

Film-Tech

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OPERATING INSTRUCTIONS
FOR
THE MAXI
PLATTER SYSTEM

D113799

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1.0

INTRODUCTION

1.1 Scope

Provided in this manual are installation, operation and maintenance instructions for the ORC Maxi Platter System. When requesting information, always furnish model and serial numbers to Optical Radiation Corporation (ORC) Azusa, California, U.S.A.

1.2 General Description

The Platter Systems are 35mm and 35/70mm film transport systems capable of giving up to 4.5 hours of uninterrupted viewing. They are designed with the minimum number of parts and mechanisms, each performing a basic function resulting in reliable operation. Installation is an easy task with little or no adjustment required. Operation is simplified by the lack of complex mechanical and electrical components.

Program make up is accomplished by splicing the featured films together into one continuous length (up to 4.5 hours). Using the Make Up Table in conjunction with the Platter System cuts program make up and break down time to a minimum. All controls are accessible at the table. Breakdown of past program or make up of future programs can be done while present program is being viewed.

The three (3) disc system has the capacity to hold two full programs, viewing of each program is separated only by the time it takes to rethread projector and platter. Each program is ready to be rethreaded and shown again immediately upon completion; no rewinding is necessary.

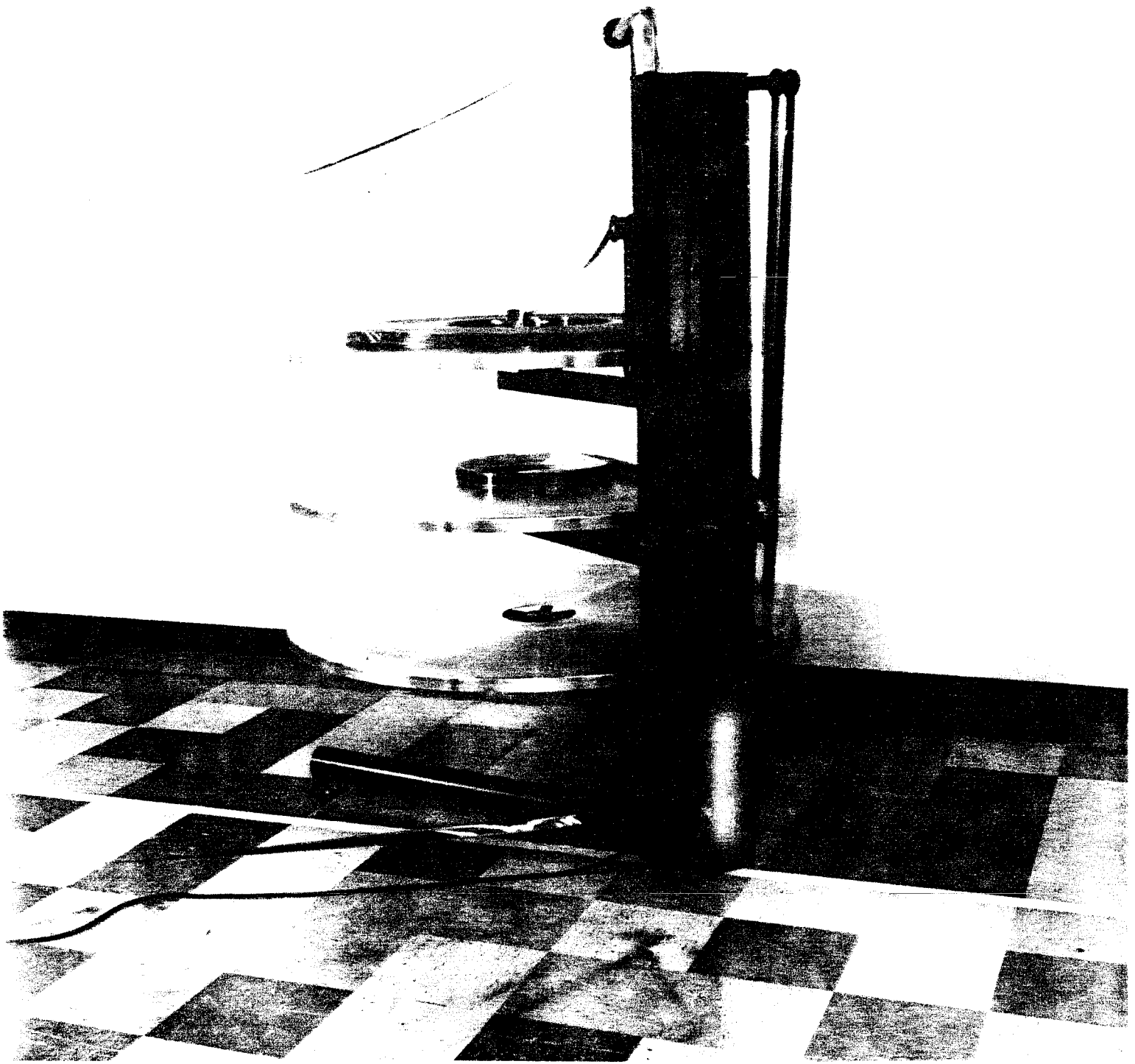
1.3 SPECIFICATIONS

Platter

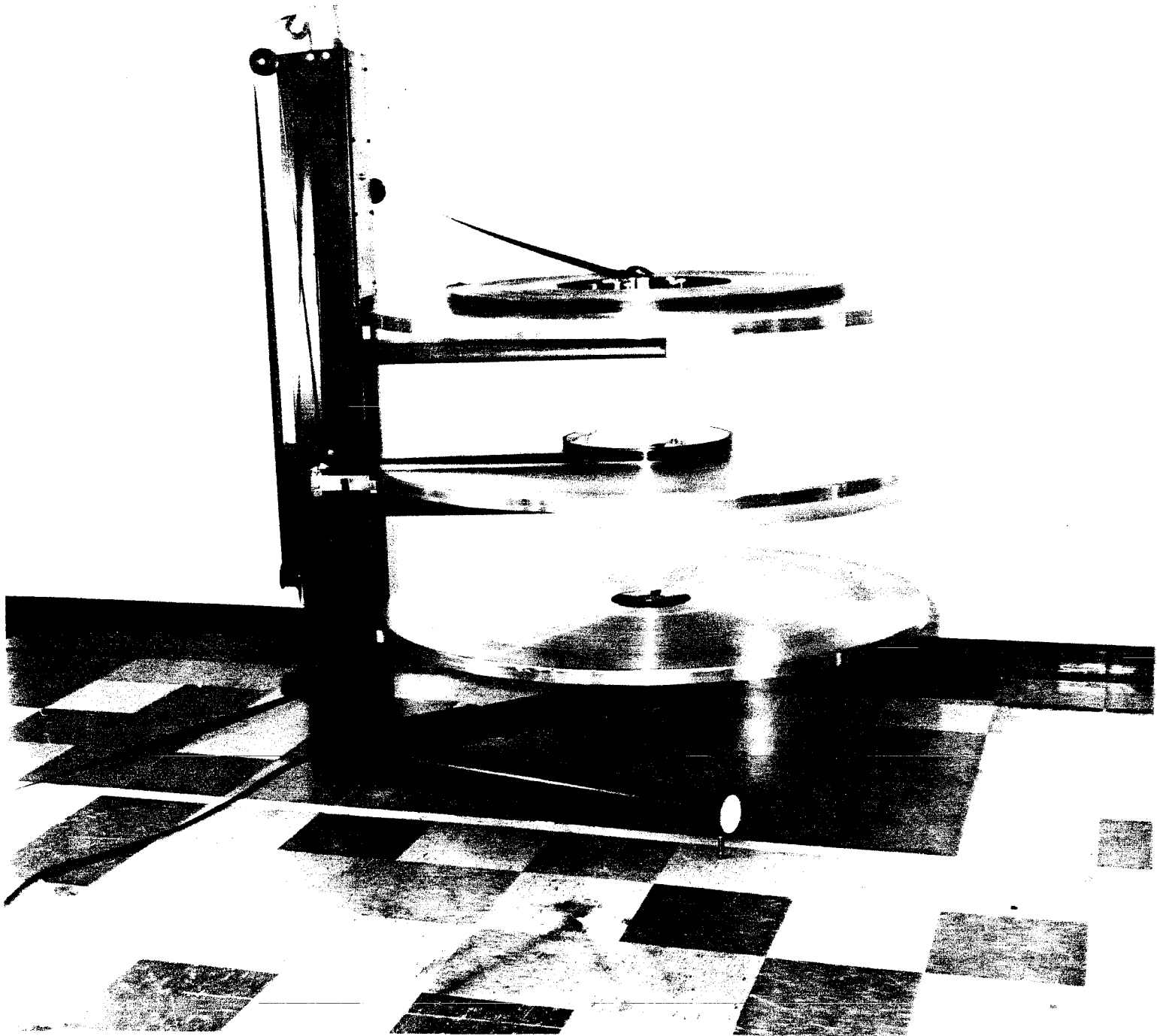
POWER REQUIREMENTS:	115VAC, 5 amps, 50/60Hz standard 3 wire w/ground
DIMENSIONS:	5.5' D x 4.5' W x 6' H
WEIGHT:	540 lbs.
SHIPPING WEIGHT:	606 lbs.
FILM CAPACITY:	4.5 hours approximate
TAKE-UP SPEED CONTROL:	Variable Resistance Trolley controlled by film tension.
FEED CONTROL:	Proportional phase control by precision long-life servo-pot system.

Make Up Table

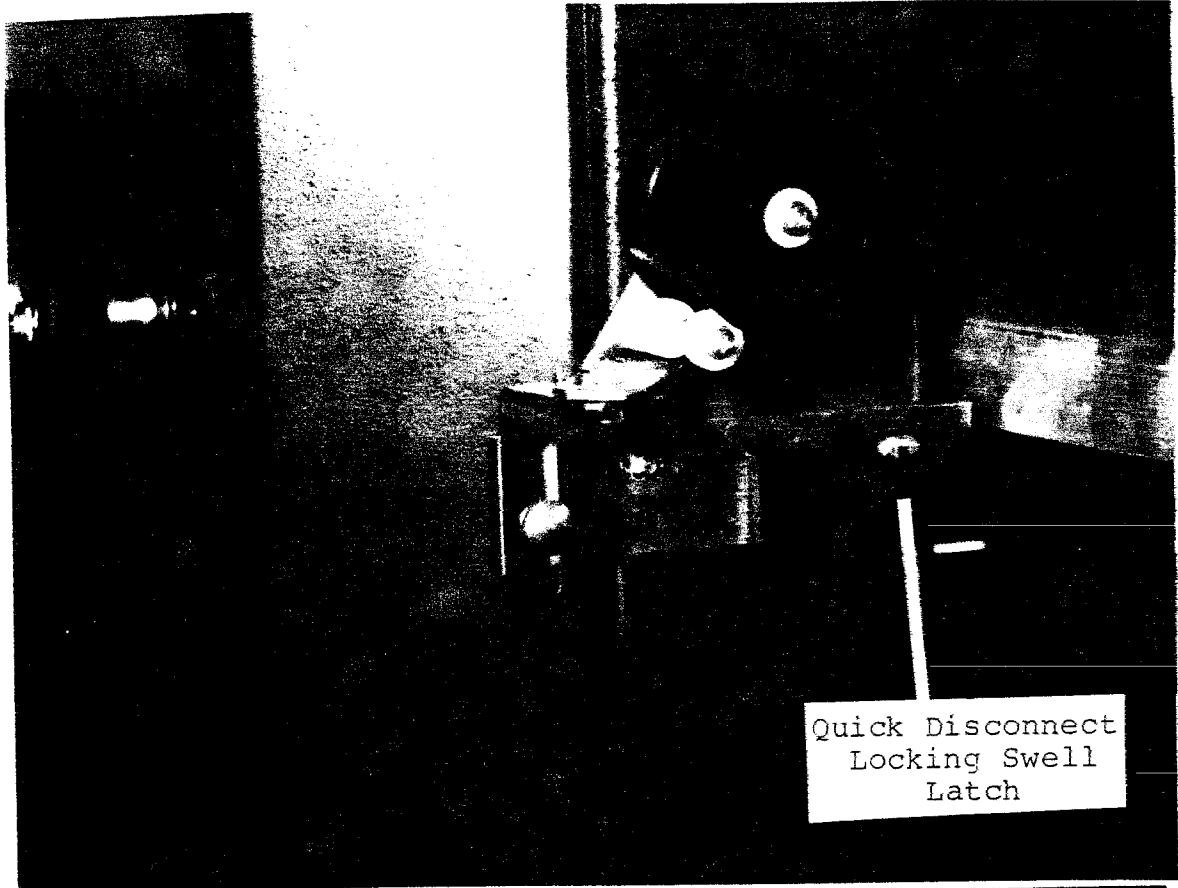
POWER REQUIREMENTS:	115VAC, 5 amps, 50/60Hz standard 3 wire w/ground
DIMENSIONS:	2' D x 1.5' W x 5' H
WEIGHT:	75 lbs.
SHIPPING WEIGHT:	94 lbs.



PLATTER SYSTEM ASSEMBLY

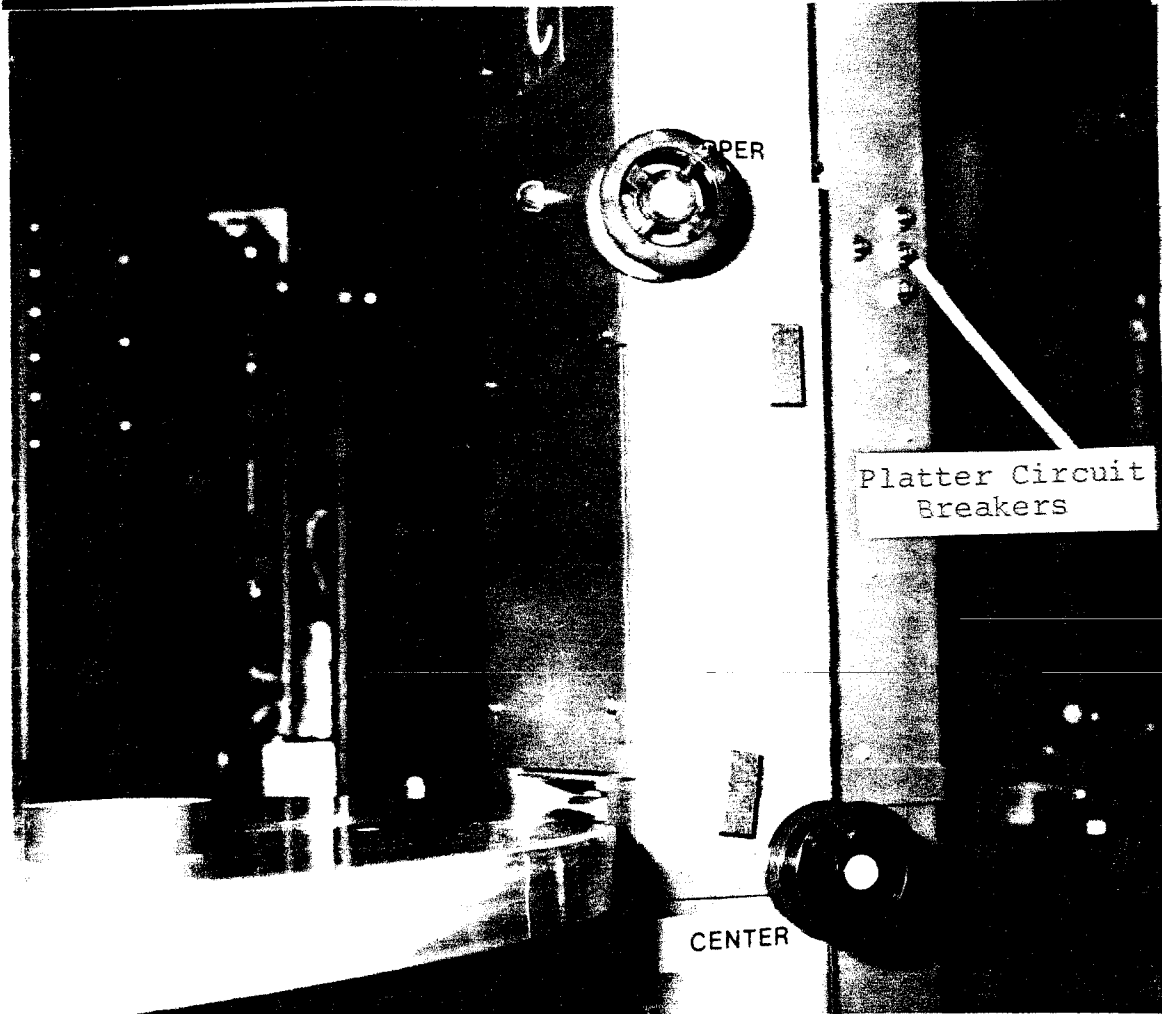


PLATTER SYSTEM - TAKE UP SIDE



TAKE UP ROLLER
ASSEMBLY
(Adjustable)

