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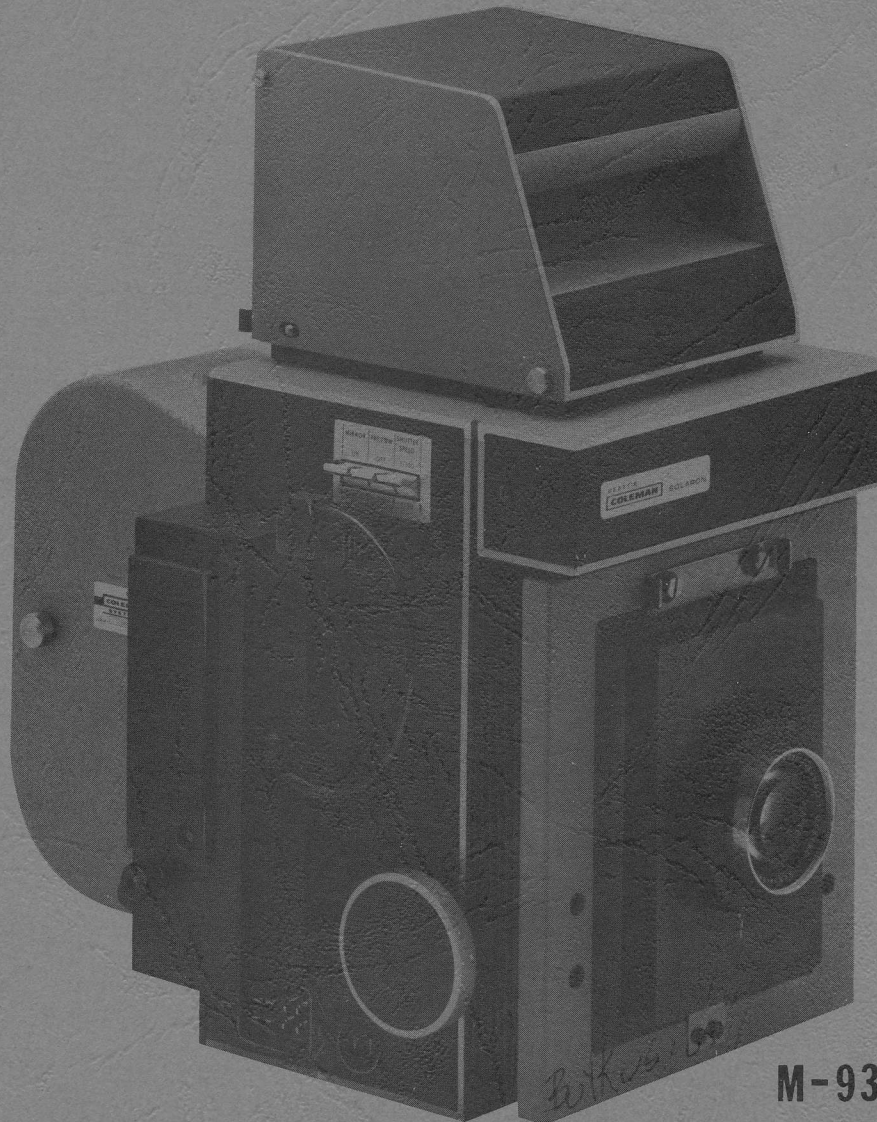
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SOLARON

SINGLE LENS REFLEX CAMERA

OPERATION MANUAL



M-93000

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SOLARON SINGLE LENS REFLEX CAMERA

T A B L E O F C O N T E N T S

<u>TITLE</u>	<u>PAGE</u>
INTRODUCTION.....	1
UNPACKING INSTRUCTIONS.....	1
WARRANTY.....	2
I. CAMERA SYSTEM DESCRIPTION:	
A. Camera Body.....	2
B. Data Chamber.....	6
C. Lensboard Assembly.....	6
D. Film Magazine.....	7
E. Operating Cables.....	7
F. Accessories.....	8
II. ASSEMBLY INSTRUCTIONS:	
A. Camera Body.....	9
B. Data Chamber.....	9
C. Lensboard Assembly.....	12
D. Viewing Mask.....	13
E. Magnifier Hood.....	13
F. Operating Cables.....	14
G. Film Magazine.....	14
III. OPERATION OF THE CAMERA:	
A. Function Switches.....	15
B. Rotating Back.....	16
C. Data.....	17
D. Focusing.....	17
E. Sequence of Operation.....	17
IV. MAINTENANCE:	
A. Lens and Mirror Maintenance.....	19
V. TROUBLE SHOOTING.....	
SERVICE REPAIRS.....	19
REPLACEABLE PARTS.....	22
	22

