

# Film-Tech

The information contained in this Adobe Acrobat pdf file is provided at your own risk and good judgment.

These manuals are designed to facilitate the exchange of information related to cinema projection and film handling, with no warranties nor obligations from the authors, for qualified field service engineers.

If you are not a qualified technician, please make no adjustments to anything you may read about in these Adobe manual downloads.

[www.film-tech.com](http://www.film-tech.com)

**U. S. NAVY  
35<sup>MM</sup> SOUND MOTION  
PICTURE EQUIPMENT**

**TYPE "D"**

**PARTS AND PRICE LIST**

**Important**

When ordering always give the following information:

1. Type and serial number of unit.
2. I. C. Instruction Book number.
3. Part number and name.

Example: Type D Projector No. 16247, I. C. Instruction Book No. 62A, E-14056 Cam Shaft Complete.

**HOLMES PROJECTOR COMPANY**  
1815 Orchard Street, Chicago, Illinois

# HOLMES

## SOUND MOTION PICTURE PROJECTOR

### PARTS and ACCESSORY PRICE LIST

HOLMES TYPE 8

TYPE "D"

I.C. INSTRUCTION BOOK NO. 62-A

U.S. NAVY CONTRACT NO. Nobs-20312

#### Important!

Below is a copy of our name plate which you will find on mechanism Case Door.  
We must have machine number to properly fill orders for parts or accessories.

HOLMES		
SOUND MOTION PICTURE PROJECTOR		
TYPE 8	MADE IN U. S. A.	SER. NO. <input type="text"/>
115 VOLTS	60 CYCLES	250 WATTS
HOLMES PROJECTOR CO.		
1815 ORCHARD STREET	CHICAGO, ILLINOIS, U. S. A.	

← GIVE NUMBER  
YOU FIND HERE

## HOLMES PROJECTOR COMPANY

1815 ORCHARD STREET • CHICAGO • ILLINOIS • U. S. A.

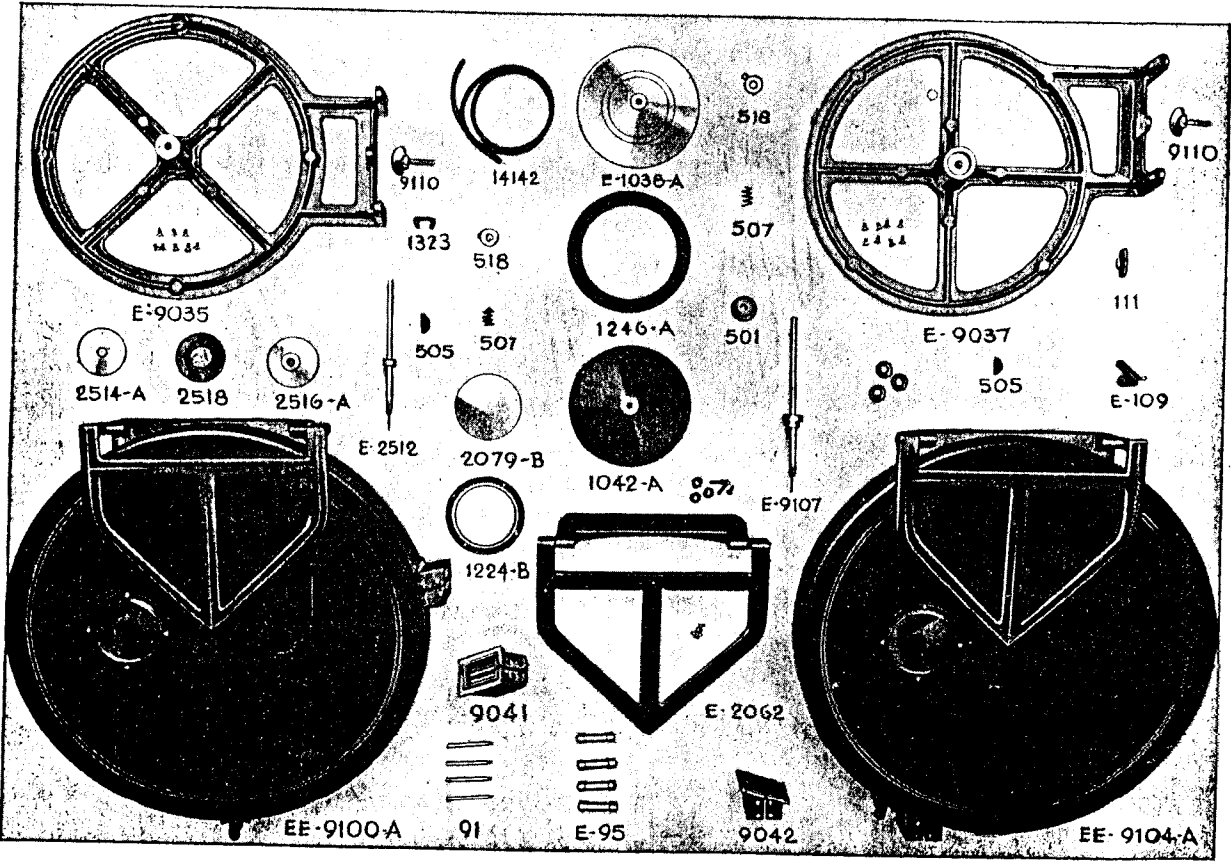
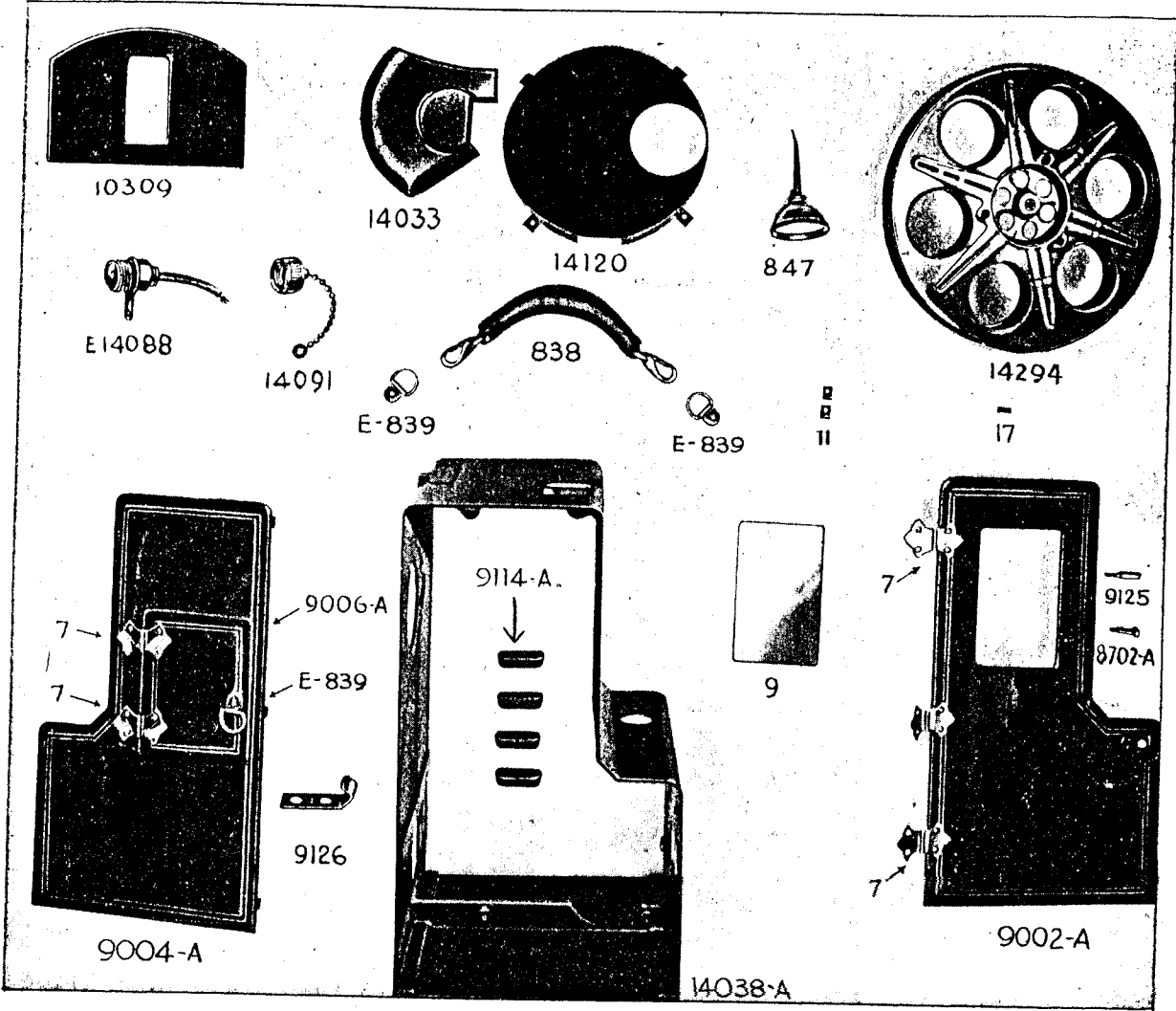
PART NO.	NAME OF PART	PRICE
----------	--------------	-------

### UPPER PICTURE

7	Case Door Hinge .....	\$ .35
9	Door Glass .....	.25
11	Door Glass Spring .....	.10
17	Case Door Latch Spring .....	.15
838	Projector Carrying Handle .....	1.35
E-839	Projector Carrying Handle Ring .....	.30
847	Oil Can .....	.25
8702-A	Door Latch Knob .....	.30
9002-A	Mechanism Housing Front Door .....	5.75
9004-A	Mechanism Housing Rear Wall .....	5.75
9006-A	Mechanism Housing Rear Wall Door .....	1.45
9114-A	Rubber Bumper .....	.15
9125	Case Door Latch .....	.40
9126	Rear Door Catch Spring .....	.15
10309	Aperture Light Baffle .....	.95
14033	Automatic Fire Shutter Guard .....	1.50
14038-A	Mechanism Case .....	46.00
E-14088	P.E.C. Male Connector Assembly .....	1.35
14091	P.E. Cell Receptacle Cover <i>AMPHENOL 80-75-CCC 1</i> .....	.75
14120	Shutter Guard .....	2.30
14294	Standard 2000 ft. Steel Reel .....	2.00

