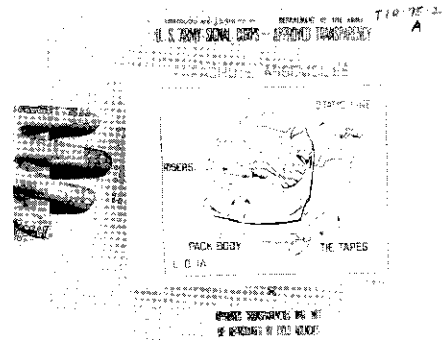
This characteristic enables the instructor to be "self-sufficient"



SECTION VI.....EQUIPMENT

UTILIZATION: The versatility of the overhead projector as a classroom aid is limited only by the resourcefulness, ingenuity, and originality of the instructor. Following are some of the materials and techniques which may be utilized:

PROJECTION OF PREPARED 8"X10" FLAT AND OPERABLE TRANSPARENCIES (see pages 11, 12)

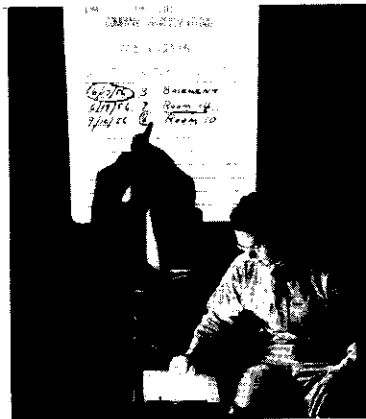


"DO-IT-YOURSELF" MATERIALS AND TECHNIQUES

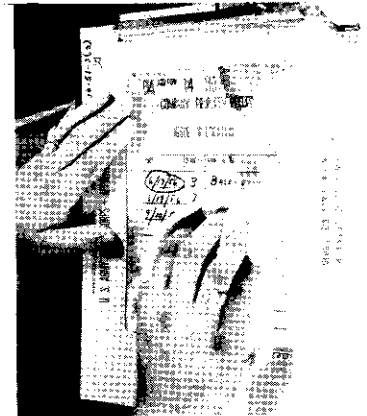
a. WRITE OR DRAW WITH GREASE PENCIL

(1) prepared transparencies

(2) erase markings at will
with soft cloth



(1)



(2)



(3)

(3) plastic sheets

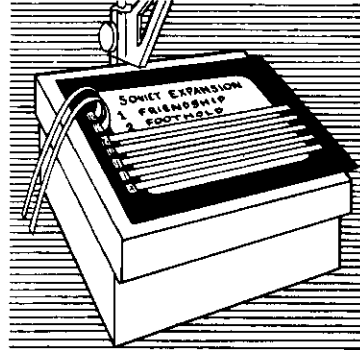
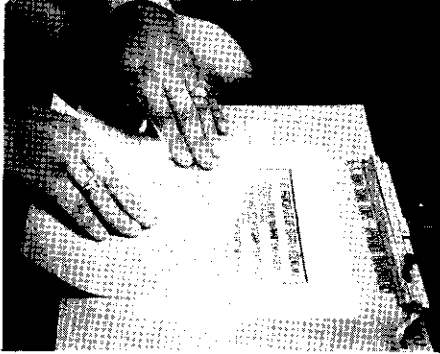
(4) cellophane roll attached to
projector provides contin-
uous writing surface 100'
long



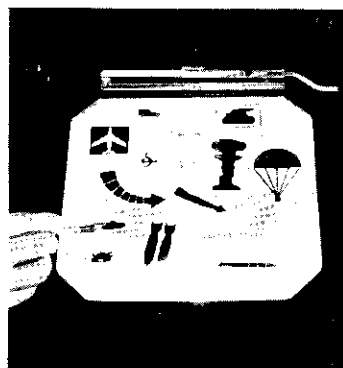
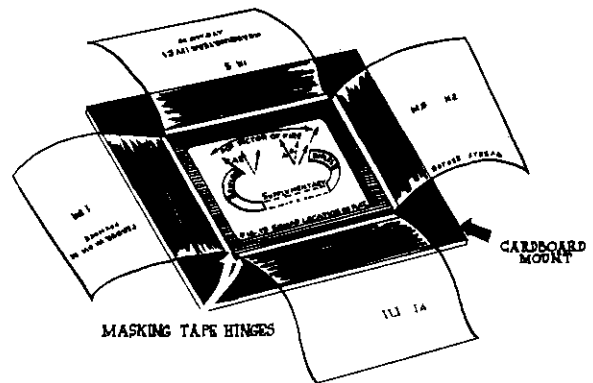
(4)

SECTION VI.....EQUIPMENT

- b. PROGRESSIVELY DISCLOSE INFORMATION by uncovering transparency with sheets and strips of opaque paper or cardboard



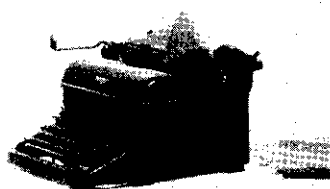
- c. OVERLAYS are used to facilitate step-by-step buildup or breakdown of a particular subject. Maps, tactical problems, mechanisms, and circuitry are examples of areas in which this technique can be effectively employed



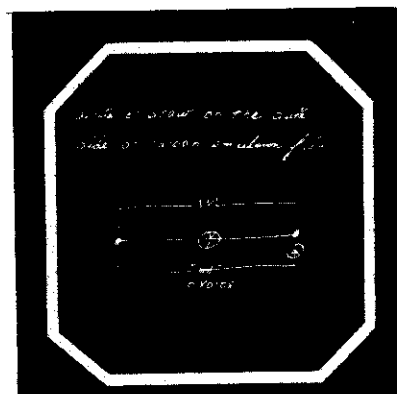
- d. CUT-OUT SYMBOLS, prepared from colored plastic sheets, paper, or cardboard, can be moved from position to position on the stage of the projector to simulate troop movements, tactical exercises, convoy traffic, gun emplacements, etc.

SECTION VI.....EQUIPMENT

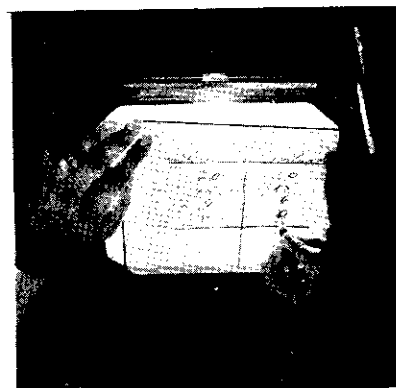
- e. CARBON EMULSION FILM is a specially treated black carbon material in 10 1/2"x10 1/2" sheet form. The transparency is produced by drawing or typing directly on the film. The projected image is white on a black background.



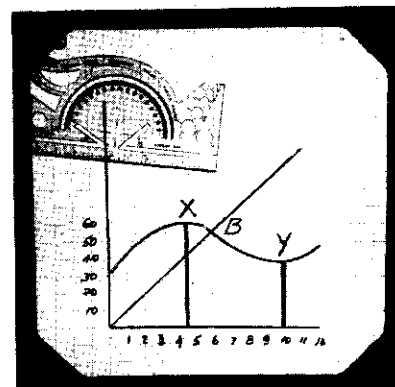
PLACE PAPER AGAINST DULL
SIDE OF FILM. TYPE ON
SHINY SIDE WITH RIBBON OFF.



- f. COLORED PLASTIC SHEETS may be inserted under cellophane roll or written on directly with grease pencil for providing background in color. Size is 10 1/2"x10 1/2", in red, blue, or green.