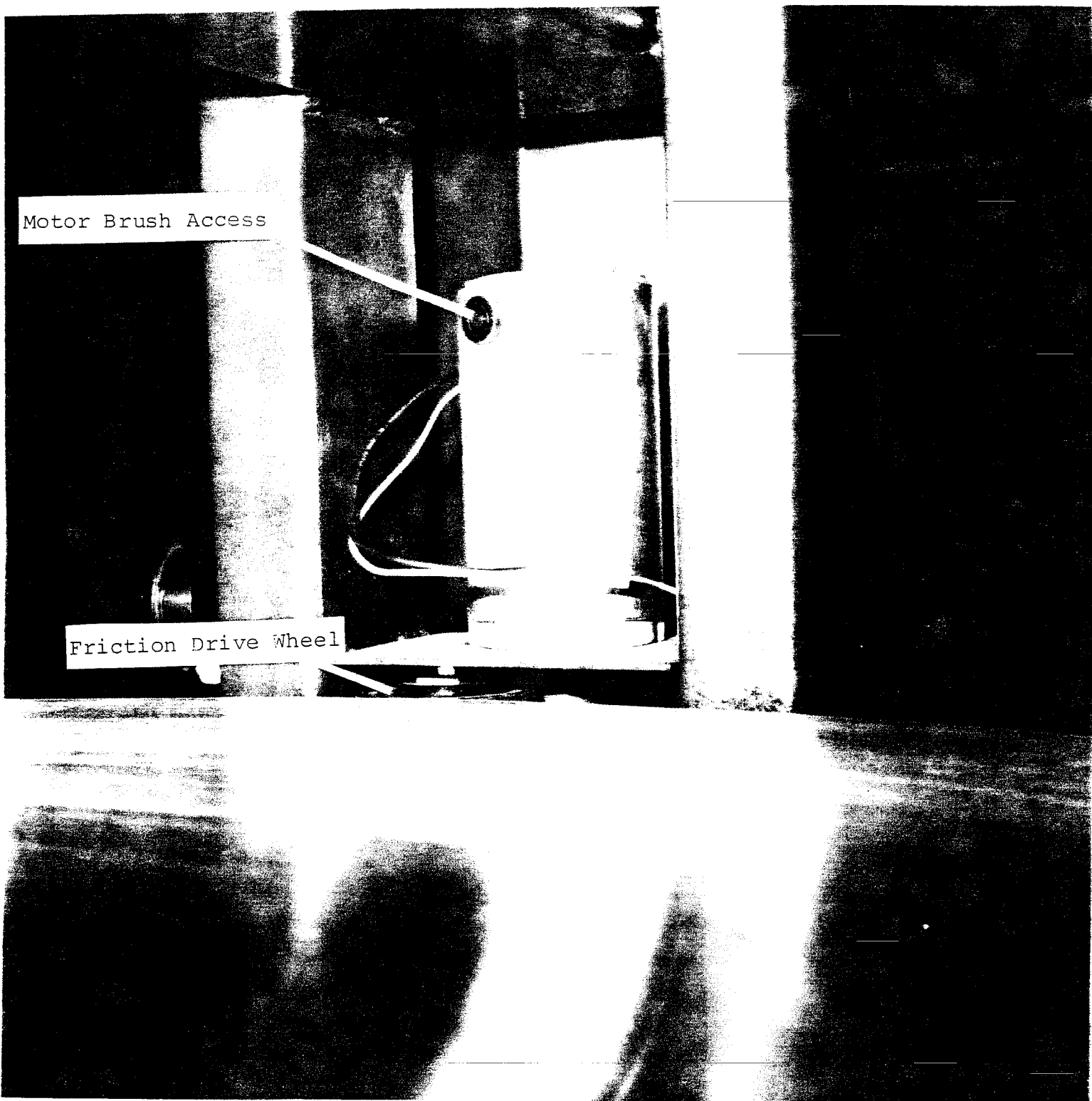
Quick Disconnect
Locking Swell
Latch



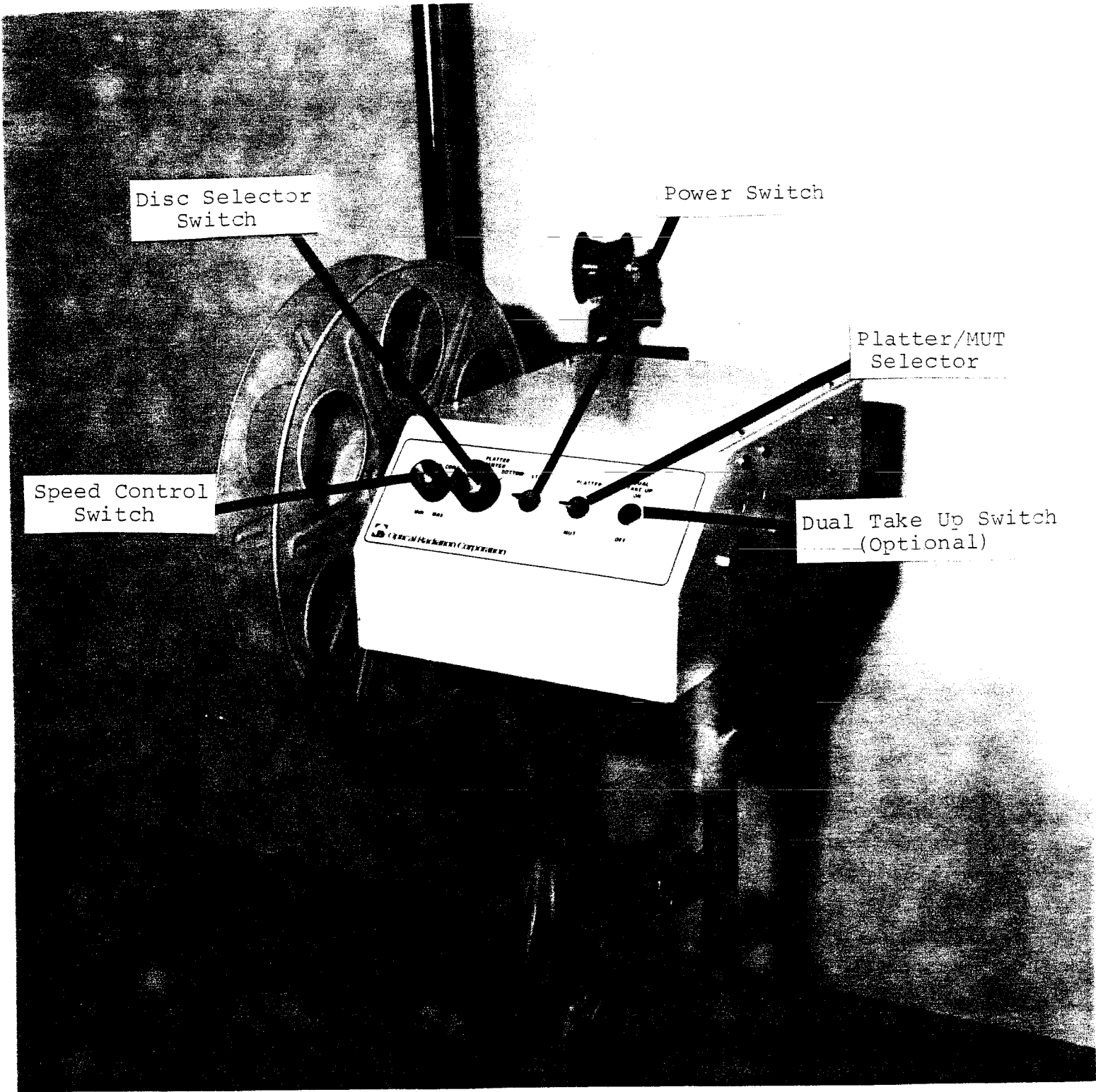
FEED OUT ROLLER
ASSEMBLY

Platter Circuit
Breakers

CENTER



PLATTER DRIVE MOTOR
(Access Cover Removed)



Disc Selector
Switch

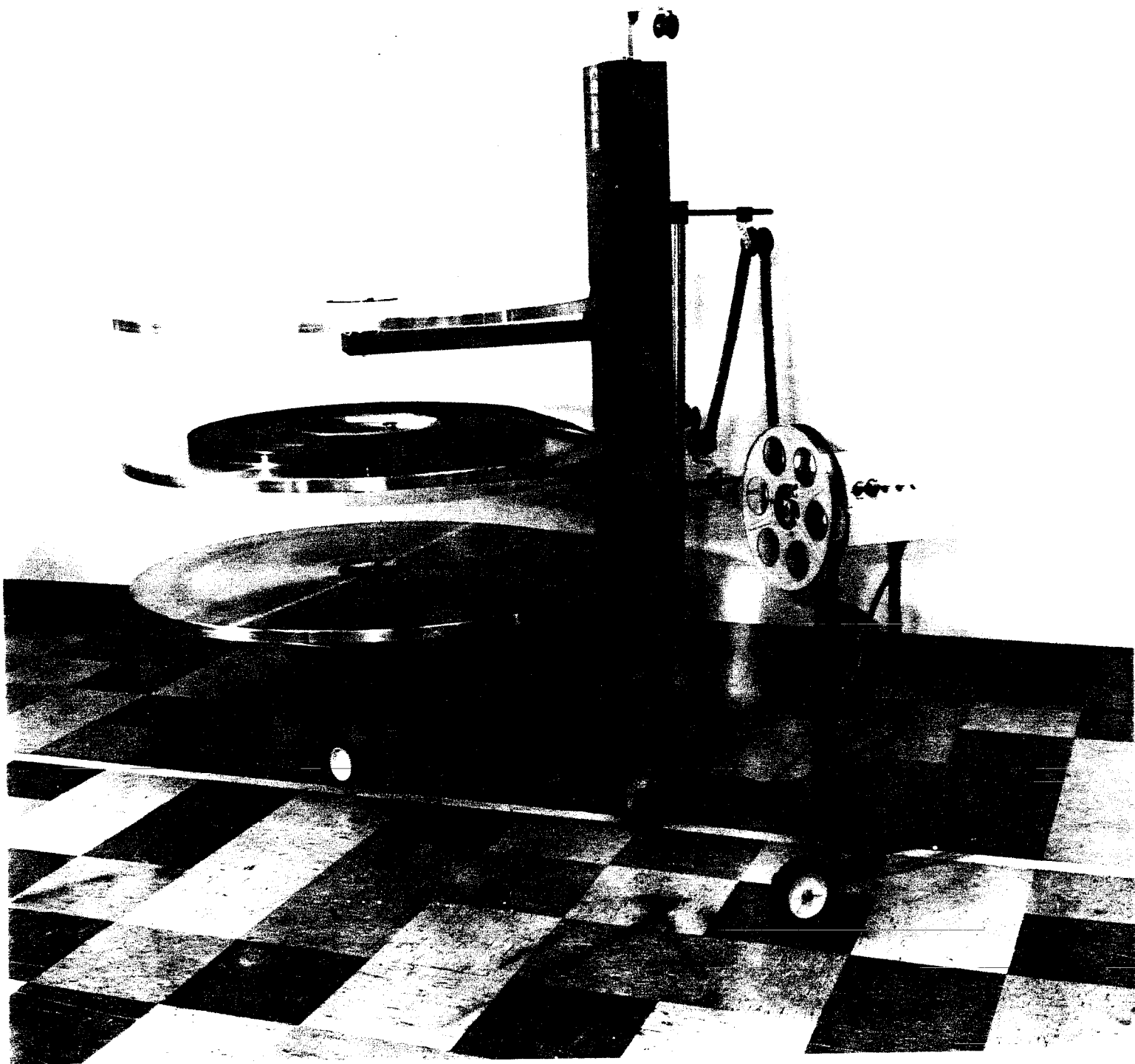
Power Switch

Platter/MUT
Selector

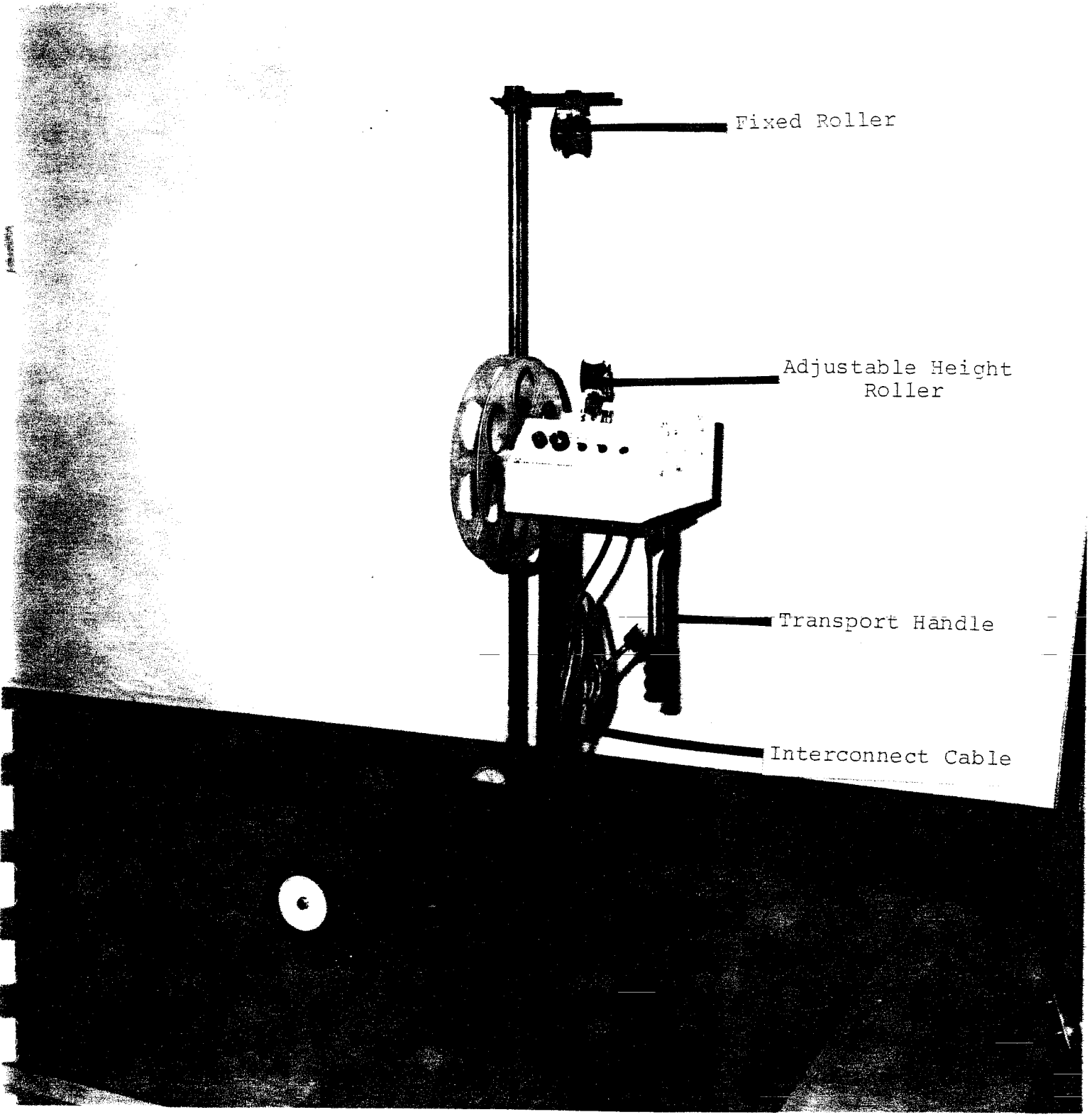
Speed Control
Switch

Dual Take Up Switch
(Optional)

MAKE UP TABLE
CONTROLS



PLATTER SYSTEM & MUT



Fixed Roller

Adjustable Height
Roller

Transport Handle

Interconnect Cable

MAKE UP TABLE ASSEMBLY

2.0 IMPORTANT SAFEGUARDS

READ AND UNDERSTAND ALL INSTRUCTIONS

2.1 WARNING

The above "WARNING" when appearing in this manual means: INSTALLATION, OPERATING AND MAINTENANCE PROCEDURES, PRACTICES, ETC., WHICH MAY RESULT IN PERSONAL INJURY OR LOSS OF LIFE IF NOT CAREFULLY FOLLOWED.

