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FILE 898565

November 19, 1965

Dear Paul:

Enclosed is a copy of the "High-Speed Camera Survey" which appeared in the October 1965 Journal of the SMPTE. As I mentioned in our phone conversation the other day, [redacted] has published an annotated bibliography entitled "Image and Cue Enhancement through the use of Moving or Flickering Presentations", prepared [redacted] The report number and address is [redacted] It might be of some value to you.

STAT STAT STAT STAT STAT

Hope to see you again in a few weeks.

Best regards,

Jack

[redacted]
Senior Optical Engineer

STAT

Declass Review by NGA.

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High-Speed Camera Survey

By DAVID A. FATORA

This survey of high-speed photographic equipment was compiled as a by-product of the planning for the photographic instrumentation of the new 1.75 million gallon hydroballistics facilities at the U.S. Naval Ordnance Laboratory in White Oak, Maryland. The cameras were surveyed at 124 locations. The work was done by David Fatora, a Photographic Technologist in the Photographic Division of the Laboratory.

Most of the information was made available to Mr. Fatora by direct contact with the manufacturers, with only parts available in ready literature and advertising matter. The manufacturers have checked the survey and it should be accurate and current as of the date compiled.

This compilation is being published since it is the only known record in which the user can readily compare certain general characteristics of commercially available equipment. No attempt is made for comparisons by resolving power, sturdiness, flexibility, or other factors that involve varying opinions of users or manufacturers. Nor can cost comparisons be shown other than in a general way, since each manufacturer could show the data for a wide variety of lenses or other accessories too space-consuming for such a report.

The addresses of the camera manufacturers are listed below in order that interested persons can go direct to them rather than through the Society or the Naval Ordnance Laboratory:

Camera Manufacturers

Avco Corp.
Industrial Products Div.
North Wilmington
Mass. 01888

Barr and Stroud, Ltd.
Kinnaird House
1 Pall Mall East
London, S. W. 1, England

Beckman & Whitley, Inc.
993 East San Carlos Ave.
San Carlos, Calif. 94070

Benson-Lehner Corp.
1860 Franklin St.
Santa Monica, Calif.

Cordin Co.
226 West Haven Ave.
Salt Lake City
Utah 84115

Ehrenreich Photo-Optical Industries
Military and Special Products
701 Welch Rd., Suite 303
Palo Alto, Calif.

Electro-Optical Instruments
255 N. Halstead St.
Passadena, Calif. 91107

Fairchild Camera & Instr. Corp.
Industrial Products Div.
221 Fairchild Ave.
Plainview, L. I., N. Y.

McDonnell Aircraft Corp.
Box 516
St. Louis, Mo. 63166

Northridge Research, Inc.
18222 Parthenia St.
Northridge, Calif. 91324

Photo-Kinetics, Inc.
1624 Stillwell Ave.
Bronx, N. Y. 10461

Photo-Sonics, Inc.
820 South Mariposa St.
Burbank, Calif. 91506

Red Lake Laboratories
2971 Corvin Dr.
Santa Clara, Calif. 95051

Revere Camera Co.
Wollensak Div.
850 Hudson Ave.
Rochester 21, N. Y.

TRW Instruments
139 Illinois St.
El Segundo, Calif.

Footnotes for Tabulation

(1) Exposure time per frame for streak cameras refers to the time required for the film to move the width of the slit.
(2) Fairchild footage event switch NOL installed, not factory available.
(3) Removable film plane microscope, plus external optical finder.
(4) With goose unit only.
(5) With Fairchild Rectifier Unit (115-v a-c).
(6) Lower speeds are available with special motors and power supplies for some cameras.
(7) Useful recording capacity at maximum rate taken from 75% of maximum rate.
(8) Effective exposure time calculated with 15° shutter.
(9) Times shown are for d-c operation.
(10) Special mounts are non-interchangeable.
(11) Interframe time variable.
(12) Lens mount-blank plate, converts to any mount.

Additional Notes

(a) Fastax cameras: lowest framing rate requires d-c operation for most models.
(b) Price key:

A—$1200 to $3000
B—$3000 to $6000
C—$6000 to $10000
D—$10000 to $15000
E—Above $15000

(c) Useful recording time and useful recording capacity were determined when the rotary prism cameras and film transport streak cameras reached 75% of their maximum rate.
(d) Inherent delay trigger-record: the maximum and minimum time from when the camera is first pulsed to when the camera reaches useful recording rate.
(e) Blank spaces indicate lack of data; diagonal lines indicate "does not apply."

A contribution submitted on August 23, 1965, by David A. Fatora, Aeroballistics Photographic Section, U.S. Naval Ordnance Laboratory, White Oak, Silver Spring, Md. 20910.

(*Compilation on pages 912–915.*)

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Footnotes for Tabulation

(1) Exposure time [illegible] required for the [illegible]

(2) Fairchild [illegible] available [illegible]

(3) Remarks [illegible] find [illegible]

(4) With goose unit [illegible]

(5) With Fairchild [illegible]

(6) Lower speeds [illegible] supplies [illegible] some [illegible]

(7) Overall recording [illegible]

(8) Effective [illegible] pos[illegible]

(9) Power shown [illegible]

(10) Accessories [illegible]

(11) Weight [illegible]

(12) Lens [illegible]

226 West Haven Ave
Salt Lake City
Utah 84115

Northrop
1622 [illegible]
North [illegible]

El Segundo, Calif.