### LOWER PICTURE

91	Roller Shaft .....	\$ .20
E-95	Roller Tube Assembly .....	.65
E-109	Magazine Catch Assembly .....	1.25
111	Magazine Catch Holder .....	.35
501	Ball Bearing .....	1.35
505	Woodruff Key .....	.15
507	Upper and Lower Magazine Shaft Tension Spring.....	.15
518	Lower Takeup Outer Disc Tension Collar .....	.40
E-1038-A	Lower Takeup Pulley (2000') .....	3.75
1042-A	Takeup Friction Disc (2000') .....	2.30
1224-B	Magazine Window Frame .....	.15
1246-A	Takeup Felt Washer (2000') .....	.35
1323	Belt Hook .....	.05
E-2062	Magazine Cover Hinge (2000') .....	3.70
2079-B	Magazine Glass .....	.15
E-2512	Upper Magazine Shaft (2000') .....	2.00
2514-A	Upper Magazine Shaft Inner Friction Disc .....	1.10
2516-A	Upper Magazine Shaft Outer Friction Disc .....	1.10
2518	Upper Magazine Shaft Disc Felt Washer .....	.15
E-9035	Feed Magazine Bracket (2000') .....	5.75
E-9037	Takeup Magazine Bracket (2000') .....	6.90
9041	Feed Magazine Fire Trap (2000') .....	1.75
9042	Takeup Magazine Fire Trap (2000') .....	1.75
EE-9100-A	Upper Magazine Complete (2000') .....	19.50
EE-9104-A	Lower Magazine Complete (2000') .....	26.50
E-9107	Lower Magazine Reel Shaft Complete with Ball Bearings .....	5.20
9110	Magazine Clamp Screw .....	.60
14142	Takeup Belt (2000') .....	.70

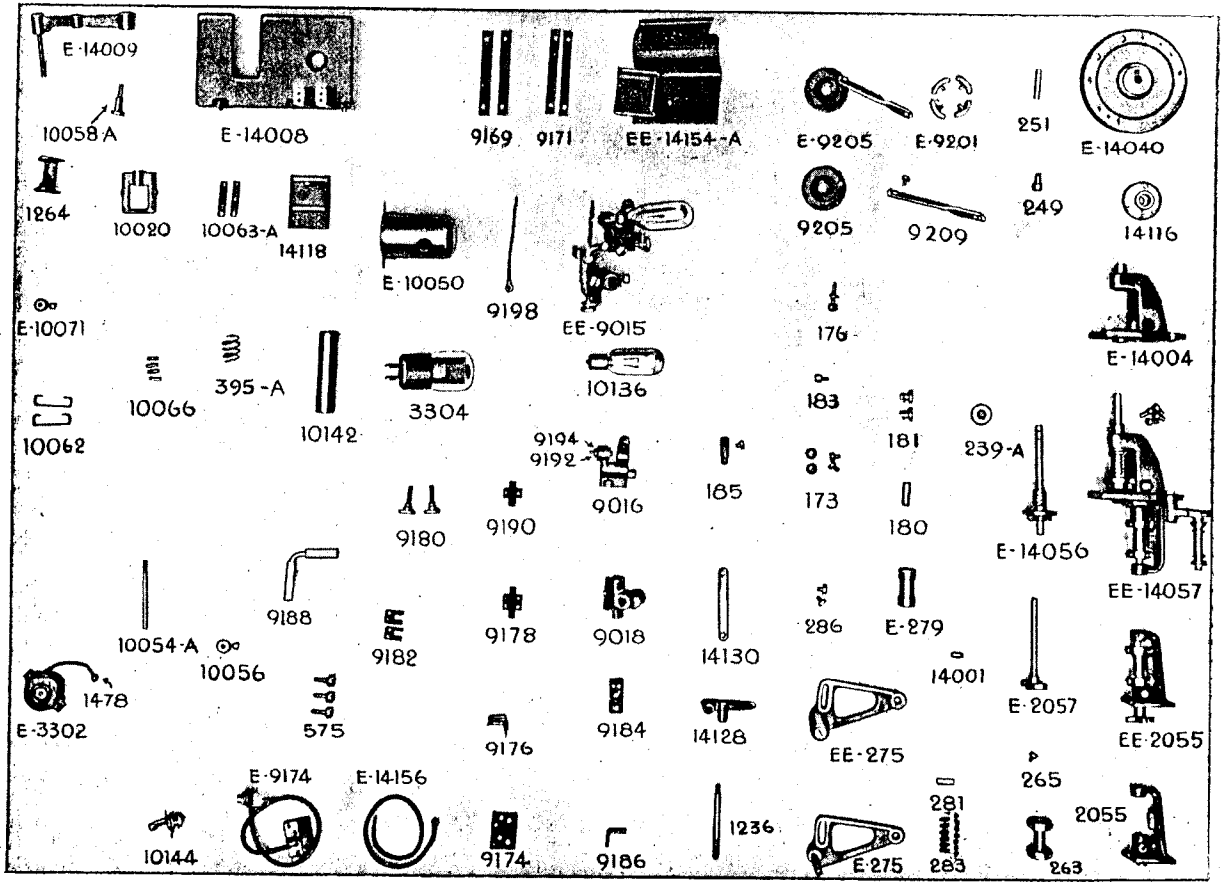
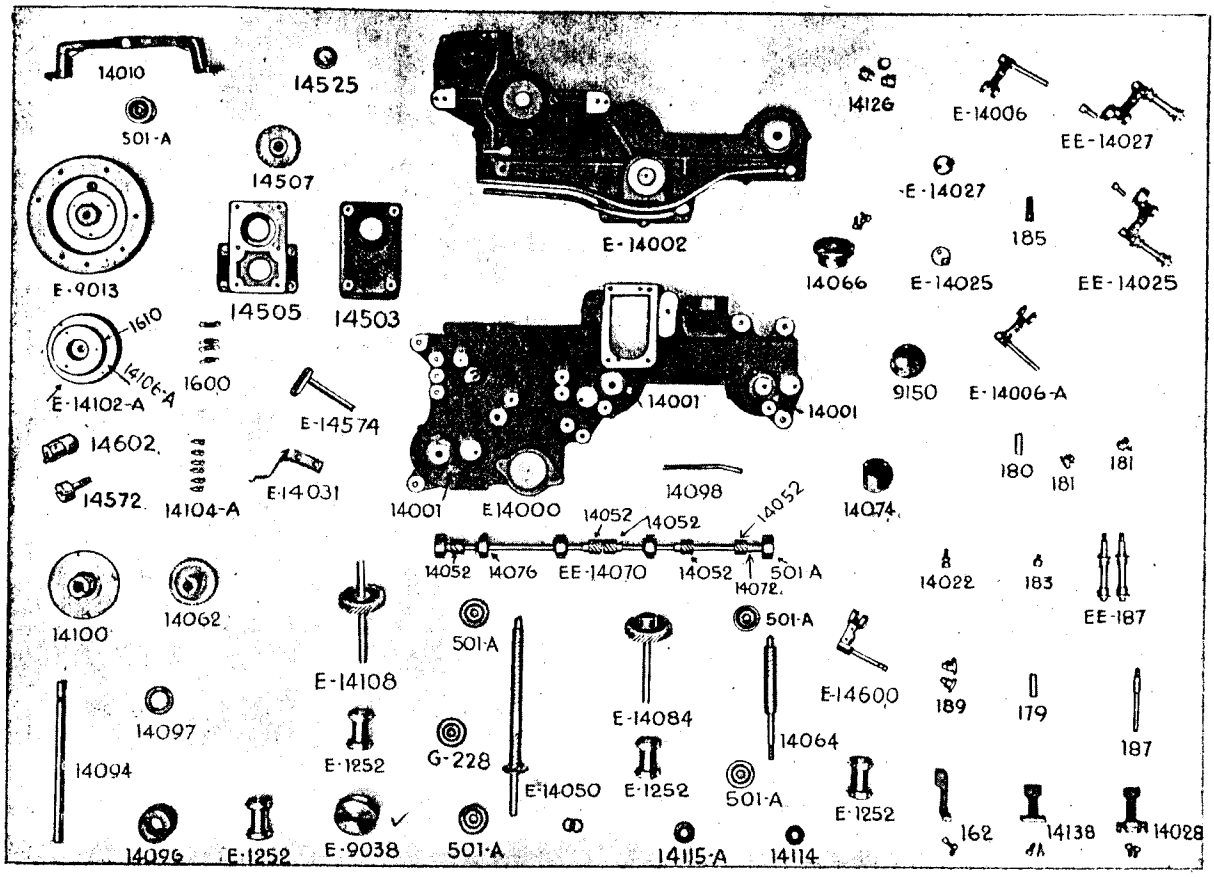


PART NO.	NAME OF PART	PRICE
<b>UPPER PICTURE</b>		
162	Feed Sprocket Stripper Shield .....	\$ .90
180	Intermittent Sprocket Guide Roller Tube (short) .....	.20
181	Sprocket Guide Roller End .....	.50
183	Sprocket Guide Roller Screw .....	.20
185	Sprocket Guide Roller Tension Spring .....	.15
187	Stationary Roller Stud .....	.55
EE-187	Stationary Roller Stud Complete .....	1.20
189	Stationary Roller End .....	.35
G-228	Grease Seal .....	1.15
501-A	Oil Seal Bearing .....	2.30
E-1252	Sound, Feed, Takeup or Holdback Sprocket & Screw.....	5.75
1600	Filter Spring .....	.35
1610	Damping Felt .....	.50
E-9013	Sound Shaft Fly Wheel .....	6.90
E-9038	Takeup Pulley and Screw .....	1.90
9150	Worm Gear End Plate .....	.25
E-14000	Mechanism Housing .....	39.70
14001	Oiler .....	.30
E-14002	Mechanism Housing Cover .....	17.45
E-14006	Takeup Guide Roller Arm Assembly .....	1.35
E-14006-A	Feed and Holdback Guide Roller Arm Assembly .....	1.35
14010	Sound Shaft Rear Bearing Bracket .....	1.40
14022	Guide Roller Arm Adjusting Screw .....	.25
E-14025	Feed and Holdback Adj. Cylinder .....	.90
EE-14025	Feed & Holdback Guide Roller & Cyl. Assembly .....	2.90
E-14027	Takeup Adjusting Cylinder .....	.90
EE-14027	Takeup Guide Roller and Cylinder Assembly .....	2.90
14028	Takeup Sprocket Stripper Shield .....	.50
E-14031	Gate Arm Retaining Spring Bracket Assembly .....	.90
E-14050	Drive Worm and Grease Propeller Assembly .....	6.90
14052	Vertical Shaft Cam or Shutter Drive Gear .....	2.30
14062	Sound Shaft Gear .....	5.75
14064	Shutter Shaft .....	4.60
14066	Shutter Shaft Bearing Cap .....	2.30
EE-14070	Vertical Drive Shaft Complete .....	23.30
14072	Vertical Drive Shaft Spacer .....	.15
14074	Vertical Shaft Bottom Bearing Cover .....	.50
14076	Ball Bearing Retaining Spring .....	.15
E-14084	Takeup Shaft and Gear .....	4.45
14094	Sound Shaft .....	.90
14096	Sound Shaft Grease Retaining Felt .....	.25
14097	Sound Shaft Grease Retaining Fibre Washer .....	.15
14098	Sound Shaft Oil Tube .....	.10
14100	Filter Disc .....	2.90
E-14102-A	Damping Felt Disc Complete .....	3.15
14104-A	Filter Spring Stud .....	.15
14106-A	Filter Stop Pin .....	.15
E-14108	Holdback Sprocket Shaft and Gear .....	4.60
14114	Shutter Felt Washer .....	.10
14115-A	Intermittent Rear Bearing Felt Washer .....	.10
14126	Grease Hole Plug .....	.15
14138	Feed Sprocket Stripper Shield .....	.90
14503	Motor Gear Box .....	2.00
14505	Motor Gear Box Cover .....	1.50
14507	Worm Gear .....	4.00
14525	Grease Plug Screw .....	.10
14572	Auxiliary Guide Roller Arm Screw .....	.40
E-14574	Auxiliary Guide Roller Shaft Assembly .....	1.30
E-14600	Intermittent Shoe Arm .....	1.40
E-14602	Intermittent Shoe Adjusting Collar .....	.25



