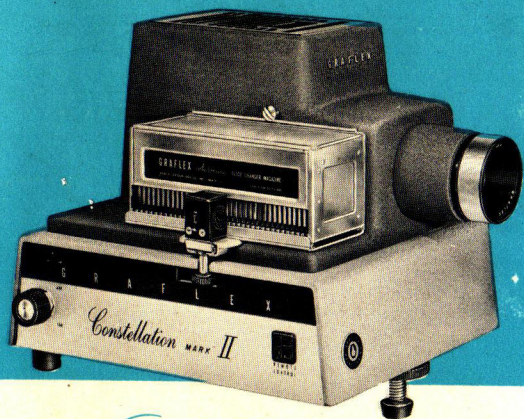


WILSONWERKS ARCHIVES

This camera manual is for reference and historical purposes, all rights reserved.

This cover page is copyrighted material. This document may not be sold or distributed without the express consent of the publisher.

©2008-2025 wilsonwerks Llc



Constellation MARK II
SLIDE PROJECTOR
OPERATING INSTRUCTIONS

The new Constellation Mark II Projector has been designed and manufactured by Graflex to reproduce every minute detail of your 35mm, Bantam, or Super Slide transparencies with a clarity and brilliance never before achieved. The Constellation Mark II Projector can be used on 110-120 volt 50-60 cycle AC current. Do not use a lamp of higher wattage than specified on the nameplate. Always keep the projector clean and dry and in a case when not in use.

Setting Up The Projector	6
To Start The Projector and Pre-Condition Slides	7
The Automatic Slide Changer	8
The Single Slide Editor	8
The Airequipt Magazine	9
Loading The Magazine	9
Index Card	10
Inserting The Magazine Into The Projector	10
Operating the Constellation Mark II	11
Preconditioning of Slides	12
Care of Slide Changer	12
Focusing	13
Centering The Picture On The Screen	13
Showing Stereo Slides	14
To Clean Lenses and Reflector	14
To Replace Lamp	15
Projection Distance Chart	16
Carrying Case	16
Graflex Slide Timer	17
Accessory Projection Lenses	18
S.V.E. Slide Binders	18

INDEX

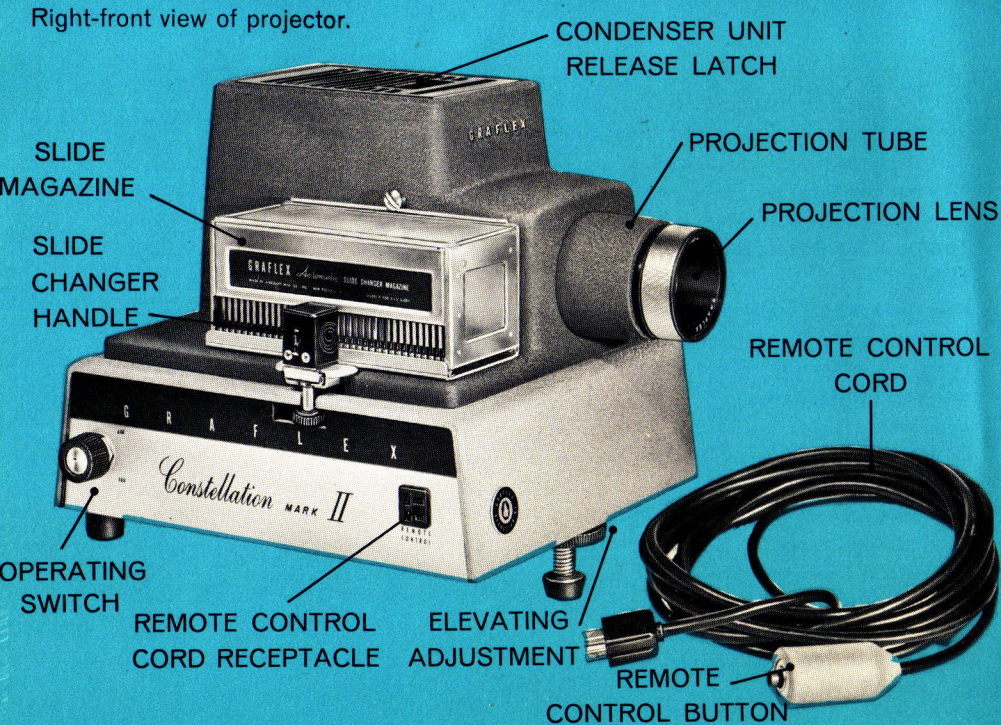


FIG. 1

Left-rear view of projector.