LIST OF ILLUSTRATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
Figure 1	Single Lens Reflex Camera	3
Figure 2	Single Lens Reflex Camera	4
Figure 3	Lensboard Assembly	5

OPERATION MANUAL
SOLARON SINGLE LENS REFLEX CAMERA

INTRODUCTION

The Coleman 'SoLaRon' Single Lens Reflex (SLR) Camera is a fully automatic, long roll film, portrait camera of the latest design. The 'SoLaRon' camera will provide many years of operation, provided proper maintenance and operating procedures are followed.

This manual is provided to aid the user in operating the camera, and complete familiarity with its contents will insure maximum versatility and efficiency during its use.

UNPACKING INSTRUCTIONS

All equipment received should be checked against the invoice for description and quantity. *butkus.us*

If the equipment is damaged in any way upon arrival, the shipping cartons should be saved and a claim should be filed with the carrier. A full report of damage should be obtained from the claim agent and a copy forwarded to Coleman Systems. We will assist as much as possible in helping you settle the claim and arrange for repairs or replacement. Please include TYPE and SERIAL NUMBERS when referring to this equipment.

WARRANTY

The registration card attached to your camera or magazine should be filled out completely, signed by you and the dealer within ten (10) days of date of purchase and returned to Coleman Systems. If you did not receive a registration card, contact your dealer immediately. Coleman Systems' obligation under warranty is specified on the registration card under "Factory Warranty."

When corresponding with us regarding your camera or magazine, be sure to identify the camera and magazine by PART NUMBER, TYPE and SERIAL NUMBER.

Your registration card furnishes us with the necessary information to guarantee you service coverage. In case of theft, you can be assured of being able to get a permanent record of the serial number and value of your camera by writing to the factory.

I. CAMERA SYSTEM DESCRIPTION

The SoLaRon Camera System consists of the following components:
(Refer to Figures 1, 2 & 3 for nomenclature of the system.)

A. CAMERA BODY

The camera body is a rugged aluminum housing which mounts or contains the following:

1. Electronics - The electronics controlling the function of the camera system are mounted behind easily assessable panels or enclosures.
2. Rotating Back - The back rotates to position the magazine for a horizontal or vertical format. The

