

KOLLMORGEN CORPORATION

NORTHAMPTON, MASSACHUSETTS 01060

PRICE LIST #4 for MOTION PICTURE PROJECTION LENSES

AUGUST 1965

Subject To Change Without Notice

RETAIL

Member:
TESMA-TEDA

F/1.9

BX-241 SUPER SNAPLITE - 2-25/32" Dia.

(6 elements)		Suggested
E. F. in		
Inches	Speed	Unit Price
2.00	f/1.9	\$230.00
2.25	f/1.9	230.00
2.50	f/1.9	240.00
2.75	f/1.9	240.00
3.00	f/1.9	250.00
3.25	f/1.9	250.00
3.50	f/1.9	260.00
3.75	f/1.9	260.00
4.00*	f/1.9	280.00
4.25*	f/1.9	280.00
4.50*	f/1.9	280.00
4.75*	f/1.9	320.00
5.00*	f/2.0	320.00

*Proven for 70mm application, see aperture stop note.

BX-163 SERIES II SNAPLITE -2-25/32" Dia.

(4 elements)		Suggested
E. F. in		
Inches	Speed	Unit Price
3.50	f/2.0	\$ 220.00
3.75	f/2.0	220.00
4.00	f/2.0	220.00
4.25	f/2.0	220.00
4.50	f/2.0	240.00
4.75	f/2.0	240.00
5.00	f/2.0	240.00
5.25	f/2.2	260.00
5.50	f/2.3	260.00
5.75	f/2.45	260.00
6.00	f/2.55	300.00
6.25	f/2.65	300.00
6.50	f/2.75	300.00
6.75	f/2.85	300.00
7.00	f/2.90	300.00
7.25	f/2.95	350.00
7.50 to 9.00	f/3.0 to f/3.6	350.00*

* Available to extent of existing stock.

F/1.7

BX-290 SUPER SNAPLITE - 2-25/32" Dia.

(7 elements)		Suggested
E. F. in		
Inches	Speed	Unit Price
2.50	f/1.7	\$ 320.00
2.75	f/1.7	320.00
3.00	f/1.7	340.00
3.25	f/1.7	340.00
3.50	f/1.7	360.00
3.75	f/1.7	360.00
4.00	f/1.7	390.00

BX-294 SUPER SNAPLITE - 2-25/32" Dia.

With X-tended Barrel & Built-in Magnifier*

F/1.7X

(11 elements)		Suggested
E. F. in		
Inches	Speed	Unit Price
1.75	f/1.7X	\$ 560.00
1.88	f/1.7X	560.00
2.00	f/1.7X	580.00
2.25	f/1.7X	580.00
2.50	f/1.7X	580.00
2.75	f/1.7X	600.00
3.00	f/1.7X	600.00

* These lens include .69 or .75 magnifiers plus BX-290 optics.
(e.g. 4" BX-290 X.69 = 2.75" BX-294)

BX-265 SUPER SNAPLITE - 4" Dia.

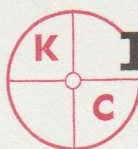
For 35 mm & 70 mm use. (6 elements)		Suggested
E. F. in		
Inches	Speed	Unit Price
5.00	f/1.9	\$ 460.00
5.25	f/1.9	480.00
5.50	f/1.9	500.00
5.75	f/1.9	530.00
6.00	f/1.9	560.00
6.25	f/1.9	600.00
6.50	f/1.9	640.00
6.75	f/1.9	690.00
7.00	f/1.9	750.00

Sizes 7.25" through 11.00" available on
special order. Speeds f/1.95 to f/3.0.
See Notes.

RAPID SHIPMENT (3 days or less)