	Speed Frames per Second Minimum (Maximum)	Speed Feet per Second Minimum (Maximum)	Exposure Time per Frame Given in Seconds Minimum (Maximum)	Interframe Interval in Seconds Minimum (Maximum)	Total Useful Recording Time in Seconds Minimum (Maximum)	Useful Recording Capacity Minimum (Maximum)	Film Loading Capacity Minimum (Maximum)	Incident Delay Between Record in Seconds Minimum (Maximum)	Frame Size - Streak	Maximum Effective Aperture	Type of Focusing	Type of Drive	AC Power - Hz	Event Synchronization	Dimension (Cubic)	Weight - Ounces/Pounds	Lens Mount	Accessories	Remarks
ROTARY PRISM-COMPENSATING CAMERAS																			
Beckman & Whitley Magnifax Model 333	3200 1000		62.5×10^{-6} 200×10^{-6}	2.5×10^{-4} 8×10^{-4}		75 FT 80 FT	100 FT 16mm		6mmx10mm	F/3.5	Internal Reflex Finder	AC or DC Motor	30 Amp	Footage Event Switch	17"x12"x10"	32 LB	CTWS	A	Minimum framing rate of 200 fr/sec available with optional motor. Exposure time per frame is 1/5 x 1/96.
Fairchild Model HS 100	2400 1600		8.32×10^{-5} 1.25×10^{-2}	3.33×10^{-4} 5×10^{-2}		75 FT	100 FT 16mm		6mmx10mm		Boresight (3	DC (5 Motor		Footage (2 Event Switch	12"x9"x5"	11 LB 22 LB	Fairchild Bayonet	A	Airborne model. Interchangeable motors for lower speeds. 28V DC battery.
Fairchild Model HS 101	2900 10		6.9×10^{-3} 2×10^{-2}	2.76×10^{-4} 8×10^{-2}		75 FT	100 FT 16mm		6mmx10mm		Boresight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	8"x8"x8"	10 LB 22 LB	Fairchild Bayonet	A	Industrial model. May be modified to function as streak camera.
Fairchild Model HS 101 w/C1 kit	2000 3000		2.5×10^{-5} 6.66×10^{-5}	1×10^{-4} 2.66×10^{-4}		75 FT 75 FT	100 FT 16mm		6mmx10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	8"x8"x8"	1½ LB 22 LB	Fairchild Bayonet	A	See remarks Model HS101.
Fairchild Model HS108 w/C1 kit	14000 7000					75 FT 75 FT	100 FT 16mm		2.5mm x10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	8"x8"x8"	1½ LB 22 LB	Fairchild Bayonet	B	Minimum framing rate of 32 fr/sec available with optional motor. Double perforated film. See remarks HS 101.
Fairchild Model HS 401	2900 10		6.4×10^{-5} 2×10^{-2}	2.76×10^{-4} 8×10^{-2}		300 FT	400 FT 16mm		6mmx10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	13"x9"x13"	26 LB 22 LB	Fairchild Bayonet	A	Start-stop operation. See remarks Model HS 101.
Fairchild Model HS 401 w/B1 kit	8000 3000		2.5×10^{-5} 6.66×10^{-5}	1×10^{-4} 2.66×10^{-4}		300 FT 300 FT	400 FT 16mm		6mmx10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	13"x9"x13"	26 LB 22 LB	Fairchild Bayonet	B	Start-stop operation. 60V DC motor. See remarks Model HS 101.
Fairchild Model HS 408 w/B1 kit	14000 7000					300 FT 300 FT	400 FT 16mm		2.5mm x10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	13"x9"x13"	26 LB 22 LB	Fairchild Bayonet	B	Start-stop operation. See remarks Model HS 101.
Fairchild Model HS 116	32000 12000					75 FT 75 FT	100 FT 16mm		1.5 mm x10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	8"x8"x8"		Fairchild Bayonet	B	Similar to Model HS 108. Uses 16 sided prism.
Fairchild Model HS 416	32000 12000					300 FT 300 FT	400 FT 16mm		1.5mm x10mm		Bore-sight (3	DC (5 Motor	30 Amp	Footage (2 Event Switch	13"x13"x9"		Fairchild Bayonet	C	Similar to Model HS 408. Start-stop operation.
Hitachi Model 16H	10000 500					100 FT	100 FT 16mm		7.4mm x10.4mm			AC Motor	30 Amp		12"x10"x12"	33 LB 66 LB		A	Similar in design to Fastax WF-3.
Photo Sonics Model 4B	3250 125		7.7×10^{-6} 1.6×10^{-4}	3×10^{-4} 6.4×10^{-3}	4.43 127.5	900 FT 994 FT	1000 FT 35mm		17mm x25mm		Bore-sight	AC Motor	50 Amp	None	24"x19"x20"	96 LB	Bayonet	C	Rotary prism-disc shutter operation; 70° maximum, 9° minimum. Buckle and run out switch, timing light, fiducial marks, transmission assembly interchangeable for various rates.
Photo Sonics Model 1C	4000 1000		6.25×10^{-6} 2×10^{-4}	2.44×10^{-4} 8×10^{-4}	3.5 15.5	350 FT 387 FT	400 FT 16mm		6mmx10mm		Bore-sight	AC-DC Motor	30 Amp	None	20"x7"x9"	41 LB	Flanged	B	May be mounted in any position. See remarks Model 4B.
Photo Sonics Model 4B Half Frame	6500 250		3.85×10^{-6} 8×10^{-4}	1.43×10^{-4} 3.2×10^{-3}	4.43 127.5	900 FT 996	1000 FT 35mm		8mmx25mm		Bore-sight	AC-DC Motor	50 Amp	None	24"x19"x20	96 LB	Bayonet	C	See remarks Model 4B.
Fastax WF-1	16000 300		2.08×10^{-5} 1.11×10^{-3}	4.16×10^{-5} 2.22×10^{-3}	.34 10.21	60 FT (7 90 FT	100 FT 16mm	.37 2.08	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Footage Event Switch	12"x12"x12"	25 LB 60 LB	FX-1 Bayonet	A	Film--Dual perforations. Interchangeable masks available. Event timer on goose.
Fastax WF-2	18000 1000		1.85×10^{-5} 4.76×10^{-4}	3.7×10^{-5} 9.52×10^{-4}	1.37 22.74	290 FT (7 360 FT	400 FT 16mm	.95 3.33	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x13"	38 LB 60 LB	FX-1 Bayonet	A	See remarks Model WF-1
Fastax WF-2S	16000 1000		1.98×10^{-5} 4.76×10^{-4}	3.98×10^{-5} 9.52×10^{-4}	1.61 26.0	310 FT (7 390 FT	400 FT 16mm	.71	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x13"	60 LB 60 LB	FX-1 Bayonet	B	Start-stop operation. See remarks Model WF-1.
Fastax WF-15	18000 1000		2.08×10^{-5} 2.56×10^{-4}	4.16×10^{-5} 5.13×10^{-4}	1.61 22.74	320 FT (7 360 FT	400 FT 16mm	.71 3.33	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x13"	38 LB 60 LB	FX-1 Bayonet	A	Records oscillograph trace simultaneously with image. See remarks Model WF-1
Fastax WF-15S	16000 1000		2.08×10^{-5} 2.56×10^{-4}	4.16×10^{-5} 5.13×10^{-4}	1.76 29.62	310 FT (7 380 FT	400 FT 16mm	.85 4.22	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x10"	60 LB 60 LB	FX-1 Bayonet	B	Start-stop operation. See remarks Model WF-15.
Fastax WF-21	16000 300		2.08×10^{-5} 1.11×10^{-3}	4.16×10^{-5} 2.22×10^{-3}	.34 10.21	60 FT (7 90 FT	100 FT 16mm	.37 2.08	2.5mm x10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Footage Event Switch	12"x12"x12"	25 LB 60 LB	FX-1 Bayonet	A	See remarks Model WF-15.
Fastax WF-3	8000 150		4.17×10^{-5} 2.22×10^{-3}	8.33×10^{-5} 4.44×10^{-3}	.34 10.21	60 FT (7 90 FT	100 FT 16mm	.37 2.08	6mmx10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Footage Event Switch	12"x12"x12"	25 LB 60 LB	FX-1 Bayonet	A	Interchangeable masks available.
Fastax WF-3T	6000 150		3.33×10^{-5} 1.33×10^{-3}	1.33×10^{-4} 5.32×10^{-3}	.57 3.21	66 FT (7 98 FT	100 FT 16mm	.43 .80	6mmx10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Footage Event Switch	12"x12"x12"	25 LB 60 LB	FX-1 Bayonet	A	See remarks Model WF-3.
Fastax WF-4	9000 500		3.7×10^{-5} 9.5×10^{-4}	7.4×10^{-5} 1.9×10^{-3}	1.61 22.74	320 FT (7 360 FT	400 FT 16mm	.71 3.33	6mmx10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x13"	38 LB 60 LB	FX-1 Bayonet	A	See remarks Model WF-3.
Fastax WF-4T	6000 500		4.33×10^{-5} 5.71×10^{-4}	1.33×10^{-4} 2.28×10^{-3}	2.2 8.2	320 FT (7 390 FT	400 FT 16mm	1.0 1.0	6mmx10mm		Integral View-finder	AC-DC Motor	30 (4 Amp	Goose Unit	14"x17"x13"	38 LB 60 LB	FX-1 Bayonet	A	See remarks Model WF-3.