2.2 CAUTION

The above "CAUTION" when appearing in this manual means: INSTALLATION, OPERATING AND MAINTENANCE PROCEDURES, PRACTICES, ETC., WHICH MAY RESULT IN DAMAGE TO EQUIPMENT IF NOT CAREFULLY FOLLOWED.

2.3 NOTE

The above "NOTE" when appearing in this manual means: INSTALLATION, OPERATING AND MAINTENANCE PROCEDURES, PRACTICES, ETC., WHICH ARE ESSENTIAL TO EMPHASIZE.

2.4 SAFETY

WARNING

- 2.4.1 Before attempting any service inside the unit or when servicing a motor disconnect unit or when servicing a motor disconnect the power plug.
- 2.4.2 When taking any voltage measurements, caution should be exercised. Always avoid contact between any current carrying part of the system or power source and the human body.
- 2.4.3 The power source must be a 3 conductor grounded type.
- 2.4.4 Do not operate Platter System with a damaged cord or if the Platter System has been damaged until it has been examined by a qualified serviceman.
- 2.4.5 If an extension cord is necessary, a cord with a suitable current rating should be used. Cords rated for less amperage than the Platter System may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled. Be sure to use 3 conductor cord.
- 2.4.6 Always unplug Platter System from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.

SAVE THESE INSTRUCTIONS

3.0 INSTALLATION

3.1 Receiving-Handling

Remove all packing material from around the Platter System and carefully inspect for damage caused by the freight carrier. Any claims for loss or damage that has occurred in transit must be filed by the buyer with the carrier. A copy of the bill of lading and freight bill will be furnished on request.

When requesting information concerning the equipment be sure to furnish stock, serial and model numbers.

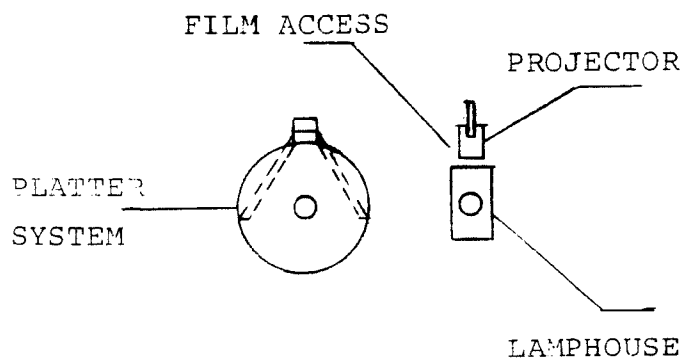
3.2 Installing Platter System

The Platter Systems are shipped assembled except for the attachment of the tubular shaped legs, and the placement of the discs and control centerpieces on the support arms, and installation of guide rollers.

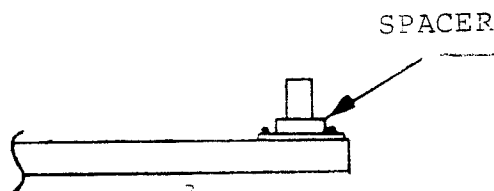
NOTE

Each disc and control centerpiece is marked so that it can be positioned on the proper support arm. Although they are interchangeable, they have been pre-adjusted at the factory and should be placed on the levels marked. Misplacing of the centerpieces may require readjustment.

The Platter System may be located on either side of the projection system. A typical installation is shown in Figure 3-1.



Attach the tubular legs to the upright post assembly as shown in Figure 1-1 with four 3/8-24 x 1/2" long set screws complete. It is advised to remove at least one set screw per leg to permit easy alignment of the legs. Move the post and support arm assembly into position.



Locate the markings on the discs. Select the bottom disc and place on the support arm. The hub of the disc should rest on the spacer shown in Figure 3-2 when properly in place. Select the proper control centerpiece and plug it into the socket in the post (See Figure 3-3).

The bottom surfaces of the control arm roller assembly should not rub on the plate when it is properly adjusted, and it should swing freely within the limits of the adjacent rollers.

Repeat the above procedures for each support arm, working from the bottom to the top of the unit.

3.3 Film Roller Installation

The rollers have been packaged and numbered. They are installed with a phillips screw driver.

3.4 Film Guidance Roller Installation

The film guidance rollers supplied are to be mounted to the upper and lower magazines of the projector.

Cut a three to four inch slot in the outer edge of the upper magazine slightly forward of the center spindle and flush with the inside back of the magazine so that the film path is clear. Position the guidance roller assembly against the rear surface of the magazine in the center of the slot just cut, and with the bottom of the rollers about six inches away from the magazine. Drill one hole near the outer edge of the magazine through the magazine and the roller mounting bar and bolt these items together. To adjust the guidance roller assembly, thread a length of film from the projector through rollers to the Platter System. For forward and backward adjustment rotate the rollers around the mounting bolt, and for side or directional adjustment, twist or bend mounting bar in direction needed. Upon completion of alignment, drill a second hole four inches from first hole through the magazine and roller mounting bar. Insert hardware and secure in place. Repeat this procedure for the bottom magazine.



Control Centerpiece
(unplugged)

CONTROL CENTERPIECE



Threaded w/Film

3.5 Platter System Controls

The Maxi Platter is equipped with an electronic control which allows the feed-out of the film to operate independently from the take-up control.

3.5.1 Circuit Breaker

The panel consists of three (3 ea.) 3 amp motor circuit breakers and one (1 ea.) 5 amp system circuit breakers.

3.5.2 Control Centerpiece

The platter speed during feed-out is determined by the position of the control arm on the centerpiece assembly. The control arm is mounted on the shaft of a ball bearing servopot. It constantly monitors and controls the feed-out rate as demanded by the projector.

The centerpiece assembly is a plug-in module which may be easily removed from the system for servicing. The servopot and the control arm are factory adjusted. The following procedure should be followed to determine if readjustment is needed.

- 1) Check that the disc drive wheel is engaged with the edge of the correct disc.
- 2) Plug the system into the 115VAC power source, this should light the two pilot lights under the upper arms.
- 3) The disc should rotate at high speed when the control arm is in the extreme clockwise position, and stop in the most counterclockwise position. If resetting is required, refer to section 5.1.1.

3.6 Make Up Table Assembly

3.6.1 Refer to Figures 1-2A and 1-2C for the following procedures.

3.6.2 (1) Attach mounting bracket and control box assembly to base using three 1/4-20 bolts.

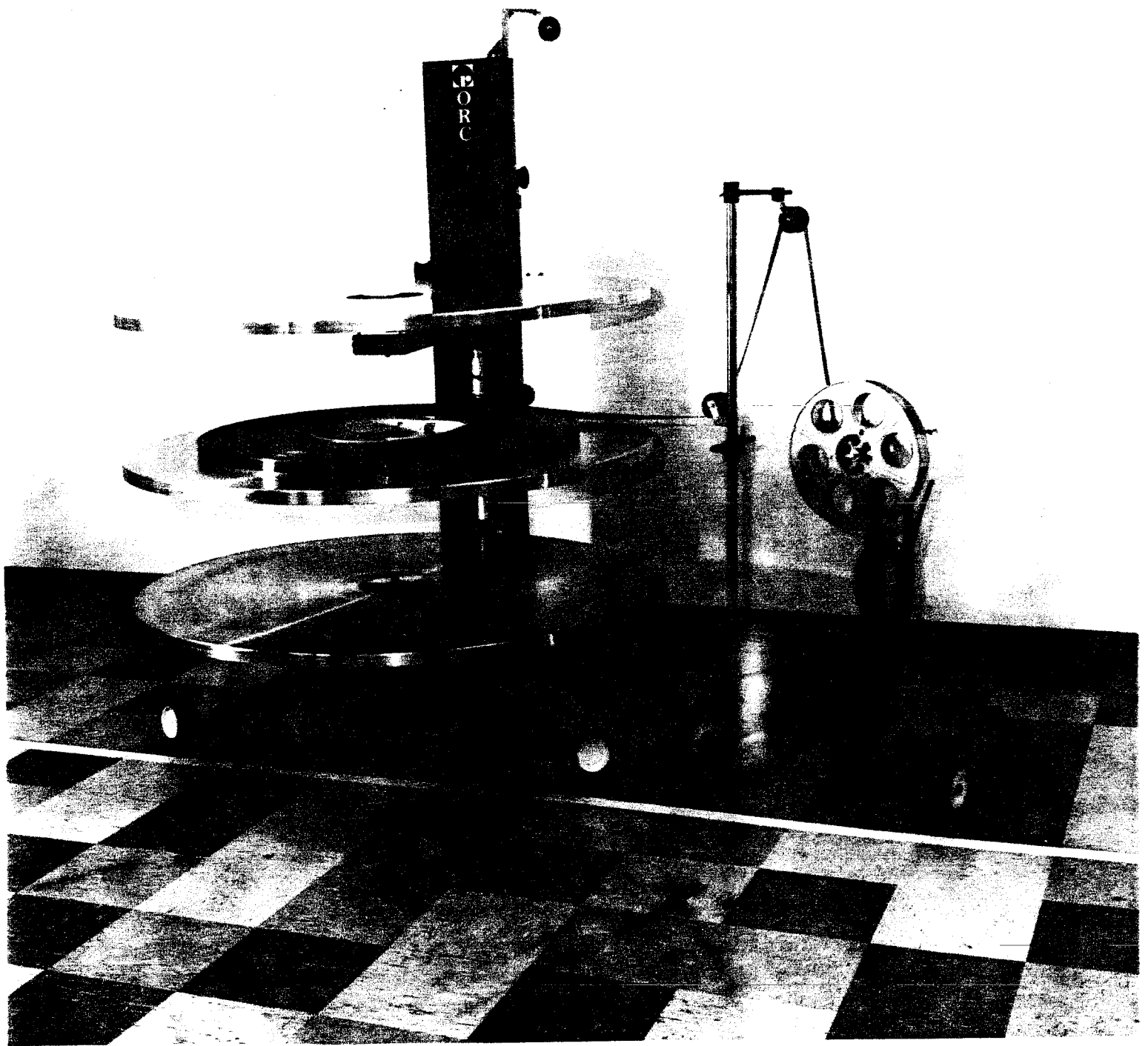
(2) Attach the vertical height adjustment bar to base.

(3) Install the adjustable swivel roller and fixed roller assembly on the vertical height adjustment bar.

3.6.3 Bring the film through the swivel roller and adjust the roller track for alignment with the film reel. Securely tighten the track mounting screws.

MAKE UP TABLE PROCESS

- Step #1. Set the film speed control at minimum.
- Step #2. Set the rotary switch to the disc to be used for Make-Up.
- Step #3. Place the power switch in the OFF position.
- Step #4. Set the "Platter/MUT" switch to Platter. The speed of the platter will now be controlled by the speed control on the table.
- Step #5. Plug the interconnecting cable on the Make Up Table, into the socket located on the base of the upright column of the Platter.
- Step #6. Remove the control centerpiece from the disc to be used for Make-Up.
- Step #7. Remove the "Moveable Take-Up Roller Bracket" from the disc to be used for Make-Up.
- Step #8. Check that the disc drive wheel is engaged.
- Step #9. Install take-up ring on the disc by pushing pins on ring into holes on disc.
- Step #10. Install reel on the spindle of the Make Up Table.
- Step #11. Adjust the rollers on the vertical pole of the Make Up Table for optimum alignment with the disc.
- Step #12. Fasten the film head leader to the take-up ring, with sound track up, and wind counterclockwise direction.
- Step #13. Place the power switch on the table to the ON position. Slowly increase the speed control dial until the desired speed is reached and transfer the film from the reel to the disc. Continue splicing the reels together until the program is complete.
- Step #14. When finished return power switch to the OFF position, return the film speed control dial to minimum and unplug the interconnecting cable.



MAKE UP TABLE PROCESS

PROGRAM PRESENTATION

- Step #1. Select the take-up disc by placing the alignment pins of the "Moveable Take-Up Roller Bracket" in the alignment holes nearest the disc to be used. The other two discs are ready for feed.
- Step #2. Remove the take-up ring from the program to be shown and install on the Platter selected for take-up.
- Step #3. Install the control centerpiece on the disc to be used for feed.
- Step #4. Check that the disc drive wheels are engaged.
- Step #5. Install the Feed roller bracket in the designated place for the disc to be used for feed-out. This is locked in place with two toggle swell latches.
- Step #6. Thread the film from the center of the disc through the control centerpiece and then to the feed roller bracket on the upright column.
- Step #7. Pull off enough film to thread the projector, the Platter System and back to the take-up ring.
- Step #8. Fasten the film to the take-up ring so that the sound track is up and the film winds in a counterclockwise direction. The program is now ready for presentation.