MATCHED PAIRS

UNMATCHED PERFORMANCE



KOLLMORGEN

CORPORATION

NORTHAMPTON, MASSACHUSETTS 01060

August, 1965

KOLLMORGEN PROJECTION LENS DATA SHEET

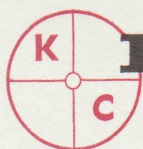
Inches e.f.	Back Aperture				Front Aperture			
	f/2.0 BX163	f/1.9 BX241	f/1.7X BX294	f/1.7 BX290	f/2.0 BX163	f/1.9 BX241	BX294	BX290
2.00		1.182	1.496			1.054	1.765*	
2.25		1.182	1.614			1.185	1.909*	
2.50		1.418	1.772	1.339		1.317	2.206*	1.484
2.75		1.418	1.772	1.418		1.448	2.353*	1.632
3.00		1.500	1.772	1.496		1.580	2.353*	1.778
3.25		1.500		1.614		1.710		1.924
3.50	1.427	1.500		1.715	1.752	1.843		2.070
3.75	1.520	1.614		1.793	1.880	1.974		2.216
4.00	1.620	1.614		1.793	2.030	2.105		2.362
4.25	1.720	1.693			2.130	2.237		
4.50	1.823	1.735			2.270	2.368		
4.75	1.910	1.733	BX265 f/1.9		2.375	2.510	BX265 f/1.9	
5.00	1.910	1.733**	1.890		2.510	2.510**	2.632	

Note: 1. In every case, lens diameter is larger than shown. Dimensions are inner diameters of lens clamp rings, thus indicates exposed glass area.

2. Lens speed in these cases relate to e.f. and front aperture e.g.:
BX241 3": $\frac{3" \text{ e.f.}}{1.580"} = f/1.9.$

* Inner lens, front magnifier is 2.353" dia.

** BX241 5" is f/2.0



KOLLMORGEN CORPORATION

NORTHAMPTON, MASSACHUSETTS 01060

September, 1965

Policy Statement

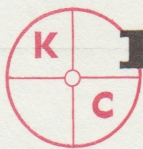
As a manufacturer of Precision Equipment for the Motion Picture Industry, Kollmorgen sets forth its operating policies:

1. AVAILABILITY - to provide a ready source of its product at any business time, without delays in processing or production. (i.e.; we keep it in stock).
2. ALTERNATES - to provide a variation in performance of a particular product type so that choice is available. (i.e.; we maintain stock in 2 or 3 different items at each 1/4 step from 2" to 7").
3. ADVICE - to provide experienced recommendations, on request, to aid in reaching optimum quality and improve technical input. (i.e.; we make computations and recommendations).
4. AWARENESS - to maintain constant contact with users, and help to isolate both technical and business problems, to keep abreast of changes. (i.e.; we have visited numerous new installations, dealers, and official meetings, plus contacts to users and other manufacturers, further we have visited new theaters, dealers, TESMA-TEDA meetings, SMPTE activities, etc.)
5. ADVANCEMENT - to upgrade and update proven products, to create new and improved products, to work constructively with related technical organizations and related manufacturers to reduce problems and maximize the end quality. (i.e.; we are tightening tolerances and gathering data for all of us to further solve problems).
6. ACTIVITY - to pursue these facets of endeavor with interest and zeal; to actively and continuously pursue the aims of the industry in accord with sound business practices. (i.e.; these items of publication indicate our activity).

It is planned that Kollmorgen would move toward a complete line of 35 and 70 MM lenses and perhaps other theater products, toward the end of a sharply defined, high contrast, uniformly illuminated picture on the screen, to the satisfaction of owners, operators and dealers.

We all are part of an industry that has overshot the limits of its original technology, and Kollmorgen shall be one of those, that will promise stability and picture quality not currently available.

Your comments are solicited.



KOLLMORGEN

CORPORATION

NORTHAMPTON, MASSACHUSETTS 01060

GENERAL MEMORANDUM #9

September, 1965

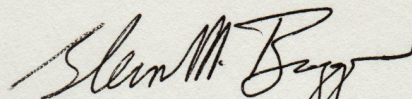
TO: KOLLMORGEN LENS DEALERS AND PROJECTION SPECIALISTS