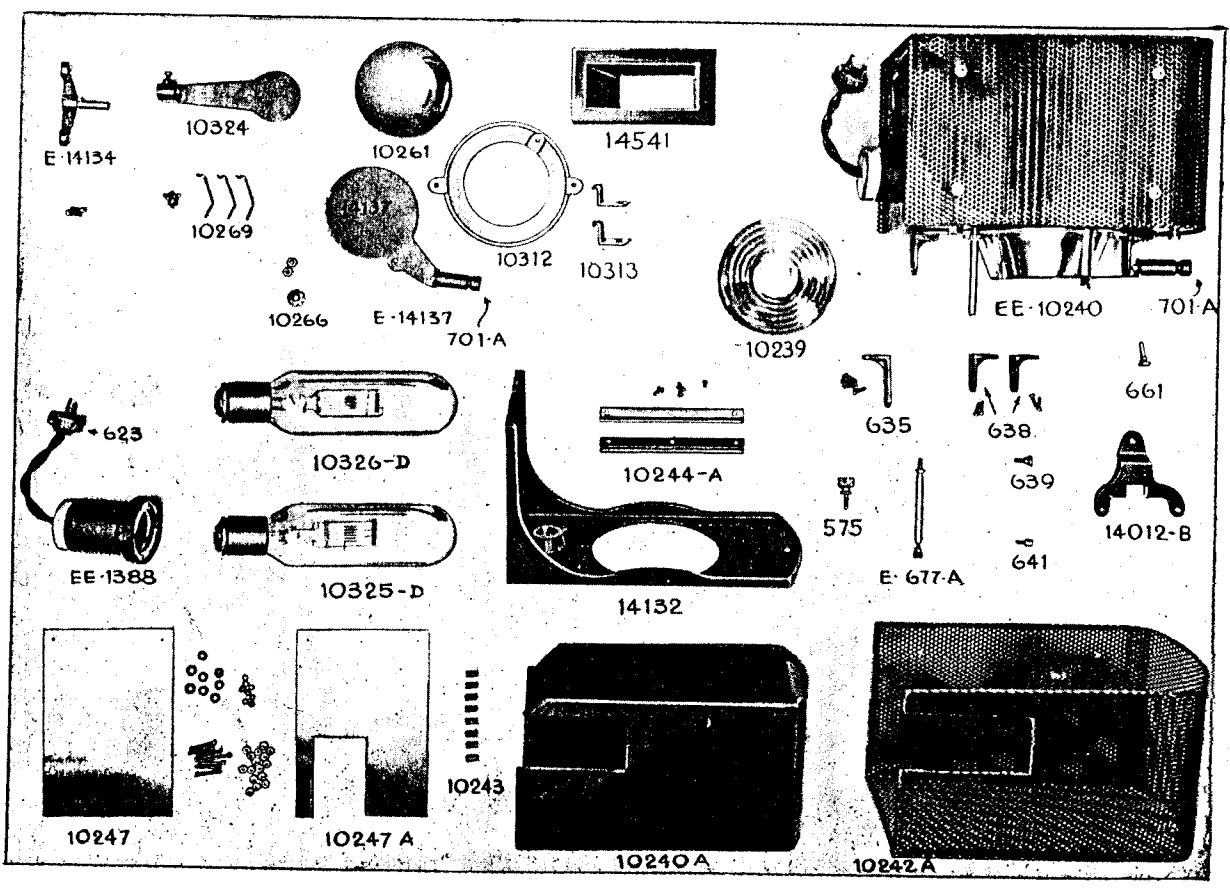
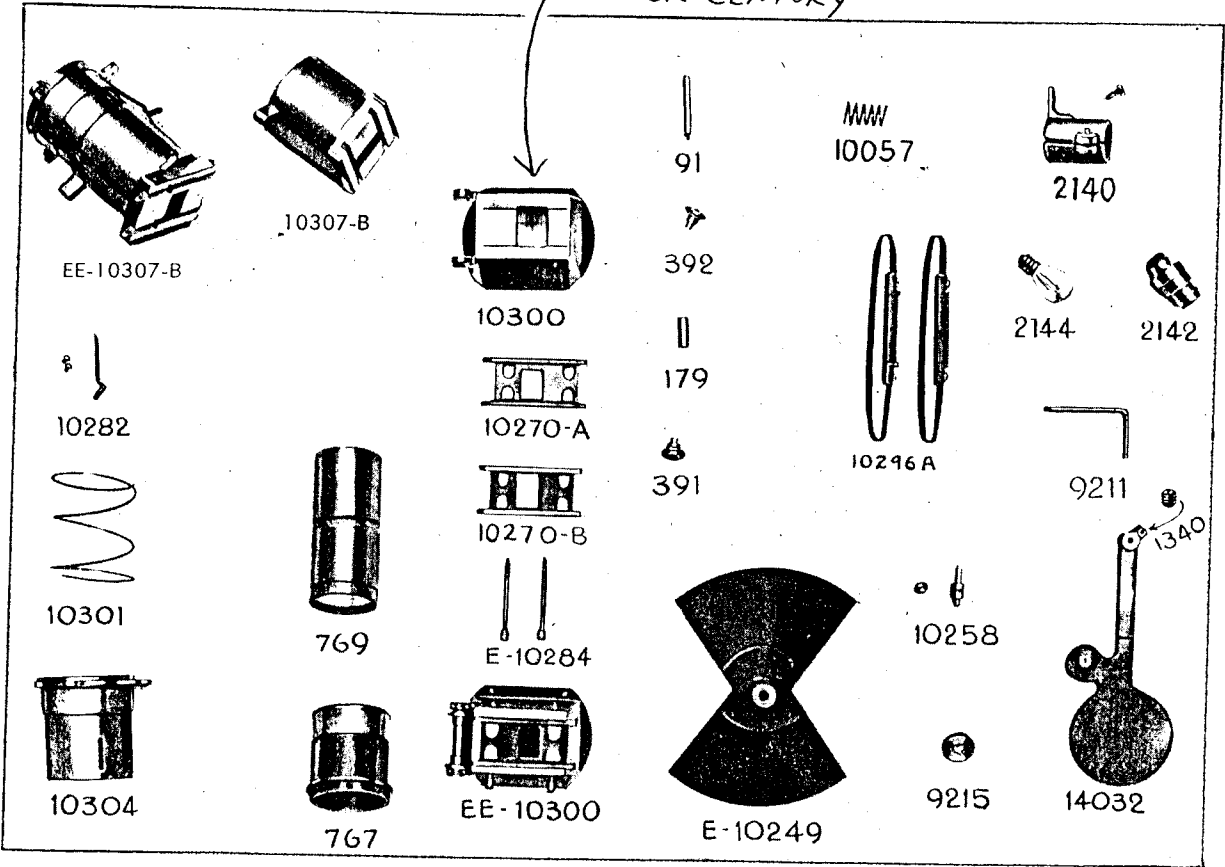
PART NO.	NAME OF PART	PRICE
10144	Exciter Lamp Jack .....	.60
14001	Oiler .....	.30
E-14004	Cam Bearing Assembly .....	14.75
E-14008	Sound Lens Mount .....	4.35
E-14009	Sound Gate Arm Assembly .....	.90
E-14040	Cam Shaft Fly Wheel Complete .....	7.10
E-14056	Cam Shaft Complete .....	10.35
EE-14057	Cam and Intermittent Units Complete .....	58.65
14116	Intermittent Rear Bearing Collar .....	1.85
14118	Sound Aperture Plate .....	2.30
14128	Framing Lever Arm .....	.90
14130	Framing Link .....	.25
EE-14154-A	Exciter Lamp Light Guard Complete .....	1.45
E-14156	Exciter Lamp Wire Sleeve and Wire .....	.35





PART NO.	NAME OF PART	PRICE
<b>UPPER PICTURE</b>		
91	Roller Shaft .....	\$ .20
179	Guide Roller Tube (Long) .....	.20
391	Aperture Guide Roller (left) .....	.65
392	Aperture Guide Roller (right) .....	.65
* 767	Lens Jacket .....	9.20
769	Series I Motion Picture Lens (give focal length) .....	15.00
1340	8-32 x 3-16 Headless Set Screw .....	.05
2140	Framing Lamp Socket Casting .....	1.00
2142	Framing Lamp Socket .....	1.35
2144	Framing Lamp 6.5 6 12.5 VOLT .....	.40
9211	Fire Shutter "L" Rod .....	.35
9215	Fire Shutter Weight .....	.25
10057	Sound Guide Roller Spring .....	.15
E-10249	Shutter .....	2.80
10258	Fire Shutter Lever Stud .....	.50
10270-A	Aperture Plate .....	1.15
10270-B	Aperture Plate (Silent) .....	1.15
10282	Aperture Gate Catch Spring .....	.40
E-10284	Aperture Plate Retaining Screw and Knob .....	.50
10296-A	Film Tension Skid Assembly .....	1.65
10300	Aperture Mount Cone .....	3.75
EE-10300	Aperture Mount Cone Complete .....	7.50
10301	Aperture Mount Cone Spring .....	.30
10304	Lens Mount .....	4.00
10307-B	Aperture Gate .....	4.30
EE-10307-B	Aperture Gate Complete .....	19.45
14032	Automatic Fire Shutter .....	1.15
<b>LOWER PICTURE</b>		
575	6-32 Knurled Screw .....	\$ .30
623	Male Plug .....	.70
635	"L" Arm Bracket .....	1.00
638	Lower "L" Arm Bracket .....	.90
639	"L" Arm Bracket Slotted Screw (Top) .....	.30
641	"L" Arm Bracket Slotted Screw (Bottom) .....	.25
661	Lamphouse Cover Screw .....	.35
E-677-A	Lamphouse Stay Rod and Nut .....	.60
701-A	Dowser Button .....	.60
EE-1388	Prefocus Socket Complete .....	9.80
10239	Fluted Condenser .....	6.90
EE-10240-A	Lamphouse Complete .....	103.50
10240-A	Lamphouse Shell .....	4.40
10242-A	Lamphouse Shell Guard .....	3.85
10243	Lamphouse Shell Guard Spacer .....	.15
10244-A	Lamphouse Shell Track .....	.35
10247	Lamphouse Transite .. ASBESTOS .....	.55
10247-A	Lamphouse Transite .. ASBESTOS .....	.55
10261	Reflector .....	5.20
10266	Spring Washer .....	.10
10269	Reflector Retainer Spring .....	.25
10312	Condenser Mount (Front) .....	3.45
10313	Condenser Mount Retaining Clamp .....	.20
10324	Reflector Holder .....	1.00
10325-D	1000 Watt Lamp .....	6.25
10326-D	1500 Watt Lamp .....	9.75
14012-B	Upper Lamphouse Bracket .....	1.45
14132	Lamphouse Frame Casting .....	8.35
E-14134	Lamphouse Reflector Rod Base Assembly .....	1.55
14137	Dowser .....	.90
E-14137	Dowser Complete .....	1.50
14541	Blower Housing Aux. Throat .....	1.00