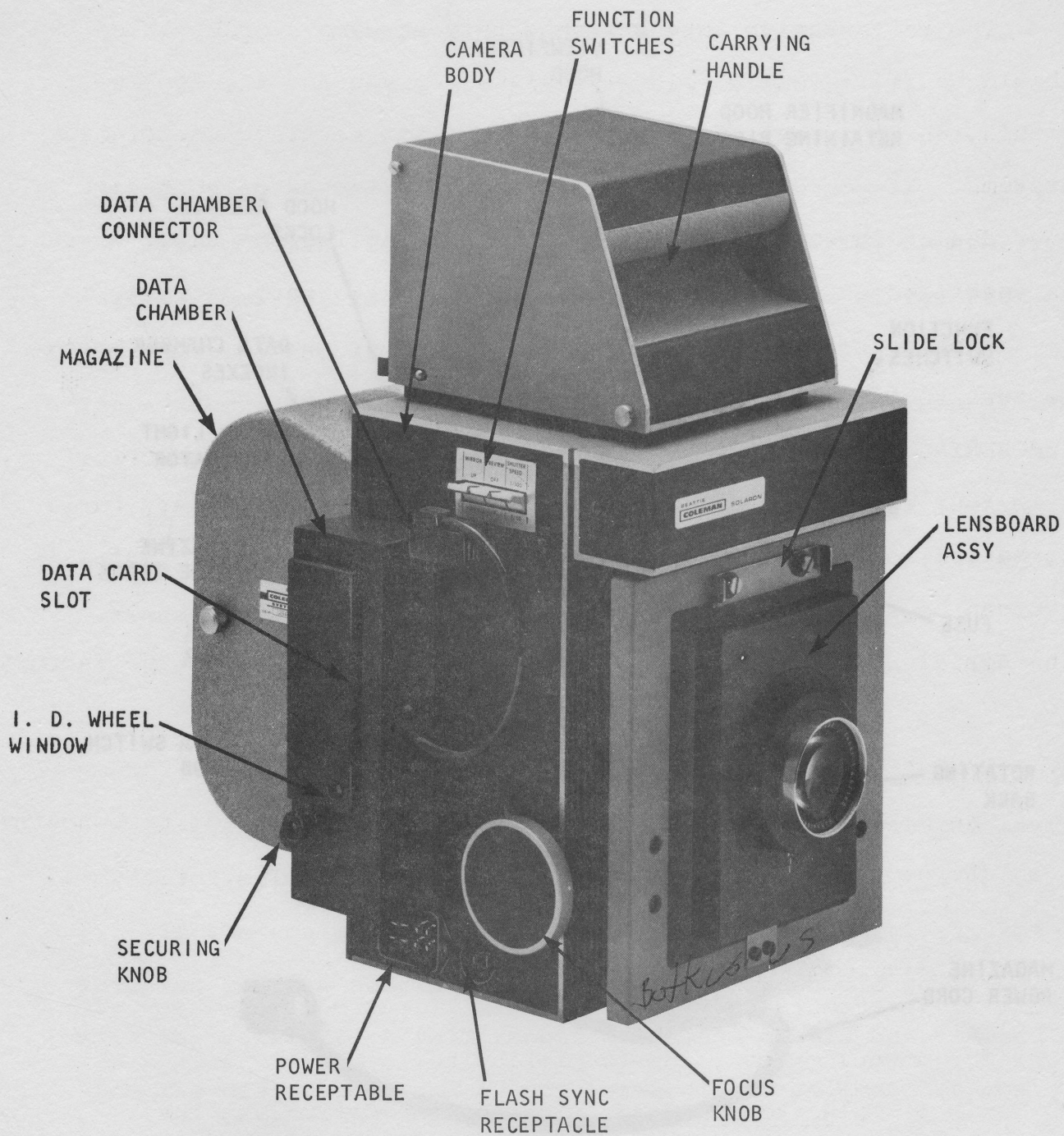


FIGURE 1

Single Lens Reflex Camera

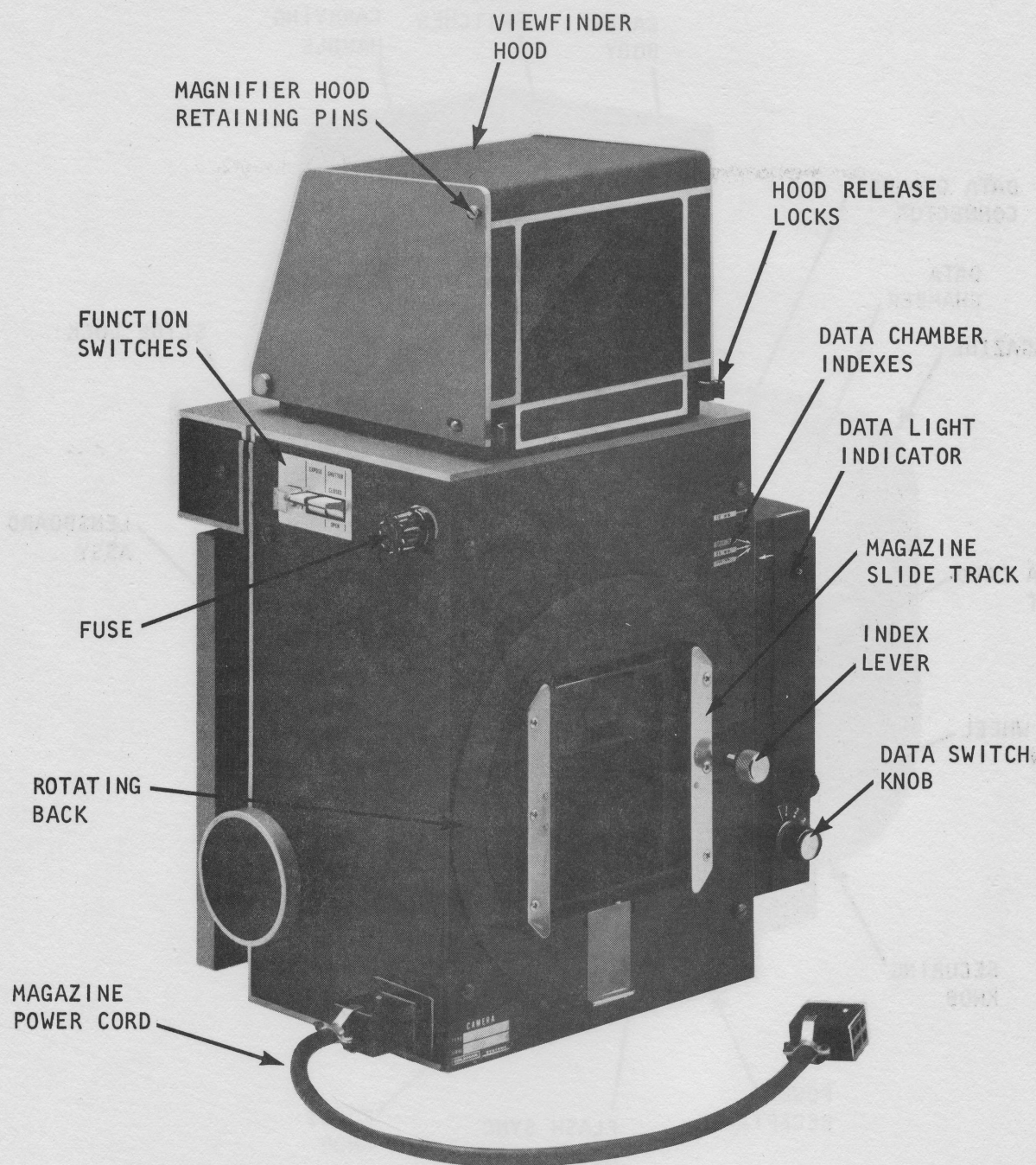
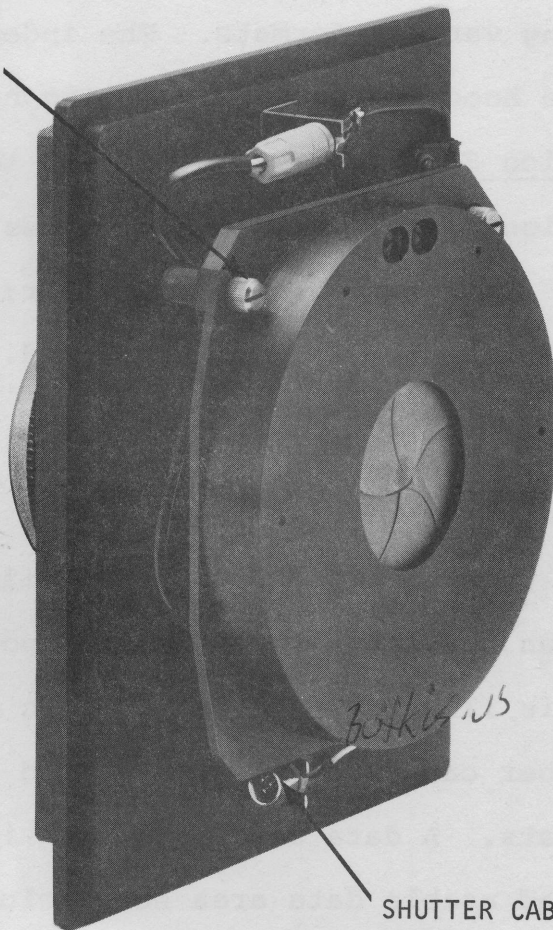


FIGURE 2

Single Lens Reflex Camera

SHUTTER TO
LENSBOARD
SCREWS (3)



SHUTTER CABLE
RECEPTACLE

FIGURE 3

Lensboard Assembly

back has a universal magazine mounting interface.

3. Viewing Hood - The viewing hood on top of the camera permits viewing and focusing through the camera lens. The viewing hood can be rotated through 360 degrees for viewing from all sides. Masks are provided for framing various formats. The indentation at the top of the hood serves as a carrying handle.
4. Function Switches - Switches for the following functions are located on the sides of the camera body: (a) Expose; (b) Shutter; (c) Mirror; (d) Preview; (e) Shutter Speed.