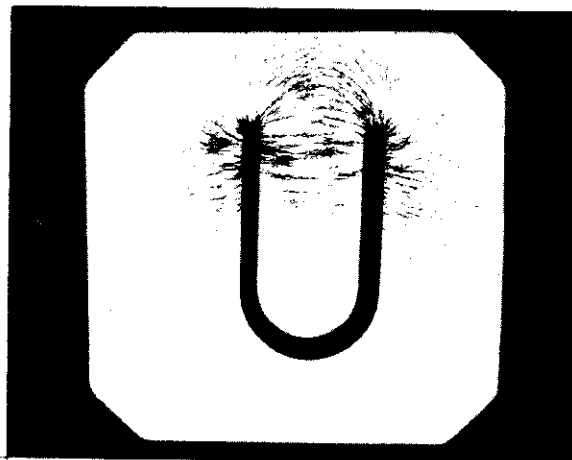
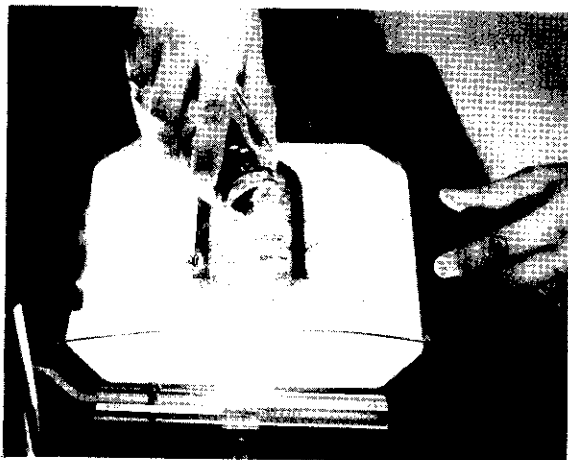
- g. DRAWING INSTRUMENTS may be manipulated directly on the projector stage, thereby allowing students to follow the step-by-step construction and solution of a problem via a large projected image.



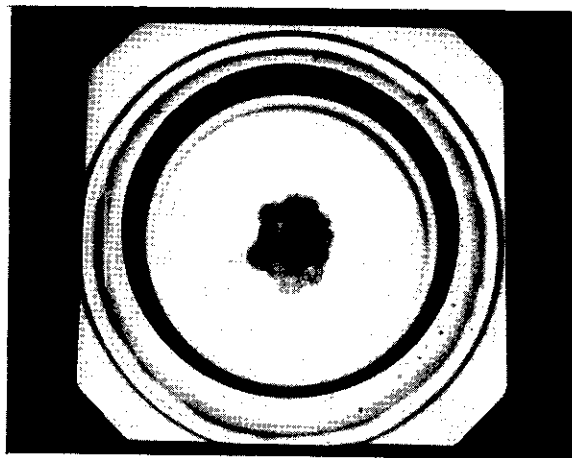
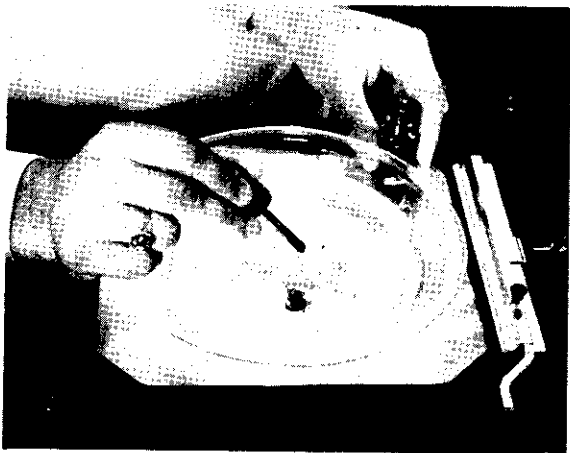
- h. TRANSPARENT GRID SHEETS provide convenient guide lines for drawing radio waves, artillery plotting curves, graphs, and similar constructions.

SECTION VI.....EQUIPMENT

- i. OPAQUE OBJECTS may be effectively utilized in some instances as projected silhouettes. The illustrations show magnetic lines of force being demonstrated with horseshoe magnet, iron filings, and plastic sheet.



- j. PROJECTION OF FLUIDS offers a number of interesting possibilities. A transparent container such as an ordinary glass dish will serve as a receptacle for demonstrating chemical reactions and lubrication principles, simulating atomic explosions, etc. Illustrated is a simulated explosion using dish of water and colored ink.

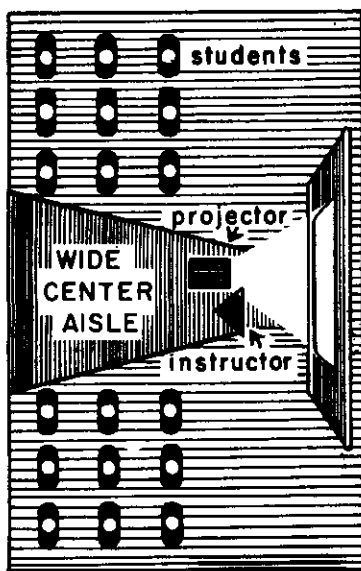


- k. PREPARING TRANSPARENCIES FROM TRANSLUCENT DRAWINGS -
(see Portable Transparency Printer, page 32)
- l. PREPARING TRANSPARENCIES DIRECTLY FROM MANUALS, BOOKS, MAPS, AND OTHER OPAQUE ORIGINALS - (see Projecto-Printer, page 37)

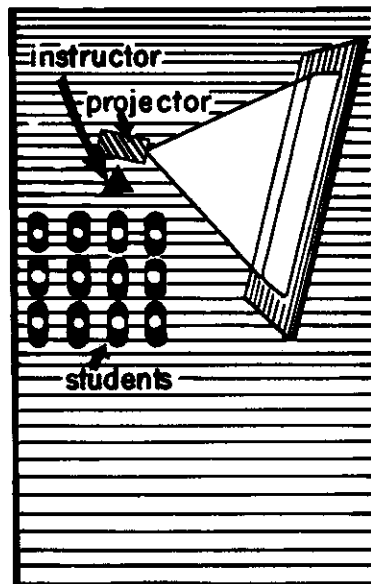
SECTION VI. EQUIPMENT

ASSURING GOOD VISIBILITY

- a. Use A Large Screen - the BM-6 Wall Screen (102"x102") is best for most classrooms (see page 45). If a screen is not available, project on a white bed sheet or unbroken light-colored wall surface.
- b. The Audience Should Have An Unrestricted View Of The Screen



in-line viewing

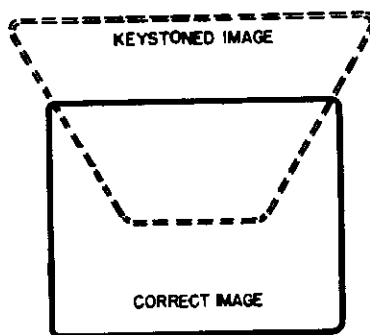


angle viewing

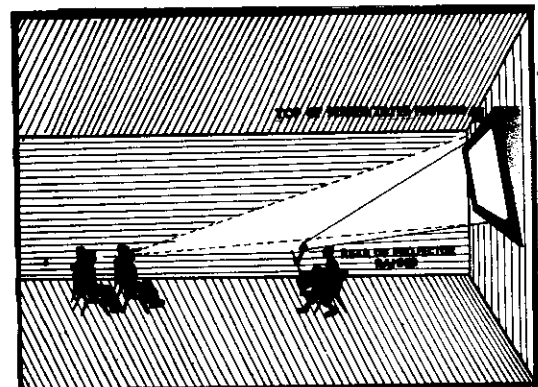


bottom of screen should be above student eye level

- c. When the projector light beam does not strike the screen at a 90 degree angle, the image is "KEYSTONED." If this keystone effect is objectionable, it can be corrected by raising the front end of the projector and tilting the top of the screen forward (or pulling the bottom of the screen back).



