

ULTRA QUARTZ

FOLLOWSPOT

USER MANUAL

MODEL: UQ-120/82



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LIMITED WARRANTY

Thank you for purchasing the Phoebus Manufacturing Ultra Quartz Model #UQ-120/82.

The Phoebus Manufacturing Ultra Quartz Model UQ-120/82 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 clipper 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

- | | |
|-----------------------|---|
| 1) POWER SWITCH | Controls power to diode and fan. |
| 2) FUSE | 3AB 5AMP |
| 3) REAR LENS CONTROL | Used to focus image. Turn handle clockwise to lock and counterclockwise to unlock. Slide handle to focus. |
| 4) TILT LOCK KNOB | 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) CLIPPER | Masks spot to rectangular strip or blackout. Open 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 | 40 to 140 feet |
| 2) Lamp | GE ENX or FLE Lamp |
| 3) Size | 32"L x 51.5"H x 23.5"W |
| 4) Weight | 75.5 pounds including base |
| 5) Tilt | 70° down, 60° up |
| 6) Sweep | 360° |
| 7) Power | 120 volt 50/60Hz under 5 amps |
| 8) Controls | Iris, Clipper, Six Color Boomerang |
| 9) Optics | 3" rear, 6" front |

INITIAL SETUP AND OPERATION

- 1) Unpack carefully and inspect for shipping damage.
- 2) Insert 3 casters into the base legs. Position cast legs around end of 1-3/4" pipe. Secure with the hardware provided. Insert yoke tube into base.
- 3) Slide in first the small then the large yoke knob washers onto the threaded stud of the yoke knob. Thread knob 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 yoke can be inserted between them.
- 4) Lift the Ultra Quartz 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 knobs to tighten the grip on the yoke.
- 5) Insert the two control handles (steel shaft with ball knob) into the slots at the top middle of Ultra Quartz. The handles screw into threaded holes which can be seen through the slots.
- 6) Connect to 105-125 Volt 50/60Hz power line. Switch on. Bulb should light immediately.
- 7) Iris and clipper are controlled by the ball knobs on top.
- 8) The front lens control handle (on lower side) is set for desired throw by sliding it forward for a narrow beam (long throw) or rearward for a wide beam (Spread). It may be locked in place by turning it clockwise. Do not over tighten!
- 9) The rear lens control handle (side of unit, near middle) is used to obtain the desired focus, soft or hard edge. Slide it forward for wide beam (spread) or rearward for narrow beam (long throw). It may be locked in position by turning clockwise. Do not over tighten!
- 10) To obtain desired throw at a given distance, both lenses must be moved. Lens positions may be chalk marked on the side of the unit near the slots for the handles.

OPTICAL SYSTEM OPERATION

I. SETUP AND FOCUSING

- 1) Turn power switch on. Lamp should light immediately.
- 2) Move iris and clipper 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 clipper shapes the image to a strip or a rectangle of variable height. Move the middle control handle away to close and toward to open the clipper.
- 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 Ultra Quartz uses a General Electric ENX or FLE Lamp, 360 watts at 82 volts or equivalent. This is a Quartz lamp mounted in a dichroic reflector. A diode is used to operate the lamp from standard 120 volts.

Lamp life is an average of 75 hours at normal use.

Color temperature is about 3300° Kelvin.

In handling the lamp, avoid touching the quartz arc tube. Use the outside of the reflector or the base. If the quartz 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.

II. ELECTRICAL

The Ultra Quartz operates on 105 to 125V 50/60Hz A.C. Present models draw 5 amps or less, starting or running, at high power factor. A diode is used to supply the lamp with the proper voltage and current.

MAINTENANCE

I. LAMP CHANGE

- 1) Turn off and unplug unit.
- 2) Open door at rear of unit.
- 3) Press lamp socket lever.
- 4) Lift lamp straight up and out its holder.
- 5) Seat new lamp into holder. Push down gently but firmly until you feel it hit a positive stop.
- 6) Plug Ultra Quartz in and turn on. Lamp should light immediately.