SIMPLEX E-7 APERTURE PLATES OR CENTURY



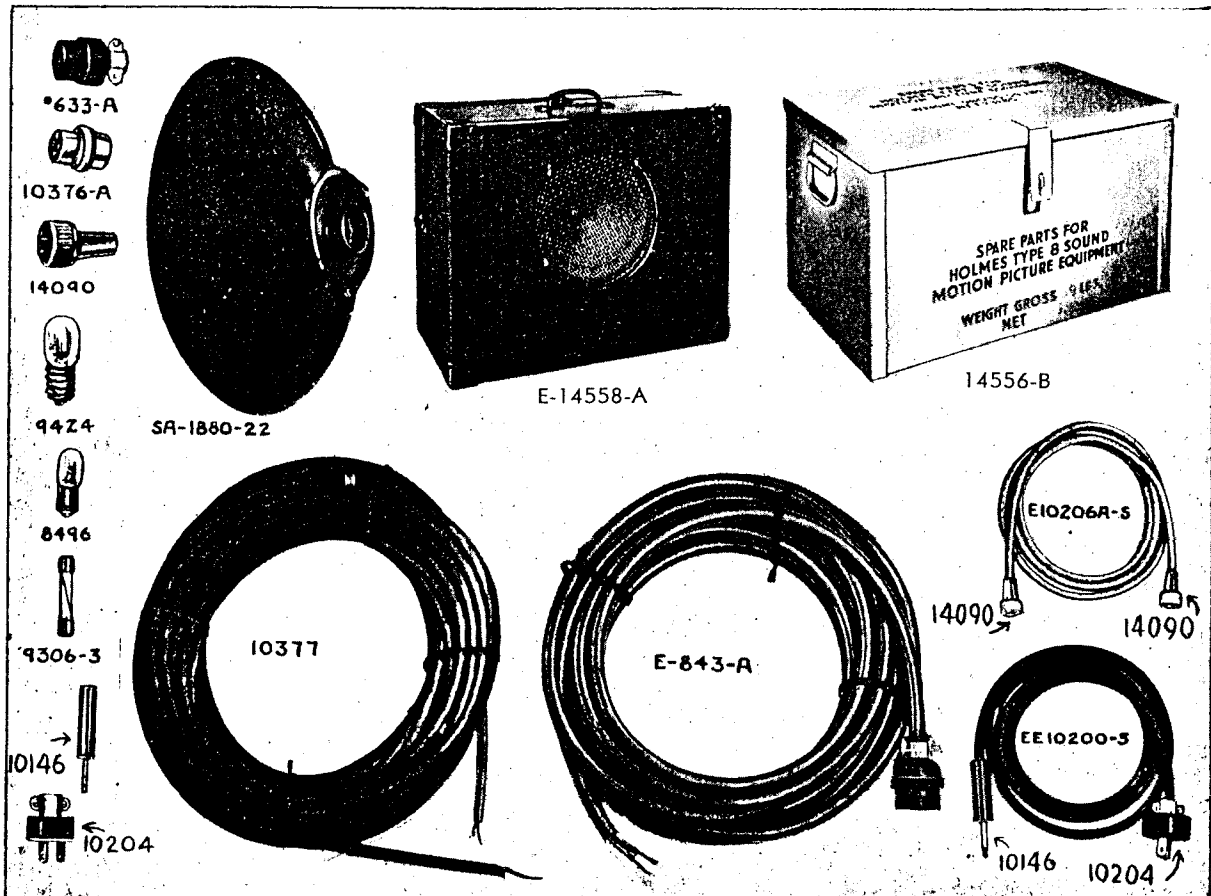
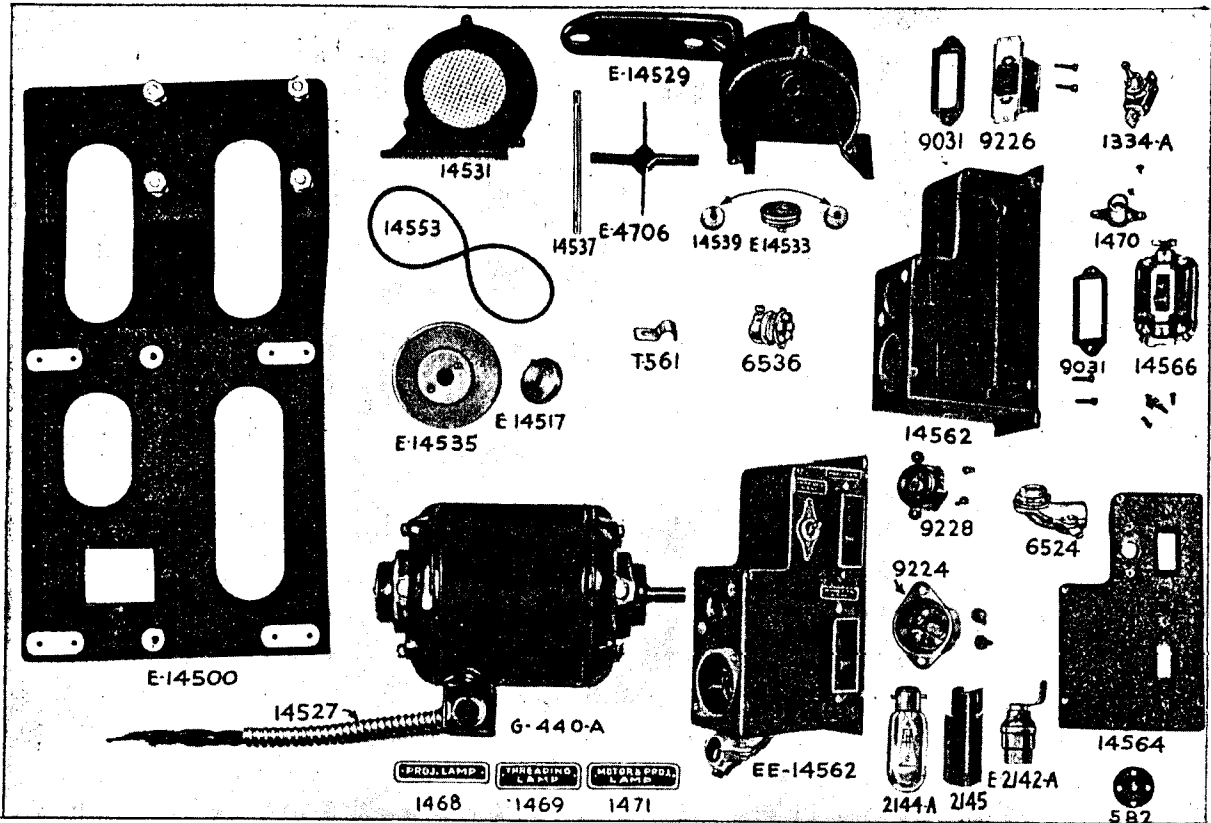
PART NO.	NAME OF PART	PRICE
----------	--------------	-------

**UPPER PICTURE**

G-440-A	Motor .....	\$28.00
T-561	Wire Clip .....	.30
582	Universal Coupling .....	.30
1334-A	Threading Light Switch .....	1.15
1468	Name Plate (Proj. Lamp) .....	.25
1469	Name Plate (Threading Lamp) .....	.25
1470	"On" - "Off" Name Plate .....	.25
1471	Name Plate (Motor and Proj. Lamp) .....	.25
E-2142-A	Threading Lamp Socket and Bracket .....	1.75
2144-A	Threading Lamp <i>15 T.T.D.C.</i> .....	.40
2145	Lamp Shield .....	.50
E-4706	Blower Fan and Screw .....	1.50
6524	90° Conduit Connector .....	.40
6536	Straight Conduit Connector .....	.25
9031	Lamp Switch Guard .....	.60
9224	A. C. "Input" Male Plug .....	1.45
9226	Projector Lamp Switch .....	1.30
9228	Projector Lamp "Output" Receptacle .....	.95
E-14500	Motor Mounting Plate with Studs and Nuts .....	9.40
E-14517	Motor Pinion Clutch .....	1.00
14527	Motor Flexible Tubing .....	.15
E-14529	Blower Housing and Pulley Support .....	4.75
14531	Blower Housing Cover .....	1.20
E-14533	Blower Pulley .....	.90
E-14535	Motor Clutch and Pulley .....	7.50
14537	Blower Shaft .....	.15
14539	Bracket Spacer .....	.75
14553	Blower Belt .....	.20
14562	Control Box .....	4.00
EE-14562	Control Box Complete .....	15.50
14564	Control Box Cover .....	1.45
14566	Tumbler Switch .....	3.00

**LOWER PICTURE**

633-A	Projector Cord Female Connector .....	\$ 1.45
E-843-A	Projector Cord Complete .....	6.10
SA-1880-22	Cone and Voice Coil Assembly .....	8.00
8496	Pilot Lamp <i># 44</i> .....	.20
9306-3	3 Ampere Fuse .....	.10
9424	Neon Lamp <i>NE-45</i> .....	1.40
10146	Exciter Lamp Jack Plug .....	1.00
EE-10200-5	5 ft. Exciter Lamp Cord Complete .....	3.25
10204	Exciter Lamp Cord Cap .....	1.20
E-10206A-5	5 ft. P. E. Cord Complete with Connectors .....	5.00
10376-A	4 Contact Male Speaker Connector .....	2.75
10377	2 Wire Speaker Cable Only .....	9.40
14090	P. E. Lead Screw Connection <i>AMPHS No.</i> .....	.75
14556-B	Spare Parts Box .....	20.00
E-14558-A	Speaker Case with Brackets Only .....	25.00