B. DATA CHAMBER

The camera comes equipped with a data chamber (optional) to record the information onto the film from a data card and an automatically advancing pose I.D. wheel. The data is illuminated by electronic flash. The data chamber can be easily positioned for various film formats. A data card interlock is provided. The recommended usable data area not including data wheel I.D. is 1-7/8" x 1/2" reduced to 7/8" x 1/4" on film.

C. LENSBOARD ASSEMBLY

The Lensboard Assembly consists of the following:

1. Shutter - The shutter is a five bladed electrically operated shutter which can be used with any lensboard. The speed of 1/50 or 1/100 of a second can

be selected by positioning the Shutter Speed Switch, located on the side of the camera body, to the desired speed. (See Figure 1)

2. Iris - The Lensboard Assembly incorporates a five bladed electromechanical iris. The iris automatically opens when the mirror is in the down (view) position and closes to the preset f-stop when returned to the up position.
3. Lens - Lenses are available in 105mm f/4.5 (retro-focus), 150mm f/4.5 and 180mm f/4.5. The Lensboard Assembly can be easily changed for selection of desired lens; refer to Lensboard Assembly instructions.

D. FILM MAGAZINE

The magazine is usually a C-55, C-58, D-56, F-80 or D-108. The magazine operates from a standard 115VAC, 50 or 60 Hertz source. Operation is completely automatic and the film will advance one frame each time the expose switch is actuated. For detailed information, refer to the magazine manual. *Butkus.us*

E. OPERATING CABLES

The operating cable furnished with the SoLaRon Camera connects into the mating 8-pin receptacle on the camera body. There are two (2) separate cords leading from the connector.

1. Power Cord - The power cord is twelve (12) feet long

and terminates in a 3-pin grounded plug. The plug mates with all grounded convenience outlets, 115VAC. If a two (2) prong adapter is used, the third prong or pigtail should be connected to an external ground.

2. Operating Switches - The cable for the operating switch is eight (8) feet long for freedom of movement around the camera during posing and working with the subject. The operating switches for "expose" and "view" are located in a "pistol grip" handle for ease of handling.
3. Flash Sync Cord - A special two (2) prong connector is furnished for installation on your strobe cord. The mating connector is located on the camera body next to the 8-pin receptacle. The user can adapt the sync cord for use with any type strobe system.

F. ACCESSORIES

1. Data Chamber - A data chamber described in Section "B" can be easily mounted to the camera.
2. Patch Cable - A patch cable must be used when magazines with a 4-pin connector are used with the SoLaRon Camera System.
3. Magnifier Hood - The magnifier hood attaches to the viewing hood on top of the camera when a magnified and light shielded view of the picture image is desired.

4. Carrying Case - The carrying case is a double locked suitcase type with foam rubber inserts with cutouts to accommodate the SoLaRon Camera System and accessories.
5. Viewing Slide - A viewing slide is furnished for focusing through the back of the camera.
6. Viewing Masks - Viewing masks are available dependent on desired format. (See chart under Assembly Instructions)

II. ASSEMBLY INSTRUCTIONS

Refer to Figures 1 & 2 for nomenclature of the camera system.

A. CAMERA BODY

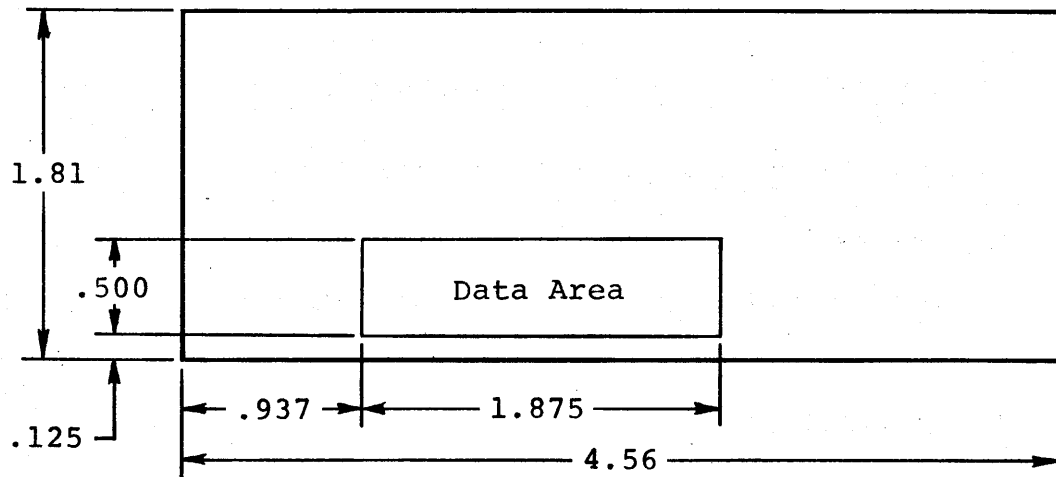
Set up the body on a substantial tripod or mounting platform. The base of the camera contains a 1/4 - 20 threaded hole for the attachment of the camera to the tripod.