keystoned image



eliminating keystone effect

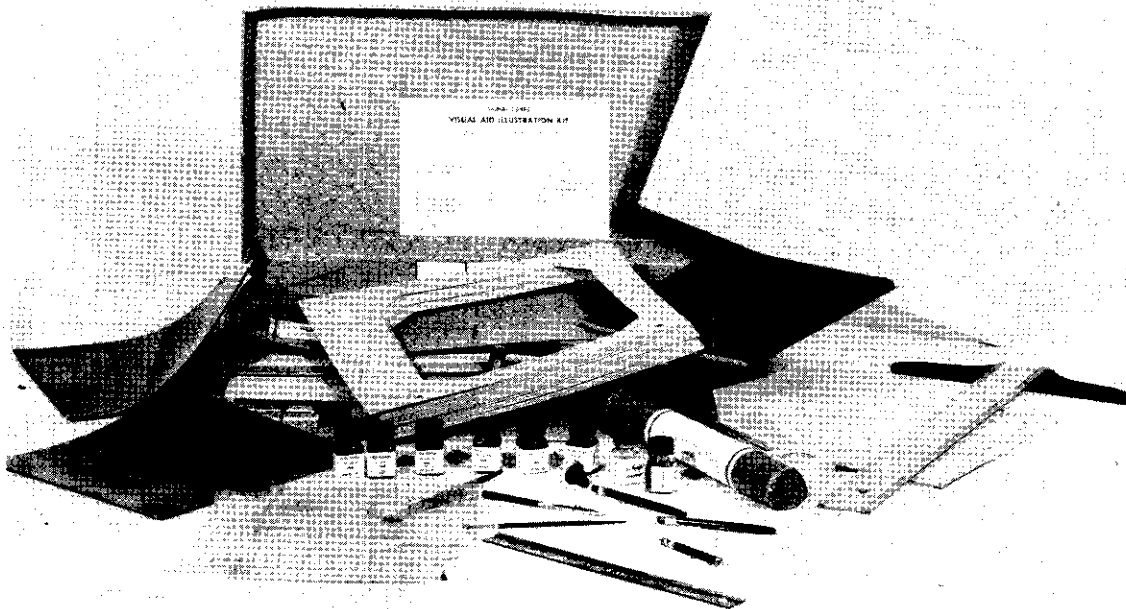
SECTION VI. EQUIPMENT

AVAILABILITY: Request Overhead Transparency Projector and any of the below listed Associated Materials from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

ASSOCIATED MATERIALS

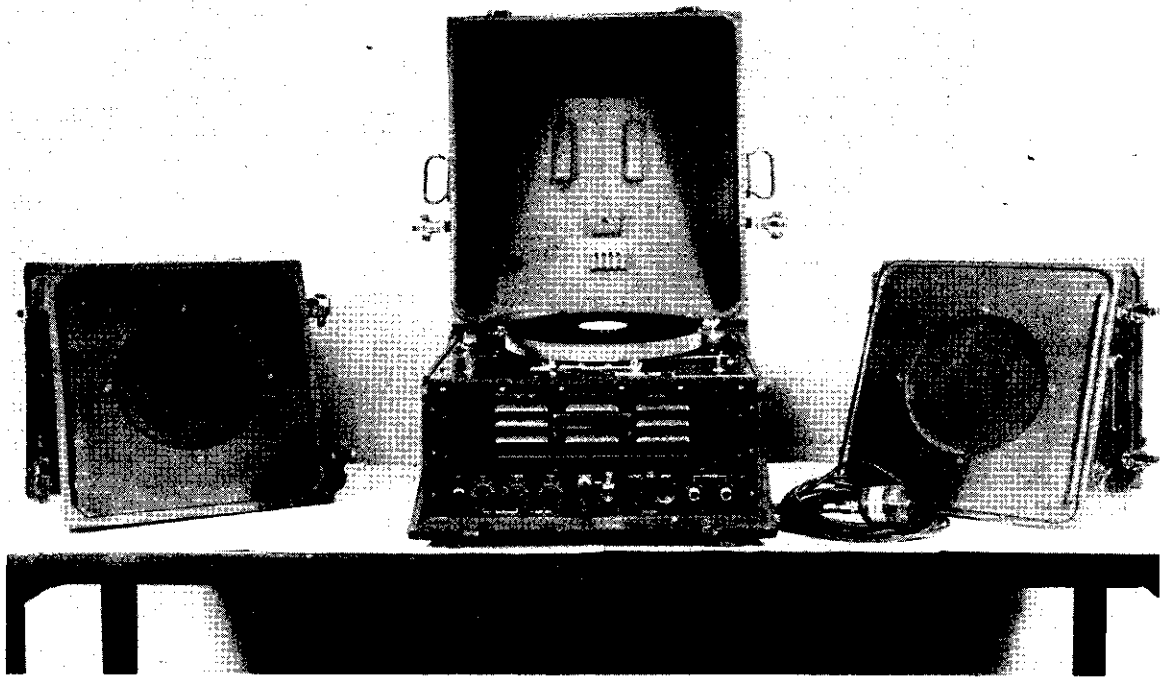
- a. Cellophane Roll (10 1/2"x100')
- b. Clear Plastic Sheets (10 1/2"x10 1/2")
- c. Colored Plastic Sheets (10 1/2"x10 1/2"-red, blue, green)
- d. Carbon Emulsion Film (10 1/2"x10 1/2")
- e. Grease Pencils
- f. Cardboard Transparency Mounts (7 1/2"x9 1/2" opening)
- g. Visual Aids Illustration Kit (includes drawing instruments, colored plastic inks, grid sheets, masking tape, and an assortment of items a. through e. above)



Visual Aids Illustration Kit

SECTION VI EQUIPMENT

E. RECORD PLAYERS



DESCRIPTION: The AN/UIH-2 is designed primarily as a record player to be used in conjunction with sound film strips and playback of phono recordings at 33 1/3, 45, or 78 RPM. A microphone hookup also permits utilization of the equipment as a public address system.

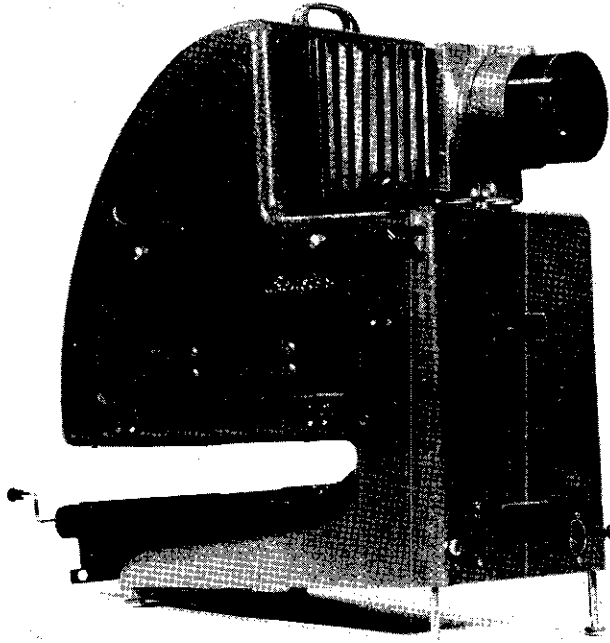
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment

SECTION VI.....EQUIPMENT

F. OPAQUE PROJECTOR



DESCRIPTION: The AP-5 is a 1000-Watt Opaque Projector which supersedes the PH-132 "Baloptican." Improved features include:

1. Brighter screen image
2. Projection of materials up to 10"xl0" in size
3. Built-in optical pointer (projects arrow on screen for focusing attention-see illustration on next page)
4. Continuous feed mechanism (for convenient projection of flat materials)
5. Fan-induced vacuum (to prevent flutter of flat materials during projection)