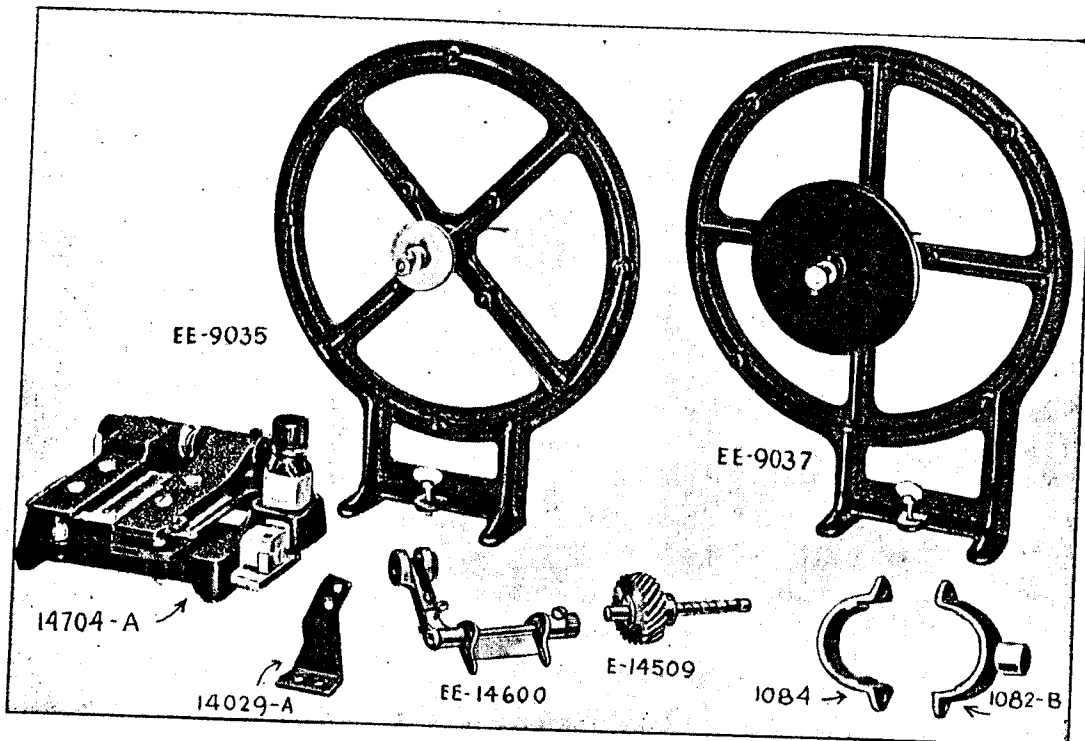
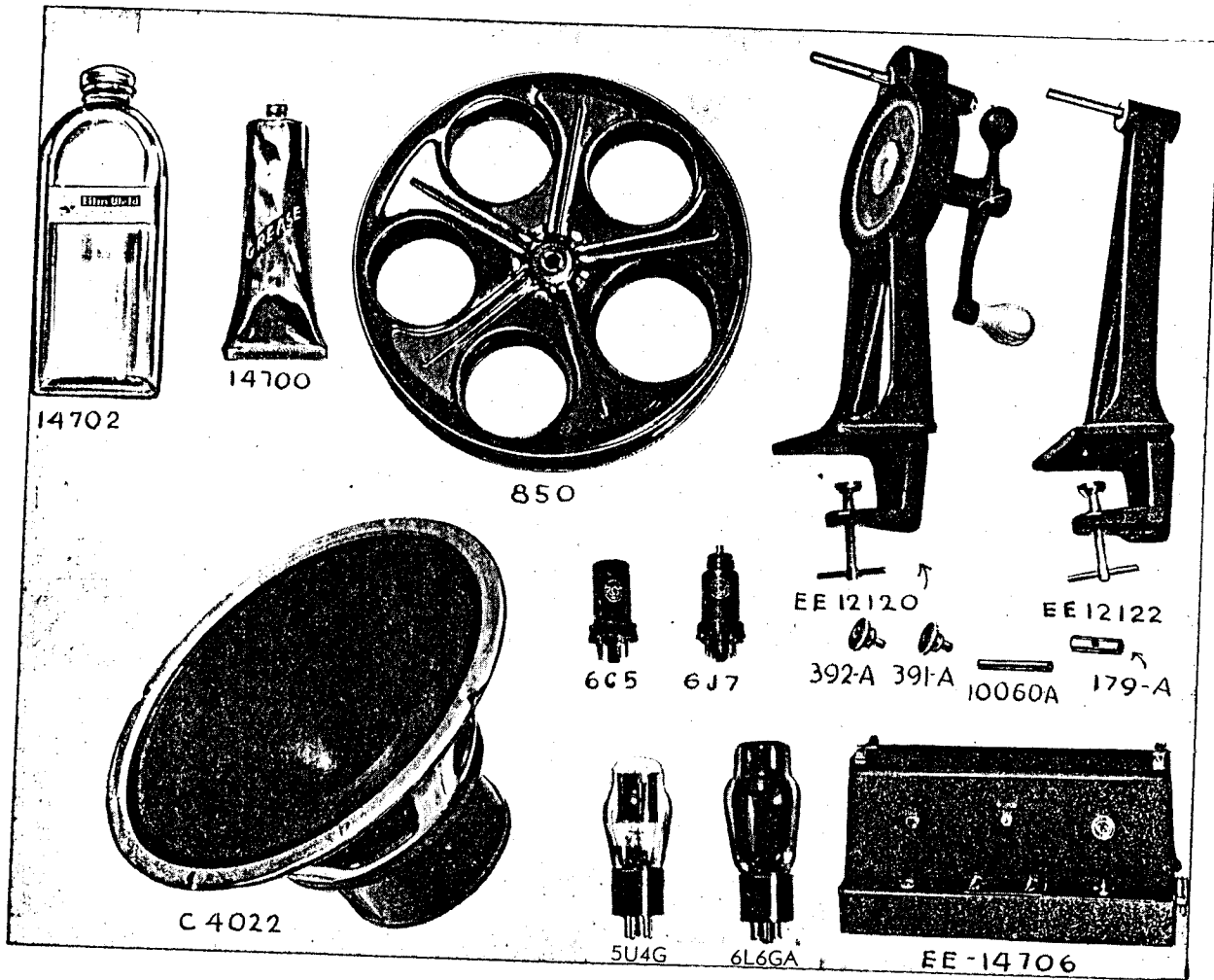
PART NO.	NAME OF PART	PRICE
----------	--------------	-------

**UPPER PICTURE**

179-A	Sound Guide Roller Tube .....	\$ .20
391-A	Sound Guide Roller (left) .....	.65
392-A	Sound Guide Roller (right) .....	.65
850	1000 ft. Reel .....	.60
C-4022	A-12-PM Speaker (without case) .....	45.00
10060-A	Sound Gate Stud .....	.20
EE-12120	Rewind - Geared End .....	5.75
EE-12122	Rewind - Idler End .....	2.00
EE-12123	Rewind Complete .....	7.75
14700	Tube of Grease .....	.55
14702	Pint of Film Cement .....	1.75
EE-14706	L-25-N Amplifier Complete .....	182.28
	6C5 Tube .....	.95
	6J7 Tube .....	.95
	6L6GA Tube .....	1.95
	5U4G Tube .....	1.00

**LOWER PICTURE**

1082-B	Prefocus Socket Holder .....	2.00
1084	Socket Holder Clamp .....	1.45
EE-9035	Feed Magazine Bracket Complete (2000') .....	11.45
EE-9037	Takeup Magazine Bracket Complete (2000') .....	22.50
14029-A	Case Brace Casting .....	.50
E-14509	Motor Pinion and Shaft .....	4.95
EE-14600	Intermittent Shoe Arm Complete .....	3.35
14704-A	Film Patching Block .....	25.00