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FASTAX WF-4S	8000	3.97x10^-5	7.95x10^-5	1.61	300 FT (7	400 FT	.71	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	60 LB	FX-1 BAYONET	B	START-STOP OPERATION. SEE REMARKS MODEL WF-3.
	500	5.71x10^-4	2.28x10^-3	57	390 FT	16mm									60 LB			
FASTAX WF-4S	4000	3.33x10^-5	1.33x10^-4	2.2	320 FT (7	400 FT	1.0	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	60 LB	FX-1 BAYONET	B	SEE REMARKS WF-4S.
	500	5.71x10^-4	2.28x10^-3	8.2	390 FT	16mm	1.0								60 LB			
FASTAX WF-4S	8000	4.17x10^-5	8.33x10^-5	1.61	320 FT (7	400 FT	.71	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	38 LB	FX-1 BAYONET	A	RECORDS OSCILLOGRAPH TRACE SIMULTANEOUS WITH IMAGE. MARKS AVAILABLE.
	500	5.43x10^-4	3.02x10^-3	22.74	360 FT	16mm	3.33								60 LB			
FASTAX WF-4S	8000	3.97x10^-5	7.95x10^-5	1.61	300 FT (7	400 FT	.71	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	60 LB	FX-1 BAYONET	B	START-STOP OPERATION. SEE REMARKS MODEL WF-4S.
	500	5.71x10^-4	2.28x10^-3	57	390 FT	16mm									60 LB			
FASTAX WF-4S	6300	3.33x10^-5	1.33x10^-4	2.2	320 FT (7	400 FT	1.0	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	38 LB	FX-1 BAYONET	B	SEE REMARKS MODEL WF-4S.
	500	4x10^-4	1.6x10^-3	8.2	390 FT	16mm	1.0								60 LB			
FASTAX WF-4S	4000	3.33x10^-5	1.33x10^-4	2.2	320 FT (7	400 FT	1.0	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	14"x17"x13"	60 LB	FX-1 BAYONET	B	SEE REMARKS MODEL WF-4S.
	500	5.71x10^-4	1.02x10^-3	8.2	390 FT	16mm	1.0								60 LB			
FASTAX WF-17	8000	4.17x10^-5	8.33x10^-5	.34	60 FT (7	100 FT	.37	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	GOOSE UNIT	12"x12"x12"	25 LB	FX-1 BAYONET	A	SEE REMARKS MODEL WF-14.
	150	2.22x10^-3	4.44x10^-3	10.21	90 FT	16mm	2.08								60 LB			
FASTAX WF-17	6000	3.33x10^-5	1.33x10^-4	.57	70 FT (7	100 FT	.43	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	FOOTAGE EVENT SWITCH	12"x12"x12"	25 LB	FX-1 BAYONET	A	SEE REMARKS MODEL WF-14.
	150	1.33x10^-3	5.32x10^-3	3.61	98 FT	16mm	.40								60 LB			
FASTAX WF-30	3000	815.55x10^-5	2.78x10^-4	13.5	1000 FT	1200 FT	2.5	6mmx10mm		INTEGRAL VIEW-FINDER	AC-DC CON-TROL	45 AMP	NONE	25"x20"x9"	80 LB	FX-1 BAYONET	C	INTERCHANGEABLE SHUTTER, 300 OR 30°. START STOP OPERATION. SERVO CONTROL.
	500	3.33x10^-4	1.68x10^-3	77.75	1200 FT	16mm	.25								12 LB			
FASTAX WF-5	6000	5.55x10^-5	1.11x10^-4		60 FT	100 FT		10mm x25mm		INTEGRAL VIEW-FINDER	AC-DC MOTOR	30 (4 AMP	FOOTAGE EVENT SWITCH	12"x12" x13.5"	29 LB 60 LB	FX-1 BAYONET	A	DC OPERATION FOR 100 PPS.
	100	3.33x10^-3	6.66x10^-3		100 FT	35mm												
FASTAX WF-8A	2000	1.25x10^-4	3.75x10^-4		225 FT	400 FT		20mm x25mm		REFLEX FINDER	AC MOTOR	50 AMP	NONE	22"x25"x12"	110 LB	FX-2 BAYONET	C	START-STOP OPERATION.
	200	1.25x10^-3	3.75x10^-3		390 FT	35mm												
NORTH RIDGE RESEARCH SPEED TRACKER	2000	1x10^-5	2.75x10^-4	24.0		1200 FT	.2	6mmx10mm		BORESIGHT	AC-DC MOTOR	7 AMP	UNIT AVAIL-ABLE	16"x4"x5"	15 LB	FASTAX III	B	ROTARY SHUTTER 9° TO 72°. START-STOP OPERATION. CORRELATION AND EVENT LIGHTS. LOWER SPEEDS AVAILABLE.
	1000	2.5x10^-4	7.8x10^-4	48.0		16mm	.5											
RED LAKE LABS HYCAM K2001	8500	1.18x10^-6	5.8x10^-5	.40	75 FT	100 FT	.1	7.4mm x10.4mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	24 AMP	FOOTAGE EVENT SWITCH	9"x9"x10"	13 LB	C MOUNT	A	8 SIDED PRISM, DISC SHUTTER AND FILM SPROCKET ON ONE SHAFT. FLAT FILM GATE, CUT OFF SWITCH, INTERCHANGEABLE SHUTTERS--1/25, 1/5, 1/10, 1/20, 1/50, 1/100.
	100	4x10^-3	9.9x10^-3	40.0	100 FT	16mm	.1											
RED LAKE LABS HYCAM K2051	8500	1.18x10^-6	5.8x10^-5	.40	75 FT	100 FT	.1	7.4mm x10.4mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	24 AMP	FOOTAGE EVENT SWITCH	9"x9"x10"	14 LB	C MOUNT	A	SEE REMARKS MODEL K2001.
	12	4x10^-2	8.8x10^-2	400.0	100 FT	16mm	.1											
RED LAKE LABS HYCAM K2001A	17000	5.88x10^-7	2.9x10^-5	.4	75 FT	100 FT	.1	3.7x10.4 OR 3.7x5.2mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	24 AMP	FOOTAGE EVENT SWITCH	9"x9"x10"	13 LB	C MOUNT	A	SAME AS K2001, EXCEPT WITH 8mm OPTIONAL HEAD; COMPLETE HEADS OR PRISM SHAFT KITS CAN BE INTERCHANGED TO OBTAIN 8mm OR 16mm SYSTEMS.
	200	2x10^-3	4.95x10^-3	40.0	100 FT	16mm	.1											