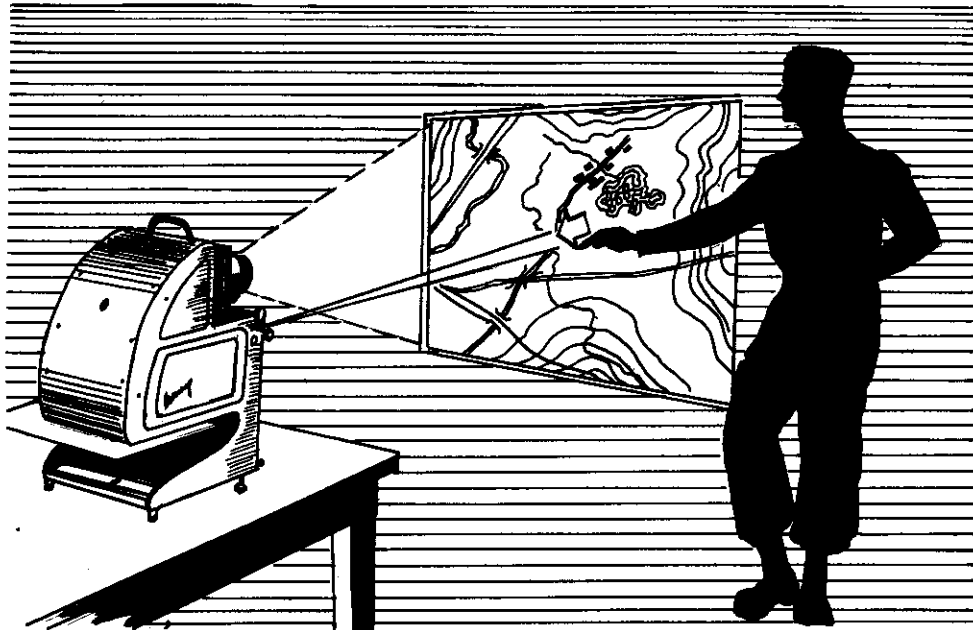
UTILIZATION: Advantage - Will project a large image of literally anything that can be inserted in the projector

Disadvantage - Must be used in darkened room

SECTION VI.....EQUIPMENT

Use This Projector For:

1. Projecting maps, photographs, schematics, and all other types of flat opaque materials
2. Projecting books and manuals
3. Projecting objects
4. Local preparation of maps, charts, and posters (original is projected to desired size and traced)



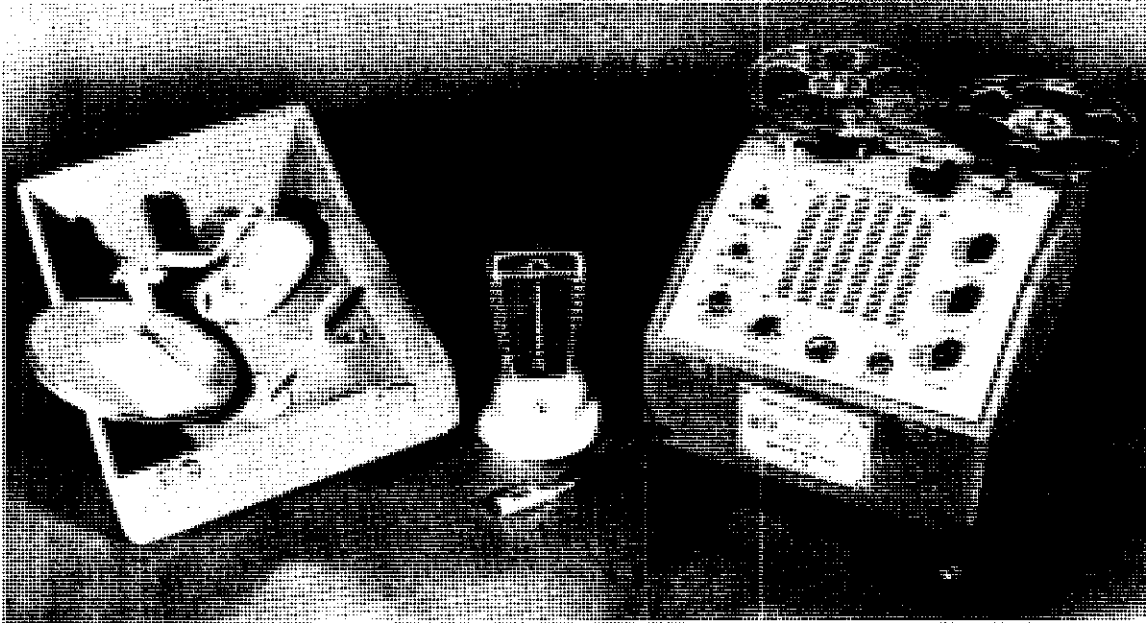
AVAILABILITY: Request from supporting film & equipment exchange

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

PLEASE DO THIS: Be certain that a licensed projectionist is available to operate and maintain the equipment

SECTION VI.....EQUIPMENT

G. TAPE RECORDER



DESCRIPTION

The RD-87 is a magnetic tape recorder equipped to record and playback at either 3 3/4 or 7 1/2 inches per second.

UTILIZATION

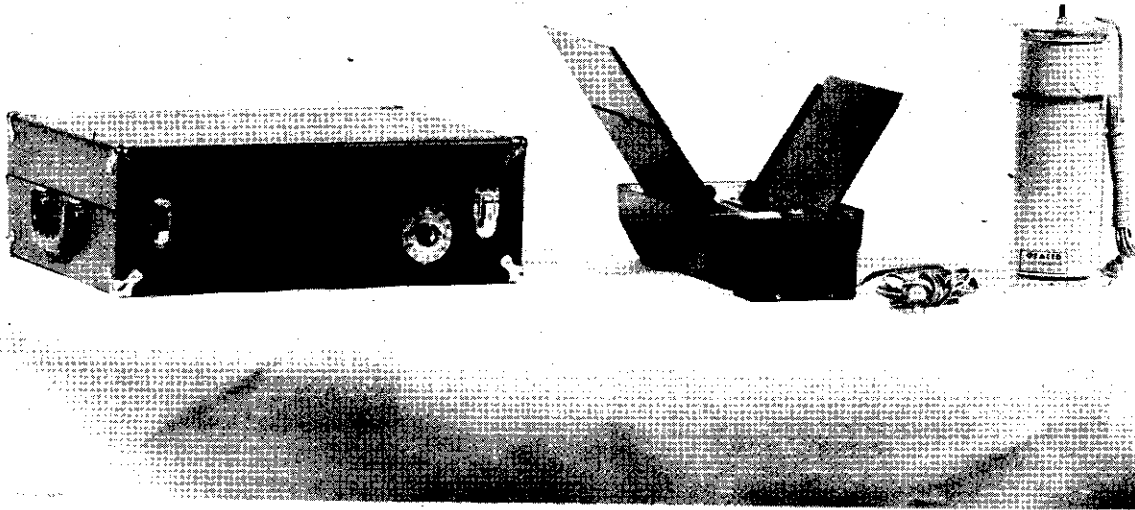
1. Instructor training (such as an analysis of speech habits or contents of a presentation)
2. Recording of significant events for later playback
3. Preparation of "canned" commentary or sound effects as a supplement to a presentation