B. DATA CHAMBER

Rotate the light shield, located below the data window, until it clears the data housing and insert the data chamber into the slot located on the side of the camera body. Pull the knurled securing knob out to its stop and slide the data chamber to its full down position. Push the securing knob in and turn clockwise until it engages the locknut in the camera body. Plug the 8-pin data chamber connector into its mating connector on the camera body. Reach through the back of the camera and move the light shield toward the aperture opening. If a data chamber is not used, an

adapter plate cover with bypass plug must be installed over the data chamber opening and plugged into the data chamber connector on the camera body.

1. Positioning - (Figure 2) The data chamber must be positioned to match the film format being used. Loosen the securing knob (Figure 1) and slide the data chamber to the position desired by lining up the index arrow on the data chamber with the colored index mark on the camera body corresponding to the magazine format to be used. (See Figure 2) The index marks are for vertical positioning only; horizontal position formats can be located in the following manner: Using a viewing slide, mark the format areas in the correct position on the viewing slide. Insert the viewing slide on the camera. With the shutter open, move the data chamber until the data window is in the correct position of the format area. Mark this position on the index mark.
2. Data Card - Data information, in addition to the pose I.D., can be added to the exposure by insertion of a data card. The size of the data card to be used is shown below. A medium grade white index paper should be used. Information to be recorded must be within the "Data Area."



3. Card Insertion - The data information should be oriented as shown in the "Data Area" of card and the card should be inserted with the data information facing the camera. Make sure the data card is fully seated in the data slot (see Figure 2) in order to close the data interlock. The camera will not work if a data card is not properly inserted. *Butkus 105*
4. Data Exposure - The exposure of the data information is determined by the setting of the data switch which controls the brightness of the lamp flash. The correct setting will vary with the speed of the film. The recommended starting setting is 3. The I.D. wheel will advance each time an exposure is made and the letter which appears in the window is the same that is recorded on the film. The green

data lamp indicator will light each time the data strobe flashes.

C. LENSBOARD ASSEMBLY (Figure 3)

To attach the lensboard, move the slide lock to the left. Connect the 3-pin connector cable, protruding from the camera, to its mating connector on the lensboard assembly. Rotate the lensboard assembly until the connector is at the bottom with the cable routed over the top of the shutter assembly. Insert the bottom edge of the lensboard assembly behind the retaining plate. Swing the lensboard assembly into position and move the slide lock to the right. This will cause the slide lock to move down, locking the lensboard assembly in position. CAUTION: Make sure the cable is not in the optical path by viewing through the back while focusing the camera.

1. Changing Lenses

To change lenses proceed as follows:

- a. Remove lensboard assembly;
- b. Disconnect the shutter cable (refer to Figure 3);
- c. Loosen the three (3) screws holding the shutter to the lensboard assembly;
- d. Assemble the selected lens and lensboard to the shutter assembly by tightening the three (3) screws;
- e. Reconnect the shutter cable to the lensboard;

f. Install lensboard assembly.

D. VIEWING MASK

Select the viewing mask for the correct magazine format (see chart below). Release and lift up on the viewfinder hood by depressing the black spring locks located on both sides of the cover (Figure 2). Insert the mask, letter side up, over the top of ground glass of the viewfinder by lining up the holes in the mask with the two pins adjacent to the ground glass. Depress the spring locks and close the viewfinder hood.

