

I-MARC 200

FOLLOWSPOT

USER MANUAL

MODEL: IM-200/120



PHOEBUS MANUFACTURING
2800 THIRD STREET
SAN FRANCISCO, CA 94107
U.S.A.

415 550 1177 TEL
415 550 2655 FAX
www.phoebus.com

**i-marc 200 FOLLOWSPOT
USER MANUAL**

IM-200/120

<u>CONTENTS</u>	<u>PAGE</u>
LIMITED WARRANTY	1
CONTROL DESCRIPTION (Features).....	2
CONTROL DESCRIPTION (Specifications).....	2
BASIC SETUP AND ASSEMBLY	2-3-4
OPTICAL SYSTEM OPERATION	
I. SET UP AND FOCUSING	4
II. BEAM CONTROL.....	4
TECHNICAL DATA	
I. LAMP	5
II. ELECTRICAL.....	5
MAINTENANCE	
I. LAMP INSTALLATION.....	5
II. LENS CLEANING	6
III. COLOR GEL REPLACEMENT.....	6
IV. HOUSING REMOVAL AND LUBRICATION	6
V. TROUBLESHOOTING.....	6
PARTS LAYOUT.....	7-8
PARTS DESCRIPTION	9
REPLACEMENT PARTS LIST	10
WARRANTY.....	11

LIMITED WARRANTY

Thank you for purchasing the Phoebus Manufacturing I-Marc 200 Model #IM-200/120.

The Phoebus Manufacturing I-Marc 200 is guaranteed against defects in material and workmanship for a period of one year from date of purchase from Phoebus Manufacturing. In case of difficulty, contact Phoebus Manufacturing or your dealer for repair or return instructions. Iris and dowser are guaranteed for six months under normal use.

Lamps are excluded from this warranty. This warranty does not apply to mechanical defects caused by rough handling or to damage caused by improper operation not in accordance with this manual. Cause of defect is in the sole judgement of Phoebus Manufacturing.

This warranty is voidable at Phoebus Manufacturing's option under the following circumstances:

- User makes unauthorized modifications (electrical or mechanical).

- The unit is connected to improper voltage supply.

- Any other condition occurs which causes catastrophic failure or impairs Phoebus Manufacturing's ability to render proper service.

If the unit is modified by the customer without permission, the customer agrees to pay for any time or parts necessary to remove the modifications before repair, if necessary.

Phoebus will not be responsible for consequential damages caused by failure, for whatever reason, of equipment of its manufacture. Sole liability is for repair or replacement (at Phoebus Manufacturing's option) of the defective equipment under the terms described above.

CONTROL DESCRIPTION

Features

- | | |
|---------------------------|---|
| 1. POWER SWITCH | Off- circuit one (cooling)- Circuit two (on). |
| 2. FUSE | 3AB 7AMP |
| 3. REAR LENS CONTROL | Used to focus image. Turn handle clockwise to lock and counterclockwise to unlock. Slide handle to focus. |
| 4. ADJUSTABLE TILT HANDLE | Friction lock for vertical tilt of unit. |
| 5. FRONT LENS CONTROL | Changes image size. Turn handle clockwise to lock and counterclockwise to unlock. Slide handle forward for smaller image, spot distribution, long throws. Slide handle back for larger image, flood distribution, short throws. |
| 6. DOWSER | Mechanical Dimmer. Opens when lever is moved towards operator. |
| 7. IRIS | Controls size of image. Opens widest when lever is moved towards operator. |
| 8. COLOR CONTROLS | Six controls. Gel is inserted in beam when lever is moved down. |
| 9. HEIGHT COLLAR | Slides up and down yoke to raise or lower unit. |

SPECIFICATIONS

- | | |
|-------------|-----------------------------------|
| 1. THROW | 25 to 150 feet |
| 2. LAMP | SMR-202/D1 or UV1 |
| 3. SIZE | 28.5"L x 51"H x 10.5"W |
| 4. WEIGHT | 60 pounds including base |
| 5. TILT | 70° down, 60° up |
| 6. SWEEP | 360° |
| 7. POWER | 120 volt 50/60Hz under 5 amps |
| 8. CONTROLS | Iris, Dowser, Six Color Boomerang |
| 9. OPTICS | 4" rear, 6" front |