RED LAKE LABS HYCAM K2051A	17000	5.88x10^-7	2.9x10^-5	.4	75 FT	100 FT	.1	3.7x10.4 OR 3.7x5.2mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	24 AMP	FOOTAGE EVENT SWITCH	9"x9"x10"	14 LB	C MOUNT	A	SAME AS K2001A.
	20	2x10^-2	4.95x10^-2	400.0	100 FT	16mm	.1											
RED LAKE LABS HYCAM K2004E	10000	1x10^-6	5x10^-5	1.3	325 FT	400 FT	.1	7.4mm x10.4mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	15 AMP	FOOTAGE EVENT SWITCH	12"x15"x15"	31 LB	C MOUNT	A	SAME AS K2001, EXCEPT HAS 100',200', AND 400' SPOOL CAPACITY. BUILT-IN SPEED CON-TROL TO 5000PPS (190), FOOTAGE INDICATOR, INTERCHANGEABLE OPTICAL HEADS.
	100	4x10^-3	9.9x10^-3	160.0	400 FT	16mm	.3											
RED LAKE LABS HYCAM K2054E	10000	1x10^-6	5x10^-5	1.3	325 FT	400 FT	.1	7.4mm x10.4mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	15 AMP	FOOTAGE EVENT SWITCH	12"x15"x15"	32 LB	C MOUNT	A	SAME AS K2004E.
	10	4x10^-2	9.9x10^-2	1600.0	400 FT	16mm	.3											
RED LAKE LABS HYCAM K2004AE	20000	5x10^-7	2.5x10^-5	1.2	325 FT	400 FT	.1	3.7x10.4 OR 3.7x5.2mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	15 AMP	FOOTAGE EVENT SWITCH	12"x15"x15"	31 LB	C MOUNT	A	SAME AS K2004E, EXCEPT WITH 8mm OPTIONAL HEAD WHICH ALLOWS SPEED CONTROL TO 10000 PPS.
	200	2x10^-3	4.95x10^-3	160.0	400 FT	16mm	.3											
RED LAKE LABS HYCAM K2054AE	20000	5x10^-7	2.5x10^-5	1.3	325 FT	400 FT	.1	3.7x10.4 OR 3.7x5.2mm	F/2.8	THROUGH THE LENS	AC-DC MOTOR	15 AMP	FOOTAGE EVENT SWITCH	12"x15"x15"	32 LB	C MOUNT	A	SAME AS K2004AE.
	20	2x10^-2	4.95x10^-2	1600.0	400 FT	16mm	.3											
PHOTO KINETICS NOVA 16-1A	2800	1.2x10^-4	2.4x10^-4	1.0	80 FT	100 FT	.76	6mmx10mm		THROUGH THE LENS BORE-SIGHT	26V DC	3 AMP	UNIT OPTIONAL	8.5"x9" x7.6"	10 LB 22 LB	FOUR LOBE BAYONET	A A	REMOVABLE PRISM ASSEMBLY FOR FULL, HALF, QUARTER FRAME, STREAK, AND FLASH SYNC. NONINTERMITTENT SYNCHRONIZING PULSE GEN-ERATOR BUILT IN, APERTURE PLATES--FULL TO .003" SQT. 400 FT AND 1200 FT MAGAZINE AVAILABLE. STOP-START WITH 400 OR 1200 FT.
	600	6.67x10^-4	1.1x10^-3	3.7	90 FT	16mm	.33											
PHOTO KINETICS NOVA 16-1B	1600	2.1x10^-4	4.2x10^-4	2.25	80 FT	100 FT	1.2	6mmx10mm		THROUGH THE LENS BORESIGHT	26V DC	3 AMP	UNIT OPTIONAL	8.5"x9" x7.6"	10 LB 22 LB	FX-1 BAYONET	A	SEE REMARKS MODEL 16-1A. FOR BOTH MODELS, THE USEFUL RECORDING CAPACITY FOR A 400' MAGAZINE IS: 370 FT/380 FT.
	275	1.2x10^-3	2.4x10^-3	13.1	90 FT	16 mm	.38											
PHOTO KINETICS NOVA 16-3	10000	3.3x10^-5	6.68x10^-5	.41	70 FT	100 FT	.255	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC MOTOR	30 AMP	UNIT OPTIONAL	8.5"x9" x7.6"	15 LB 22 LB	FOUR LOBE BAYONET	A	SEE REMARKS MODEL 16-1A. 400 FT MAGAZINE USEFUL RECORDING TIME: 1.43/66.2; USEFUL RECORDING CAPACITY: 370/390.
	200	1.7x10^-3	3.4x10^-3	18.3	90 FT	16mm	9.0											
PHOTO KINETICS NOVA 16-4	4000	4.17x10^-5	1.66x10^-4	.894	80 FT	100 FT	.316	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC 26V DC	30 3	UNIT OPTIONAL	8.5"x11" x7.6"	10 LB 22 LB	FOUR LOBE BAYONET		SEE REMARKS MODEL 16-1A. NOT CONVERTIBLE TO STREAK, HALF, OR QUARTER FRAME. HAS DISC SHUTTER.
	10	1.67x10^-2	6.7x10^-2	392.0	90 FT	16mm	3.4											
PHOTO KINETICS NOVA 16-5	4000	8.3x10^-5	1.66x10^-4	3.05	370 FT	400 FT	1.25	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC MOTOR	12 AMP	UNIT OPTIONAL	16"x5"x14"	19 LB 15 LB	FOUR LOBE BAYONET		SEE REMARKS MODEL 16-1A. STOP-START OPERATION.
	500	6.7x10^-4	1.3x10^-3	30.5	390 FT	16mm	0.34											
PHOTO KINETICS NOVA 16-6	4000	4.17x10^-5	1.66x10^-4	3.05	370 FT	400 FT	1.25	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC MOTOR	12 AMP	UNIT OPTIONAL	16"x5"x14"	19 LB 15 LB	FOUR LOBE BAYONET		DISC SHUTTER, START-STOP OPERATION. SEE REMARKS MODEL 16-4. MUST HAVE OWN POWER SUPPLY.
	500	3.35x10^-4	1.3x10^-3	30.5	390 FT	16mm	0.34											
PHOTO KINETICS NOVA 16-7	3000	1.11x10^-4	2.22x10^-4	14.5	1185 FT	1200 FT	1.3	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC MOTOR	25 AMP	UNIT OPTIONAL	26"x8"x21"	70 LB 27 LB	FOUR LOBE BAYONET		SEE REMARKS MODEL 16-1A.
	60	5.6x10^-3	1.11x10^-2	745.0	1190 FT	16mm	3.1											
PHOTO KINETICS NOVA 16-8	3000	5.5x10^-5	2.22x10^-4	14.5	1185 FT	1200 FT	1.3	6mmx10mm		THROUGH THE LENS BORESIGHT	AC-DC MOTOR	25 AMP	UNIT OPTIONAL	26"x11"x21"	70 LB 27 LB	FOUR LOBE BAYONET		SEE REMARKS MODEL 16-4.
	60	2.85x10^-3	1.11x10^-2	745.0	1190 FT	16mm	3.1											