VIEWING MASK FORMATS

D56	SPLIT 70MM	VERTICAL
D56	SPLIT 70MM	HORIZONTAL
F80	46MM	VERTICAL
F80	46MM	HORIZONTAL
C55	35MM	VERTICAL
C55	35MM	HORIZONTAL
C54	35MM	VERTICAL
C54	35MM	HORIZONTAL

E. MAGNIFIER HOOD

Install the magnifier hood by engaging the slots on the sides of the hood over the retaining pins on the

viewing hood (Figure 2).

F. OPERATING CABLES

1. Power and Operating Cord - Plug the 8-pin connector into its receptacle on the camera body. Plug the three (3) pin power plug into any grounded 115VAC outlet.

NOTE: SINCE THE CAMERA MAY FIRE WHEN THE POWER CORD IS PLUGGED IN, THIS SHOULD BE DONE PRIOR TO PLUGGING IN THE MAGAZINE.

2. Flash Sync Cord - Plug the sync cord into its two (2) prong mating connector located on the camera body next to the power and operating cord connector. Adapt and connect the other end to the strobe.

G. FILM MAGAZINE

Load the magazine with the desired film; refer to the magazine manual. Slide the magazine into the slide-track until the aperture plate is in firm contact with the retaining lip at the end of the slide track (Figure 2). Plug the magazine connector into the mating receptacle on the camera. (CAUTION: BEFORE INSTALLING OR REMOVING THE MAGAZINE MAKE SURE THE VIEWING HOOD IS ROTATED TO ALIGN WITH THE BODY OF THE CAMERA.)

III. OPERATION OF THE CAMERA

A. FUNCTION SWITCHES

1. Mirror - The mirror function is controlled from either of two locations, the "view" switch on the "pistol grip" handle of the operating cord or the "mirror" switch on the body of the camera. Either switch, when depressed, will cause the mirror to move to its down position and the shutter and iris to open for viewing at the hood. The mirror switch, located on the body of the camera, is a double throw switch which enables the operator to electrically lock the mirror in the down position when viewing.
2. Preview - The "preview" switch, located on the body of the camera, will close the iris to its preset f-stop position when depressed in conjunction with the "mirror down" (view) position. This function is used when it is desired to view the subject at the "f" stop setting in which it will be shot.
3. Expose - An exposure is made each time the "expose" switch is depressed. This may be done from either of two locations; the "expose" switch on the "pistol grip" handle of the operating cord or the "expose" switch on the body of the camera. Because of a built-in protective delay circuit, you must wait at least two (2) seconds after the "expose" switch has been released before another exposure can be made.

If the "expose" switch is depressed prior to expiration of the two (2) second delay, the cycle must be repeated. A double exposure may be made, with a magazine, by unplugging the magazine for the first exposure and plugging it in for the second exposure and film advance.

4. Shutter - The "shutter" switch, located on the body of the camera, is provided for opening the shutter when viewing through the back of the camera. The shutter will open each time the "shutter" switch is depressed and close when released. The iris will stay at its preset opening during this operation.
5. Shutter Speed - The switch controlling the shutter speed is located on the body of the camera. It may be set for either 1/50 or 1/100 of a second. The shutter speed is controlled by an electronic circuit and will adjust automatically to the speed indicated by the switch position.

B. ROTATING BACK

To rotate the back from one format position to the other, pull out on the spring loaded index lever (refer to Figure 2) and rotate the back 90° counter-clockwise for horizontal position, and 90° clockwise for vertical position. The back will lock in at these two positions.

C. DATA

The data light intensity changes from low at setting #1 to high at setting #4. Rotate the knob to the correct setting, depending on speed of film. The recommended start setting is #3.

D. FOCUSING

The camera may be focused by using either of two methods:

1. Depress the "view" or "mirror" switch which will cause the mirror housing to move down and the shutter and iris to open for focusing while viewing through the hood. The lens may be moved to the correct focus position by rotating either of the large knobs located on both sides of the camera body.
2. Focusing may also be accomplished by viewing the subject through a viewing slide installed on the back of the camera in place of the magazine. The shutter may be opened for viewing by depressing the "shutter" switch to the open position. Focusing is then accomplished by rotating either of the large knobs on the camera body. *Both knobs*

E. SEQUENCE OF OPERATION

The following sequence of operation takes place each time the indicated function switch is actuated:

1. Expose - With magazine, data chamber and strobe connected.

- a. Expose switch is closed. Shutter opens for preset period. Data Lamp fires. Strobe fires. Shutter closes. Magazine advances one frame.
 - b. Expose switch is opened. Two second time delay begins. Exposure cannot be made during time delay.
2. Shutter -
- a. Shutter switch is closed. Shutter opens.
 - b. Shutter switch is opened. Shutter closes.
3. Mirror or View -
- a. Mirror or View switch is closed. Mirror moves to down position. Shutter and iris open.
 - b. Mirror or View switch is opened. Mirror moves to up position. Shutter and iris close.
4. Preview - Camera is in "shutter" or "view" condition with shutter and iris full open for viewing.
- a. Preview switch is closed. Iris closes to its preset f-stop position.
 - b. Preview switch is opened. Iris opens to full open position.
5. Shutter Speed - Expose switch is closed. Shutter will open and close at 1/100 or 1/50 of a second, dependent on position of shutter speed switch.

IV. MAINTENANCE

A. LENS AND MIRROR MAINTENANCE

The lens and mirrors should be kept clean. Care should be taken not to scratch these surfaces. They may be safely cleaned only with a soft camel hair brush or high quality lens cleaning cloth. To remove fingerprints or grease, use Kodak Lens Cleaner along with Kodak Lens Cleaning Paper.

CAUTION: Do not use alcohol, solvents or rough, linty cloth.

Do not use abrasive cleaners.

Excessive cleaning may do more harm than good!

V. TROUBLE SHOOTING

Should you encounter difficulties with operation of the SoLaRon Camera System, it is suggested that you review the following trouble shooting check points:

A. CAMERA FAILS TO OPERATE WHEN EXPOSE BUTTON IS PUSHED

1. Operating cable is not connected.
2. Faulty operating cable.
3. Data chamber or bypass plug is not connected.
4. Data card is not inserted.
5. Fuse is blown.

B. ELECTRONIC LIGHTS FLASH BUT NO IMAGE ON NEGATIVE

1. Magazine dark slide is not removed.
2. Lens cover is not removed.
3. Shutter did not open.

C. ELECTRONIC LIGHTS DO NOT FLASH

1. Faulty Sync cable.
2. Defective strobe.

D. DOUBLE EXPOSURE

1. Film not advancing.

E. FILM DOES NOT ADVANCE

1. Magazine not plugged in.
2. Faulty metering switch in magazine.
3. Film is not properly attached to take-up spool.

F. MAGAZINE RUNS CONTINUOUSLY

1. Metering switch in magazine is out of adjustment.
2. Film supply is exhausted.
3. Film is not loaded properly.

G. FILM SCRATCHED

1. Improper loading.
2. Emulsion build-up on rails.
3. Poor processing.

H. SUBJECT IS CUT OFF

1. Film is not advancing properly.

2. Wrong viewing mask.

I. DATA OVEREXPOSED

1. Data card is too white.
2. Data switch is not at correct setting.

J. DATA UNDEREXPOSED

1. Data switch is not at correct setting.
2. Data information is too light.
3. Data card is too dark.

K. DATA EXPOSURE MISSING

1. Data strobe lamp is burned out.
2. Data card is not inserted correctly.
3. Data chamber is not in the correct position.

L. OTHER SWITCH FUNCTIONS DO NOT WORK

1. Shutter and/or iris is not connected.
2. Same as Section V. A.

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SERVICE REPAIRS

If any malfunction develops that requires returning the equipment for repairs, in or out of warranty, please take the following steps:

1. Send full details of the problem and include TYPE and SERIAL NUMBERS. Upon receipt of this information we will send you instructions to return the equipment to Coleman Systems or one of its authorized service centers.

2. If the equipment is to be shipped to us or a service center, forward it transportation prepaid. If requested, an estimate of the charges will be made before the work begins in cases where the equipment is not covered by warranty.

3. Whenever possible, return the equipment in its original carton and packing. If such is no longer available, pack the equipment in a strong exterior container, and surround equipment with excelsior or similar shock-absorbing material.

4. Equipment should not be shipped for repair until shipping instructions have been received from Coleman Systems.

REPLACEABLE PARTS

When ordering replacement or spare parts, be sure to identify the part and give the TYPE and SERIAL NUMBER of your camera or magazine.