Basic Setup and Assembly

1. Unpack and check for shipping damage. Box contents contains the following:
 - a. (1) i-marc 200 Followspot.
 - b. (1) Yoke Assembly.
 - c. (1) Yoke Insert Tube.
 - d. (3) Cast Aluminum base legs.
 - e. (1) Height collar and handle.
 - f. (1) Hardware kit w/ 6 5/16-18 x 1 1/2" hex head bolts, 6 hex nuts and 6 lock washers.
 - g. (1) Accessory kit w/ 2 lens handles, 2 adjustable yoke handles, 2 control handles, 2 medium Brake washers, 2 small brake washers.
 - h. (1) Lamp (Not included with purchase)

ASSEMBLY INSTRUCTIONS

1. Find the cast aluminum base legs. One at a time, with the hollow side facing down, place three base legs around the bottom of the yoke tube. Note: either end of tube can be top or bottom. As you place the legs around the tube, simultaneously insert the hex head bolts into the pass through holes on each of the base leg. Slide on the lock washer and hand tighten the hex nuts. Using a 1/2" socket, nut driver or open end wrench. Proceed to Alternately tighten each bolt. To prevent gaps between the legs do not tighten any one bolt completely, tighten bolts equally.
2. Next Insert 3 casters into the base legs. Occasionally the base leg through hole may accumulate excess powder coating, making it difficult to insert casters. Light filing with a rattle file can be used to clean excess coating. Slide the height collar ring onto the yoke tube, followed by the height collar washer. Then insert the yoke into the base insert tube. Screw in the height collar handle and raise or lower to desired height and lock handle into place.
3. Slide the small, then the large friction washers onto the threaded stud of the adjustable tilt handle. Thread handle into the bail until it is flushed to the yoke weld nut on the other side of the bail. Spread washers fully apart so that the yoke can be inserted between them.
4. Lift the i-marc 200 using the front and rear of the chassis as supports. Position the bail handle shafts in the U-shaped slots at the top of the yoke. Ensure that the washers are positioned properly. Turn the tilt lock handles to tighten the grip on the yoke. Push the button on the tilt handle for suitable handle positioning.
5. Unscrew the eight spring activated captive thumbscrews located on either side of unit. Lift off the housing and set aside.
Next, unscrew the three 6-32 x 1/2" knurled brass thumbscrews which button down the lamp mount plate. Using care to not lose the thumbscrews, remove the plate. Unpack the lamp and inspect for damage. The lamp interfaces with the lamp ring mounted on the lamp spring side of the plate. Notice the cut out in the bottom of the lamp plate. The lamp filament must align vertically in the middle of this lamp plate cut out.
Next, pull the spring mounted red phenolic lamp seat around base of the lamp to snugly seat the lamp. Replace the loaded lamp plate and button down with the three brass knurled thumbscrews.
Next, you will need to plug in the lamp to the ballast leads. Insert the male lamp plug into the female receptacle located on the ballast. Plugs are designed to insert one way only. If the plugs do not easily mate, do not force. Rotate 180 degrees for proper insertion.
Next, locate the two zinc plated steel control shafts. Thread one of the two control shafts into the iris control bracket and the second into the dowser swivel, hand

tighten. The shafts have flat cut outs at one end of the shaft, Using a(n) open end wrench tighten the shafts securely. A nyloc nut and washer are supplied to fully secure shaft.

Next, unscrew the two 1/4-20 phillips head shipping screws and washers, remove and save screws for future shipping use if needed. Slide the metal washer (first) and then the fibre lens washer onto the threaded stud of the lens handles. Insert and hand tighten to lock down (clockwise) and loosen to operate (counterclockwise).

Next, replace the housing by lining up the two control shafts with the rubberized control slots on the housing. Lower housing onto chassis and Button down with thumbscrews.