Approved For Release 2004/11/30 : CIA-RDP78B04770A000900040011-8

Approved For Release 2004/11/30 : CIA-RDP78B04770A000900040011-8

	Speed (Frames per second) Maximum / Speed (Feet per second) Maximum	Exposure time per frame in seconds (Minimum / Maximum)	Interframe interval in seconds (Minimum / Maximum)	Total useful recording time in seconds (Minimum / Maximum)	Useful recording capacity (Minimum / Maximum)	Film loading capacity	Trigger delay bigger record in seconds (Minimum / Maximum)	Frame size-streak	Maximum effective aperture	Type of focusing	Type of drive	AC power-amps	Event synchronization	Dimensions (L x W x H)	Weight: Camera/Control	Lens mount (1)	Price	Remarks
FILM TRANSPORT STREAK CAMERAS																		
Fastax WF-7	120 / 5	1.39×10^{-5} / 1.11×10^{-3}			60 FT (7 / 100 FT	100 FT / 16MM		.040"x.868"		Film Plane Telescope	AC-DC Motor	30 Amp	Goose Unit	12"x12"x13"	29 LB / 60 LB	FX-1 Bayonet	A	Oscillo-streak continuous recording. Interchangeable slits available from .04" to .010"x.868". Maximum and minimum useful exposure calculated for .040" maximum and .003" minimum.
Fastax WF-6	200 / 4	1.25×10^{-5} / 8.92×10^{-4}		.34 / 10.21	60 FT (7 / 90 FT	100 FT / 16MM	.37 / 2.08	.040"x.410"		Film Plane Telescope	AC-DC Motor	30 Amp	Goose Unit	12"x12"x12"	25 LB / 60 LB	FX-1 Bayonet	A	See remarks Model WF-7. Slits available .040"x.410" to .003"x.410". Total exposure calculated for .040" maximum and .003" minimum.
Fastax WF-22B	200 / 12.5	1.19×10^{-5} / 4.16×10^{-4}		1.61 / 26.0	300 FT (7 / 390 FT	400 FT / 16MM	.71	.040"x.410"		Film Plane Telescope	AC-DC Motor	30 Amp	Goose Unit	14"x17"x13"	60 LB / 60 LB	FX-1 Bayonet	A	Start-stop operation, oscillo-streak. See remarks Model WF-6.
Fastax WF-23	225 / 12.5	1.11×10^{-5} / 2.66×10^{-4}		1.37 / 22.74	280 FT (7 / 370 FT	400 FT / 16MM	.95 / 3.33	.040"x.410"		Film Plane Telescope	AC-DC Motor	30 Amp	Goose Unit	14"x17"x13"	38 LB / 60 LB	FX-1 Bayonet	A	See remarks Model WF-6.
Fastax WF-18A	125 / 12.5	2×10^{-5} / 2.66×10^{-4}			225 FT (7 / 390 FT	400 FT / 35MM		.720"x.868"		Film Plane Telescope	AC Motor	50 Amp	Camera Control	22"x25"x12"	87 LB	FX-2 Bayonet	C	Interchangeable slits from .04"x.868" to .010"x.868". Exposure calculated for .040" maximum and .003"x.868" slit minimum, oscillo-streak.
Photo Sonics Model CFB	200 / 5	3×10^{-4} / 1.2×10^{-2}		4.5 / 159.4	900 FT / 997 FT	1000 FT / 35MM		.720"x.922"		Bore-sight	AC-DC Motor	25 Amp	None	24"x19"x10"	90 LB	Bayonet	C	Continuous film transport, slits--.101" to .01". Timing light. Buckle and run-out switch.
Photo Sonics Model CFA 35	120 / 5	6.94×10^{-6} / 1.66×10^{-3}		1.17 / 39.4	140 FT / 197 FT	200 FT / 35MM		.010"x.968"		Bore-sight	AC-DC Motor	50 Amp	None	21"x15"x13"	99 LB	Bayonet	C	See remarks Model CFB.
Photo Sonics Model CFA 70	120 / 5	6.94×10^{-6} / 1.66×10^{-3}		1.17 / 39.4	140 FT / 197 FT	200 FT / 70 MM		.010"x2.25"		Bore-sight	AC Motor	50 Amp	None	21"x15"x13"	99 LB	Bayonet	C	See remarks Model CFB.
Photo Kinetics Nova 16-B	250 / 5	1.0×10^{-6} / 5.0×10^{-5}		.41 / 18.3	70 FT / 90 FT	100 FT / 16MM	.255 / 3.0	.040"x.410"		Through the lens Bore-sight	AC-DC Motor	30 Amp	Optional Unit	8.5"x9" x7.6"	15 LB / 22 LB	Four Lobe Bayonet	A	See remarks Nova Model 16-1A. Other models convertible to streak. 400 foot available. Useful recording time: 1.49/68.2; capacity: 800/380 feet.