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

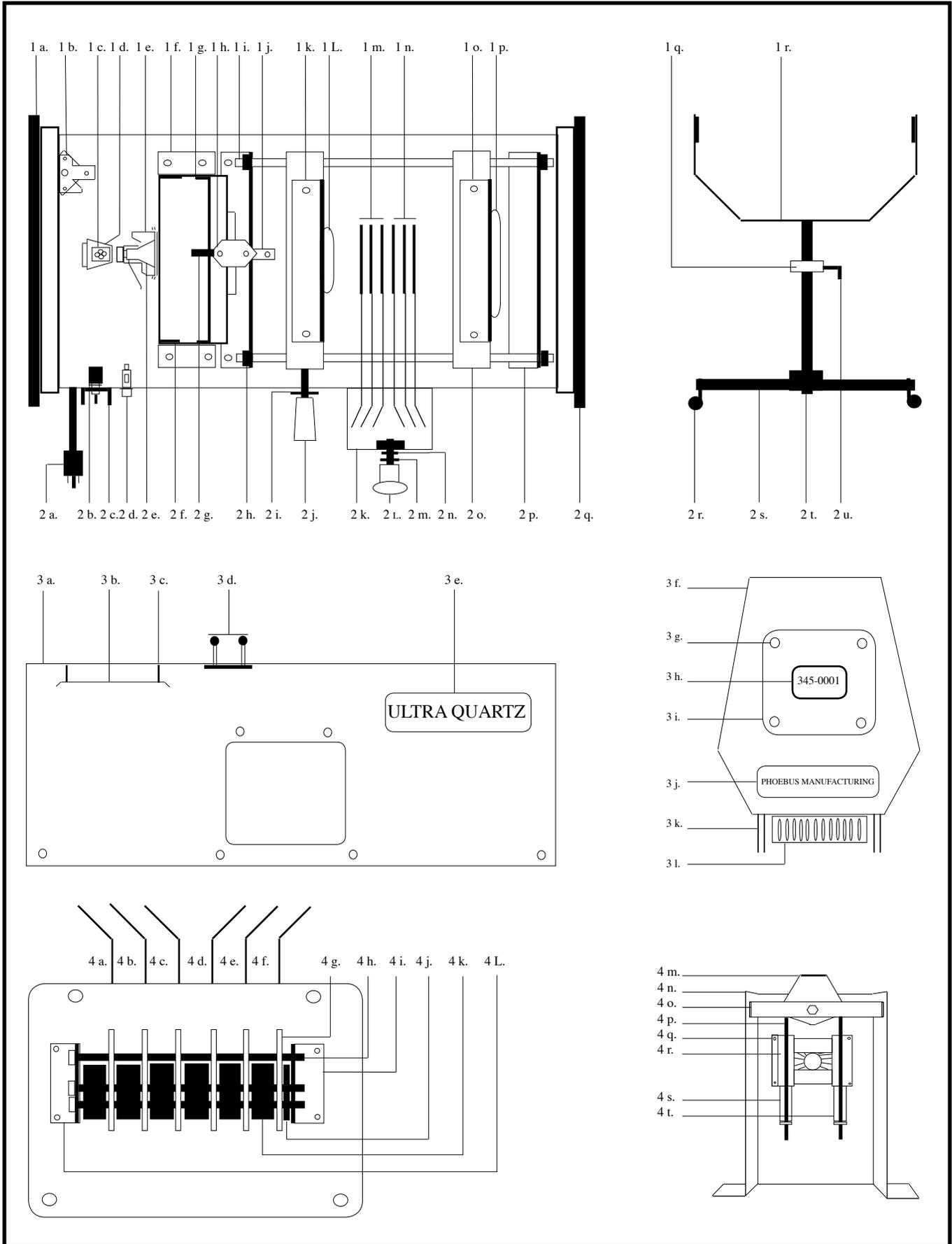
- 1) Unscrew the two control handles on top of unit and remove.
- 2) Unscrew the thumbscrews.
- 3) Tighten vertical tilt lock knobs on either side of yoke (unit will be unbalanced with housing off).
- 4) Grip housing at front and rear top edges.
- 5) Lift straight up until front lens is cleared, and 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 DIODE (ELECTRICAL)

Lamp does not light:

- 1) If unit is off, check power and fuse. Replace fuse with 5amp 3AB fuse.
- 2) If unit is on and the fan is running, check the following:
 - A. Unplug unit, remove housing. Check that the lamp connector is firmly seated in its socket. If so, the lamp may have reached the end of its life. Replace the lamp.
 - B. If the above measures have not been successful, call your distributor or Phoebus Manufacturing for further help.