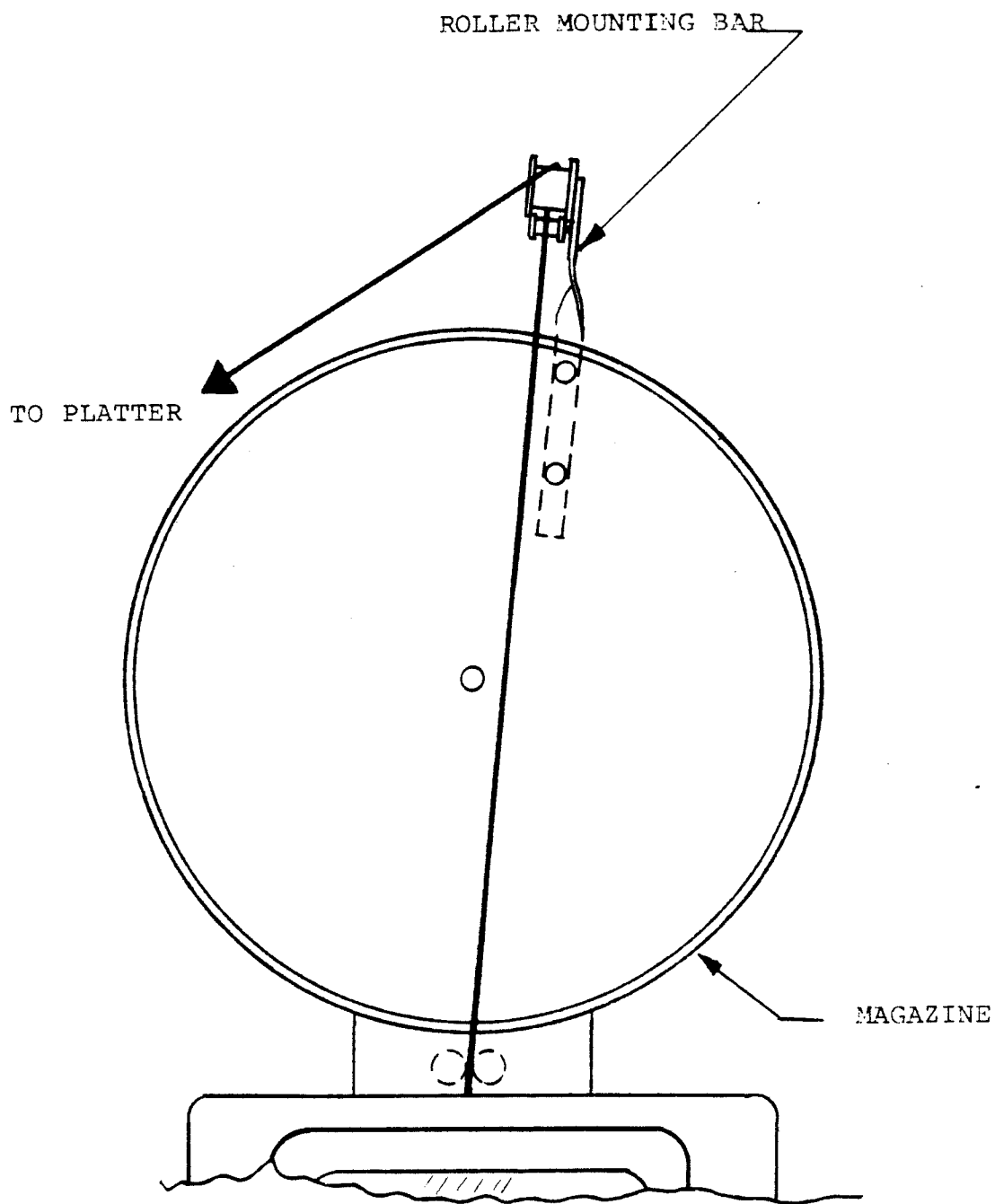
BREAK DOWN PROCESS

- Step #1. Set the film speed control at minimum.
- Step #2. Set the rotary switch to the disc to be used for breakdown.
- Step #3. Place the power switch in the OFF position.
- Step #4. Set the Platter/MUT switch to MUT.
- Step #5. Plug in the interconnecting cable on the Make Up Table into the socket located on the base of the upright column of the Platter.
- *Step #6. Remove the control centerpiece from the disc to be used for break-down.
- *Step #7. Remove the moveable take-up roller bracket from the disc to be used for break down.
- Step #8. Check that the disc drive wheel is disengaged.
- Step #9. Place the take-up reel on the side of the spindle of the table.
- Step #10. Adjust the rollers on the vertical pole of the Make-Up Table for optimum alignment with the disc.
- Step #11. Thread the film from the outside of the disc through the table rollers and onto the reel in a counter-clockwise direction with the sound track in.
- Step #12. Place the power switch on the table to the ON position. Slowly increase the speed control dial until the desired speed is reached and transfer the film from the disc to the reel.

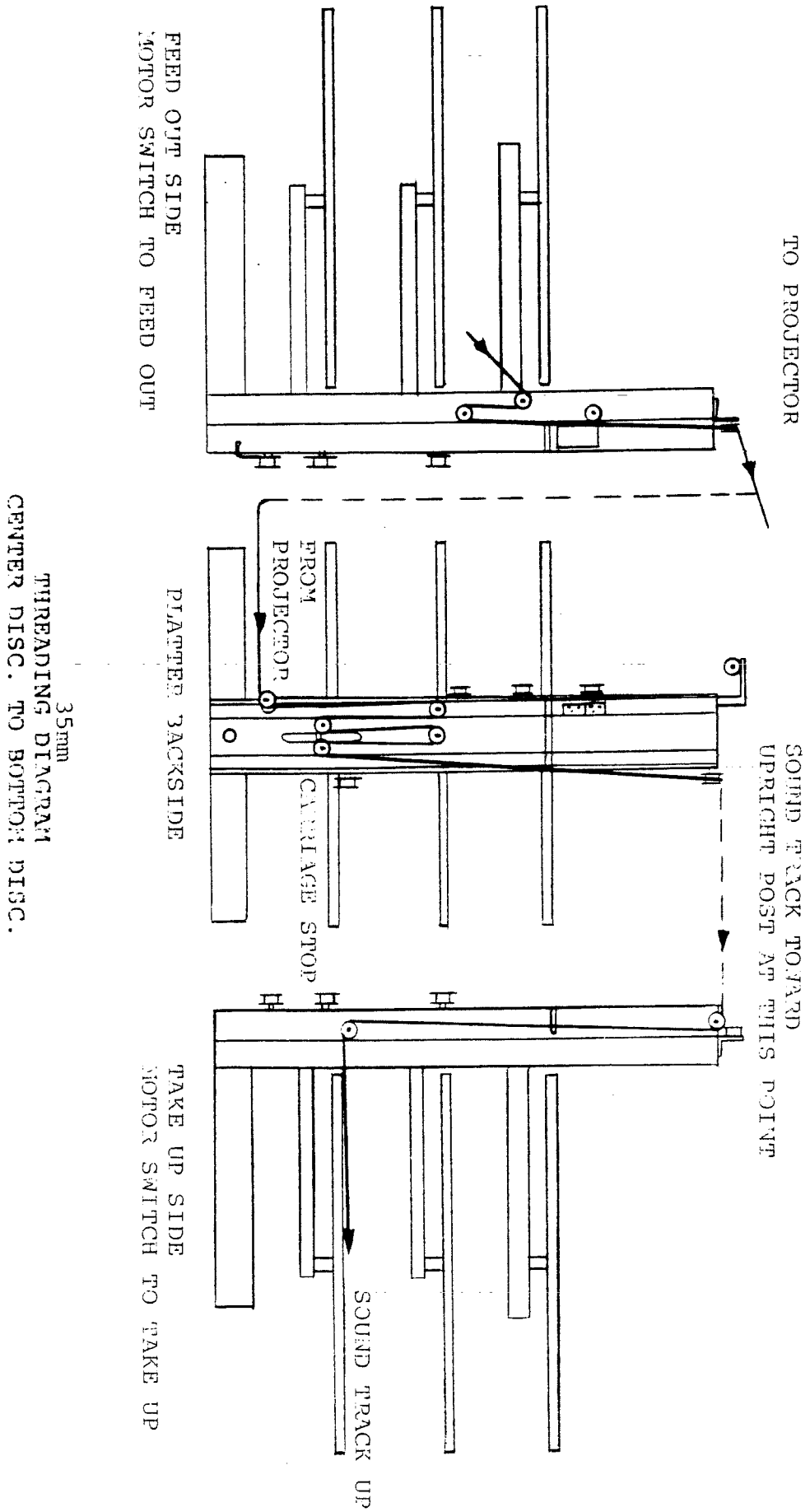
CAUTION

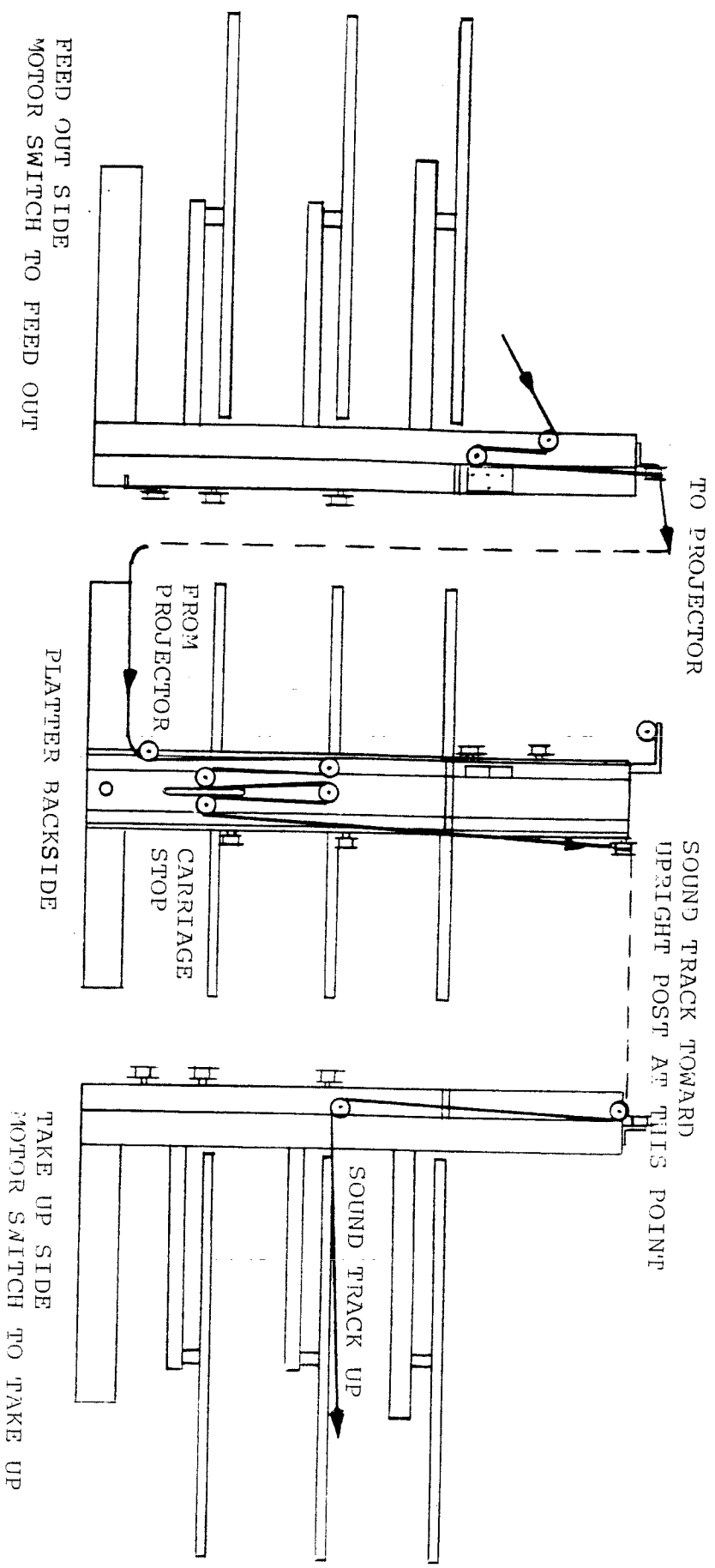
Make all speed changes very slowly. Remember that the film is pulling on a full Platter (80-200 pounds). If sudden speed changes are made the film will break and the Platter will continue to turn.

*Not required, but serves as a safety feature accidental presentation interruption if the MUT Table is not disconnected after make up or break down.