Warrick F-7 (McDonnell)	125 / 15			6.4 / 64.0	800 FT / 950 FT	1000 FT / 35MM	3.20 / 7.0	0" to .750"		Film Plane Telescope				22"x18"x8"	44 LB			Continuous film transport, start-stop operation. Variable height slit; speed regulation plus or minus 1%.
McDonnell Model F-9	150 / 15			6.4 / 66.0	900 FT / 999 FT	1000 FT / 35MM	4.0 / 0.3	0.75"x1.0"		Bore-sight	AC-DC Motor	10 Amp		16"x7.7" x18.8"	50 LB	Special Type		Start-stop operation.
McDonnell Model 70-46	250 / 100			3.2 / 9.0	800 FT / 900 FT	1000 FT / 70MM	2.0 / .5	2.25"x2.25"		Bore-sight	AC-DC Motor	10 Amp		16.8"x8.5" x23"	80 LB	Special Type		Very high film acceleration, available in 0.75"x1.0" slit.
ROTATING MIRROR-STATIONARY FILM STREAK CAMERAS																		
AVCO Model MC-300-2	12800 / 1280			5×10^{-5} / 5×10^{-4}	2-3/8" x7½"	16" of 70MM			F/2.5		Air driven		None required	15"x'2"x8"	22 LB		B	Continuous recording, slit attachments available: .001" to .05"x2".
Beckman & Whitley Model 770	32800 / 5450	3×10^{-9} / 18×10^{-9}		2×10^{-5} / 1.23×10^{-4}	8"x2"	8" of 70MM		.0015" x70MM	F/7.7	Film plane microscope	Air driven	10 Amp	Unit Optional	32"x13"x8"	75 LB	Special Type	E	Synchronized rotating mirror, control unit delays from 10^{-6} sec. to 10^{-3} sec. Camera mounted on 8 foot optical bench.
Beckman & Whitley Model 339-B	29800 / 2292	5×10^{-9} / 6.5×10^{-9}		1.31×10^{-4} / 1.69×10^{-3}	46.5" x35MM	48" of 35MM		.0015" x2"	F/8	Film plane microscope	Air driven	10 Amp	None Required	48"x24"x12"	250 LB	Special Type	E	Continuous recording.
Beckman & Whitley Model 200	90000 / 985	7.7×10^{-9} / 2.1×10^{-8}		4.5×10^{-6} / 3.6×10^{-4}	.9" x5.5"	5-1/8" of 35MM		.004" x1"	F/6.5	Film plane microscope	Air driven	10 Amp	Unit Optional	32"x13"x8"	75 LB	Special Type	E	Simultaneous streak and framing camera. Effective exposure time calculated for .002" slit.
Hitachi Model SP-1	13100 / 1970	2.5×10^{-8} / 2.0×10^{-7}		1.65×10^{-4} / 1.32×10^{-3}	26" x	100 FT. 35MM		.004" x	F/1.4	Reflex System	AC Motor	20 Amp	None Required	75"x22"x27"	264 LB		E	Continuous writing system. Slits: .1MM, .3MM, .5MM. Rotating shutter optional.
Barr & Stroud CP-6	72000 / 33000	2.28×10^{-9} / 4.97×10^{-9}		2.7×10^{-5} / 6×10^{-6}	50MM x100CM	50 FT 62MM	5.8×10^{-5}	.05MM	F/17	Reflex System	Air Driven	10 Amp	Synch. Unit Optional	34"x22"x33"	200 LB	C Mount	E	Slit-width adjustable from 0 to 2MM.
Cordin Model 10-030A	17500 / 1250			9.3×10^{-6} / 1.3×10^{-3}	50CM x4"	50CM x5"		.010" x4"			AC Motor						D	Slit widths of .002, .005 available. Film length: 60 FT magazine. Shields allow 125, 250, 375, or full 500MM length exposure.
Cordin Model 10-031	33500 / 335			3.16×10^{-5} / 3.16×10^{-3}	12.5"	12.5" x35MM		.020"		Micro-scope view	Air driven						D	Slit width continuously variable to .020" wide. Film load: 100 FT spool or standard cassette.
Cordin Model 10-032	40000 / 335			2.6×10^{-5} / 3.16×10^{-3}	12.5" x50MM	12.5" x70MM		.015" x50MM		Micro-scope view	Air driven						E	Slit width continuously variable from .001" to .015". Film load: 100 FT spool or 15 foot cassette.
Cordin Model 10-012	50000 / 1000			1.3×10^{-5} / 9.6×10^{-4}	29CM x31MM	29CM x35MM		20x10-6" x31MM		Parallax view	Air driven						E	Slit width continuously variable from 1×10^{-6}" to 2×10^{-3}". Film load: 100 foot spool or standard cassette. Model 10-012 converted from 10-010A camera.