1. Fringe Benefits: To aid in picture quality, minimize cropping, and generally help Kollmorgen dealers, a new Fringe Benefit Plan is instituted effective September 15th. For each set of four lenses in any combination of F/1.9's, F/1.7, or F/1.7X ordered for a particular theater job, Kollmorgen will include at no charge SMPTE target film sufficient to make test loop, plus instruction sheet. In addition, a pair of AX 280 thread adaptors will be included at no charge. Further, parcel post charges to any point in continental U.S. will be paid by Kollmorgen, for such orders.
Free!
2. Repair Exchange Plan: By mid-October you will receive full details on our Repair Exchange Plan. After permission is obtained from Kollmorgen a pair of fully reconditioned lenses can be shipped to a theater to replace lenses which require repairs. The reconditioned lenses would stay permanently at the theater, the returned lenses would be reconditioned and kept by Kollmorgen for future repair exchanges. Under this plan there would be no loan charge, and would be only one shipment to the theater and one shipment back. The reconditioning charge would be standard (for each series) with the exception of broken lenses or damaged barrels. This has been tried with several dealers and has worked out well. In certain instances, it may be possible to exchange lenses of different focal lengths, but within the same model series. Kollmorgen permission must be obtained. It is hoped that this new service will simplify and speed up the repair process, and it is suggested that better theater chains consider this perhaps every two years.
New!
3. Illumination Studies: There is an attached data sheet indicating results of recent tests at Ashcraft laboratories indicating various brightness readings for different focal lengths and different speeds for Kollmorgen lenses. In using Kollmorgen BX 265 lenses for drive-in theater 70mm use, excellent light readings have been obtained. Several instances indicate readings as high as 9-11 foot-lamberts.
Next Time Data!
4. Policy Statement: Attached is a Kollmorgen Policy Statement meant to indicate our overall approach. There are some parts of it that probably would apply to the entire TEDA organization also.
5. Data Sheet: The lens aperture Data Sheet planned to be released with Memo #8 is attached, indicating exposed glass diameters for all Kollmorgen lenses between 2" and 5". Note the back apertures!
6. *Lens Survey: To aid in moving your slow stock please use the enclosed post card to indicate items between 4" and 11" which you would like to move.

7. New Retail Price Sheet: The attached retail price sheet is provided at the request of dealers to indicate both lenses available to customers and relative prices. Kollmorgen will bill dealers referencing dealer price list #4; no special discounts are allowed to any dealer, customer or other user, by Kollmorgen. It is expected that the #4 lists will be valid to December, 1966.
8. Theater Projection Quality: This writer senses a strong need for a "new" theater handbook providing points of advance on such matters as projection angle, flat, shallow or deep curved screens, sight lines, lens speeds, screen gains and the like. It is hoped that this subject will come up both at the Los Angeles convention and again at New Orleans in February.
9. Illumination Between C-Scope and 1.85 Widescreen: If the c-scope aperture has an area of 0.600 sq. inches, and the widescreen has an area of 0.368 sq. inches, and the ratio between the lenses is usually 0.6 times the e.f., then the light on the screen is about 6/10 for wide screen as compared to the c-scope. Therefore, it is necessary to have a faster lens for widescreen than for c-scope, just to keep the illumination the same. This is why the Kollmorgen f/1.7 for widescreen and f/1.9 for backup, makes such a good combination. More on this next issue.
10. Next Issue - October 15th
 1. Index
 2. D-150 Data
 3. Pre Convention Notes
 4. SMPTE Notes

Very truly yours,

KOLLMORGEN CORPORATION



Glenn M. Berggren
Mgr. Theater Equipment

GMB/dmp

Enc.

* Please mark and return the card, today.

TO: DEALERS,
RESEARCHERS,
PROJECTION ENGINEERS,
TECHNICIANS,
MANUFACTURERS

ELECTRO-OPTICAL DIVISION



KOLLMORGEN
CORPORATION

104 LOWER WESTFIELD ROAD
HOLYOKE, MASS. 01040

TELEPHONE 413-536-7500

INFORMATION MEMO 68-3

1. **ACADEMY AWARD:** You have seen the publicity! The Technical Award was a Class III plaque for "the design and development of a series of projection lenses". Enclosed is a reduced copy of the original plaque, and it refers to the f/1.7 B-290 series, the f/1.7X B-294 series, and the adjustable Magna-Com. The Award is based on actual demonstrations at Hollywood in November 1966 and November 1967. In reviewing past awards, the only other such award relating to projection lenses, was in 1939 to Brand X.
2. **PRICE CHANGE:** Memo 68-4 on Pricing is directed only to authorized dealers.
3. **ULTRAVISION AND THE SCIENCE OF PROJECTION:** The 18-month development program resulting in Ultra-Vision, shall have a permanent effect on the science of projection. The program was based on actual test, and numerical proof, producing new equipment, new approaches, new efficiency plus the bane of the myths, namely development of actual testing procedures for previously unmeasurable factors of picture quality. Some were reported to SMPTE in 1967, more will be reported on May 7 at SMPTE; still more shall be reported in the Fall SMPTE Convention. When you can sit in the front row and say the picture is good, or show a full length Cinemascope feature and not focus, something is different. Brief demonstrations were held on April 4, 5, 6, 8, and 9, and more are to come. (A reprint of Film Daily of January 15, 1968 is enclosed.)
4. **SMPTE CONVENTION - Los Angeles - May 6-10.** The projection session is on May 7, and contains several unique technical reports, and symposiums on both Theater Construction and Automation. Kollmorgen offers 4 technical reports; a) on Improving 35mm Projection, b) An Analysis of Lens and Mirror Types, c) Illumination of Different 35mm Film Formats, and d) Portable Screen Brightness Meter. Two are on picture quality specifically, and two on controlling and measuring screen brightness. Come and hear.