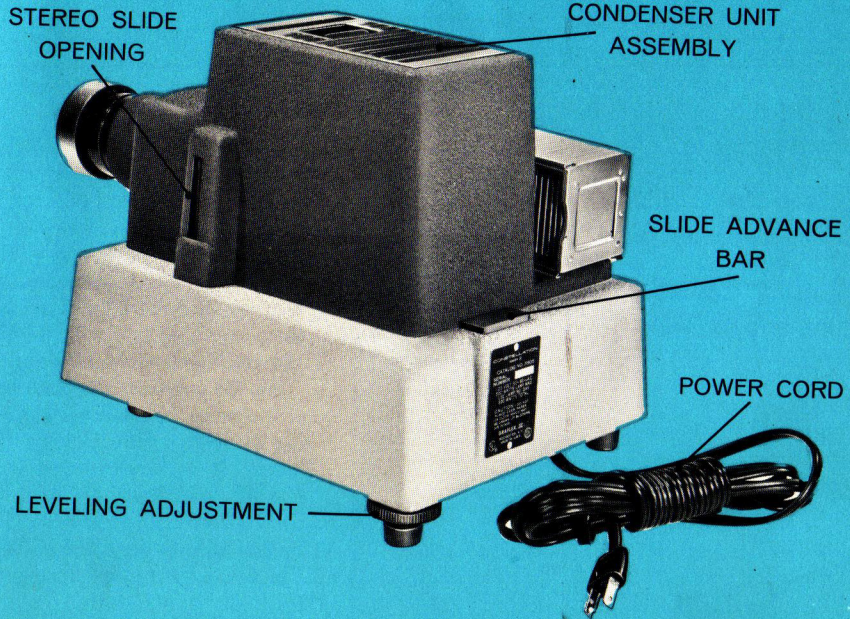
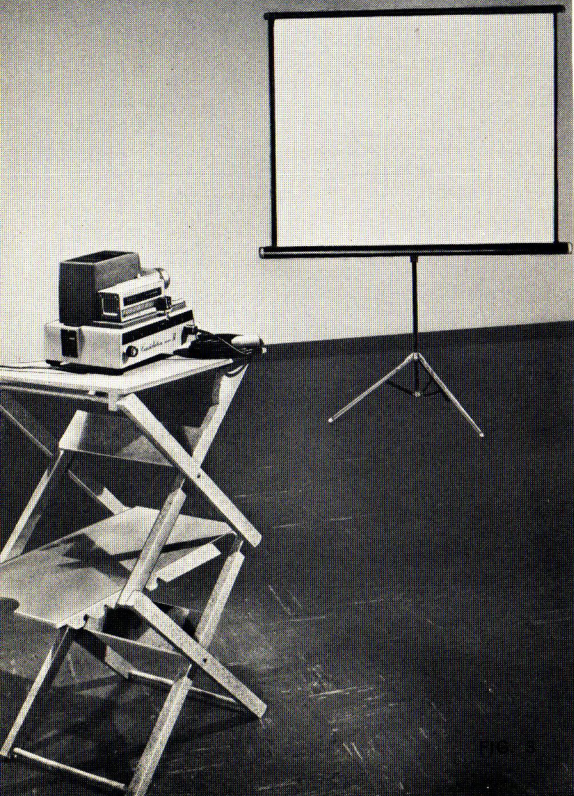


FIG. 2



SETTING UP THE PROJECTOR

Set the projector on a convenient stand at one end of the room. This may be a desk, end table, or other object of suitable height. Note: *Check to be sure that there is no cloth or paper under the projector which may be drawn up to block the air inlet.* Plug the power cord into a source of 110-120 volt 50-60 cycle AC current.

Set the screen at the opposite end of the room. Arrange audience seating for convenient viewing of the screen. It is recommended that no one sit closer than $2\frac{1}{2}$ to 3 screen widths from the screen since viewing in this area is very uncomfortable. Fig. 3 shows a typical arrangement.

TO START
THE
PROJECTOR
AND
PRE-CONDITION
SLIDES

Pull the slide changer handle (see Fig. 1) out as far as it will go. Insert a magazine into the slide entrance of the changer with the white index card on top of the magazine as shown in Fig. 7, Page 10.