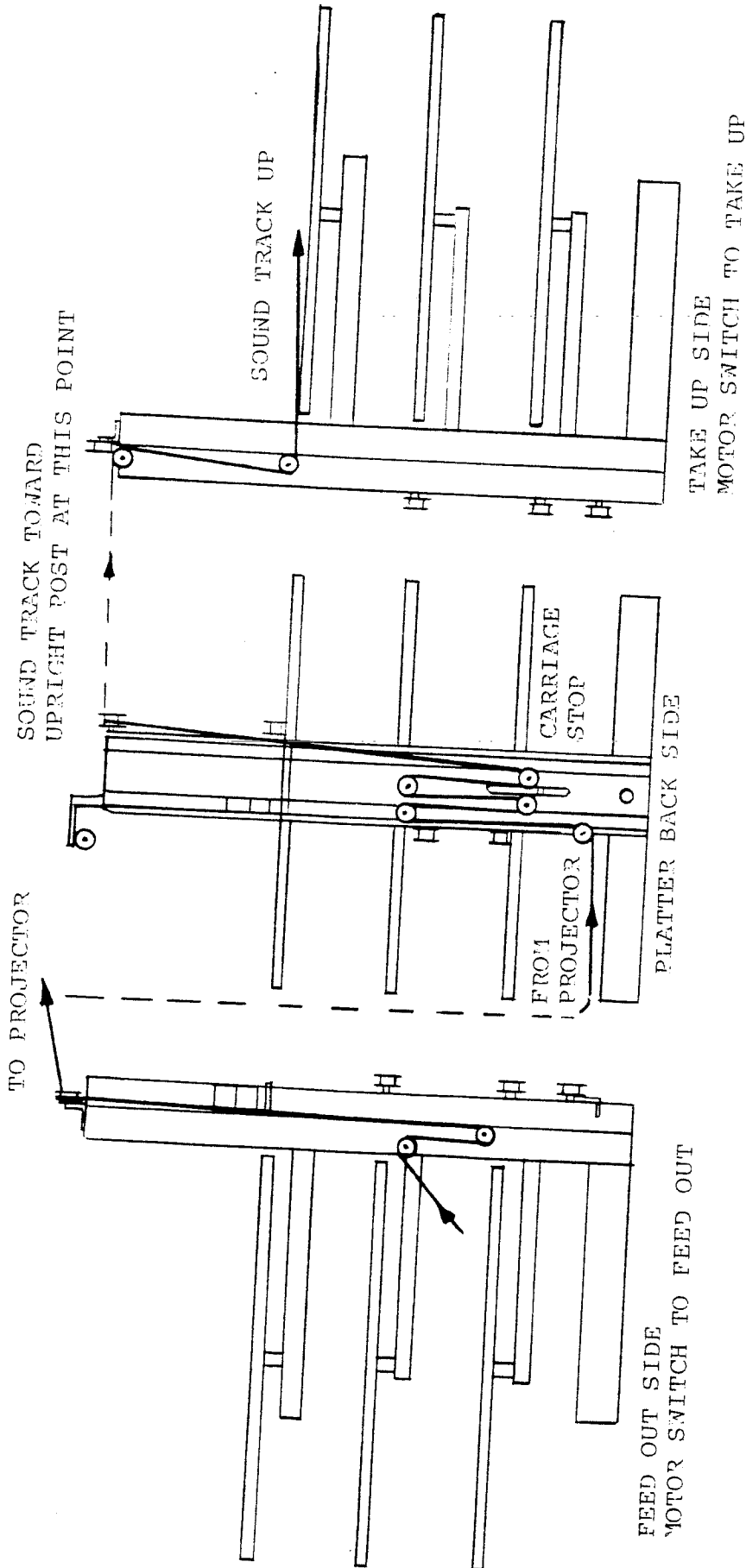


FILM GUIDANCE ROLLER INSTALLATION

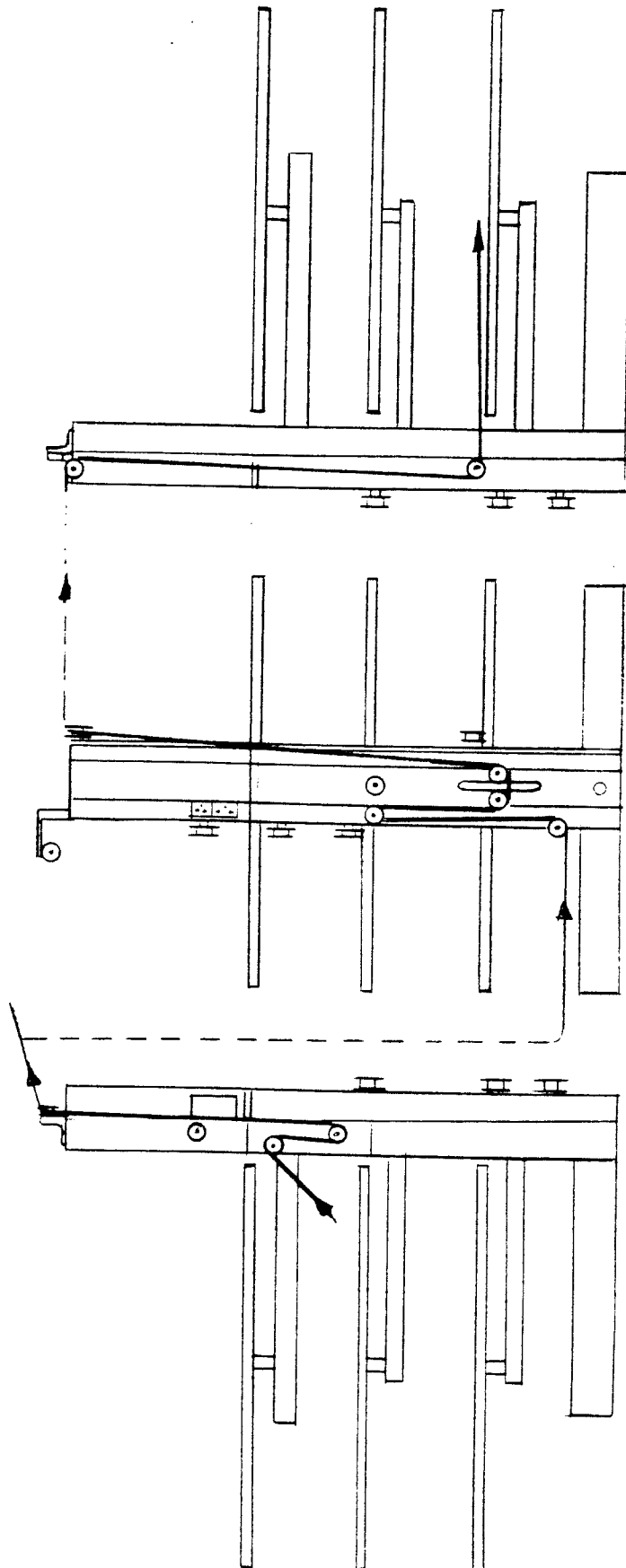




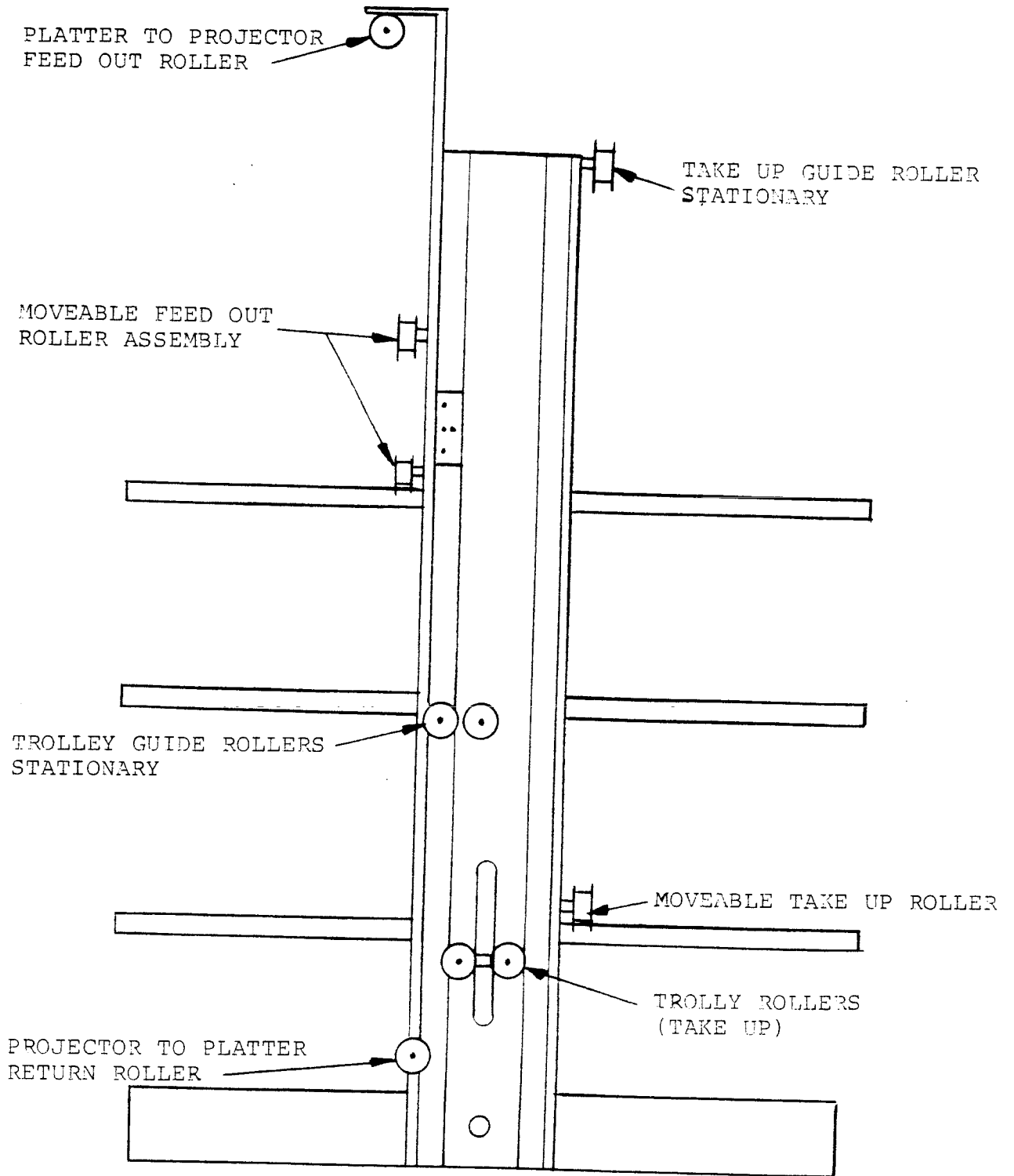
35mm
THREADING DIAGRAM:
TOP DISC TO CENTER DISC



35mm
 THREADING DIAGRAM
 BOTTOM DISC TO TOP DISC.



70mm TROLLEY THREADING DIAGRAM



35mm and 35/70mm Platter
Roller Diagram

5.0 MAINTENANCE

5.1 Platter System and Make Up Table

Maintenance on the Platter System and the Make Up Table consists of keeping the unit clean.

Disc surfaces can be refinished with 3/0 emery cloth or steel wool working slowly from the center out with the disc, rotating at maximum speed. (Make Up Table control in Platter mode gives maximum speed).

The application of wax to painted surfaces will aid in the protection of the system. Use of a foaming/degreasing aluminum cleaner on disc will keep discs clean. The control centerpiece, control arm and rollers should be checked to insure that all parts move freely. Any commercial liquid household cleaner used sparingly may be used to wipe down the system and clean the rollers.

Monthly check all rollers and roller assemblies for freedom of movement. Rollers with bearings that do not rotate freely must be replaced; others may be disassembled and cleaned.

Every six months, check the brushes on the drive motors and variable transformers. Replace as necessary. See Spare Parts List Section 5.4.

The bearings in the Make Up Table should be inspected after approximately every 40 hours of use, and lubricated with a small amount of Kroil lubricant.

5.1.1 Control Centerpiece Adjustment

1. Remove centerpiece and place on level surface with plug exposed to allow a VOM connection.
2. Loosen the screw on the control arm.
3. Connect VOM leads to the phone plug on the underside of the assembly. Set meter range to R x 1 resistance scale.
4. Hold the control arm in the CCW position when viewed from above.
5. With a small flat blade screwdriver inserted in the slot of the servopot shaft, turn shaft until VOM reads as close to zero as possible. The maximum setting should not exceed 50 ohms.
6. Tighten screw on control arm and re-check resistance reading in the CCW position.
7. Check resistance reading in the full CW position (top platter speed). It should be 700 +50 ohms.
8. Adjust torsion spring tension so the control arm will slowly return back to the CCW position (complete stop position).

5.1.2 Top Speed Adjustment

Refer to Figure 5-1. Maximum platter speed is factory adjusted; if adjustment is required, perform the following steps:

CAUTION

THERE ARE 115 VAC SECTIONS ON THE SPEED CONTROL PC BOARD AND CONNECTOR. DO NOT HANDLE BOARD UNLESS THE PLATTER IS UNPLUGGED FROM THE WALL OUTLET.

1. Remove mounting screws from hinged control panel and swing panel open to gain access to trimmer pot on speed control printed circuit board.
2. Determine which platter is the fastest and the slowest. Set feed selector switch to SLOWEST PLATTER.
3. Use a piece of masking tape to hold control arm on slowest platter control centerpiece to the full CW position (platter max. speed).
4. Adjust trimmer pot until top platter turns at 30 RPM (5 turns - 6-1/2 turns per 10 seconds).
5. Switch feed selector to next platter and repeat step 3. Readjust trimmer pot if platter speed is less than 30 RPM (5 turns per 10 seconds).
6. Repeat step 3.5 for the last platter.

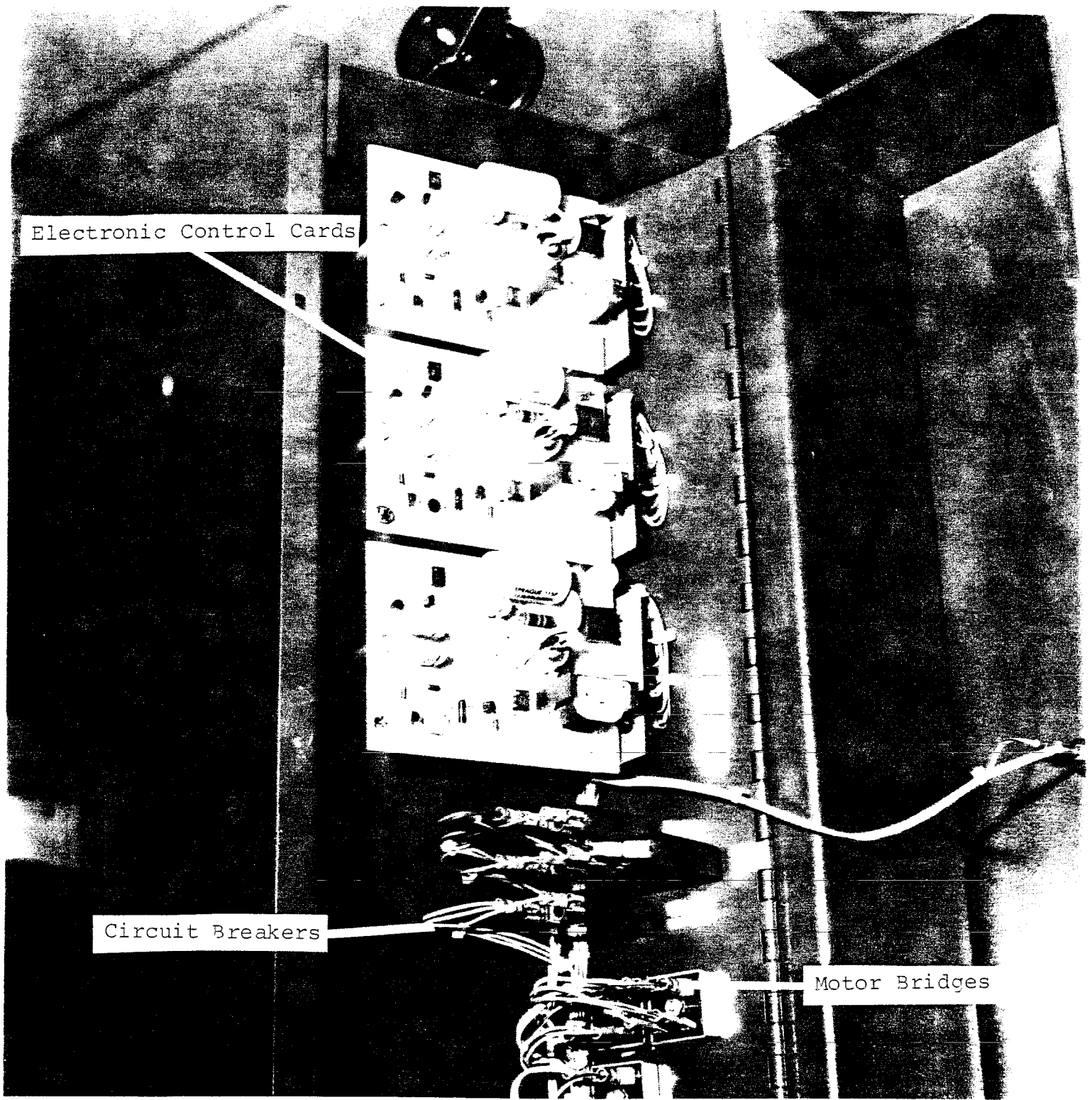


FIGURE 5-3
CONTROL PANEL ASSEMBLY

5.2 TROUBLESHOOTING GUIDE

<u>Symptom</u>	<u>Probable Cause</u>
1. Platter does not rotate.	1.1 C/B in table tripped. 1.2 No power at power source. 1.3 Defective speed control. 1.4 Switch off in table position (MUT connector). 1.5 Cord not securely inserted in Platter System.
2. Make Up Table spindle does not rotate.	2.1 C/B tripped. 2.2 No power at power source. 2.3 Defective speed control. 2.4 Switch off or in Platter position. 2.5 Motor brushes defective. 2.6 Belt slipping on pulley 2.7 Pulleys loose on shaft(s)
3. Film under or over-runs on feed-out. NOTE: A slight oscillation may be observed at the beginning and end of program, which should stabilize.	3.1 System not threaded properly. 3.2 Control arm not moving freely. 3.3 Control centerpiece out of adjustment(See 5.1.1) 3.4 Maximum speed adjustment is set too high.(See 5.1-.2). 3.5 Control centerpiece potentiometer is faulty.

5.3 Brush Inspection And Replacement Procedure

WARNING

ARMATURE BRUSHES ARE NOT AT GROUND POTENTIAL. DISCONNECT THE POWER SOURCE BEFORE ANY WORK IS PERFORMED

Brush wear rate varies depending on the individual application's duty cycle, and should be inspected at frequent intervals (120) days to determine an appropriate inspection schedule for each specific application.

5.3.1 Brush Removal

Unscrew brush retaining cap and withdraw spring and brush (See Figure 1-1C). Replace if needed. (Always replace both brushes when service is required).