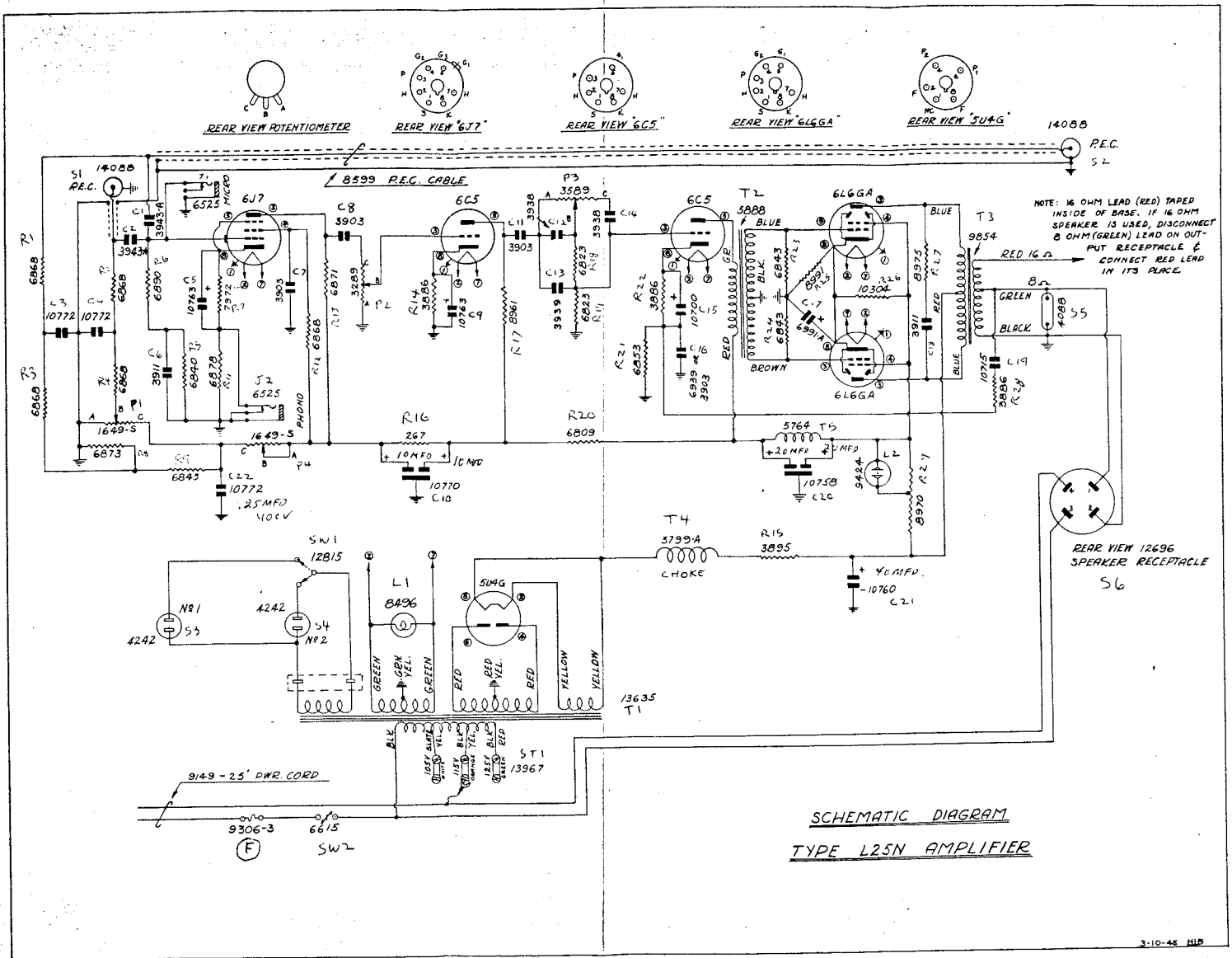


## TYPE L25N AMPLIFIER LEGEND

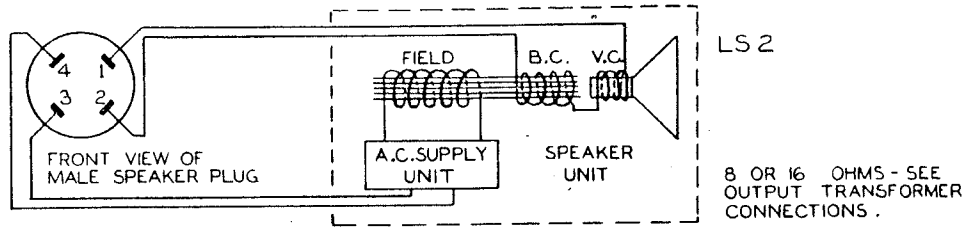
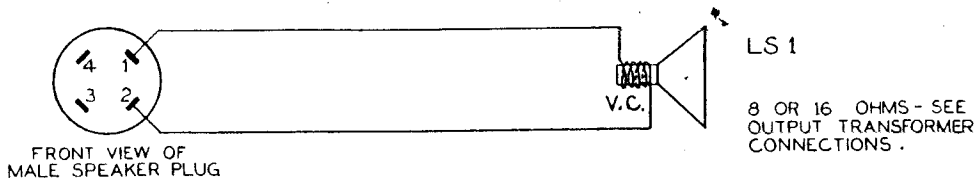
"We cannot make shipment of any amplifier parts unless the amplifier serial number is sent with the order.

Nomenclature	Description	Part Number	Price List
R1, R2, R3, R4, R12	Resistor - 500,000 Ohms ½ Watt	L25N-6868	\$ .17
R5	Resistor - 5,000,000 Ohms ½ Watt	L25N-6840	.17
R6	Resistor - 1,500,000 Ohms ½ Watt	L25N-6890	.17
R7	Resistor - 1,500 Ohms ½ Watt	L25N-7972	.17
R8	Resistor - 100,000 Ohms ½ Watt	L25N-6873	.17
R9	Resistor - 10,000 Ohms ½ Watt	L25N-6845	.17
R10	Deleted - 50K 1WATT	L25N-293	.20
R11	Resistor - 500 Ohms ½ Watt	L25N-6878	.17
R13	Resistor - 50,000 Ohms ½ Watt	L25N-6871	.17
R14, R22, R28	Resistor - 3,000 Ohms ½ Watt	L25N-3886	.17
R15	Resistor - 25 Ohms 10 Watt Wirewound	L25N-3895	.60
R16	Resistor - 10,000 Ohms ½ Watt	L25N-267	.17
R17	Resistor - 25,000 Ohms ½ Watt	L25N-8961	.17
R18, R19	Resistor - 250,000 Ohms ½ Watt	L25N-6823	.17
R20	Resistor - 5,000 Ohms 1 Watt	L25N-6809	.20
R21	Resistor - 300 Ohms ½ Watt	L25N-6853	.17
R23, R24	Resistor - 25,000 Ohms ½ Watt	L25N-6843	.17
R25	Resistor - 150 Ohms 10 Watt Wirewound	L25N-8991	.65
R26	Resistor - 7,500 Ohms 40 Watt Wirewound	L25N-10304	1.55
R27	Resistor - 10,000 Ohms 10 Watt Wirewound	L25N-8975	.65
R29	Resistor - 2,000 Ohms tapped at 750 - 20 Watts	L25N-8970	1.15
C1, C2	Condenser - .005 Mfd. Mica	L25N-3943-A	1.00
C3, C4, C22	Condenser - .25Mfd. 400 V. Paper	L25N-10772 ✓	.30
C5, C9, C15	Condenser - 25Mfd. 25 V. Electrolytic	L25N-10763	.70
C6, C18	Condenser - .001Mfd. 600 V. Paper	L25N-3911	.15
C7, C8, C11	Condenser - .1 Mfd. 400 V. Paper	L25N-3903	.20
C10	Condenser - 10-10 Mfd. 450 V. Electrolytic	L25N-10770	1.40
C12, C14	Condenser - .0005 Mfd. 500 V.	L25N-3938	.25
C13	Condenser - .0001 Mfd. 500 V.	L25N-3939	.25
C16	Condenser - .15 Mfd. 400 V. Paper	L25N-6939	.30
C17	Condenser - 20 Mfd. 150 V. Electrolytic	L25N-6991-A	.90
C19	Condenser - .5 Mfd. 400 V. Paper	L25N-10715	.50
C20	Condenser - 20-20 Mfd. 450 V. Electrolytic	L25N-10758	1.95
C21	Condenser - 40 Mfd. 450 V. Electrolytic	L25N-10760	1.85
T1	Power Transformer	L25N-13635	16.40
T2	Audio Transformer P. P. Input	L25N-5888	5.00
T3	Audio Transformer P. P. Output	L25N-9854	6.00
T4	Choke	L25N-3799-A	4.85
T5	Choke	L25N-5764	2.50
J1, J2	Single Circuit Jack	L25N-6525	.65
P1, P4	Potentiometer - 100,000 Ohms	L25N-1649-S	.95
P2	Potentiometer - 500,000 Ohms	L25N-3289	.95
P3	Potentiometer - 2,500,000 Ohms	L25N-3589	.95
S1, S2	P.E.C. Receptacle	14088	.40
S3, S4	Exciter Receptacle	L25N-4242	1.00
S5	Monitor Speaker Receptacle	L25N-4088	.95
S6	Speaker Receptacle	L25N-12696	3.40
SW1	D.P. D.T. Projector Changeover Switch	L25N-12815	2.80
SW2	S.P S.T. A.C. Line Switch	L25N-6615	.85
ST1	Terminal Block	L25N-13967	.65
L1	Pilot Lamp	L25N-8496	.20
L2	Neon Lamp	L25N-9424	1.40
F	Fuse 3 Ampere Type 3A.G.	9306-3	.10
	Pilot Lamp Bracket	L25N-9114-R	.70
	Neon Lamp Bracket	L25N-12641	1.50
	Fuse Post and Extractor	L25N-7015	.75
	Jack Cover	L25N-14087	.40
	Handle	L25N-9188	1.05
	Knob	L25N-5581-A	.15
	Cap and Chain for S6	L25N-12697	.70
	Cap and Chain for S1, S2 AMPHENOL 80-75-CCC1	L25N-12698	.70
	Amplifier Back Cover	L25N-13963	1.70
	P.E.C. Cable	L25N-8599	1.30