Your Constellation Mark II has built into it a unique "pre-popping" feature. Before slides are projected turn the switch (Fig. 4) to "lamp." This allows warm air to flow over the slides, (see warm air duct shown in insert photo below) preconditioning them so that they will not "pop" out of focus as they are being shown. Allow a minute or two warm-up time for the first magazine (while you set up your screen). When a number of magazines are to be shown they may be pre-conditioned by sliding them in from the rear while the last few slides of the preceding magazine are being projected.

7

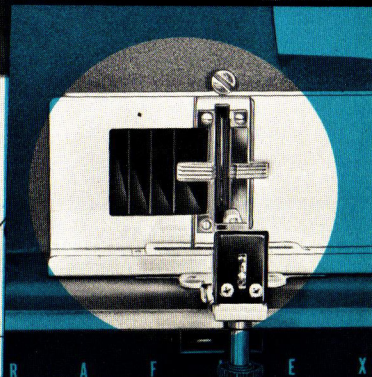
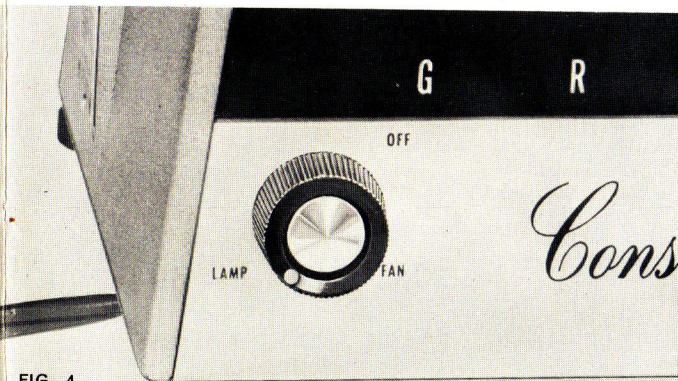


FIG. 4

THE AUTOMATIC SLIDE CHANGER

Your Constellation is equipped with a Graflex (Air-equip) Automatic Slide Changer (Fig. 5) which provides a means for showing and storing 2 x 2 slides in an orderly manner, without the need of handling and sorting the slides after each showing. With reasonable care, the Changer will afford great pleasure and convenience to you and your audience for countless hours of slide projection.

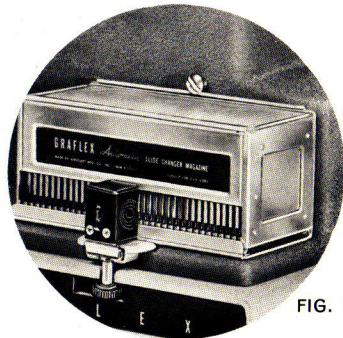
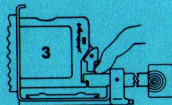
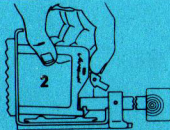
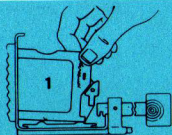


FIG. 5

THE SINGLE SLIDE EDITOR

Use this to prescreen your slides before filing them permanently in Magazines. Instructions for attaching:

1. Pull handle of the Automatic Slide Changer all the way out. Insert Editor into slide entrance of the Changer so that lower right corner rests on ridge closest to handle of Changer. Press down. (Illustration 1.)
2. Hold Editor firmly with left hand; open lock by pressing in at top. Push in Changer handle until tip is centered over hole at lower corner of Editor. (Illustration 2.) Lift Editor and snap lock into place. (Illustration 3.)
3. Pull handle all the way out
4. and insert slide at right angle into Editor slot. Remove slide by tilting towards handle.
4. To remove Editor, pull handle out so that its tip is centered over ridge nearest handle. Snap in top of Slide Editor lock, disengage tip and pull handle out.



THE AIREQUIPT MAGAZINE

Each magazine is provided with 36 metal slide frames designed to receive all ready-mounts and S.V.E. Slide Binders (cardboard mounts with glass aperture). Some types of all glass mounts can be accommodated if the binding tape is omitted since the metal frame will hold the pack firmly.

The metal slide frames:

1. Protect your slides from warping and wearing particularly at the corners.
2. Keep each transparency in the focal plane regardless of variation and thickness of the slide mount.