Lastly, Screw the two black control knobs onto the iris and dowser control shaft to complete the assembly process. The Imarc is now ready for operation.

SYSTEM OPERATION

I. SETUP AND FOCUSING

1. The i-marc 200 is equipped with a three position switch. On, Cooling & Off. Be sure that the switch is in the off position (down) before connecting the AC line cord into a 110-120 VAC Grounded Receptacle. Flip the power switch to the middle fan, position for cooling purposes. Note: the factory does not recommend cooling the lamp after operation. The cooling feature is provided for those situations where cool down is needed for quick lamp replacement. Flip the switch to the on, up position. Lamp will strike immediately, and will come up to full output within thirty seconds. Lamps are not classified as hot-restrike. However we have found that the lamps will restrike within seconds of shut down. The lamp adjustment thumbnuts have been factory set, and should not need adjusting. However, if needed the adjustment thumbnuts can be accessed through the rear panel. Proper alignment can be achieved with no more than 1/4 to 1/2 turn per screw in either direction. Failure to maintain proper distance may result in reduced lamp and color gel life.
2. Move iris and dowser controls toward operator to open.
3. Move front lens forward for spot or rearward for flood distribution. Position can be chalk marked on side of chassis near handle set.
4. Move rear lens until edge of pattern is in focus. Position may be adjusted for hard or soft edge.
5. Close down the iris by moving its control handle away from the operator.
6. Focused may change slightly with iris closed. Best focus setting is with iris half open.
7. To "zoom" the lenses to a new position, a coordinated motion of both front and rear lenses is used. Note that these lens move opposite to each other to maintain focus

II. BEAM CONTROLS

1. The dowser gradually dims the beam until completely blacked out. Move the control handle away to close and toward to open the dowser.
2. The iris provides a 6 to 1 change in image diameter. It is controlled by the front handle, away to close and toward to open. The brightest spot is obtained with the iris open and the lenses adjusted for the largest spot desired. Smaller spots are then obtained using the iris.

TECHNICAL DATA

I. LAMP

The i-marc 200 uses the Ushio SMR-202/D1, or the SMR-200/UV1 (optional conversion for blacklight projection) Emarc DC Flicker Free UV enhanced metal halide Lamp. The lamp envelope is axially mounted in a dichroic reflector. The internally mounted ballast is used to operate the lamp from standard 120 volts.

Lamp life is an average of 1500 hours, however at normal use it is rated at 2000 hrs.

Correlated color temperature is about 5600° Kelvin, Xenon-like light for crisp white imaging.

Take care in handling the lamp, avoid touching the arc tube. Use the outside of the reflector or the base. If the arc tube is touched, clean it with alcohol or freon before use to prolong lamp life.

The lamp is cooled by a fan located below the lamp. This fan is essential to lamp operation. Improper cooling will cause decreased lamp life. Do not allow lamp to cool before cutting power. While the lamp is not classified as hot restrike, it will restrike within 30 seconds.

II. ELECTRICAL

The Imarc operates on 105 to 125V 50/60Hz A.C. Present models draw 7 amps or less, (replace using 7A 3AB Bussman fuse) starting or running, at high power factor. Within the unit and directly beneath the lamp bracket assembly, you will find the internally mounted Ballast used to supply the lamp with the proper voltage and current. **There are no user serviceable parts located on this ballast!!** Refer to the trouble shooting guide located on page 6 of this manual, or contact the local dealer/ representative in your area.

MAINTENANCE

I. LAMP INSTALLATION

1. Turn off and unplug unit.
2. Loosen the eight thumbscrews on both sides of housing.
3. Remove the two control handle shafts from inside the housing. Black knobs may be removed leaving the shafts in place.
4. Lift and remove housing from chassis.
5. Unscrew the three knurled brass thumbscrews to remove lamp mount plate. If lamp is being installed for the first time, discard the packing material between the seat and plate.
6. Spread the spring loaded lampseat and insert the lamp into the seat and lamp ring assembly. Very important!! Metal filament must be referenced at 6 o'clock and centered in the cut away of the lamp ring assembly.
6. Replace housing, control handles and thumbscrews. Plug in Imarc and flip the switch to the middle position (cooling only) and then to the up (run) position.