5.4 Spare Parts List

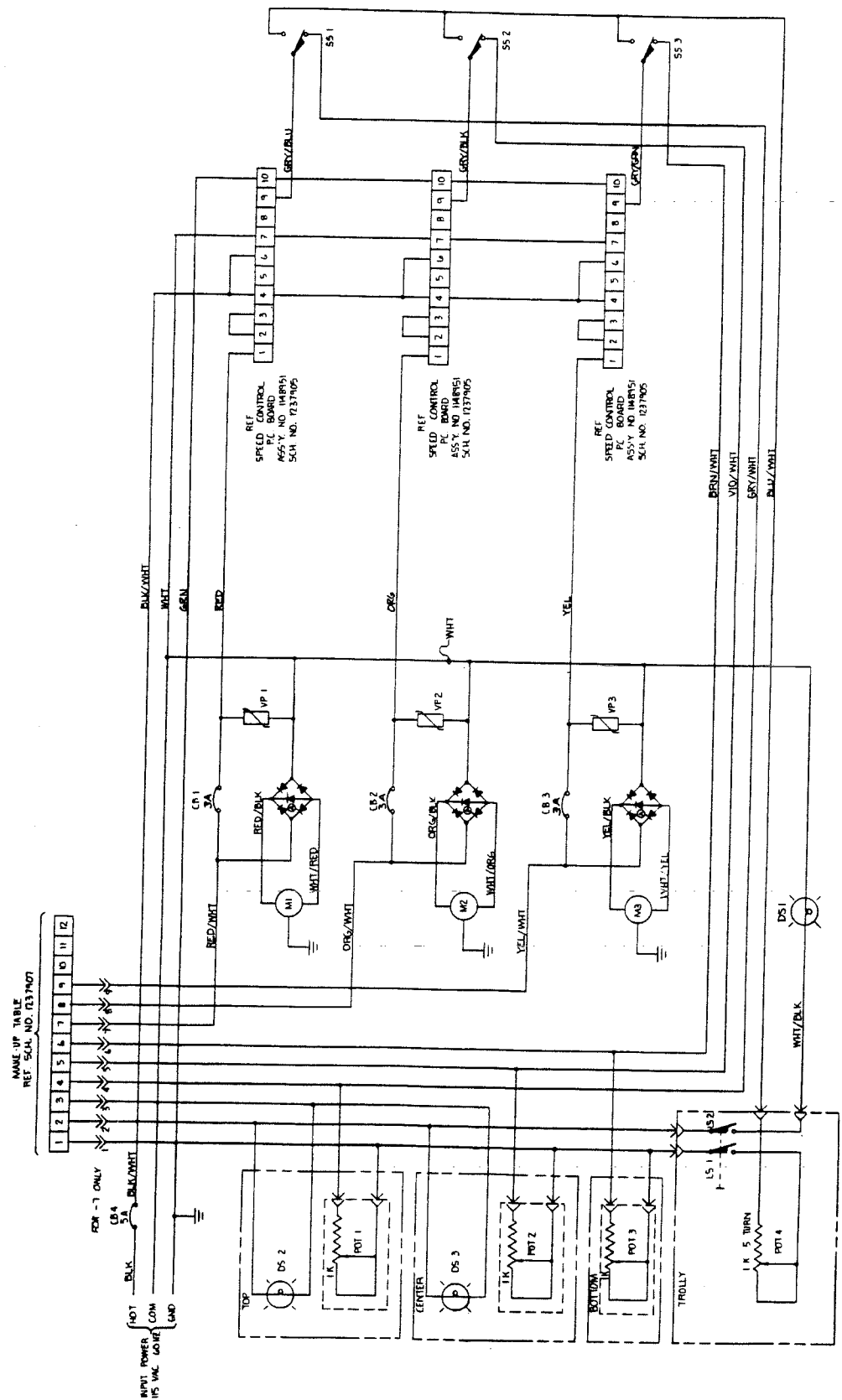
Platter

1. Disc light bulbs.
2. 3 Amp C/B and 5 Amp C/B
3. 2" dia. roller with bearing and hub insert.
4. Take up ring.
5. Control centerpiece assembly.
6. Disc drive motor.
7. Take-up potentiometer 1k, 5 turn
8. Motor brushes.

Make Up Table

1. 1/2" spindle.
2. 5/16" spindle.
3. Reel retaining safety pin.
4. Reel drive pin.
5. Motor brushes.

REV	DATE	APPROVED	REVISIONS
A	10/27/75	J. B. BRADY	REVISED TRACK TO BRIDGE (13)
B	11/17/75	J. B. BRADY	REVISED TRACK TO BRIDGE (13)
C	12/17/75	J. B. BRADY	REVISED TRACK TO BRIDGE (13)
D	1/27/76	J. B. BRADY	REVISED TRACK TO BRIDGE (13)



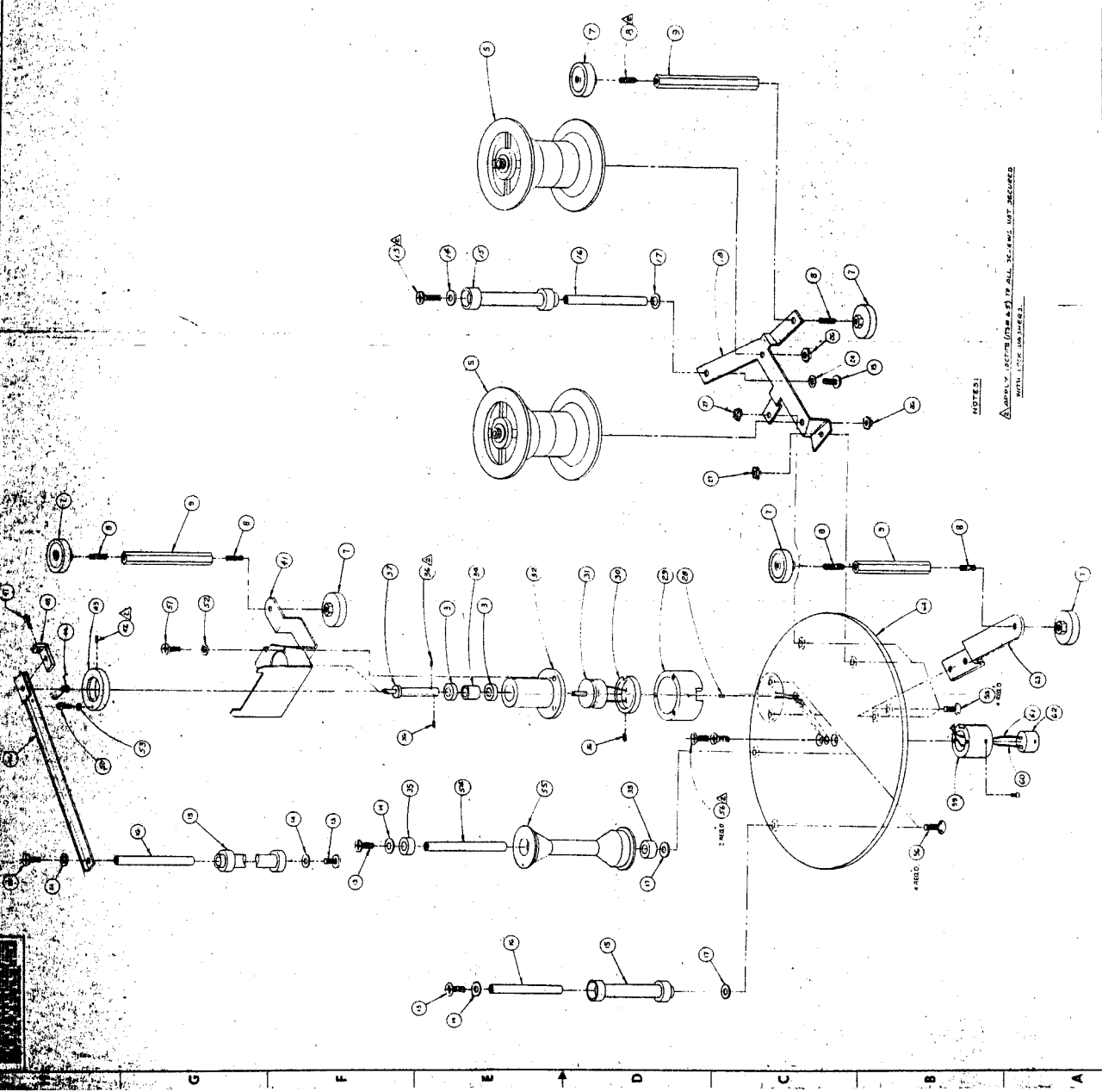
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APPROVED	J. B. BRADY
DESCRIPTION	REVISED TRACK TO BRIDGE (13)
REVISIONS	REVISED TRACK TO BRIDGE (13)

DATE	10/27/75
APPROVED	J. B. BRADY
DESCRIPTION	REVISED TRACK TO BRIDGE (13)
REVISIONS	REVISED TRACK TO BRIDGE (13)

Optical Reduction Corporation
 SCHEMATIC, MAXI
 ELECTRONIC PLATTER

TOOL NUMBER: D 33030 1247379

NOTES - UNLESS OTHERWISE SPECIFIED:

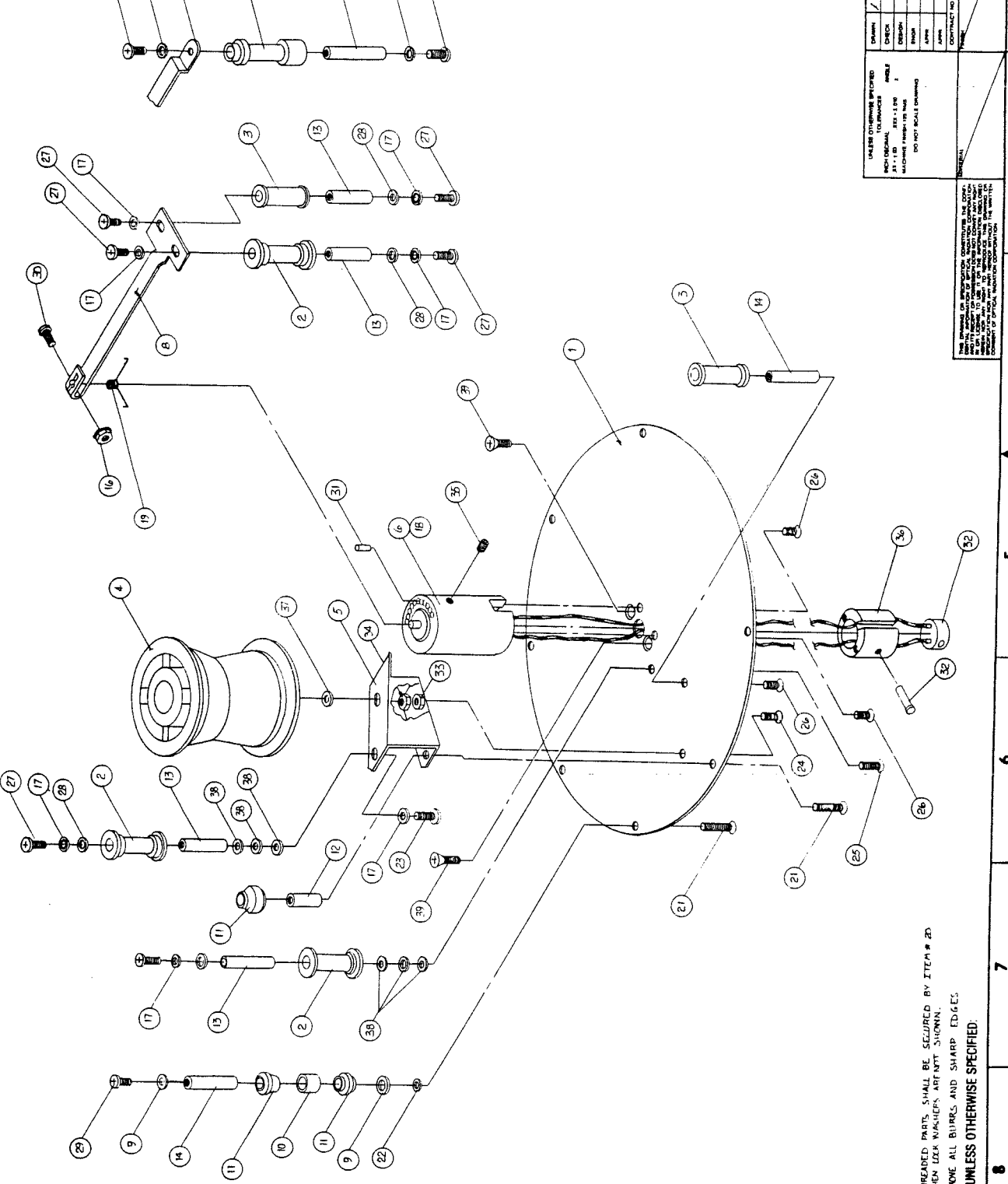



NOTES:
 1. DIMENSIONS (IN INCHES) TO ALL DECIMALS NOT INDICATED
 WITH LOCAL DIMENSIONS.

QTY	DESCRIPTION	REF
1	OPTICALLY SENSITIVE	1
1	BRACKET	2
1	BRACKET MOUNT	3
1	CONNECTOR (IN)	4
1	CONNECTOR (OUT)	5
1	CONNECTOR (MID)	6
1	CONNECTOR (END)	7
1	CONNECTOR (FLAT)	8
1	CONNECTOR (FLAT)	9
1	CONNECTOR (FLAT)	10
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1	CONNECTOR (FLAT)	100

LIST OF MATERIAL
 Optical Weapon Component
 70 IN. W.
 ASSEMBLY CENTER/ASSEMBLY
 1000000000
 1000000000
 1000000000

REV. NO.	DATE	APPROVED
1	1/17/54	W. J. SHANN
2	1/21/54	W. J. SHANN
3	1/21/54	W. J. SHANN
4	1/21/54	W. J. SHANN
5	1/21/54	W. J. SHANN
6	1/21/54	W. J. SHANN
7	1/21/54	W. J. SHANN
8	1/21/54	W. J. SHANN