LOADING THE MAGAZINE

1. Pull operating handle all the way out. (Some resistance will be encountered as it is necessary to disengage a spring clutch from the electric drive mechanism. When the handle is pushed back in or the electric advance is operated the clutch will re-engage.)
2. Remove the magazine by pushing either forward or backward.
3. Place the Magazine on a table with the nameplate down.
4. Without removing the metal slide frames from the magazine, insert the slides into the frames upside down (bottom of picture towards the index card of the magazine) with the shiny side toward the projection lamp in the usual manner. Be sure to push each slide into its frame all the way so it is seated behind the "lip" of the outer edge of the metal frame. (Fig. 6) The magazines are equipped with springs which prevent slide frames from falling out during handling.

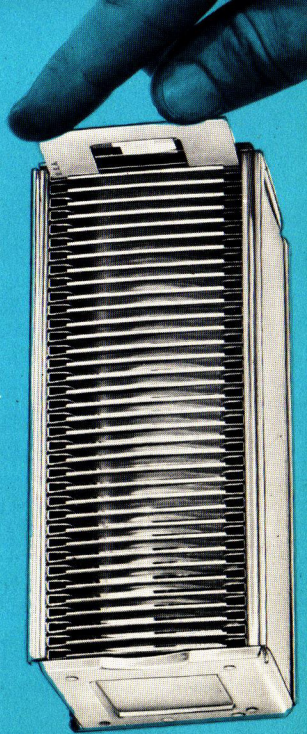


FIG. 6

INDEX CARD

Each magazine is provided with an index card (A) (Fig. 7) under an acetate cover.

To remove:

1. Insert the point of a knife or other pointed instrument at one of the four corners.
2. Lift up and pull out.

To replace:

1. Slide index card and acetate cover in from either end of magazine.

INSERTING MAGAZINE INTO PROJECTOR

1. Pull operating handle all the way out.
2. Hold magazine as pictured in Fig. 7 with index card on top and all slide frames touching right side of magazine.
3. Insert from the rear, *under top guide rail and inside bottom guide rail.*

When number 1 on the index card registers with the center of the slide changer retaining screw, slide number 1 is in position ready to be inserted. Leave in this position for a couple of minutes to preheat slides.

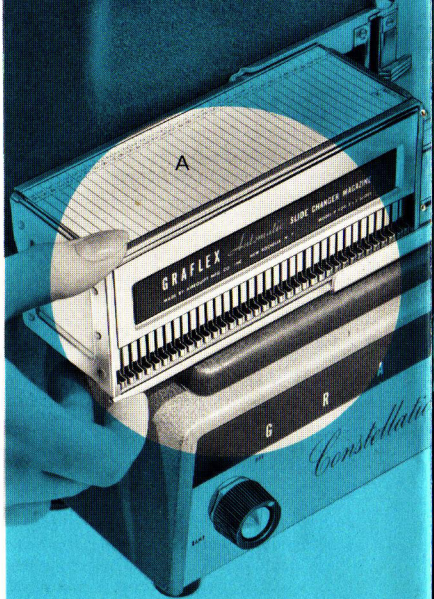


FIG. 7

OPERATING THE

Constellation MARK II

With the switch in either the “fan” or “lamp” position, the electric slide changer mechanism is ready to operate. With the magazine in place as described previously, the first slide is moved into projection position by pushing either the *advance bar* at the rear of the projector (Fig. 8), or the *remote button* on the remote control cord which must be plugged into the receptacle in the side of the projector base (Fig. 9). Subsequent slides are advanced in sequence by pushing either button.

Slides need not be shown in sequence. Pull the handle to the “out” position and advance the magazine to the desired slide. (Slight resistance will be encountered as it is necessary for a spring clutch to disengage from the electric drive mechanism.)

When the end of the magazine is reached, the pusher bar will not enter the magazine, but the mechanism will disengage with the handle out in readiness for inserting the next magazine.