II. LENS CLEANING

1. Slide front lens to its extreme forward position using the control handle.
2. Clean the front lens using glass cleaner and a soft, lint-free cloth. The rear surface may be reached by removing the housing.
3. Slide rear lens fully back and clean both surfaces.
4. Replace housing.

III. COLOR GEL REPLACEMENT

1. Unscrew four thumbscrews on either side of the color boomerang.
2. Lift boomerang off. Position it upside down, control levers facing you.
3. Raise the lefthand (operator right) gel holder and lower all the others.
4. Remove three clip fasteners around the gel holder rim.
5. Separate rings, remove old gel.
6. Use the ring as a pattern to cut new gel. Darker gels should be put in lefthand (operator right) gel holders.
7. Insert gel, cover with ring and secure with three clips.
8. Lower lefthand (operator right) gel holder and raise next one.
9. Repeat steps #4 to #8. To access the bottom gel clip, raise all the gels to the left or right and lower the one being worked on.
10. As you move toward the right-hand gels (operator right), insert progressively lighter colors. The lefthand (operator right) holders should be used for deep blue or purple gels.
11. Replace boomerang assembly and secure with four thumbscrews.

IV. HOUSING REMOVAL AND LUBRICATION

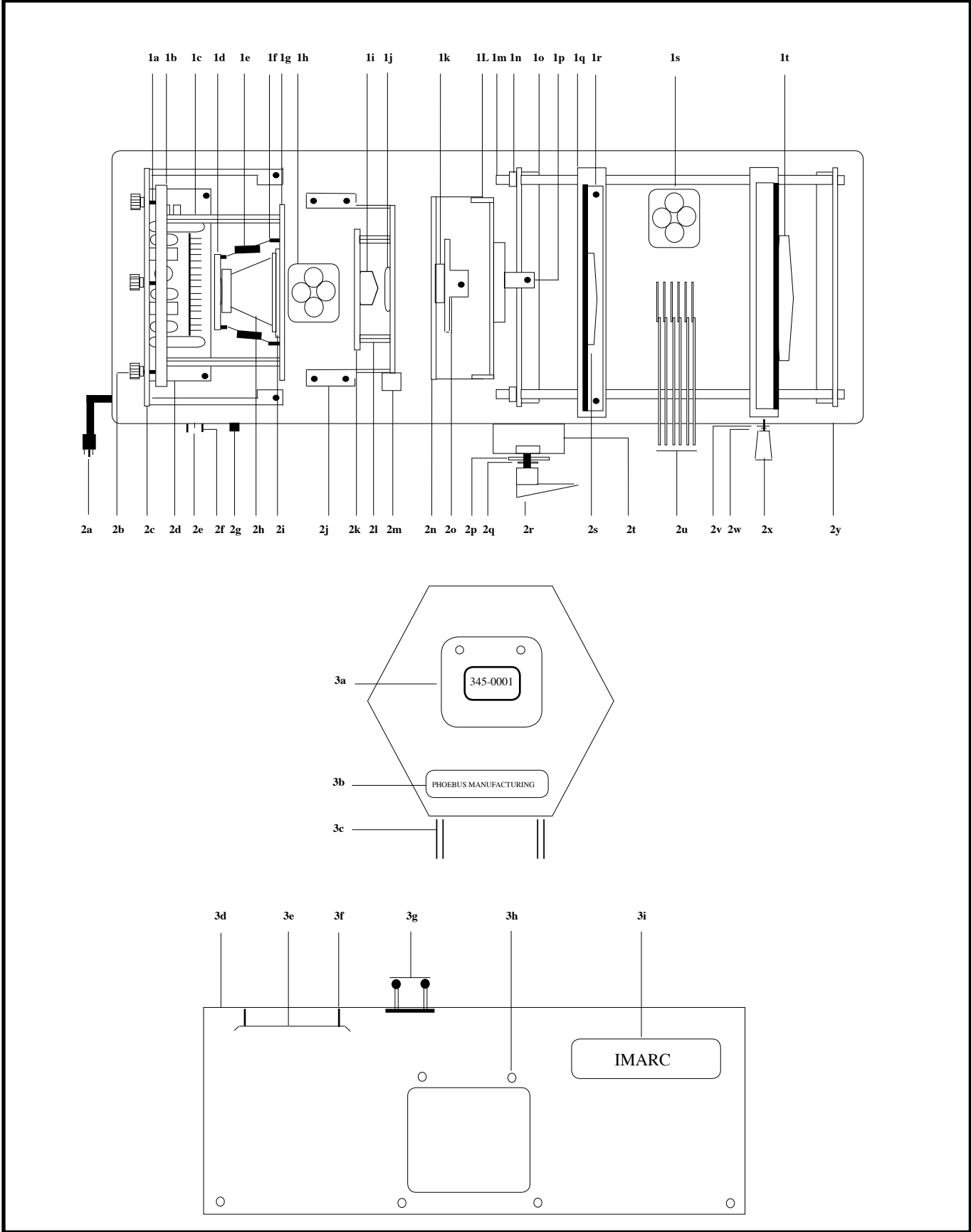
1. Unscrew the two control handles on top of unit and remove.
2. Unscrew the thumbscrews.
3. Tighten vertical tilt lock knobs on either side of yoke (unit will be unbalanced with housing off).
4. Grip housing at front and rear top edges.
5. Lift straight up until front lens is cleared, and remove.
6. Wipe all bearing shafts with a cloth dampened with furniture wax.
7. Operate front and rear lenses forward and back to distribute wax.
8. Replace housing, holding front and rear. Guide front over lens and line up front housing and chassis.
9. Insert and screw in two control handles.
10. Screw in thumbscrews.