AVAILABILITY

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

SECTION VI.....EQUIPMENT

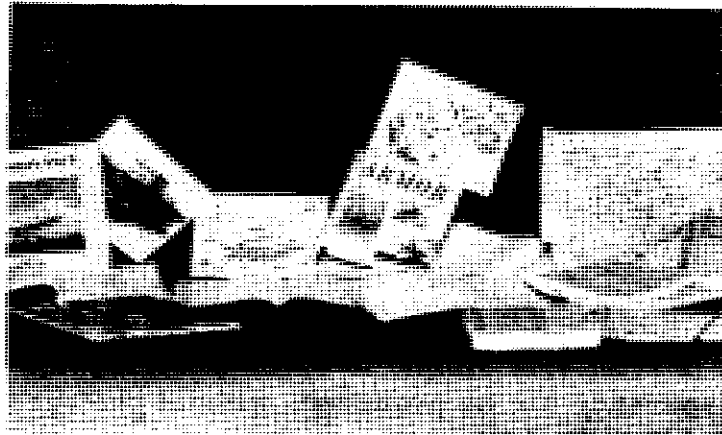
H. PROJECTO-PRINTER



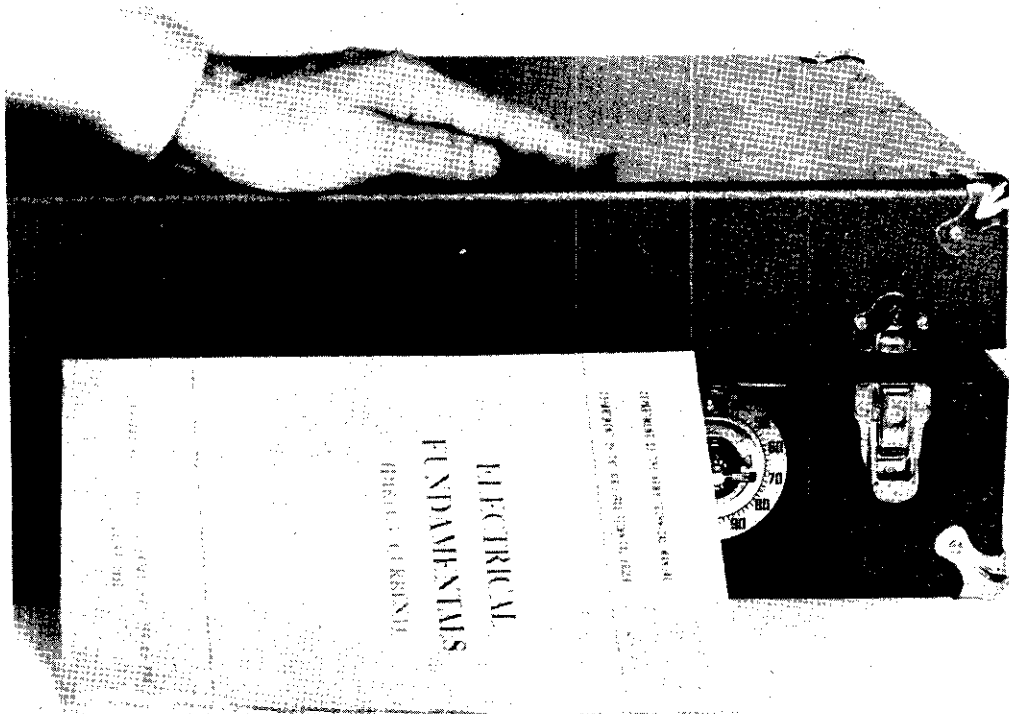
DESCRIPTION: The Projecto-Printer consists of a contact printer with an ultraviolet light source, a wet development processor, and an ammonia development chamber.

UTILIZATION: This equipment is designed to prepare transparencies from any opaque original material for use on the PH-637 overhead transparency projector.

- (1) The original from which the transparency is made may be in literally any form---bound pages in books, manuals, and magazines, maps, photographs, and other forms of printed material (maximum size 8 1/2"x11"). The original may have printing on both sides.



SECTION VI EQUIPMENT

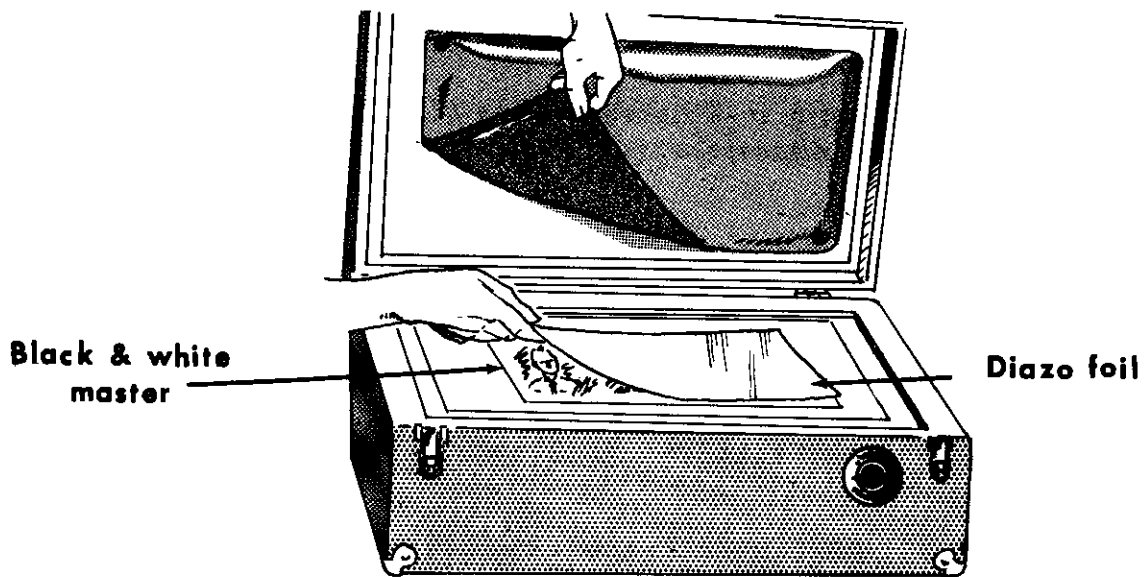


- (2) Note that when preparing a transparency from an original in bound form it is not necessary to tear out or in any way mutilate the original.

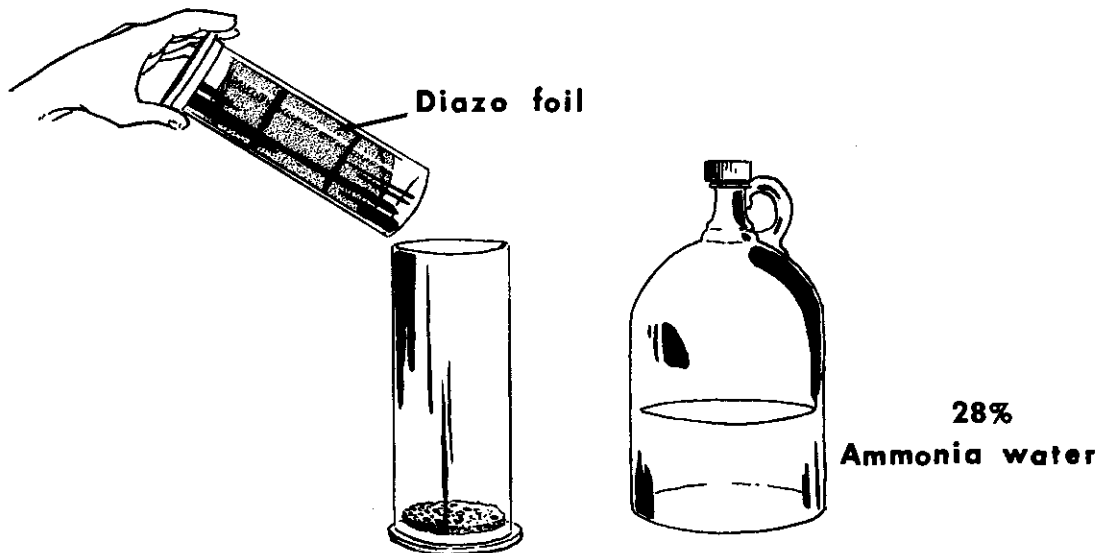


- (3) The equipment is relatively simple to operate and a projectable black-and-white transparency can be produced, without photographic darkroom facilities, in under two minutes.

SECTION VI EQUIPMENT



- (4) MAKING TRANSPARENCIES IN COLOR: A black-and-white transparency which has been prepared with the Projecto-Printer will serve as an excellent master for conversion to color through exposure and development of colored diazo foils. The diazo foil, in a selected color, is first exposed with the black-and-white transparency master in the Projecto-Printer light box, then developed in the ammonia chamber.