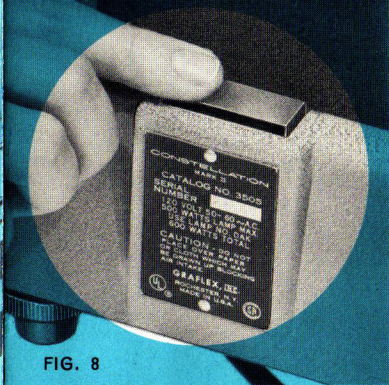


FIG. 8

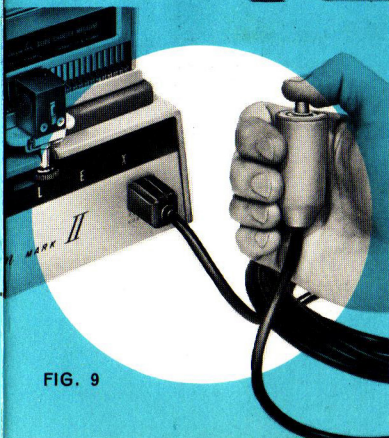


FIG. 9

CARE OF SLIDE CHANGER

The Graflex Automatic Changer is ruggedly constructed of the finest material and workmanship. However, like other fine equipment, it must be handled carefully, intelligently, and not abused. The entire mechanism is completely enclosed to protect all moving parts and requires no oiling. Proper care will result in long life and countless hours of pleasure.

Should a slide jam in the showing position and the hook on the end of the pusher bar become disengaged, the handle should be pulled all the way out and the magazine removed. With the magazine removed, it is possible to insert a wire hook or other thin instrument into the opening to pull the jammed slide out.

In a more serious jam where the hook is disengaged and the slide frame is half in the magazine and half in the opening, thus preventing the magazine from being removed, it may be necessary to remove the Changer from the projector. Remove knurled screw A and screw B (Fig. 10) when the handle is in the "out" position. With these screws removed, lift the changer slightly and withdraw for easier access to the jammed slide. The spring loaded aperture shutter may be slid aside and a thin instrument may be used to push the jammed slide back into the magazine. Once the defective frame has been pushed back into the magazine, the magazine should be removed and the frame inspected for cause of failure.

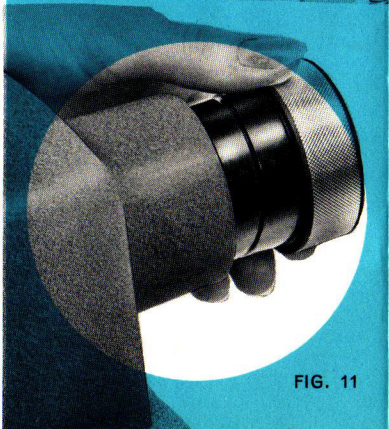
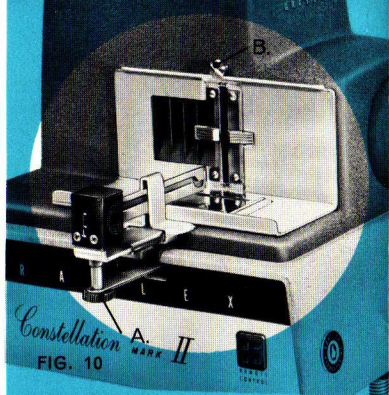




FIG. 12

FOCUSING

Focus the image on the screen by rotating the lensbarrel in or out of the projector until the picture is sharp (Fig. 11).

POSITIONING THE PICTURE ON THE SCREEN

The picture may be raised or lowered on the screen by rotating the elevating adjustment (Fig. 12). The image may be leveled with the screen border by rotating the leveling adjustment (Fig. 13).



FIG. 13

SHOWING STEREO SLIDES

One side of a pair of paper or glass mounted stereo slides may be projected by inserting one end into the opening opposite the Graflex Changer. See Fig. 14.

Note: It is necessary to have an empty frame or Single Slide Editor in the projection aperture to open the shutter.

TO CLEAN LENSES AND REFLECTOR

To clean projection lens, remove lens tube from the mount and gently wipe both lens surfaces with a soft clean cloth. Use lens cleaner sparingly when necessary. Do not attempt to remove lens cells from the tube in which they are sealed.

To clean condenser lenses and reflector, remove condenser unit by pulling back on latch A (Fig. 15), and lifting out. It is necessary to remove condensers and heat filter from the unit for thorough cleaning. To remove front condenser B, loosen screw at top front (not shown) and remove screw and clip. To remove heat filter C or rear condenser D, lift up on end of retaining clip beneath each and slide to one side. Reinstall carefully.

When ordering replacements, specify model, serial number and part number.
See table below.