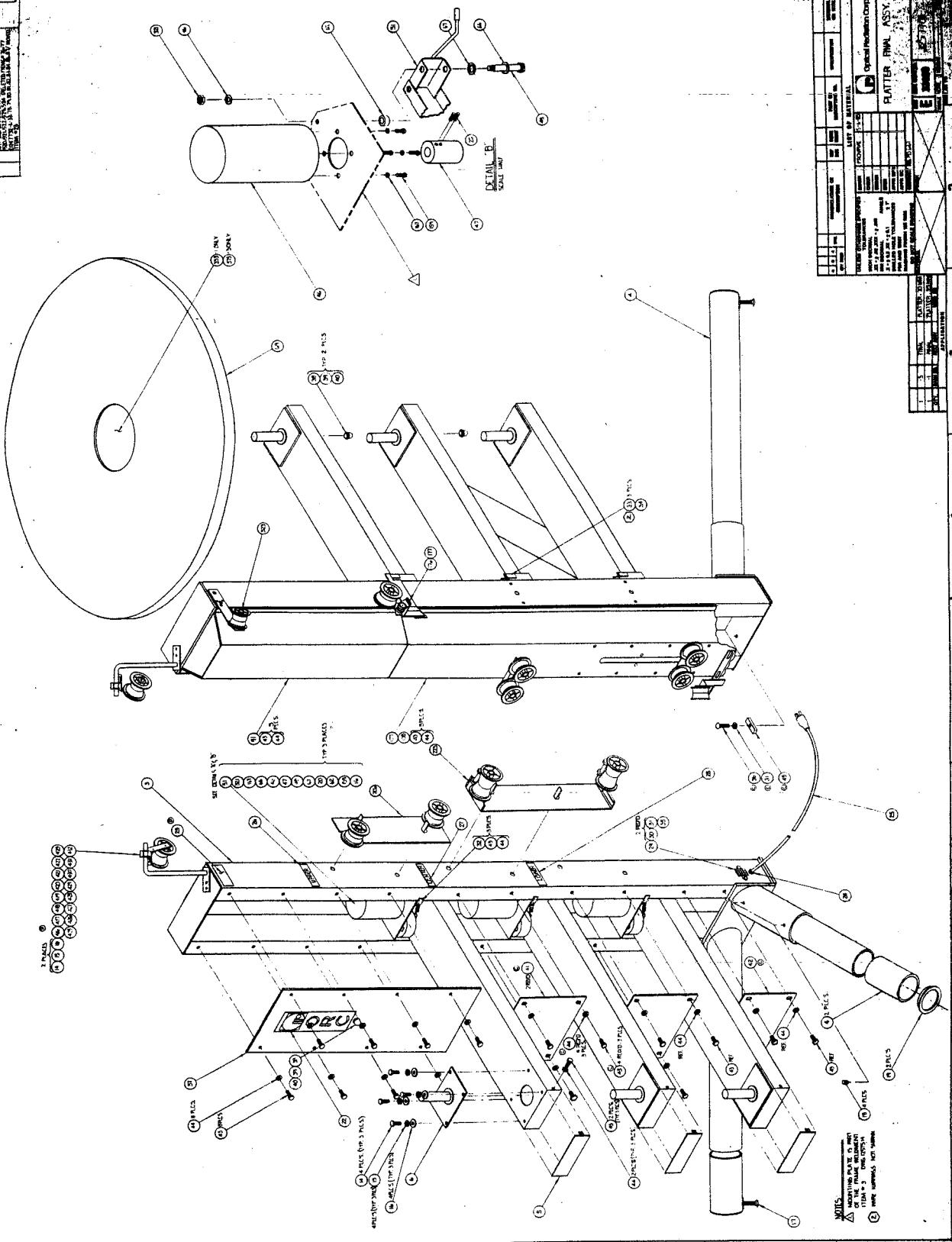


 Optical Radiation Corporation CONTROL CENTERPIECE ASSY (ELECTRONIC - 35 mm)	ORDER NO. D 33030 CONTRACT NO. 1247830	SHEET NO. 6 TOTAL SHEETS 6
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING	DRAWN / PALDINIA S-1-54 CHECK / [] DESIGN / [] APPROVE / [] CONTRACT NO.	SCALE ADVISE: 1/2" = 1"

(E) THREADED PARTS SHALL BE SECURED BY ITEM # 20
 WHEN LOCK WASHERS ARE NOT SHOWN.
 (J) REMOVE ALL BURRS AND SHARP EDGES.
 NOTES - UNLESS OTHERWISE SPECIFIED:

PART NAME		PLATTER - RWL - ASSY	
DRAWING NO.		100-100000-001	
REV.		1	
DATE		10/1/54	
BY		J. W. BROWN	
CHECKED		J. W. BROWN	
APPROVED		J. W. BROWN	
MATERIALS		SEE PARTS LIST	
MANUFACTURING		SEE PARTS LIST	
ASSEMBLY		SEE PARTS LIST	
TESTING		SEE PARTS LIST	
REVISIONS		SEE PARTS LIST	
REVISION NO.		1	
REVISION DESCRIPTION		INITIAL DESIGN	

1	PLATTER	1
2	PLATE	1
3	SCREW	1
4	SCREW	1
5	SCREW	1
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7	SCREW	1
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100	SCREW	1



100-100000-001
PLATTER - RWL - ASSY
10/1/54
J. W. BROWN

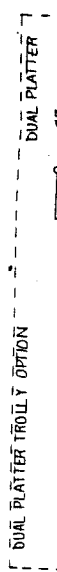
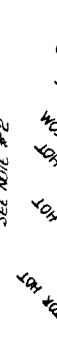
100-100000-001
PLATTER - RWL - ASSY
10/1/54
J. W. BROWN

NOTES:
1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO BE HOLD TO TOLERANCES SHOWN.

ZONE	LTR	DESCRIPTION	DATE	APPROVED
C	ED	W. S. DOR	REDESIGNED / REDRAWN	4-3-86
				LV

REVISIONS	
DATE	APPROVED
4-3-86	LV

SEE NOTE #2



SEE NOTE #1



UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS IN CH.
 DECIMAL ANGLES
 XX.X ± 0.00
 MACHINE FINISH 125 RMS
 DO NOT SCALE DRAWING

Optical Radiation Corporation
SCHEMATIC,
 (AUTOMATIC ELECTRONIC M.U.T.)

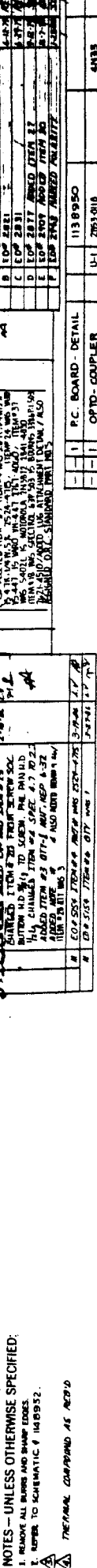
CONTRACT NO. 1237907
 CODE IDENT NO. C 33030
 SCALE: NEXT ASSY FIRST USE
 SHEET 1 OF 1

2) REF SCHEMATIC 1237905
 1) REF SCHEMATIC 1247379
 NOTES — UNLESS OTHERWISE SPECIFIED:

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REV. NO.	DATE	DESCRIPTION
1	10/15/54	INITIAL COMPILING AS REQ'D
2	11/10/54	REVISIONS
3	12/15/54	REVISIONS
4	1/10/55	REVISIONS
5	1/20/55	REVISIONS
6	2/10/55	REVISIONS
7	2/20/55	REVISIONS
8	3/10/55	REVISIONS

NOTES - UNLESS OTHERWISE SPECIFIED:
 1. REMOVE ALL BUBBS AND SHARP EDGES.
 2. REFER TO SCHEMATIC & DRAWINGS.



INITIAL COMPILING AS REQ'D

REV. NO.	DATE	DESCRIPTION	BY	CHKD.
1	10/15/54	INITIAL COMPILING AS REQ'D		
2	11/10/54	REVISIONS		
3	12/15/54	REVISIONS		
4	1/10/55	REVISIONS		
5	1/20/55	REVISIONS		
6	2/10/55	REVISIONS		
7	2/20/55	REVISIONS		
8	3/10/55	REVISIONS		

REV. NO.	DATE	DESCRIPTION	BY	CHKD.
1	10/15/54	INITIAL COMPILING AS REQ'D		
2	11/10/54	REVISIONS		
3	12/15/54	REVISIONS		
4	1/10/55	REVISIONS		
5	1/20/55	REVISIONS		
6	2/10/55	REVISIONS		
7	2/20/55	REVISIONS		
8	3/10/55	REVISIONS		

REV. NO.	DATE	DESCRIPTION	BY	CHKD.
1	10/15/54	INITIAL COMPILING AS REQ'D		
2	11/10/54	REVISIONS		
3	12/15/54	REVISIONS		
4	1/10/55	REVISIONS		
5	1/20/55	REVISIONS		
6	2/10/55	REVISIONS		
7	2/20/55	REVISIONS		
8	3/10/55	REVISIONS		

Optical Radiation Corporation
 P.C BOARD ASSEMBLY

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REVISION SHEET RECORD

SHEET NO.	IND	1	2	3a	3b	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	CHG. BY	APPR BY	DATE
E.O. #467B	N/C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	AA			
#4825	-	-	-	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	AA		9/23/5	
#4861	-	-	-	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C				
#4876	-	-	-	-	-	-	-	-	-	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	AA		12/1/85	
#5015	-	-	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	AA		12/1/85	
#5051	-	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	P.R.	AA	1/24/86	
#5119	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	P.R.			

REVISIONS

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ITEM NO. REV.	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	125770A-1	125770A-3	125770A-1	125770A-3	COMPONENT DESIGNATION
6		1233100	CENTER POST ASSY	3	3			SEE PAGE 4
51		1237735	DISK DRIVE ASSY	3	3			" " 6
69		1139042-5	PENTIX ASSY	3	3			" " 6
70	F	1247732	TOP ROLLER ASSY	-	-			" " 7
91	G	1248188	CONTROL PANEL ASSY	1	1			" " 8
107		1257719	SPEED CONTROL PANEL ASSY	1	1			" " 8
176		1237702-1	ASSY, ROLLER T.U	1	-			" " 11
177		1237702-3	ASSY, ROLLER - 1	-	1			" " 11
206		1247703	ROLLER F.O. ASSY 35 mm	1	-			" " 12
223		1247704	ROLLER P.O. ASSY 35/70 mm	-	1			" " 13
244		1227664-1	KEEPER ROLLER ASSY 35 mm	4	-			" " 14
245		1227664-2	KEEPER ROLLER ASSY 35/70 mm	-	5			" " 14
266		1148451	SPEED CONTROL PCB ASSY	3	3			" " 15
316		1236872	T.U. KIN. ASSY 35 mm	2	2			" " 17
325		1233711	ASSY, KIN. IN. 70 mm	-	2			" " 17
333		1247830	CONTROL CENTERPIECE ASSY 35 mm	2	2			" " 17
377	E	1247831	CONTROL CENTERPIECE ASSY 70 mm	-	2			" " 19
247		1227834-1	KEEPER ROLLER BRACKET ASSY	2	-			" " 14
248		1227834-3	KEEPER ROLLER BRACKET ASSY	-	1			" " 14
355	E	1228073	TOP ROLLER BAR ASSY	1	1			" " 18
346	E	1148853-7	ROLLER ASSY 35 mm	12	1			" " 19
367	E	1148858-9	ROLLER ASSY 35/70 mm	-	11			" " 19
416	F	1238078-1	ADJUSTABLE TOP ROLLER ASSY, 35MM 8"	1	-			" " 21
417	F	1238078-3	ADJUSTABLE TOP ROLLER ASSY, 35/70MM 8"	-	1			" " 21
418	F	1238078-5	ADJUSTABLE TOP ROLLER ASSY, 35MM 10"	-	1			" " 21

JOB NO. 22061 SHEET 3a OF 25 SIZE CODE IDENT NO **A 33030** REV 6

1207701



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INDEX

ITEM NO.	PI CHG	DWG NO	PART NO	DESCRIPTION	MANUFACTURER PN	SIZE	CODE IDENT NO	COMPONENT DESIGNATION
419	F	1238078-7		ADJ. TOP ROLLER ASS'Y.	35/70 MM	10"	1257701-1	SEE SHEET 21
420	F	1238078-9		"	35 MM	12"	1257701-3	"
421	F	1238078-11		"	35/70 MM	12"		"
422	F	1238078-13		"	35 MM	14"		"
423	F	1238078-15		"	35/70 MM	14"		"
425	F	1238167-1		DOUBLE-ADJ. TOP ROLLER ASS'Y.	35 MM	8"		"
426	F	1238167-3		"	35/70 MM	8"		"
427	F	1238167-5		"	35 MM	10"		"
428	F	1238167-7		"	35/70 MM	10"		"
429	F	1238167-9		"	35 MM	12"		"
430	F	1238167-11		"	35/70 MM	12"		"
431	F	1238167-13		"	35 MM	14"		"
432	F	1238167-15		"	35/70 MM	14"		"
491	F	1228074-1		ADJUSTABLE ROLLER ASS'Y.	35 MM			"
500	F	1228074-3		"	35/70 MM			"
134	G	1228193		DIODE ASS'Y.			3 3	"

JOB NO. PD 661 SHEET 3b OF 25

SIZE A CODE IDENT NO 33030

1207701

RFV G

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ITEM NO.	PI CHG	DWG NO. / PART NO.	DESCRIPTION / MANUFACTURER/PN	1257701-1	1257701-3	1257701-3	COMPONENT DESIGNATION
1		1257701-1	FINAL ASSY 35 mm	1			
2		1257701-3	FINAL ASSY 35/70 mm				
3		1257514	WEAR PIN, FRAME	1			
4		1237577	LEG, EXTENSION	2			
5		1227578	COVER ARM	3			
6		1233700	CENTERPOST ASSY	3			
7		1237718	CENTERPOST SUPPORT ASSY	3			
8		2253-0223	CONNECTOR, SINCH (WITH PIN)		1		
9		2263-9222	CONNECTOR, MOLEX		1		
10		8"	WIRE ROAWG INS YELLOW		1		
11		9"	WIRE ROAWG INS GREEN		1		
12		#8 32 x 3/16 LG.	SCREW, SOC SET		1		
13		1/4-28 x 1/4 LG.	SCREW, SOC SET NALF 108		1		
14	B	1/4-20 x 5/8	SCREW, NIX HD.	16	16		
15	B	1/4 1D.	WASHER, LOCK INT 214.	16	16		
16	B	1/4 1D x 1" 90.	WASHER, FENDER	12	12		
17		3/8-16 x 3 1/2 LG.	SCREW, NIX HD.	2	2		
18	B	3/8-24 x 1/2 LG.	SCREW, SET	4	4		
19		4856-0005	CHIPS, CARTRIDGE	2	2		
20	B	10-32 x 1/2" LG.	SCREW, SET	2	2		
21		1/4 1D	WASHER, FLAT	5	5		
22		1126937-1	LOGO	1	1		
23		1228001	NAME PLATE	1	1		
24		5228-6730	STRAIN RELIEF	1	1		
25	C	3160-0330	POWER CORD	1	1		

JOB NO. FD-1 SHEET 4 OF 25


SIZE CODE IDENT NO. **A** 33030

REV **G**

1207701

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ITEM NO.	PI CHG	DWG NO. / PART NO	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	COMPONENT DESIGNATION
26		1227768-1	LABEL, UPPER	1		
7		-3	LABEL, CENTER	1		
8		-5	LABEL, LOWER	1		
9	D	2253-1211	RECEPTACLE	1		
30	B	#6	WASHER, FLAT	2	2	
1	E	#16	WASHER, INT. STAR LOCK	3	3	
2		1227738	TUB, SPRING	3	3	
3		2952-1211	SWITCH	3	3	
4		1227753	BRACKET SWITCH	3	3	
5	B	6-32 X 1/4" LG.	SCREW, PHILL. PAN HD.	2	2	
6	E	6-32 X 3/4" LG.	SCREW, PHILL. PAN HD.	1	1	
7		1237784	PANEL, FERN	1	1	
8	B	2435-9730	LAMP	3	3	
9	B	2465-5700	SOCKET	3	3	
40	B	2470-5773	LENS	3	3	
1	E	1237983-1	PLATTER GUARD	2	2	
2	E	1237983-3	PLATTER GUARD	1	1	
3	E	#8-22	SCREW, HEX WASHER HD ROLL FORM	42	42	
4	E	#8	WASHER, LOCK INT. TH SKL OXIDE	42	42	
5	E	2474-0121	GROUND BAR WITH LABEL	1	1	
6	D	4052-0840	HOOK	3	3	
7		1118176	DRIVE SLIDE	3	3	
8	B	3506-0023	SCREW, SHOULDER SOC. HD. 5/16 DIA X 2 LG.	3	3	
9	E	#8-32 X 3/4	SCREW, PHIL PAN HD	1	1	
50	E	#8	WASHER, FLAT	1	1	