SECTION VI. EQUIPMENT

For more detailed information concerning utilization of the Projecto-Printer, contact the supporting film & equipment exchange.

AVAILABILITY: Request Projecto-Printer and any of the below listed associated materials from supporting film & equipment exchange .

1. Active Army - See Service Support Chart #2, page 50
2. Army Reserve-ROTC - See Service Support Chart #3, page 51
3. Use Request Form DA 11-43 (see page 55)

ASSOCIATED MATERIALS

- a. Negative Paper and Positive Film Sets
- b. Developing Solution
- c. Stronger Ammonia Water (28%)
- d. Diazo Foils - black, blue, red, yellow, green, violet, sepia, orange (specify color)
- e. Cardboard Transparency Mounts (7 1/2"x9 1/2" opening)

SECTION VI.....EQUIPMENT

I. PROJECTION SCREENS

Three basic types of projection screens are in Army-wide use:

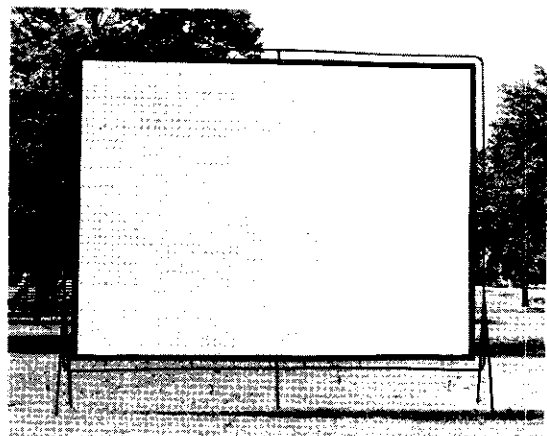
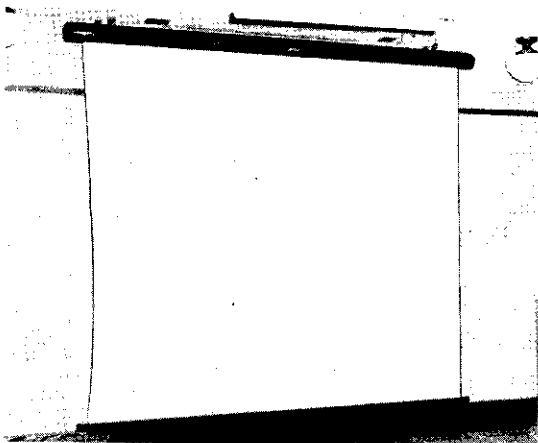
1. BM-1 or BM-10 50"x70" or 70"x70" portable tripod type for projection before relatively small groups.
2. BM-6 102"x102" wall type for use with larger groups. This screen serves to particular advantage in classroom situations where a semi-permanent or permanent installation is desirable. The case can be suspended from a wall or ceiling. The screen fabric rolls up into the case when not in use.
3. PH-555 - 7'x9 1/2' for field use. The screen fabric is suspended by coil springs from metal supporting frames.

AVAILABILITY: Request from supporting film & equipment exchange

Active Army - See Service Support Chart #2, page 50

Army Reserve-ROTC - See Service Support Chart #3, page 51

Use Request Form DA 11-43 (see page 55)



SECTION VI.....EQUIPMENT

J. REAR VIEW PROJECTION TECHNIQUES (see illustrations on page 39)

Rear View Projection Can Be Utilized To Advantage When:

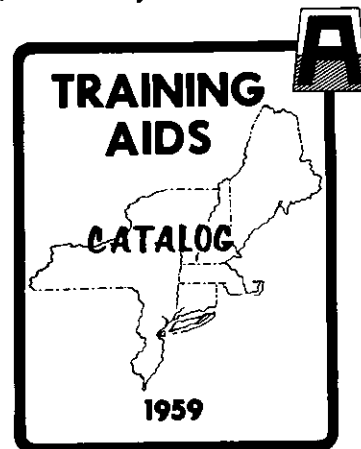
1. Showing films and transparencies in lighted rooms or outdoors
2. Maximum ventilation of the instructional area is essential
3. It is desirable to have the projector behind the screen

MATERIALS REQUIRED

1. The screen must be of a translucent material such as frosted acetate, ground glass, or sand-blasted window glass.
2. An ordinary mirror serves to reverse the projected image and reflect it to the screen.
3. A projection box houses the projector, reflecting mirror, and rear view screen. This arrangement is essential for keeping the reflecting mirror and rear side of the screen in darkness.

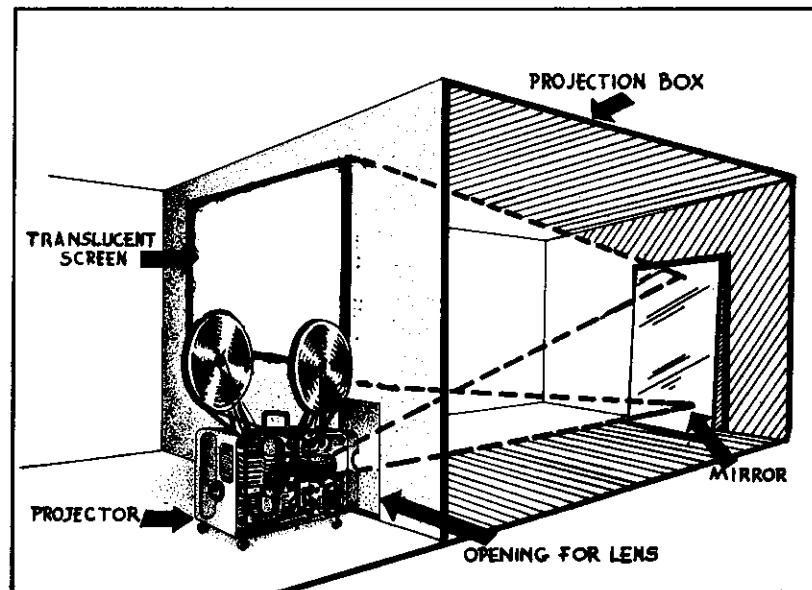
AVAILABILITY: Until such time as an Army rear view system becomes standardized, field activities are encouraged to locally fabricate their own systems with the assistance of supporting film & equipment exchanges and training aids subcenters.

1. Refer to page 92 of the First Army Training Aids Catalog.
2. Ask the supporting training aids subcenter for advice and assistance, (see Service Support Chart #4, page 52)
3. Ask a film & equipment exchange at any Active Army installation for advice and assistance (see Service Support Chart #1, page 49)

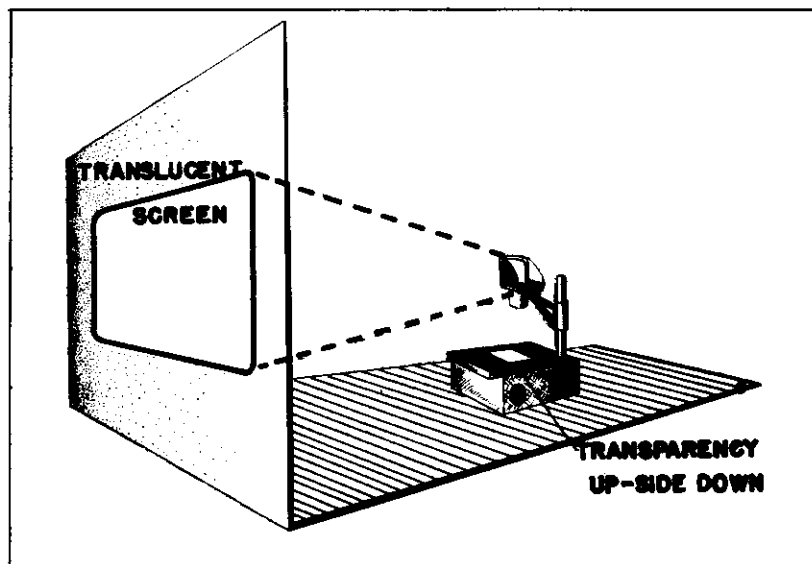


FIRST U. S. ARMY

REAR VIEW PROJECTION TECHNIQUES.....