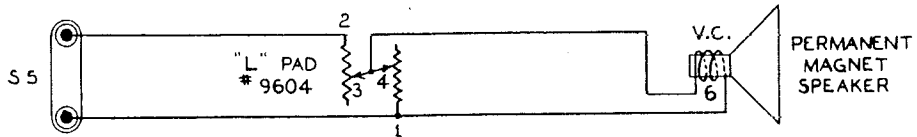




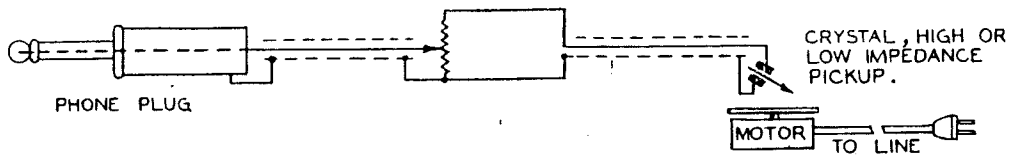
SPEAKER CONNECTIONS



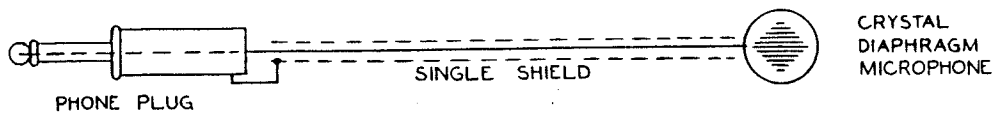
MONITOR SPEAKER CONNECTIONS



PHONOGRAPH CONNECTIONS

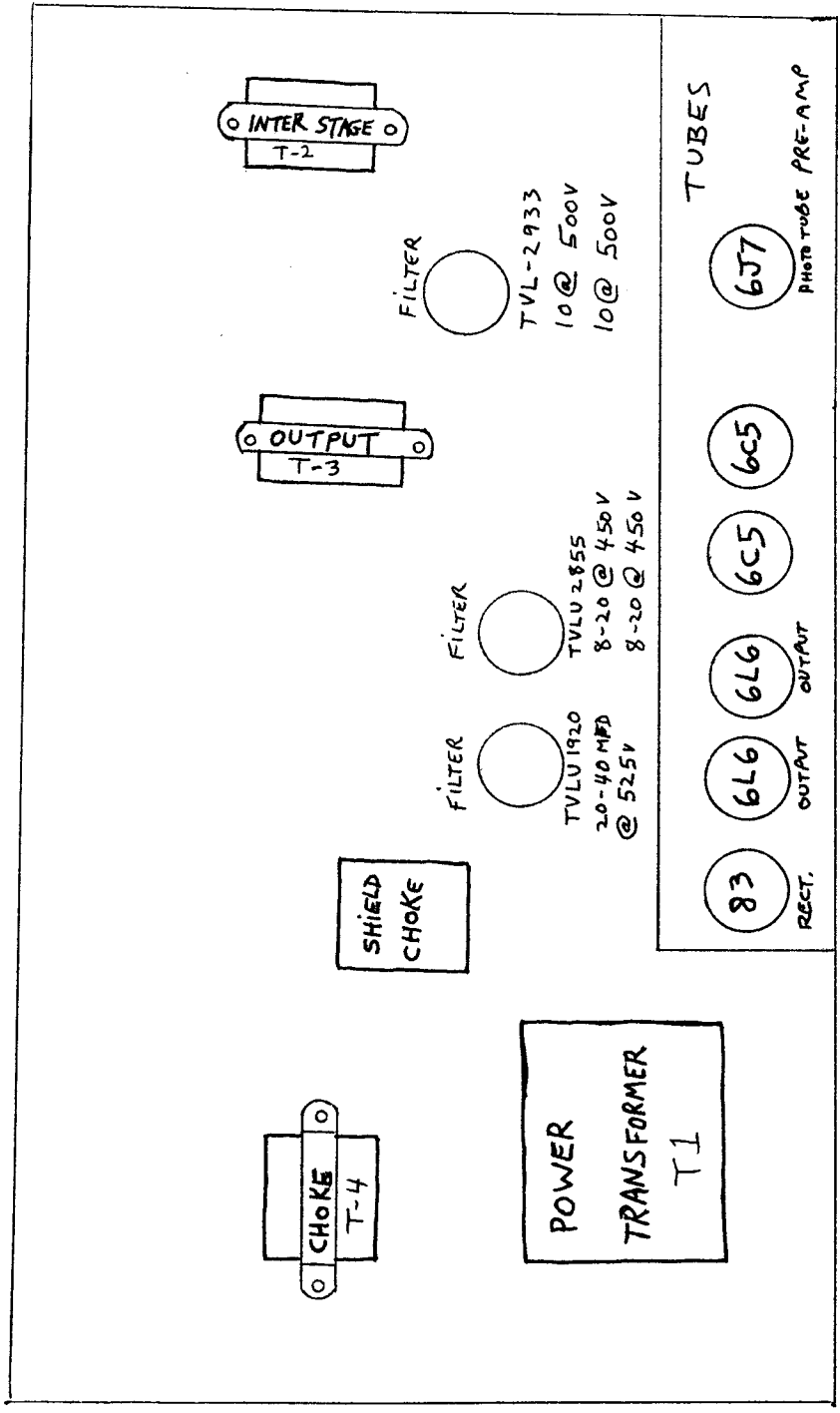


MICROPHONE CONNECTIONS



FORM 2705 - SHEET 2

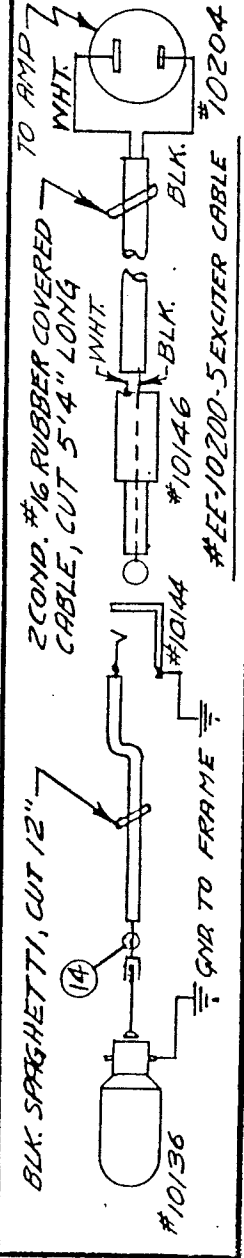
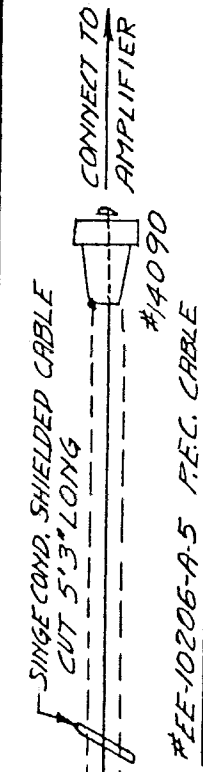
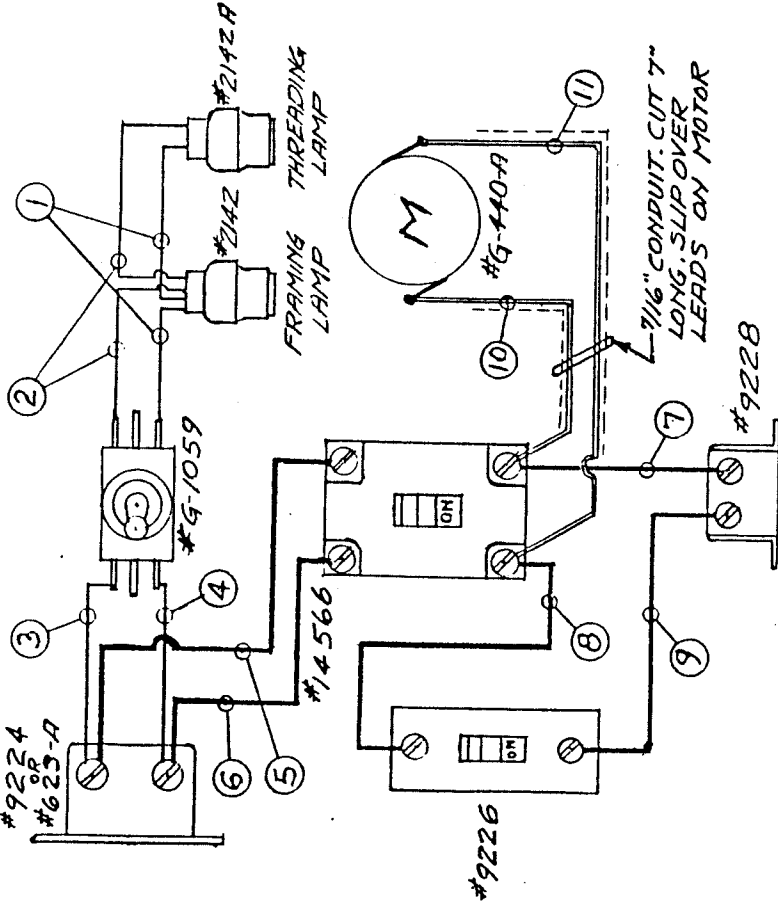
11-27-42



HOLMES AMPLIFIER LAYOUT

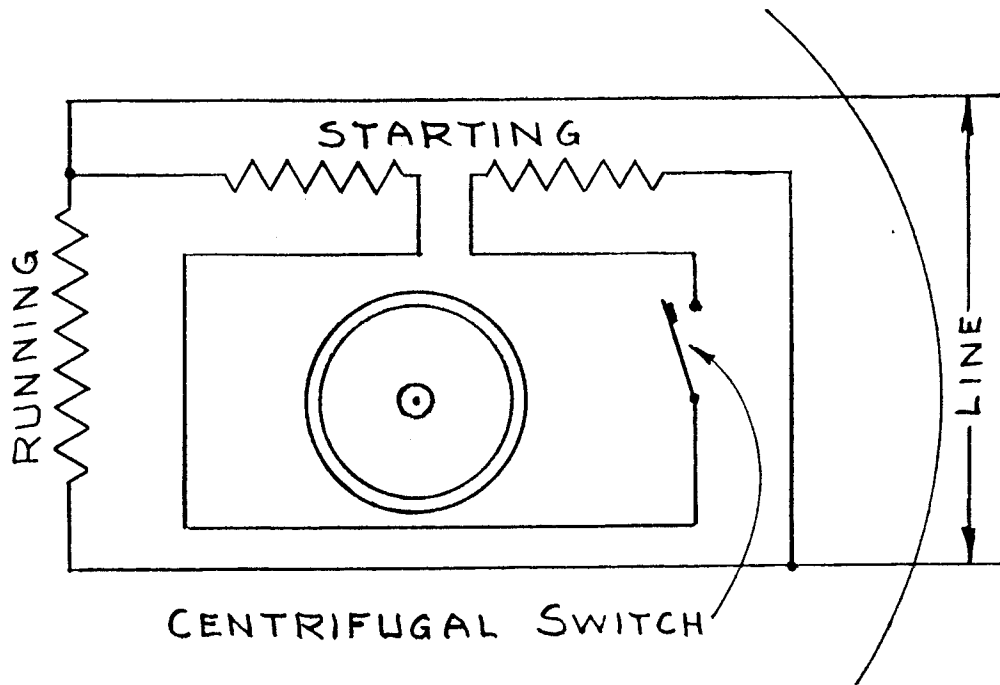
WIRING LEGEND

NO.	SIZE	COLOR	CUT LENGTH	STRIP & TIN ONE END	OTHER END
1	#18	RED	42"	3/4" 1/2"	1/2"
2	#18	BLK.	42"	3/4" 1/2"	1/2"
3	#18	BLK.	7"	3/4"	1/2"
4	#18	RED.	7"	3/4"	1/2"
5	#14	BLK.	.9"	3/4"	3/4"
6	#14	RED	9"	3/4"	3/4"
7	#14	BLK.	9"	3/4"	3/4"
8	#14	RED	9"	3/4"	3/4"
9	#14	RED	9"	3/4"	3/4"
10	1/4" #16	BLK	ON MOTOR	LUG	---
11	1/4" #16	RED.	ON MOTOR	LUG	---
12	#18	GRN.	4 1/2"	1/2"	1/2"
13	#18	BLK.	3 1/2"	1/4"	1/4"
14	#18 SOLID	BARE	12 1/2"	LUG	---



WIRING CHART - NAVY TYPE "D"  
 HOLMES PROJECTOR COMPANY  
 1815 N. ORCHARD  
 CHICAGO, ILL.  
 U.S.A.

DRN: JEV DATE: 12-8-41 NO. 5K35-304



### MOTOR WINDING DATA

Frame S50SJ    Style 462-5421     $\frac{1}{8}$  H. P.    115 Volt  
 60 Cycle    2.4 Amperes    Single Phase    1725 R.P.M.

### STATOR DATA

4 Poles

Starting Winding	3 coils per pole 15-15-40 Turns Wire Size, No. 25 S.C. E.
Running Winding	3 coils per pole 39-44-24 Turns Wire Size, No. 20 Enamel

### OPERATION

The above windings are located in different slots around the stator with the starting winding in series with the starting switch.

The phase displacement of the currents in the starting and running windings, together with their physical displacement on the stator, produces a rotating magnetic field that starts the rotor revolving.

When the rotor reaches a predetermined speed, the centrifugal switch opens the starting winding. Current then flows only in the running winding and the motor operates same as an ordinary induction motor.