Approved For Release 2004/11/30 : CIA-RDP78B04770A000900040011-8

Approved For Release 2004/11/30 : CIA-RDP78B04770A000900040011-8

ROTATING DRUM CAMERAS																							
AVCO Model DC-060-2		620 210				1.667x10^-3 5x10^-4			12.56" x3"			F/2.5	MICRO-SCOPES	AIR DRIVEN				15"x8"x8"	25 LB		B	CONTINUOUS RECORDING.
Beckman & Whitley Model 364		400 8				6.9x10^-3 .35	33-7/8" 35MM	33-7/8" 35MM		FILM	25MM	TRANSPORT	52.8AM	AC MOTOR	10 AMP	NONE REQUIRED		15"x14"x14"	34 LB	C MOUNT	A	RANDOM EVENT OSCILLOSCOPE CAMERA. CONTINUOUS WRITING. FACEPLATE INTERCHANGEABLE WITH MODEL 350.
FRAMING CAMERAS																							
Fastax WF-7		100 3		1.33x10^-6 1.11x10^-3			60 FT 120 FT	100 FT 16MM					FILM PLANE TELE	AC-DC MOTOR	30 AMP	GOOSE UNIT		12"x12"x12"	29 LB 50 LB	FX-1 BAYONET	A	OSCILLO-STREAK CONTINUOUS RECORDING. INTERCHANGEABLE SLITS AVAILABLE FROM .0" TO .010" WIDE.
Cordin Model 10-010	1.25x10^6 5x10^6		200 4	5.33x10^-7 2.67x10^-5 11.25x10^-5 3.32x10^-4	8x10^-7 4x10^-5	1x10^-5 2.3k 10.2k	25 FRAMES	100 FT 35MM	ADJUSTABLE	.75" x1.0"	.070" .040"	.410"	MICRO-SCOPE SCAN	AIR DRIVEN		SYNCH. UNIT REQUIRED		36"x9"x30"	300 LB 200 LB	BAYONET	E	MODEL 10-205 TURBINE. HALF WIDTH AREA TUBES AVAILABLE, GIVING EFFECTIVE EXPOSURE/FRAME OF 1/6 INTERFRAME TIME. .070" APERTURE AVAILABLE - 1/13 INTERFRAME TIME. SEE REMARKS MODEL 10-220 TURBINE.
Fastax WF-3							60 FT 90 FT	100 FT 16MM					FILM PLANE TELE-SCOPE	AC-DC MOTOR	30 AMP	GOOSE UNIT		12"x12"x12"	35 LB 60 LB	FX-1 BAYONET		
Cordin Model 10-010	5x10^6 2x10^6			1.33x10^-7 6.67x10^-6	2x10^-7 10x10^-6	5x10^-6	25 FRAMES	100 FT 35MM	ADJUST-ABLE	.34" x1.0"			MICRO-SCOPE SCAN	HELIUM DRIVEN		SYNCH. UNIT REQUIRED		36"x9"x30"	300 LB 200 LB	BAYONET	E	MODEL 10-220 TURBINE. SEE REMARKS MODEL 10-208 TURBINE. CONTINUOUSLY VARIABLE OBJECTIVE SLIT WIDTH FROM 2.0 TO 20.0 MM. FIDUCIAL-MARK SYSTEM AVAILABLE.
Barr & Stroud Model CP-5	7.92x10^6 1.59x10^6			1.26x10^-7 5.1x10^-7	1.25x10^-7 6.25x10^-7	7.45x10^-6 14.65x10^-6	117 FRAMES 28	50 FT 35MM	3.41x10^-6 2.15x10^-6	8MM DIA. 18MM DIA.	F/16	REFLEX VIEWING	AIR DRIVEN	10 AMP		SYNCH. UNIT REQUIRED		34"x22"x33"	389 LB	C MOUNT	E	OPTIONAL OPTICAL SYSTEMS AVAILABLE FOR CHANGING FRAMING RATE. ROTOR MAY BE DRIVEN TO 1/10 FULL SPEED OR LESS.
Benson-Lehner Ellis	1.6x10^6 480			5x10^-8 1x10^-6		6.6x10^-4 .5	240 FULL 960-1/4	400 FT 35MM		10MM x25MM	F/3.5	PERI-SCOPE OCCULAR	AIR DRIVEN	8 AMP				2.5'x6.5' x5.5'	1050 LB			CONTINUOUSLY VARIABLE FRAMING RATE.
E.O.I. Model KFC-600	10^8 10^3			5x10^-9 5x10^-6	5x10^-9 5x10^-5	5x10^-6 5x10^-5	6 FRAMES	4"x5" (6 SHEETS)	6x10^-8	1.75" x2.5"	F/9.5	FILM PLANE VIEW BOX		10 AMP				30" LONG 2' DIA.	175 LB 300 LB	SPECIAL TYPE	E	KERR CELL CAMERA--6 FRAMES.
E.O.I. Model RMC-15F	1.2x10^6 2x10^6			5x10^-8 3.5x10^-7	7x10^-7 7x10^-5	1.1x10^-5 1.1x10^-3	15 FRAMES	35MM CASSETTE	1.5x10^-5 2x10^-3	1"x15MM 10x15MM	F/10	FILM PLANE EYEPIECE	AIR & HELIUM DRIVEN	2 AMP				18"x 8"x12"	50 LB	SPECIAL TYPE	E	ROTATING MIRROR, VARIABLE STOPS, FOIL SHUTTER.
Beckman & Whitley Model 189A	4.08x10^6 4.8x10^4			4.4x10^-8 7.5x10^-6	2.5x10^-7 25x10^-5	5x10^-5 6.25x10^-4	25 FRAMES	100 35MM		.75"x1" 11/32"x1"	F/10.5	BORE-SIGHT	AIR & HELIUM	10 AMP				28"x32"x6"	225 LB	SPECIAL TYPE	E	NOT CONTINUOUS RECORDING. REQUIRES INTERCHANGEABLE TURBINES FOR VARIOUS FRAMING RATES. STOPS AVAILABLE.
Beckman & Whitley Model 192	1.4x10^6 4x10^4			1x10^-7 7.5x10^-6	7.1x10^-6 2.5x10^-5	5.5x10^-5 2x10^-3	82 FRAMES	84" x35MM		.75"x1"	F/26	THROUGH THE LENS	AIR, NITROGEN OR HELIUM	10 AMP	NONE REQUIRED			72"x38"x26"	1550 LB	SPECIAL TYPE	E	CONTINUOUS RECORDING. STUDY OF RANDOM OR PREDICTABLE EVENTS. STOPS AVAILABLE.