Description	Part Number
(B) Front Condenser	A37656
(C) Heat Filter	A37538
(D) Rear Condenser	A37539

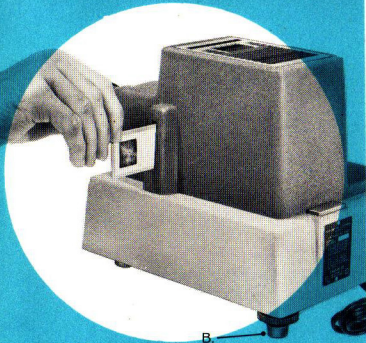


FIG. 14

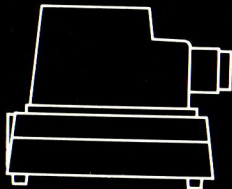


FIG. 15

TO REPLACE LAMP

1. Remove power cord from wall outlet.
2. Remove condenser unit as described on page 14 to expose lamp.
3. Remove lamp by pulling straight up and out.

To replace: rest center pin of lamp in the large hole in the socket and rotate lamp to align index ridge on center pin with groove in socket, then push down firmly until it seats with a click. Wipe lamp free of all finger prints and dust. Replace condenser unit. Use replacement lamp designated by ordering code DAK only.

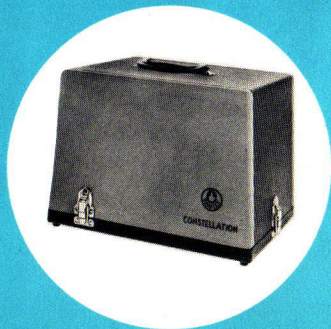


PROJECTION DISTANCE CHART FOR 4 INCH LENS

CONSTELLATION CARRYING CASE

A good projector deserves a good carrying case and we recommend the use of the sturdy attractively finished carrying case for the Constellation Mark II Slide Projector. It will accept the projector with one magazine in place and has space for at least two additional magazines. Constructed of plywood; has lift-off style cover with attractive durable plastic covering material for long life. Three sturdy catches hold cover to base securely. Carrying handle positioned to balance weight of projector.

Caution: This case is designed for carrying and storage only—not for protecting projector during shipment.



Width of Image in Inches	PROJECTION DISTANCE IN FEET			
	35mm Double Frame	35mm Single Frame	Bantam	Super Slide
40"	10	15	9	9
50"	13	20	12	12
60"	16	25	14	14
70"	18	30	17	17
84"	22	33	19	19



GRAFLEX SLIDE TIMER

For full time automatic operation the Constellation Mark II can be equipped with the accessory Graflex Slide Timer. No buttons to push—just set the dial at the desired projection interval (5, 12, 15, 20, or 30 seconds). Each slide is shown for the pre-selected interval—is automatically withdrawn and stored in the Airequipt Magazine and the next slide projected. Provision is made for holding or rejecting slides regardless of the interval setting. Ask your Graflex Dealer for a demonstration.

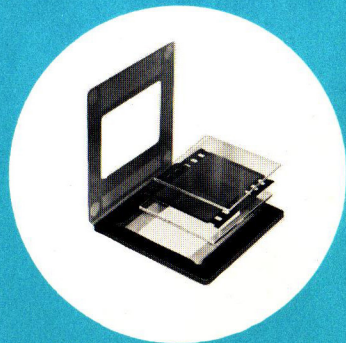
ACCESSORY PROJECTION LENSES

A variety of projection lenses are available for your Constellation Mark II Slide Projector, enabling you to obtain full screen size images regardless of the projection distance.

- 3" f/3.5 (Cat. No. 3570)
- 4" f/3.3 (Cat. No. 3571)
(Replacement)
- 5" f/3.5 (Cat. No. 3572)
- 5" f/4.0 (Cat. No. 3575)
- 7" f/4.9 (Cat. No. 3573)
- 7" f/3.5 (Cat. No. 3577)
- 10" f/5.6 (Cat. No. 3578)

S.V.E. SLIDE BINDERS

Easy to use S.V.E. Slide Binders provide permanent protection against dust and scratches. No warping of film or out of focus pictures. The most popular slide binder made. For double frame or Bantam, in bulk packs of 100 or packs of 20.



GRAFLEX, INC.
3750 Monroe Avenue
Rochester 3, N. Y.

GRAFLEX, INC.
1345 Diversey Parkway
Chicago 14, Illinois

GRAFLEX, INC.
800 North Cole Avenue
P. O. Box 38606
Hollywood 38, California

GRAFLEX, INC.
50 Rockefeller Plaza
Suite 922
New York 20, New York

GRAFLEX OF CANADA, Ltd.
47 Simcoe Street
Toronto 1, Ontario, Canada

GRAFLEX SERVICE CENTERS

Graflex Service Centers are located at the addresses given here and are equipped to inspect, clean, and adjust all Graflex manufactured products. While correspondence should be addressed to the Service Center nearest you, your Graflex dealer will be glad to take care of the details of packing and shipping equipment for attention. He may also be able to provide such services as are necessary so that the projector need not be sent away.