PARTS LAYOUT



LAYOUT DESCRIPTION

CHASSIS INTERNAL COMPONENTS AND BASE

- | | |
|----------------------------------|-----------------------------------|
| 1a.. Rear Bulkhead | 2a. A.C. Line Cord |
| 1b. Spare Lamp Holder | 2b. No/Off Switch |
| 1c. Fan Motor w/Blade | 2c. Switch Guard |
| 1d. Fan Motor Bracket | 2d. Fuse Holder |
| 1e. Lamp Socket Holder | 2e. Lamp (ENX, FLE) |
| 1f. Iris clipper Bracket | 2f. Lamp Bracket |
| 1g. Iris Clipper Support Bracket | 2g. Clipper Threaded Rod |
| 1h. Clipper swivel | 2h. Retaining collar |
| 1i. Lens Rod | 2i. Lens Washer |
| 1j. Iris Assembly | 2j. Lens Handle |
| 1k. Rear Lens Holder | 2k. Bail |
| 1L. Rear Lens | 2L. Yoke, Tilt Handle |
| 1m. Left Hand Gel Frames | 2m. Medium Brake Washer |
| 1n. Right Hand Gel Frames | 2n. Small Brake Washer |
| 1o. Front lens Holder | 2o. Front & Rear Lens Casting |
| 1p. Front Lens | 2p. Front & Rear Lens Rod Bracket |
| 1q. Height Collar | 2q. Front Bulkhead |
| 1r. Yoke | 2r. Caster w/Brake |
| | 2s. Base Leg Casting |
| | 2t. Base Center Tube |
| | 2u. Height Collar Handle |

HOUSING, REAR BULKHEAD, COLOR BOOM AND CLIPPER ASSEMBLY

- | | |
|--|----------------------------------|
| 3a. Housing | 4a. Gel Frame 15 Degree Right |
| 3b. Light Shield | 4b. Gel Frame 30 Degree Right |
| 3c. Light Shield Standoff | 4c. Gel Frame 45 Degree Right |
| 3d. Iris Clipper Control Handle w/Knob | 4d. Gel Frame 15 Degree Left |
| 3e. Product Label | 4e. Gel Frame 30 Degree Left |
| 3f. Rear Bulkhead | 4f. Gel Frame 45 Degree Left |
| 3g. Thumbscrew | 4g. Color Frame Ring |
| 3h. Serial Label | 4h. Boom retaining Bolt |
| 3i. Rear Access Plate | 4i. Boom Bracket Left |
| 3j. Company Label | 4j. Boom Thrust Washer thin |
| 3k. Chassis Guide Handle | 4k. Boom Thrust Washer Thick |
| 3L. Rectifier Cover | 4L. Boom Bracket Right |
| | 4m. Clipper Swiver |
| | 4n. Iris Clipper Bracket |
| | 4o. Iris Clipper Support bracket |
| | 4p. Clipper Connecting Rod |
| | 4q. Spacer Bar |
| | 4r. Slide Retainer plate |
| | 4s. Upper Clipper Jaw |
| | 4t. Lower Clipper jaw |
-