Portable Rear View Projection Booth

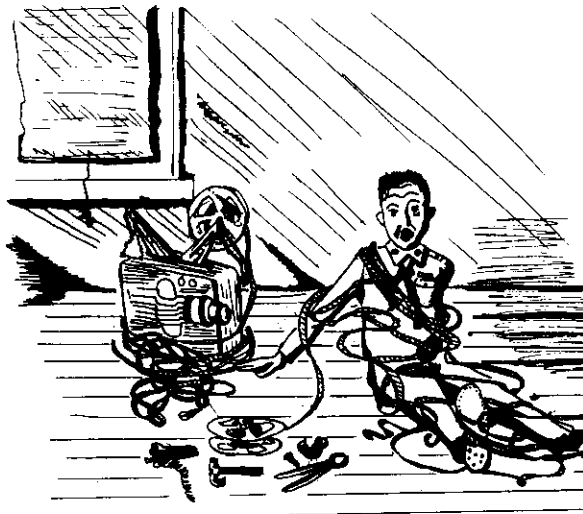


**Rear View Projection with Overhead Transparency Projector
(no projection box required)**

SECTION VII.....QUALIFIED PROJECTIONISTS

Most of the various types of projection equipment described and illustrated in Section VI are precision-built, expensive, and represent the best that YOUR TAX DOLLARS CAN BUY.

IT WAS DISCOVERED A LONG TIME AGO THAT THE SUREST WAY AN INSTRUCTOR CAN FOUL UP HIS PRESENTATION AND AT THE SAME TIME GET EQUIPMENT AND/OR FILM DAMAGED IS TO LET SOME UNQUALIFIED INDIVIDUAL TRY TO BE A PROJECTIONIST



Be certain that qualified licensed projectionists are available. Training courses for this purpose are conducted throughout the Army area. Contact one of the film & equipment exchanges shown on Service Support Chart #5, page 53, for information concerning scheduled classes.

THE ALTERNATIVES ARE:

1. 32-HOUR PROJECTIONIST COURSE - license issued authorizing operation of all types of projection equipment
2. LIMITED COURSE (8 hours or more) - license issued authorizing operation of selected types of projection equipment
3. 40-HOUR PROJECTIONIST INSTRUCTORS COURSE - qualifies instructor to train projectionists and issue licenses at the local level (applicants for this course must be fully qualified projectionists)

SECTION VIII NEW PRODUCTS AND IDEAS

A number of relatively new and diversified audio-visual equipments, allied materials, and local preparation methods are presented in this section in order to familiarize First U. S. Army personnel with additional possibilities for improving upon the techniques of group communication.

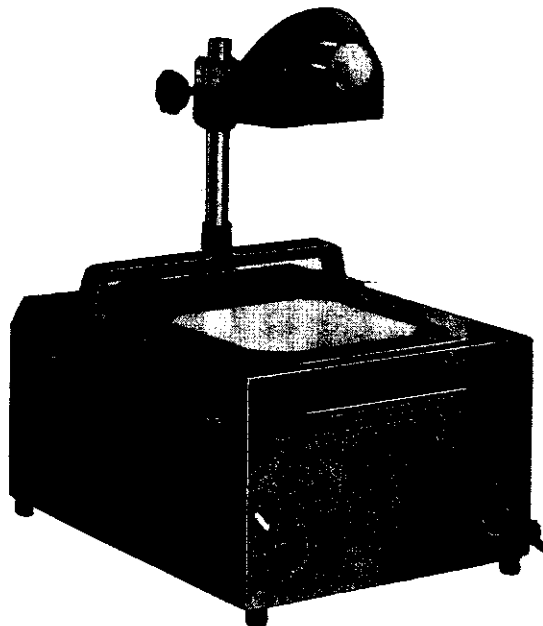
Types of items illustrated are merely representative of relatively recent developments and do not constitute an endorsement of any particular model or brand.

Availability of all items cannot be guaranteed since in many instances they have not been adopted on an Army-wide basis and any authorized local procurements effected have been for limited quantities sufficient only to satisfy priority requirements.

INQUIRIES CONCERNING AVAILABILITY OF THE PRODUCTS IS ENCOURAGED AND SHOULD BE DIRECTED TO THE SUPPORTING FILM & EQUIPMENT EXCHANGE.

1. OVERHEAD TRANSPARENCY PROJECTOR (substitute for PH-637, page 21)

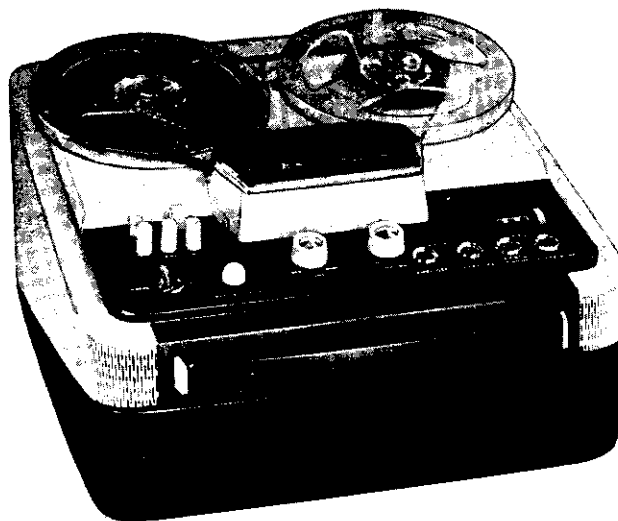
Newly developed models offer advantages in increased light output, portability, reduced operating noise and viewing restrictions, interchangeability of lens-condenser systems.



SECTION VIII. NEW PRODUCTS AND IDEAS

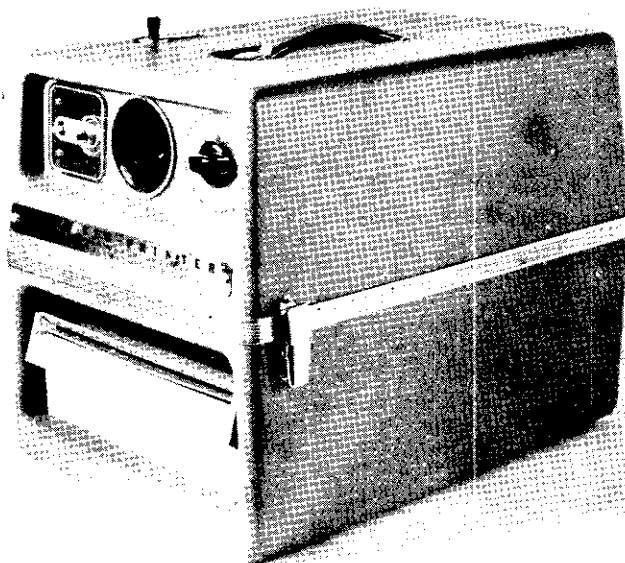
2. TAPE RECORDER (substitute for RD-87, page 32)

New equipment provides increased portability, ease and dependability of operation.