V. TROUBLESHOOTING-LAMP AND BALLAST

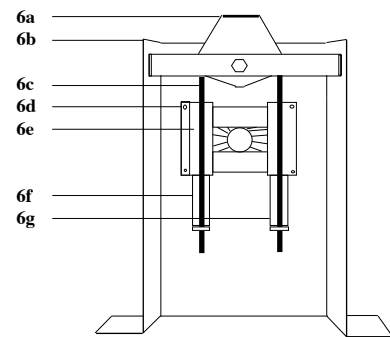
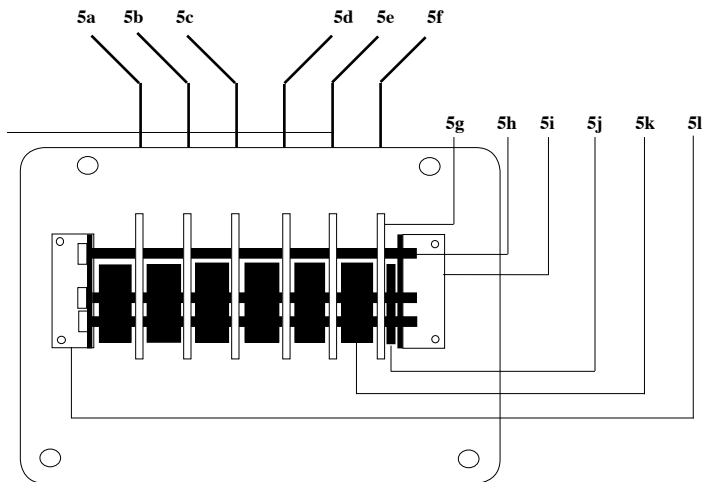
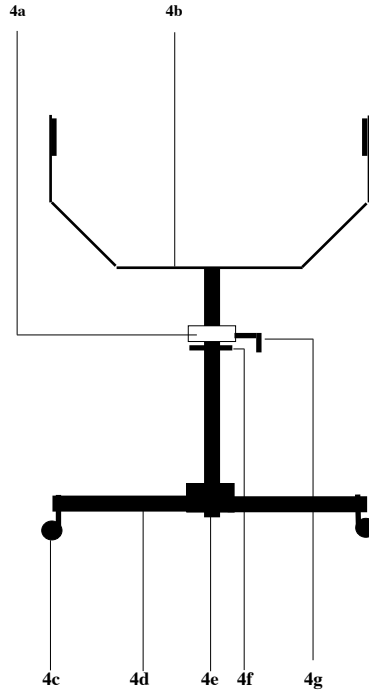
Lamp does not light:

1. If unit is off, check power and fuse. Replace fuse with 7 amp 3AB fuse.
2. If unit is on and the fan is running, check the following:
 - (a) Check that the lamp connector is firmly seated into its socket. Lamp may be defective or reached the end of its life.
 - (b) The power supply contains no user serviceable parts. Contact Phoebus Mfg.

PARTS LAYOUT (CHASSIS AND HOUSING)



PARTS LAYOUT (BASE, COLORBOOM & DOWSER ASSEMBLIES)



LAYOUT DESCRIPTION

CHASSIS INTERNAL COMPONENTS

- | | |
|----------------------------|--|
| 1a.. Lamp Adjustment Screw | 2a. Grounded AC line cord |
| 1b. Lamp Adjustment Plate | 2b. Lamp adjustment knurled brass thumbnut |
| 1c. Lamp Adjustment spacer | 2c. Lamp Bracket |
| 1d. Lamp Seat | 2d. Power supply (ballast) |
| 1e. Lamp Mount Spring | 2e. Three position switch |
| 1f. Spring Anchor | 2f. Switch Guard |
| 1g. Lamp Mount Plate | 2g. Fuse Holder |
| 1h. Fan & Fan Bracket | 2h. SMR-202/D1 or UV1 Lamp |
| 1i. Aspheric lens | 2i. Lamp Mount Ring |
| 1j. Field Lens | 2j. Field Lens Bracket |
| 1k. Dowser Swivel Washer | 2k. Aspheric Lens Plate |
| 1l. Dowser Bracket | 2L. Lens spacer |
| 1m. Lens Rod | 2m. Terminal Block |
| 1n. Lens Rod Collar | 2n. Dowser Bracket |
| 1o. Rail Bracket | 2o. Dowser Swivel |
| 1p. Iris Assembly | 2p. Medium Brake Washer |
| 1q. Lens Block | 2q. Small Brake Washer |
| 1r. Rear Lens Bracket | 2r. Adjustable Tilt Handle |
| 1s. Gel Fan & Bracket | 2s. Rear Lens |
| 1t. Front Lens | 2t. Bail |
| | 2u. Color Frames |
| | 2v. Lens Washer |
| | 2w. Metal Lens washer |
| | 2x. Lens Handle |
| | 2y. Chassis |

HOUSING, BASE, COLOR BOOM AND DOWSER ASSEMBLIES

- | | |
|---------------------------------------|-------------------------------|
| 3a. Rear Access door and serial plate | 5a. Gel Frame 15 Degree Right |
| 3b. Phoebus mfg. Label | 5b. Gel Frame 30 Degree Right |
| 3c. Chassis Guide Handle | 5c. Gel Frame 45 Degree Right |
| 3d. Housing | 5d. Gel Frame 15 Degree Left |
| 3e. Light Baffle | 5e. Gel Frame 30 Degree Left |
| 3f. Baffle Spacer | 5f. Gel Frame 45 Degree Left |
| 3g. Control Handle and knob | 5g. Color Frame Ring |
| 3h. Thumbscrew | 5h. Boom retaining Bolt |
| 3i. Product Label | 5i. Boom Bracket Left |
| | 5j. Boom Thrust Washer thin |
| 4a. Height Collar | 5k. Boom Thrust Washer Thick |
| 4b. Yoke | 5L. Boom Bracket Right |
| 4c. Caster w/Brake | |
| 4d. Cast Aluminum base leg | 6a.. Dowser Swivel |
| 4e. Base-Yoke insert tube | 6b. Dowser Bracket |
| 4f. Height Collar Washer | 6c. Dowser Connecting Rod |
| 4g. Height Collar Handle | 6d. Spacer Bar |
| | 6e. Slide Retainer plate |
| | 6f. Upper Dowser Jaw |
| | 6g. Lower Dowser jaw |
-