Beckman & Whitley Model 350	35000 200			7x10^-7 5.3x10^-4	2.86x10^-5 5x10^-3	6.4x10^-3 1.12	224 FRAMES	33-7/8" x35MM	0.22x10^-3 21x10	.28" x.39"	F/8	THROUGH THE LENS	AC MOTOR	20 AMP	NONE REQUIRED	SYNCH. UNIT OPTIONAL		12" DIA. 12.5" LONG	32 LB	C MOUNT	C	CONTINUOUS RECORDING. ROTATING MIRROR-ROTATING DRUM. SHUTTERING SPEEDS: .7, 1.8, AND 9.7x10^-6 SECONDS AT 35000 PPS.
Beckman & Whitley Model 200	8.8x10^6 1x10^4			6x10^-8 2.9x10^-6	1.12x10^-7 4.9x10^-6	2.6x10^-6 2.5x10^-4	1 SHEET	4"x5"		.23"x.5" .4"x.5"	F3.5	GROUND GLASS	AIR DRIVEN	10 AMP				32"x13"x8"	75 LB	SPECIAL MOUNT	E	SIMULTANEOUS STREAK AND FRAMING CAMERA.
IMAGE CONVERTER CAMERAS																							
PTI Model C				5x10^-8 5x10^-7	2.5x10^-7 1.3x10^-5		1 TO 5 FRAMES	4"x5" SHEET		.15" SQ.		GROUND GLASS								LEICA MOUNT		STREAK UNIT AVAILABLE.
Abtronics Model 2RS	1x10^8 1x10^7			1x10^-8 1x10^-7			1 FRAME	4"x5" SHEET	2x10^-7 1x10^-4	2.5" DIA.	F/1.9	GROUND GLASS		10 AMP	EXTERNAL SYNCH. SIGNAL			16.5"x15.2" x10"	30 LB	PRAKTICA MOUNT	B	UNITS MAY BE COMBINED FOR MULTIPLE FRAME OPERATION.
Abtronics Model 1	1x10^7 1.66x10^5			1x10^-7 6x10^-6	1x10^-6 1x10^-3		4 FRAMES	4"x5" SHEET	1x10^-6 1x10^-3	1.2" DIA.		GROUND GLASS			EXTERNAL SYNCH. SIGNAL			22"x16"x12"	40 LB	LEICA MOUNT	C	EXPOSURES MAY BE MADE IN SEQUENCE OR SIMULTANEOUSLY. THIS MODEL HAS BEEN DISCONTINUED AND REPLACED BY MODEL 4.
Abtronics Model 2	1x10^7 1x10^6			1x10^-7 1x10^-6			1 FRAME	4"x5" SHEET	2x10^-7 1x10^-4	2.5" DIA	F/1.9	GROUND GLASS		10 AMP	EXTERNAL SYNCH. SIGNAL			16.5"x15.5" x10"	30 LB	PRAKTICA MOUNT	B	UNITS MAY BE COMBINED FOR MULTIPLE OPERATION.
Abtronics Model 3	1x10^8 1x10^6			1x10^-8 1x10^-6	0 1x10^-2	1x10^-8 1x10^-5	4 FRAMES	4"x5" SHEET-2	1x10^-7	2" DIA	F/1.9	REFLEX VIEWING		10 AMP	EXTERNAL SYNCH. SIGNAL			12"x11" x9.5"	100 LB	PRAKTICA MOUNT	D	SINGLE UNITS MAY BE COMBINED. MODEL 3-4R SAME AS MODEL 3 EXCEPT THAT INSTEAD OF ONE 4-FRAME UNIT IT HAS 4 INDIVIDUAL UNITS
Abtronics Model 4	1x10^7 1.66x10^5			1x10^-7 6x10^-6	0 1x10^-6	1x10^-7 1.66x10^-5	4 FRAMES	4"x5" SHEET-2	1x10^-7	2" DIA	F/1.9	REFLEX VIEWING		2.2 AMP	EXTERNAL SYNCH. SIGNAL			12"x11" x9.5"	100 LB	PRAKTICA MOUNT	D	SEE REMARKS MODEL 3.
Abtronics Model 5	2x10^8 1x10^6			5x10^-9 1x10^-6	0	5x10^-9 1.0x10^-5	2 FRAMES	4"x5" SHEET	0 1x10^-4	2.5" DIA	F/1.9	REFLEX VIEWING		2.2 AMP	UNIT AVAIL-ABLE			22.5"x16.5" x13"	45 LB	PRAKTICA MOUNT	C	SEE REMARKS MODEL 2.
STL Model 10 Framing	2x10^8 5.2x10^4			5x10^-9 10x10^-6	2x10^-4 (1) 5x10^-6	1.65x10^-2 1.06x10^-1	3 FRAMES	4"x5" 1 SHEET	1.2x10^-8 5x10^-6	17MM x25MM	F/.5	DIRECT VIEW		2 AMP	TRIGGER UNIT OPTIONAL			28.5" x7-3/8" x11.5"	195 LB	ZIALPHAX SHUTTER	D	MAY BE USED AS FRAMING OR STREAK CAMERA. SPEED RANGE VARIABLE. INTERFRAME TIME: VARIABLE FROM FRAME TO FRAME.
STL ~~Model 10 Streak~~		8.3x10^6 8.2x10^2					4"x5"	4"x5" 1 SHEET	1.2x10^-8 2x10^-6	25MM x50MM	F/.5	DIRECT VIEW		1 AMP	TRIGGER UNIT OPTIONAL			28.5" x7-3/8" x11.5"	195 LB	ALPHAX(12 SHUTTER	D	SEE REMARKS MODEL 10 FRAMING.
KERR CELL SYSTEM																							
E.O.I. KSC-31A				5x10^-9 2x10^-5			1 FRAME	4"x5" SHEET	1x10^-7 5x10^-5	1.15" DIA	F/8	DIRECT VIEW		2 AMP	TRIGGER UNIT OPTIONAL			23"x16"x13"	55 LB	DEPENDS ON CAMERA	B	USES CROWN GRAPHIC RECORDING CAMERA.
E.O.I. Model 66	1x10^8 1x10^5			5x10^-9 5x10^-6	5x10^-9 5x10^-5	5.5x10^-9 3x10^-4	6 FRAMES	4"x5" SHEET	6.5x10^-8	1" DIA	F/0.4	GROUND GLASS		10 AMP	TRIGGER DELAY			30" LONG 2' DIA.	175 LB 300 LB	SPECIAL TYPE	E	IMAGE CONVERTER AND KERR CELL SHUTTER.

Approved For Release 2004/11/30 : CIA-RDP78B04770A000900040011-8