GRAFLEX



3750 Monroe Ave., Rochester 3, N.Y.

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Prompt return of this card will entitle you to receive all informational mailings which Graflex may make from time to time to owners of Graflex equipment.

Constellation Mark II

SERIAL NO.

NAME.....
(Please print. If member of Armed Forces, use home address.)

STREET.....

CITY.....STATE.....COUNTRY.....

Date Purchased.....From.....
(dealer)

Dealer City.....State.....Country.....

Is this equipment used for:

- Industrial-Commercial School Church
 Personal Other.....
(specify)

I learned about the Constellation Mark II through:

- Dealer recommendation Advertising in.....
(publication)
 Other way.....
(specify)

IMPORTANT: Fill out this card completely and mail at once to Graflex, Inc., Rochester 3, N.Y.
Warranty effective only if equipment is registered immediately by means of this card or suitable substitute. No postage necessary.

- C. To Equipment which has been tampered with or serviced by other than Graflex personnel;
- D. If adaptations or accessories of other than Graflex recommendations have been made or attached;
- E. If the equipment has not been registered with Graflex by means of the attached registration card or appropriate substitute within 60 days from date of purchase.

No liability is assumed for film which is damaged or is unsatisfactory for any reason (due to equipment malfunction or otherwise), nor is Graflex, Inc. obligated to replace such film. No liability is assumed for expenses or damages resulting from interruptions in operation of equipment, nor for consequential damages of any nature.

In order that we may be able to pursue our continuing program of product improvement, Graflex reserves the right to make changes in design, or add improvements to any product without incurring any obligation to include such revisions in equipment previously produced.

This warranty is made in lieu of any other guaranty, warranty, or liability express or implied. It is valid only to the *original purchaser* as indicated by the registration card. Graflex's liability under the within warranty is limited to repair or replacement as herein provided.

Graflex Service facilities are at the following locations:

Rochester	3750 Monroe Avenue	Rochester 3, N. Y.
New York Area	50 Rockefeller Plaza, Suite 922	New York 20, N. Y.
Midwest Division	1345 Diversey Parkway	Chicago 14, Ill.
Western Division	800 N. Cole Ave., P.O. Box 38606	Hollywood 38, Calif.
Canada	47 Simcoe St.	Toronto 1, Ont., Canada

Projector Serial No.

GRAFLEX, INC., Rochester 3, N. Y.

Printed in U.S.A.

YOUR PROJECTOR WARRANTY

To the Initial Purchaser of This Equipment:

We cordially welcome you to the ever-growing family of Graflex equipment owners. Skilled craftsmen have built into this instrument a level of quality and performance which is the proud heritage of more than 70 years of uninterrupted experience in the production of precision photographic equipment for exacting professional photographers around the world.

Each new projector is warranted to be free from faulty materials and workmanship. If anytime during your first year of ownership, any servicing is necessary by faulty material or workmanship, it will be provided (or the equipment replaced at our option) without charge except for transportation charges, by your nearest Graflex Service facility. Returns should be made through your Graflex Dealer; or if this is not convenient, the equipment should be carefully packed in a stiff container with adequate packing (not excelsior). Attach name and address and *any specific instructions* to the package, which should be adequately secured and fully insured.

This warranty is not applicable:

- A. To any accessory or part produced by others than Graflex. Projection lamps, tubes, and photo tube, however, are warranted against defects of workmanship and materials for the 90 day warranty period normally applicable to electronic parts;
- B. To Equipment which in our judgment has been damaged, abused, or requires replacement of parts due to wear and tear from use, or for any reason other than faulty materials and workmanship. Such equipment will be serviced at factory-established rates;

FIRST CLASS
PERMIT NO. 480
Sec. 34.9 P.L.&R.
ROCHESTER, N. Y.

BUSINESS REPLY CARD
NO POSTAGE STAMP NECESSARY IF MAILED IN U.S.A.

Postage will be paid by—

GRAFLEX, INC.
3750 MONROE AVENUE
ROCHESTER 3, N. Y., U. S. A.