Replacement Parts Price List

Prices subject to change without notice

Stock #	Description	Set #	List \$
Internal and External Parts			
IM-001	Housing	1	225.00
IM-002	Chassis	1	175.00
IM-003	Lamp Bracket	1	55.00
IM-004	Lamp Mount Plate	1	35.00
IM-005	Ballast Bracket	1	35.00
IM-006	Field Lens Bracket	1	35.00
IM-007	Dowser Bracket	1	40.00
IM-008	Iris Bracket	1	35.00
IM-009	Rear Lens Bracket	1	18.00
IM-010	Front Lens Bracket	1	18.00
IM-011	Lens Block set	2	65.00
IM-012	Lamp Fan Bracket	1	18.00
IM-013	Gel Fan Bracket	1	18.00
IM-014	Handle Set w/ Seats	2	32.00
IM-015	Boom Plate	1	18.00
IM-016	Boom Bracket Set	2	15.00
IM-017	Color Frame Set	6	72.00
IM-018	Light Baffle	1	12.00
IM-019	Dowser Swivel	1	15.00
IM-020	Iris Mount Assemb.	1	165.00
IM-021	Rail Bracket Set	2	18.00
IM-022	Lens Rod Set w/Clips	2	12.00
IM-023	Rear Brake Arm	1	12.00
IM-024	Ballast Tray	1	18.00
IM-025	Rear Access Door	1	15.00
IM-026	Access Door Frame	1	12.00
IM-027	Dowser Jaw Set	1	18.00
IM-028	Lamp Adjustment Plate	1	22.00
IM-029	Lamp Index Ring	1	12.00
IM-030	Boom Thrust Washer set	7	14.00
IM-031	Lamp Bracket Hinge	1	8.00
IM-032	Rear Door Hinge	1	8.00

Stock #	Description	Set #	List \$
Electrical Parts			
IM-040	Ballast	1	750.00
IM-041	SMR-202/D1 Lamp	1	350.00
IM-042	SMR-202/UV1 Lamp	1	450.00
IM-043	Fuse	5	32.00
IM-044	Fuse Holder	1	9.00
IM-045	Lamp Fan	1	25.00
IM-046	Gel Fan	1	25.00
IM-047	Terminal Block	1	10.00
IM-048	Switch	1	18.00
IM-049	Line Cord	1	25.00
Base and Stand Parts			
IM-050	Bail	1	35.00
IM-051	Medium Duty Yoke	1	75.00
IM-052	Base Leg Set	3	105.00
IM-053	Caster w/Brake Set	3	54.00
IM-054	Height Collar	1	18.00
IM-055	Height Collar Handle	1	12.00
IM-056	Base Insert Tube	1	35.00
Optical			
IM-060	Front Lens	1	85.00
IM-061	Rear Lens	1	75.00
IM-063	Aspheric Lens	1	45.00
IM-064	Field Lens	1	35.00
Part Kits			
IM-070	Lens Handle Kit	1	15.00
IM-071	Fiber Washer Kit	1	9.00
IM-072	Label Kit	1	18.00
IM-073	Adjustable Tilt Handle Kit	1	50.00
IM-074	Thumbscrew Kit	1	12.00
IM-075	Switch Guard Kit	1	9.00
IM-076	Control Handle Kit	1	15.00
IM-077	Connecting Rod Kit	1	42.00
IM-078	Retainer spacer bar Kit	1	22.00
IM-078	Knurled Thumbscrew Kit	1	15.00

WARRANTY CARD

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

PLACE OF PURCHASE (DEALER NAME) _____

USER'S NAME _____

COMPANY NAME _____

STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ FAX _____ EMAIL _____



Please fold along the dotted lines and staple
with return address on the outside as shown above.

Thank you!

Place
stamp
here

**PHOEBUS MANUFACTURING
2800 THIRD STREET
SAN FRANCISCO, CA 94107**

ATTENTION: WARRANTY DEPARTMENT