Very truly yours,

Glenn M. Berggren, Manager
Theatre Equipment

Ken R. Leonard, Application Engineer
Theatre Equipment

50 Years of Leadership in Projection Image Quality

TO: DEALERS,
RESEARCHERS,
PROJECTION ENGINEERS,
TECHNICIANS,
MANUFACTURERS

ELECTRO-OPTICAL DIVISION



KOLLMORGEN
CORPORATION

104 LOWER WESTFIELD ROAD
HOLYOKE, MASS. 01040
TELEPHONE 413-536-7500

INFORMATION MEMO 68-4

To Authorized Dealers Only

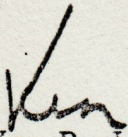
1. **PRICE CHANGE:** The rapid changes in Labor and Material Costs has caught U.S. industry. The optical industry is no exception. You heard of our 1966 strike, which resulted in wage changes, but you have not heard of the 50% to 100% changes in optical glass costs. In short, although we indicated the unavoidable price change coming in dealer memo #67-8 of 1 September 1967, it has been held off until now.

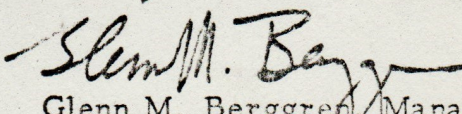
In brief, the change is about 10%, but is applied unequally to these items which were most in need of price change.

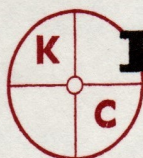
Additions are to be noted:

1. KA-298 Anamorphic
 2. KA-299 Large Anamorphic
 3. B-247 Red Regal Lens Series
 4. SB-130 & SB-230 Brightness Meter
 5. #800 Focus Binoculars
 6. AX-283 Double Threaded Spacer
 7. AX-287 Thread Ring
 8. Curved Image Lens Package (20 installations to date)
2. **PRICE CHANGE PROCEDURE:** As in August 1965 (Last Price Change), this is mailed to you on April 30, and dated May 1, 1968. As a dealer, you have a one month grace period, to enter orders at the old price. During May 1968, any order received shall be at the August 1965 price. All orders received on or after June 1, 1968 shall be at the new price, and the 1965 price sheet becomes invalid for any and all transactions. Any item returned for credit shall relate to the price billed originally, regardless of the effectiveness of the price sheets.

Very truly yours,


Ken R. Leonard, Applications Engineer
Theatre Equipment


Glenn M. Berggren, Manager
Theatre Equipment



KOLLMORGEN

CORPORATION

NORTHAMPTON, MASSACHUSETTS 01060

February 23, 1965

MEMORANDUM #5

TO ALL SNAPLITE DEALERS:

February 23, 1965

- BX-265 Lenses Available: This is the report on the survey of available lenses of the BX-265 series (4" diameter). We had replies from 43 dealers, but only the 20 listed indicated available stock. This is done as a service to the dealers, with the hope that the best of lenses shall be used in Drive-Ins being built in 1965, and for 70mm use indoor or outdoor. Series II lenses of 5" and over should not be used for large screen applications. At the factory, we have ready stock from 5" to 7", and 4-11" items (the latter are reserved for a special job). We are unaware of other items being available. We have designs from 7" to 11" continuous, but to special order only. We are obviously passing up a bit of business to do this survey for you, but the aim is that the best is used for the new theaters; your reputation and ours rides with your judgments in the theater world.
- Price Protection: Nearly all price protection letters have been issued, to assure your safety in the use of old prices for your quoted jobs. The item of real surprise is the mass of quotations now in process. Most of you mentioned theater names, and the number leads us to feel that 1965 is on its way to exceeding 1964. Good work. This is the time to give the public the very best in picture entertainment with a superb picture quality. If we can help, call on us.
- Survey From November: The survey from November totaled 25 card replies. In addition to the quantities (which bears out the coming success of 1965), you indicated the 35 mm widescreen aspect ratio. You indicated 2 for 1.66, 7 for 1.75, 10 for 1.85, and the balance unmarked. The variance indicates that we should all take thought on the subject. Many new prints are being made at 1.85, the European prints often have titles that require 1.66 or larger. Perhaps the time has come for 4 sets of lenses: c'scope, 70mm, 1.85, and 1.66. Or perhaps there is need for an adjustable lens. (We are working on this.) If you have comments on this subject, we would like to hear from you.

February 12, 1965

AVAILABLE STOCK IN THE FIELD - KOLLMORGEN BX-265 LENSES

5" 5 1/2" 5 3/4" 5 7/8" 6" 6 1/4" 6 1/2" 6 3/4" 7" 9" 10"

Falls City The Equip.
Louisville, Kentucky

2

-2-

N. T. S. Milwaukee,
Wisconsin

2u

Snaplite Dealers

February 23, 1965

Hadden The. Supply,
Louisville, Kentucky

2u

4. Lenses for 70MM: Please be advised that the BX-265 lenses have been widely used and are superior for 70mm use than the 4 element lenses from abroad. BX-265's have long back focus, and are easy to maintain in focus. Sharpness is excellent and they should be considered for all 70mm applications. The same is true of the BX-241 series from 4" to 5". (Remember the 241 and 265 series are all the same family of designs, but the front lens becomes too large at the 5" size, so the barrel enlarges to 4" o.d. at 5" e.f.) For comparison, the 5" BX-241 and the 5" BX-265 are the identical design, but the BX-241 is cut down in o.d. to fit the smaller barrel, thus reducing the speed to f/2.0. Be sure to use the best lenses for 70mm to assure that these prints are really superb on the screen. The public pays extra in most cases, and expects only the best.
5. TEDA Meeting at Phoenix: Yours truly is planning to be at the TEDA meeting in March, and hopes to meet many of you not contacted at Detroit last fall. I've got a few surprizes to show you also. See you there!
6. Inventory: We now have 60 items in stock for you.
7. Next Month: Screens, lamp adjustments, adjustable Magna-Com; back focus, critical focus, rear aperture sizes, focus drift.

Very truly yours,

KOLLMORGEN CORPORATION

Glenn M. Berggren, Mgr

Glenn M. Berggren, Manager
Theatre Equipment Sales

GMB/dmp

February 12, 1965

AVAILABLE STOCK IN THE FIELD - KOLLMORGEN BX 265 LENSES

	5"	5 1/4"	5 1/2"	5 3/4"	6"	6 1/4"	6 1/2"	6 3/4"	7"	9"	10"
Falls City The Equip. Louisville, Kentucky	2										
N. T. S. Milwaukee, Wisconsin	2u										
Hadden The. Supply. Louisville, Kentucky	2u										
N. T. S. Denver, Colorado	2u		4u	2u					2u		4u
Western The Equip. Co. San Francisco, Calif.		2u	2u								
N. T. S. Los Angeles, California		2			2						
N. T. S. Baltimore, Maryland		2u					2n	2n	2n		
N. T. S. Indianapolis, Indiana		2n			2n				2n		
N. T. S. Atlanta, Georgia		2u		1n	2n				2u	2u	
Rhodes Sound Savannah, Georgia			2u						2n		
Dixie The. Supply Albany, Georgia						2n					
N. T. S. Buffalo, New York						2u			2u		
S.F. Burns and Co. Seattle, Washington							2u				
N. T. S. Charlotte, North Carolina									2u		
J. P. Filbert Co. Los Angeles, Calif.									2n		
N. T. S. Minneapolis, Minnesota									2		
Des Moines The. Supply Des Moines, Iowa									4		
Western Service & Supply Denver, Colorado									2n		
J. Hornstein, Inc. New York City										2	
NTS Salt Lake City, Utah											2u
TOTAL AVAILABLE	8	10	8	3	6	4	4	2	24	4	6