Replacement Parts Price List

Stock #	Description	Set #	List \$
External Parts			
4000	Chassis	1	149.00
4001	Housing	1	140.00
4002	Front Bulkhead	1	132.00
4003	Rear Bulkhead	1	136.00
4004	Diode Cover	1	106.00
4005	Chassis Guide Handle	2	51.00
4006	Bail	1	59.00
4007	Insert Tube	1	41.00
4008	Base Legs	3	139.00
4009	Switch Guard	1	18.00
4010	Yoke	1	118.00
Internal Parts			
4100	Iris Clipper Bracket	1	63.00
4101	Lamp Bracket	1	69.00
4102	Front Lens Holder	1	49.00
4103	Rear Lens Holder	1	35.00
4104	Rectifier plate	1	19.00
4105	Fan Bracket	1	18.00
4106	Rear Access Door	1	23.00
4107	Rail Bracket	2	17.00
4108	Iris Clipper support Brkt	1	22.00
4109	Iris Clips	3	13.00
4110	Light Shield	1	23.10
4111	Light Shield Standoff	4	13.00
4112	Lens Rod	2	50.00
4113	Slide Retainer Plate	2	22.00
4114	Clipper Connecting Rod	2	30.00
4115	Clipper Spacer Bar	2	22.00
4116	Clipper Top	1	34.00
4117	Clipper Bottom	1	34.00
4118	Clipper Kit	2	58.00
4119	Clipper Swivel	1	28.00
4120	Lens Block	2	93.00
4121	Diode brkt Standoff	4	6.00

Stock #	Description	Set #	List \$
Electrical Parts			
4200	Rectifier	1	28.00
4201	Rectifier Thermal Kit	1	3.00
4202	ENX Lamp	1	39.00
4203	FLE Lamp	1	41.00
4204	Fuse	5	16.00
4205	Fuse Holder	1	9.00
4206	Lamp Fan Motor	1	41.00
4207	Lamp Socket	1	11.00
4208	Line Cord	1	35.00
4209	Switch	1	11.00
4210	Terminal Strip	1	12.00
Misc Parts			
4300	Caster Kit with Brakes	3	47.00
4301	Color Fasteners	36	8.00
4302	Iris Clipper Control handle	2	28.00
4303	Fan Blades	1	6.00
4304	Height Collar	1	26.00
4305	Height Collar Handle	1	18.00
4306	Iris	1	165.00
4307	Label Kit	1	36.00
4308	Lamp Holder	1	6.00
4309	Medium Brake Washer	2	5.00
4310	Lens Handle	2	15.00
4311	Lens Rod Collars	4	15.00
4312	Lens Mount Washer	7	6.00
4313	Rubber Light Baffle	1	14.00
4314	Short Thumbscrew	14	10.00
4315	Small Brake Washer	2	5.00
4316	Tilt Handle	2	36.00
4317	Wire lead Bushing	2	10.00
4318	Clipper Swivel Washer	1	3.00
4319	Control Handle Knob	2	10.00
4320	Color Gel	6	21.00
4321	Line Cord Strain Relief	1	14.00

Replacement Parts Price List

Stock #	Description	Set #	List \$
Color Boom Parts			
4400	Boom Cover Plate	1	33.00
4401	Boom Bracket Left	1	18.00
4402	Boom Bracket Right	1	18.00
4403	Boom Spring	1	5.00
4404	Boom Thrust Washers	7	50.00
4405	Color Frame Rings	6	47.00
4406	U.Q. Boom Frame 1	1	31.00
4407	U.Q. Boom Frame 2	1	31.00
4408	U.Q. Boom Frame 3	1	31.00
4409	U.Q. Boom Frame 4	1	31.00
4410	U.Q. Boom Frame 5	1	31.00
4411	U.Q. Boom Frame 6	1	31.00

Stock #	Description	Set #	List \$
Optical			
4500	Front Lens	1	181.00
4501	Rear Lens	1	169.00
Assemblies			
4600	Clipper Assembly	1	225.00
4601	Color Boom Assembly	1	274.00
4602	Rectifier Assembly	1	46.00
4603	Fan assem W/Blade &brkt	1	47.00
4604	Iris Clipper Assembly	1	302.00
220 Volt Option			
4700	Transformer	1	211.00
4701	Transformer mount Plate	1	33.00
4702	U-Bolts W/HDWE	1	10.00

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