# LENS CHART

**TABLE OF SCREEN DIMENSIONS FOR 35 MM SOUND FILM  
BASED ON .600" x .825" APERTURE AND HORIZONTAL PROJECTION**

Lens Size	2.00 In.	2.25 In.	2.50 In.	2.75 In.	3.00 In.	3.25 In.	3.50 In.	3.75 In.	4.00 In.	4.25 In.	4.50 In.	4.75 In.	5.00 In.	5.25 In.	5.50 In.	5.75 In.	6.00 In.	6.25 In.	6.50 In.	6.75 In.	7.00 In.	7.25 In.	7.50 In.	7.75 In.	8.00 In.	
50 Ft.	14.9	13.2	11.9	10.8	9.9	9.1	8.5	7.9																		
55 Ft.	16.5	14.6	13.1	11.9	10.9	10.0	9.3	8.7	8.1	7.7																
60 Ft.	17.9	15.9	14.4	13.0	11.8	11.0	10.2	9.5	8.8	8.4	7.9	7.5														
65 Ft.	19.5	17.2	15.6	14.1	12.9	11.9	11.1	10.4	9.6	9.1	8.5	8.1	7.6													
70 Ft.	20.9	18.5	16.7	15.2	13.9	12.8	11.9	11.1	10.4	9.8	9.2	8.7	8.3	7.9												
75 Ft.	22.5	19.9	17.9	16.3	14.9	13.7	12.8	11.9	11.1	10.5	9.8	9.4	8.9	8.4	8.1	7.7										
80 Ft.	24.0	21.2	19.1	17.4	15.8	14.7	13.6	12.7	11.9	11.2	10.6	10.0	9.5	9.0	8.6	8.3	7.9	7.5								
85 Ft.	25.5	22.6	20.3	18.5	16.9	15.6	14.5	13.5	12.7	11.9	11.3	10.6	10.1	9.5	9.2	8.8	8.4	8.1	7.8							
90 Ft.	27.0	23.9	21.5	19.6	17.9	16.5	15.4	14.3	13.4	12.6	11.9	11.2	10.7	10.2	9.7	9.3	8.9	8.6	8.2	7.9						
95 Ft.	28.5	25.2	22.7	20.6	18.9	17.4	16.2	15.1	14.2	13.3	12.6	11.9	11.3	10.7	10.3	9.8	9.4	9.0	8.7	8.3	8.0	7.7				
100 Ft.	30.0	26.5	23.9	21.7	19.8	18.4	17.0	15.9	14.9	14.0	13.3	12.5	11.9	11.3	10.8	10.3	9.9	9.5	9.1	8.8	8.5	8.2	7.9	7.6	7.4	
105 Ft.	31.5	28.0	25.1	22.9	20.8	19.3	17.9	16.7	15.7	14.7	13.9	13.2	12.5	11.9	11.4	10.9	10.4	10.0	9.6	9.2	8.9	8.6	8.3	8.1	7.8	
110 Ft.	33.0	29.3	26.4	23.9	21.8	20.5	18.8	17.5	16.4	15.4	14.6	13.8	13.1	12.5	11.9	11.4	10.9	10.4	10.1	9.7	9.3	9.0	8.7	8.4	8.1	
115 Ft.	34.5	30.5	27.6	25.0	22.8	21.2	19.6	18.3	17.2	16.1	15.3	14.4	13.7	13.1	12.4	11.9	11.4	10.9	10.5	10.1	9.7	9.4	9.1	8.8	8.5	
120 Ft.	36.0	31.8	28.7	26.1	23.8	22.0	20.9	19.1	17.9	16.8	15.9	15.0	14.3	13.6	13.0	12.4	11.9	11.4	11.0	10.6	10.2	9.8	9.5	9.1	8.9	
125 Ft.	37.5	33.2	29.9	27.2	24.8	23.0	21.4	19.9	18.7	17.5	16.5	15.6	14.9	14.2	13.5	12.9	12.4	11.9	11.4	11.0	10.6	10.2	9.8	9.5	9.1	
130 Ft.	39.0	34.6	31.1	28.3	25.8	24.0	22.2	20.8	19.5	18.2	17.2	16.4	15.5	14.8	14.1	13.5	12.9	12.4	11.9	11.4	11.0	10.7	10.2	9.9	9.6	
135 Ft.	40.5	36.0	32.6	29.6	27.0	25.0	23.1	21.6	20.2	18.9	17.9	17.0	16.1	15.4	14.6	14.0	13.4	12.9	12.4	11.9	11.5	11.1	10.7	10.4	10.0	
140 Ft.	42.0	37.4	34.0	30.8	28.2	26.0	23.9	22.3	20.9	19.6	18.6	17.6	16.7	15.9	15.2	14.5	13.9	13.3	12.8	12.3	11.9	11.5	11.1	10.7	10.4	
145 Ft.	43.5	38.8	35.4	32.0	29.4	27.0	24.8	23.1	21.7	20.4	19.2	18.2	17.3	16.5	15.7	15.1	14.4	13.8	13.3	12.8	12.3	11.9	11.5	11.1	10.8	
150 Ft.	45.0	40.2	36.8	33.2	30.6	28.0	25.6	23.9	22.4	21.1	19.9	18.9	17.9	17.0	16.3	15.6	14.9	14.3	13.8	13.2	12.7	12.3	11.9	11.5	11.2	
155 Ft.	46.5	41.6	38.2	34.4	31.8	29.0	26.4	24.6	23.1	21.8	20.6	19.5	18.5	17.6	16.8	16.1	15.4	14.8	14.2	13.7	13.2	12.7	12.3	11.9	11.5	
160 Ft.	48.0	43.0	39.6	35.6	33.0	30.0	27.4	25.4	24.0	22.6	21.4	20.2	19.1	18.3	17.4	16.6	15.9	15.3	14.6	14.1	13.6	13.1	12.7	12.3	11.9	
165 Ft.	49.5	44.4	41.0	36.8	33.8	31.0	28.2	26.0	24.4	23.0	21.8	20.6	19.4	18.5	17.6	16.8	16.1	15.4	14.8	14.2	13.7	13.2	12.7	12.3	11.9	
170 Ft.	51.0	45.8	42.4	38.0	34.6	31.6	28.6	26.2	24.6	23.2	22.0	20.8	19.6	18.7	17.8	17.0	16.3	15.6	15.0	14.4	13.9	13.4	12.9	12.5	12.1	
180 Ft.	52.5	47.2	43.8	39.2	35.4	32.2	29.0	26.6	24.8	23.4	22.2	21.0	19.8	18.9	18.0	17.2	16.5	15.8	15.2	14.6	14.1	13.6	13.1	12.7	12.3	
190 Ft.	54.0	48.6	45.2	40.4	36.2	32.8	29.4	26.8	24.9	23.4	22.2	21.0	19.8	18.9	18.0	17.2	16.5	15.8	15.2	14.6	14.1	13.6	13.1	12.7	12.3	
200 Ft.	55.5	50.0	46.6	41.6	37.0	33.4	30.0	27.0	25.0	23.4	22.2	21.0	19.8	18.9	18.0	17.2	16.5	15.8	15.2	14.6	14.1	13.6	13.1	12.7	12.3	
200 Ft.	57.0	51.4	48.0	42.8	37.8	34.0	30.4	27.2	25.0	23.2	22.0	20.8	19.6	18.7	17.8	17.0	16.3	15.6	15.0	14.4	13.9	13.4	12.9	12.5	12.1	

Screen dimensions from Projection Optics Co. table for throws to 170 ft. inc. and Bausch & Lomb Optical Co. Table for balance.

### EFFECT OF PROJECTION ANGLE ON SCREEN PROPORTION

The sizes given are correct for horizontal projection. For a given width the height of the picture increases with the projection angle therefore the screen height should be increased accordingly. The following table from "The Cinematographers Book of Tables" gives multipliers to use to correct the screen height to the given conditions.

For example—4" lens, 100 ft., throw, 20 deg. projection angle, screen size from table 14.9 x 20.6 ft., screen height 14.9 ft., and multiplier 4" lens 20 deg. angle 1.093.

14.9 x 1.093 = 16.3 ft. as correct screen height, therefore 16.3 ft. x 20.6 screen should be selected.

Lens	5 Deg.	10 Deg.	15 Deg.	20 Deg.	25 Deg.	30 Deg.
3"	1.0126	1.033	1.063	1.104	1.157	1.225
3½"	1.0113	1.031	1.059	1.097	1.149	1.214
4"	1.0104	1.029	1.056	1.093	1.143	1.207
4½"	1.0096	1.027	1.054	1.088	1.138	1.201
5"	1.0091	1.026	1.051	1.086	1.135	1.196
6"	1.0082	1.024	1.048	1.084	1.130	1.189

PROJECTION

Lamp Information

Mfr.	Type	Watts	Base	Hours	Price
G.E.	DTJ	1500	Mogul Prefocus	25	<del>\$44.10</del> \$65.94
G.E.	DSB	1000	Mogul Prefocus	25	<del>\$34.15</del> \$49.25
SYL.	DTA	1500	Mogul Prefocus	100	Tungsten- Halogen \$98.32

THREADING & FRAMING LAMPS

G.E.	6S6	6	Candelabra Screw	1500	Available at hardware stores
G.E.	15T7DC	15	DOUBLE CONTACT		HARDWARE STORES

SOUND EXCITER LAMP

G.E.	BXC 4A/T8/25	8½ v 4 amp	S. C. BAYONET	100	<del>\$8.85</del> \$13.81
------	-----------------	---------------	------------------	-----	------------------------------

NOTE: Use DTJ, DSB, or DTA projection lamps in machines with serial numbers 9500 to 18416. Use DFD medium prefocus base lamps with machines with serial number 18417 and up.

PHOTOTUBE: RCA 1P30

# MBC MARTY BAHN & COMPANY

1974 N.E. 149th Street, North Miami, Florida 33181 / (305) 940-8871

May 19, 1987

We are in receipt of your Post Card of May 9th requesting information on the Holmes 35mm Projector Parts and Accessories we offer for sale.

To start, the three Intermittent Assemblies we rebuilt were taken from old projectors ...disassembled, new cam pins and in some cases new star wheels and cams were replaced or reworked by our precision machine shop. Two were sold last week so we only have one more left which has a new Cam Pin, bearings, the same sprocket remained and so did the shaft. This movement has been "run in" and is tight and rock-steady. It is a complete module which is held by four screws on the operating side of the projector.. It includes the entire movement assembly replacement. Your Cost is \$115. plus \$4. Shipping.

We have milled the Aperture Casting to accomodate slip-in aperture plates usually used on Century 35mm Projector Mechanisms Your price...with your casting trade-in is \$135.(including a wide screen aperture plate) plus \$4. Shipping & Handling.

The Standard Lens Modification is a bracket assembly which when fastened to the Front of the Projector holds the large barrels (2-25/32") and allows the small ends to insert into the projector. The Assembly is \$125. plus \$.50 Shipping & Handling.

We also have Solar Cells which Plug into the present Photo-Cell Tube Sockets and are wired to any decent Power Amplifier with the most terrific sound. ....Kit with Instructions, Solar Cell Assembly \$55 plus \$3. Shipping....with 35 Watt Amplifier \$155. plus \$10. Shipping.

Takeup and Feed Belts....for 2000 ft. magazines Heavy Vinyl with Couplings One Set(2) \$14. plus 4. Shipping.

Sorry, we do not have any Firetrap parts or Service-Parts Manuals at this time.

If you wish any further information...please do not hesitate to write us.

  
Marty Bahn  
Enc: FM/F-V  
mb/me