3. REFLEX TRANSPARENCY PRINTER (substitute for Projecto-Printer, page 33)

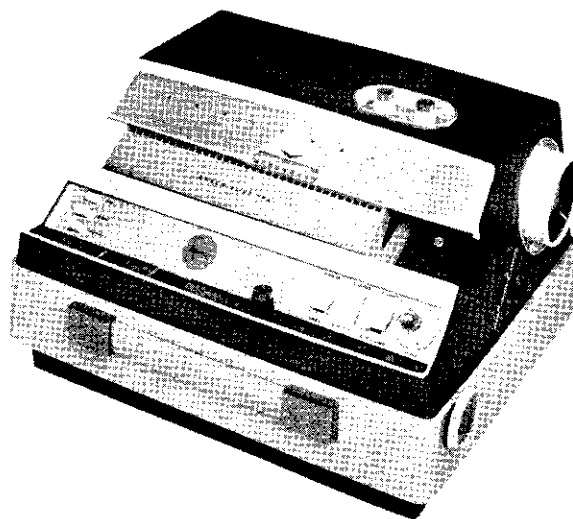
The equipment illustrated below is an improved version of the original model, featuring one-piece design and simplified operating characteristics.



SECTION VIII.....NEW PRODUCTS AND IDEAS

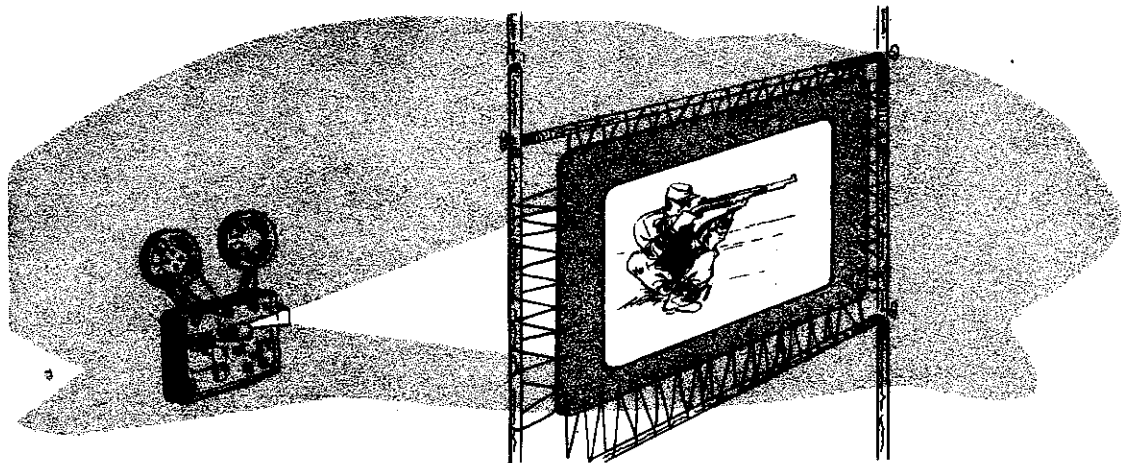
4. 2"x2" SLIDE PROJECTOR (substitute for PH-222-C, AP-6, pages 18,19)

Equipment illustrated provides fully automatic projection of 2"x2" slides, featuring remote control and variable time cycles.



5. REAR VIEW PROJECTION

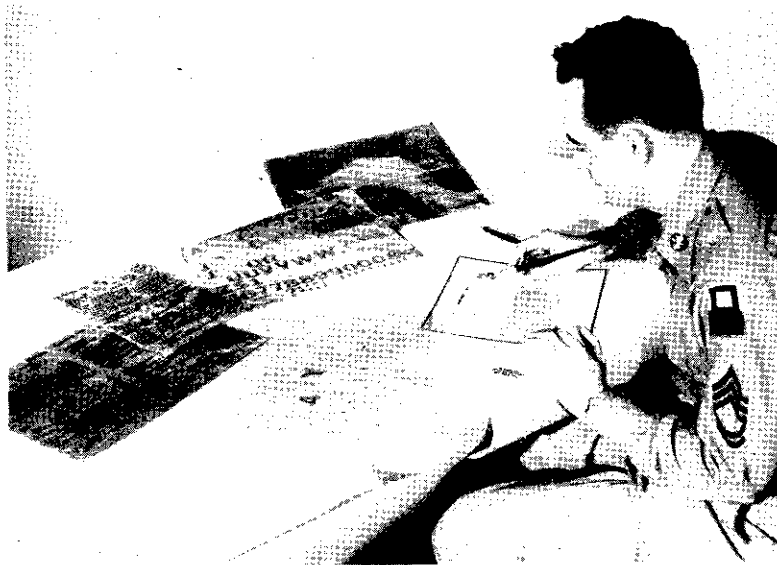
- a. SCREENS - Flexible rear view screen fabrics have been developed which eliminate excessive "hot spots" and "fall-off", and are highly resistant to wear and tear. A variety of light weight tubular frame arrangements permit easy adjustment to accommodate differing situations.
- b. MIRRORS - A rear view projection kit consisting of a small mirror with its supporting bracket can be attached directly to either the AN/PFP or AS-2, (pages 16,17), for rear view projection of 16mm films.



SECTION VIII. NEW PRODUCTS AND IDEAS

6. LOCAL PREPARATION OF TRANSPARENCIES FOR OVERHEAD PROJECTION

- a. PLANOTYPE LETTERING - These reusable, adhesive-backed plastic letters are available in a variety of sizes and transparent colors. They can be readily applied to plastic sheets and other smooth surfaces in the preparation of transparencies.

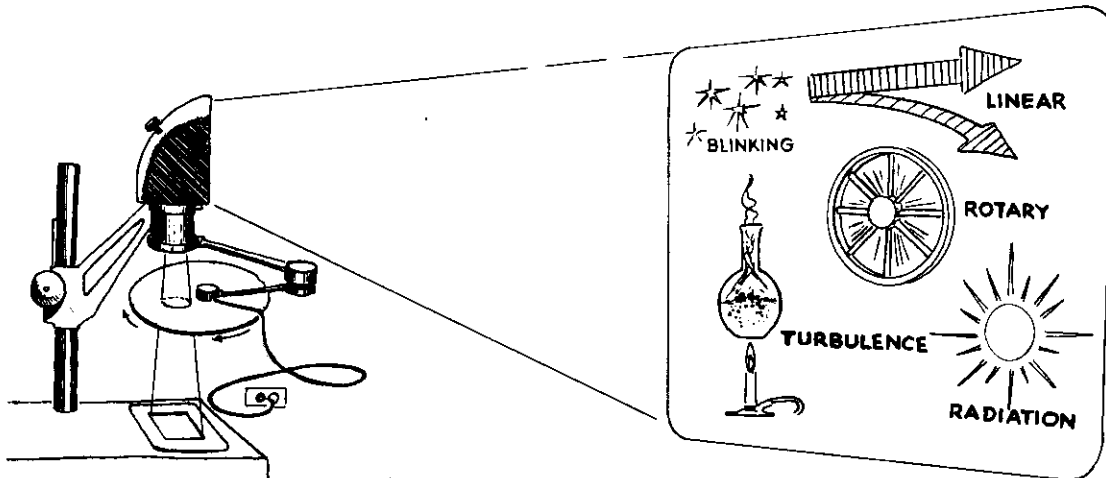


- b. BRUNING MULTICOLOR - This item is utilized in conjunction with the Projecto-Printer to prepare transparencies in a variety of colors.



SECTION VIII. NEW PRODUCTS AND IDEAS

- c. TECHNAMATION - The Technamation process utilizes a spinning polaroid lens which is positioned directly below the objective lens of the overhead projector, and a variety of adhesive-backed polaroid patterns which are cut to appropriate shape and applied directly to the transparency. When projected, selected polaroid patterns provide the illusion of such motions as rotary, radiation, blinking, linear, and turbulence.



- d. VISA-MATIC - The Visa-Matic process utilizes an adjustable polaroid lens which is positioned directly below the objective lens of the overhead projector, and a variety of polaroid filters in sheet form which are cut to appropriate shape and applied directly to the transparency. By varying the settings of the adjustable lens, a smooth transition in brightness and color from one portion of the projected image to another is effected, as predetermined by strategic application of the filtering sheets.