Optical Radiation Corporation

JOB NO. PD 661 SHEET 5 OF 25

SIZE CODE IDENT NO. **A 33030** REV **G**

1207701

ORC FORM NO. 74/4-147

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 NATIONAL BUREAU OF STANDARDS
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 CONSENT OF OPTICAL RADIATION CORPORATION

ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	SIZE	CODE IDENT NO	REV
51		1237735	DISK PLATE ASSY		1257701-1	119042-5
2		1237610	CONN. BUSH		1257701-3	1237735
3		1227773	PIN ASSY			
4		6076-001	WHEEL			
5		5852-1330	SPRING			
6		1227727	PIN, SPRING			
7		5513-3120	PIN, CLEAR			
8		5504-0907	PIN, COTTER			
9		4856-0007	TIP, RUBBER			
60		1/4-20 x 2 1/4	SCREW, SOG. HD, CAP			
1	C	1119292-3	SLEEVE			
2		5820-4300	SPACER			
3		1/4 LD.	WASHER, FLAT			
4		1/4 LD.	WASHER, LOCK INT			
5		1/4-20	NUT, HEX			
6	B	5/16	FLAT WASHER			
7	B	6006-0320	WASHER, SHIM			
8	E	1218085	WHEEL BEARING			
9	E	1139042-5	PLATE ASSY (DISK) 35/70			
20		1147832	PLATE			
1		1147933	HUB SPARE WELDED			
2		4580-1390	BEARING BALL			
3		1233199	RING PLATE SPACER			
4						
75						

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 REGULATION, NOR ANY PART HEREOF WITHOUT THE WRITTEN
 CONSENT OF OPTICAL RADIATION CORPORATION

ITEM NO	PI CHG	DWG. NO	PART NO	DESCRIPTION / MANUFACTURER PN	SIZE	CODE IDENT NO	REV	COMPONENT DESIGNATION
76	F	1247732-1		TOP ROLLER ASSY 35mm	1257701-1			
77	F	1247732-3		TOP ROLLER ASSY 35/20mm	1257701-3			
78	F	1247600		BRACKET, TOP ROLLER	1247732-1			
79	F	1227684-5		BI-ANGLE BRACKET				
80	F	1227684-7		BI-ANGLE BRACKET				
81	F	5601-5025		SCREW, SHOULDER				
82	F	6016-0012		WASHER, FLAT-NYLON				
83	F	1227664-1		KEEPER ROLLER ASSY				
84	F	1227664-3		RESUME ROLLER ASSY				
85	C							
86	F	1148858-7		ROLLER ASSY				
87	F	1148858-9		ROLLER ASSY				
88	C							
89	C							
90	C							

JOB NO. PR 661 SHEET 7 OF 25

SIZE **A** CODE IDENT NO **33030** REV **6**

1207701

Optical Radiation Corporation

ORC FORM NO 74/4 147

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ITEM NO.	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1248188	1257714-1	1257714-3	COMPONENT DESIGNATION
91	G	1248188	CONTROL PANEL ASSY	1	1				
2		1247713	PANEL KINGER	1	1				
3		2767-4101	BRIDGE	3	3				
4	D	2151-1010	CIRCUIT BREAKER	3	3				
5		4951-0310	CABLE CONMP	1	1				
6		2231-1010	RECEPTACLE PC BOARD	3	3				
7		1118953	BRACKET PCB	3	3				
8		5823-8000	SPACER	3	3				
9	G	#8-32 X 3/8	SCREW, PAN PHIL, HD.	11	11				
100		48-32	KEP NUTS	14	14				
1		1257521	WIRE ASSEMBLY	1	1				
2	D	2151-1050	CIRCUIT BREAKER	1	1				
3	D	2611-0100	VARIATOR	3	3				
4	D	3046-0410	TERMINAL STRIP	1	1				
5	G	8-32 X 5/8" LG.	SCREW, PHILL PAN HD.	3	3				
6	G	1148951	PC BOARD ASSY	3	3				SEE SHEET 15
7		1257114-1	3500 CONTROL PANEL ASSY. 35mm	1	1				
8		1257114-3	3500 CONTROL PANEL ASSY. 35/20mm	1	1				
9		1247709	PANEL STATIONARY	1	1				
110		1227790	GUIDE, CPU CONT CART	2	2				
1		1237697	BASE, ROLLER CARRIER	1	1				
2		4570-0250	BEARING	4	4				
3		1227676	MOTOR BELT	1	1				
4	G	2263-9211	CONNECTOR 2 PIN MALE MOLEX	3	3				
115	G		CONNECTOR 5 PIN MALE MOLEX	1	1				

Optical Radiation Corporation

JOB NO PD 661 SHEET 8 OF 25

SIZE CODE IDENT NO A 33030

REV 1207701 G

5. U.S. PATENT OFFICE: 35 U.S.C. 105, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

ITEM NO	PI CHG	DWG NO	PART NO	DESCRIPTION	MANUFACTURER PN
116		1227620		MFG. KNECK, POT	
7		2616-0002		POT	
8	E	2966-0013		SWITCH	
9		5276-0404		NUT, 2 VIN	
120		5206-0006		PULLEY, TIMING	
1		1227621		BRACKET, IR LENS	
2	G	4-40X3/8" LG.		SCREW, PHILL PAN HD.	
3	G	4-40		NUT, KEP	
4		5206-0005		PULLEY, TIMING	
5		4526-0004		BEARING, BRONZE	
6		1227772		LATCH	
7		5577-1230		GRIP RING	
8		5577-3100		GRIP RING	
9		5505-1212		PIN, DOWEL	
130		1227829		BRACKET	
1		1227683		ANGLE KNECK MOUNT	
2		1227684-1		BI-ANGLE BRACKET	
3		1227684-2		BI-ANGLE BRACKET	
4	G	1228193		RECTIFIER ASSY.	
5	G	2777-2011		RECTIFIER, LEAD MOUNT	
6	C	1227664-1		RESISTOR POWER ASSY.	
7	C	1227664-2		"	
8	G			TERMINAL DV14-250P PAN DUIT. (PIGGY BACK)	
9					
140					

1257701-1
1257701-3
1257714-1
1257714-3
1248188
1228193

Optical Radiation Corporation
 JOB NO. PR661
 SHEET 9 OF 25
 SIZE CODE IDENT NO. **A** **33030**
 COMPONENT DESIGNATION 1207701
 REV **G**

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 INITIAL ION 5 IES 1
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ITEM NO	PI CHG	DWG NO	PART NO	DESCRIPTION	MANUFACTURER PN	COMPONENT DESIGNATION
141	E	1148858-7		ROLLER ASSY		
2	E	1148858-9		ROLLER ASSY		
3						
4						
5						
6						
7						
8		1227693		LEARN, ROLLER MOUNT		
9		1227692		BRACKET, ROLLER SNEADICK		
150		1227733		BRACKET, LEARN ROLLER		
1		4606-0001		BELT, TIMING		
2		5516-0014		LEARN, ROLLER		
3		5916-0004		NOV, TIMING		
4		5601-5025		LEARN, SHOULDER		
5		6016-0019		WASHER, BECCVILLE		
6						
7						
8	E	#4AX1.00 LG.		SCREW, PANHEAD PHIL HP.		
9	B	#10-32X 1/2		SCREW, PHIL PAN HD		
160		#8-32 x 1/4		SCREW PHIL PAN HD		
1		#8-32 x 3/8		SCREW PHIL PAN HD		
2		#8-32 x 1/2		SCREW PHIL PAN HD		
3		#4-40X 3/8		SCREW PHIL PAN HD		
4						
165						

1257701-1
 1257701-2
 1257714-1
 1257714-3

JOB NO PD 661
 SHEET 10 OF 25

SIZE CODE IDENT NO A 33030 1207701

REV G



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ITEM NO.	PI CHG.	DWG NO.	PART NO.	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1257714-1	1257714-3	1237702-1	1237702-3	COMPONENT DESIGNATION
66		# B		WASHER LOCK INT. ITN.			2528				
7	B	# 10		WASHER LOCK INT. ITN	A		6				
8		# 4		WASHER LOCK INT. ITN			2				
9		# 10-2		NUT, E-NA			1				
170		# B 32		NUT, KSP			1313				
1											
2											
3											
4											
5											
6		1237702-1		ASSY, ROLLER T.U. 35mm	1						
7		1237702-3		" " 35/70mm							
8		1227585G		SUPPORT, ROLLER T.U.							
9		1227683		ANGLE ROLLER ADJUST							
100		1227684-1		BI-MANGLE BRACKET							
1		1227684-3		" "							
2		3506-0011		ENTR. SWELL							
3	C	1227668-1		ROLLER ROLLER ASSY							
4	C	1227668-3		ROLLER ROLLER ASSY							
5		1148858-7		ROLLER ASSY 35							
6	E	1148858-9		ROLLER ASSY 35/70							
7	E										
8	C										
9	C										
190	C										

JRC Optical Radiation Corporation

JOB NO. PR661 SHEET 11 OF 25

SIZE **A** CODE Idr VT NO **33030** 1207101 REV **G**

ORC FORM NO. 74/4-147

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ITEM NO	PI CHG	DWG NO	PART NO	DESCRIPTION	MANUFACTURER PN	125770-1	125770-3	123770-1	123770-3	124770-3	COMPONENT DESIGNATION
191	E										
2	E										
3		5601-5025		SHOULDER SCREW			1	1			
4		6016-0012		WASHER, FLUT NYLON			1	1			
5		#10-32		NUT, ESNA			1	1			
6		1/4 DIA 3/16 L		WAXING BOLT			1	1			
7		1/4 20		NUT, ESNA			1	1			
8	E	48-32 1/8 L		SCREW, PHIL. PAN. HD.			2	2			
9		#3		WASHER, FLUT			3	3			
200	E	48		WASHER LOCK, INT. 2 TH.			2	2			
1											
2											
3											
4											
5											
6		124770-3		35mm ROLLER RO. ASSY			1				
7		123750-1		PLATE ROLLER R.O.				1			
8		3506-F10041		ENTRY, SWELL				2			
9	E	1227839-1		KEEPER ROLLER / BRACKET ASSY.					2		
210	E										
1	E	1148858-7		ROLLER ASSY					2		
2	E										
3		5826-7570		SPACE						1	
4											
215											

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ITEM NO.	PI CHG	DWG NO.	PART NO.	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1247703	1247704	COMPONENT DESIGNATION
216	E	48-56 x 3/8		SCREW, PHIL PAN HD			3	4	
7	E	4.8		WASHER, FLAT			2	2	
8	E	4.8		WASHER, LOCK, INT. TH.			3	4	
9		#8-32 x 1/8-9		SCREW, PHIL FLAT HD			1	-	
220									
1									
2									
3		1247704		ROLLER FO ASSY 70 mm	-	1			
4		1247580		PLATE KOLLER FO			1		
5		1239454		BRACKET, KOLLER FO			1		
6		1223280		MOUNT, SWIVEL			1		
7		3506-0011		LATCH, SWIVEL			2		
8	E	1148858-9		ROLLER ASSY 35/70			2		
9	E								
230	E	1227668-3		KEEPER ROLLER ASSY			1		
1									
2		5601-5025		SCREW, UNFINDER			2		
3		4/0-32		NOT BORN			3		
4	E	6016-0012		WASHER, FLAT, NYLON			2		
5		5325-0070		CAP, INSULIB SCREW			1		
6		1224459		WASHER, STEEL			1		
7		5851-5030		SPRING			1		
8		4/0.32 x 1.00 L5		SCREW, SOC HD CNP			1		
9	C	1227839-3		KEEPER ROLLER / BRACKET ASSY			1		
240									

JOB NO. PD 661 OF 25 SHEET 13
 SIZE A CODE IDENT NO 33030 REV G
 1207701

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ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER-PN	1257701-1	1257701-3	1227664-1	1227664-3	1227839-1	1227839-2	COMPONENT DESIGNATION
141			THE FOLLOWING KESEK KOLLER ASSEMBLIES ARE USED ON							1238167, 1238078
2		1257701-4	1 1/2 - 2, 1257702-1 1/2 - 2, 1242703,							
3		1247830	2 1247831							
4		1227664-1	KESEK KOLLER ASSEMBLY 35 mm							
5		1227664-3	KESEK KOLLER ASSEMBLY 70 mm							
6										
7		1227839-1	KESEK KOLLER/BUCKET ASSEMBLY (35)							
8		1227839-3	KESEK KOLLER/BUCKET ASSEMBLY (70)							
9										
250 E		1218099	BEARINGS							
1										
2		4836-3/8 CG	SCREW PAN HEAD HD							
3		1217878	BRACKET							
4 B		5828-1800								
5		5836-0019								
6		5836-0006								
7		5836-0007								
8		5836-0016								
9		5836-0017								
260										
1										
2										
3										
4										
265										

JOB NO PD 661 SHEET 14 OF 25 SIZE A CODE IDENT NO 33030 REV 6

Optical Radiation Corporation 1207701

ORC FORM NO. 74/4-147

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ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	SIZE	CODE IDENT NO	COMPONENT DESIGNATION
206		1148951	SPEED CONTROL BOARD N557		1257701-3	SEE SHEET 8
7		1148952	PCB DETAIL		1148951	
8						
9						
270		2534-1015	RESISTOR CARBON 1K 1/2W 5%			R-1
1		2524-2015	2K 1/4W 5%			R-2
2		2525-1015	10K 1/4W 5%			R-3
3		2524-5615	5.6K 1/4W 5%			R-4
4		2526-2215	220K 1/4W 5%			R-5
5		2525-1015	10K 1/4W 5%			R-6
6		2526-8215	820K 1/4W 5%			R-8
7		2526-1015	100K 1/4W 5%			R-9
8		2525-4715	47K 1/4W 5%			R-11 R-12
9		2523-3315	330Ω 1/4W 5%			R-13 R-14
280		2535-1015	10K 1/2W 5%			R-15
1		2545-4715	47K 1W 5%			R-16
2		2522-4715	47Ω 1/4W 5%			K-17
3		2543-1015	100Ω 1W 5%			R-18
4		2523-1015	RESISTOR CARBON 100Ω 1/4W 5%			R-10 K-19
5						
6						
7		2621-4510	POTENTIOMETER			R-7
8						
9						
290						

JOB NO FD 661 SHEET 15 OF 25

SIZE **A** CODE IDENT NO **33030** REV **6**

Optical Radiation Corporation 1207701

ORC FORM NO 74/4 147

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ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER/PN	1257701-1	1257701-2	1236872	1233711	1247830	COMPONENT DESIGNATION
216		1230872	TAKES UP KING ROLLER 35 mm	2	-	-	-	-	
7		1241120	RING, TAKE UP	1	-	-	-	-	
8		1211121	PIN, TAKE UP	1	-	-	-	-	
9		1223253	PIN, TAKE UP	2	-	-	-	-	
320		1/4" x 1/2" O.V.	WASHER, FLAT	2	-	-	-	-	
1		1/4 20	NUT, HEX	1	1	1	1	1	
2		31-242	LOC TITE	1	1	1	1	1	
3									
4									
5		1233711	NUT, KILN TAKE UP 35/70 mm	2	-	-	-	-	
6		1243252	T.O. KING PENALTY	1	-	-	-	-	
7		5325-0200	KNOB	2	-	-	-	-	
8		1/4-20	NUT, HEX	2	-	-	-	-	
9		1/4 10 x 5/8 O.D.	WASHER, FLAT	2	-	-	-	-	
330		1223253	PICO	2	-	-	-	-	
1	E	#242	LOCTITE	2	-	-	-	-	
2									
3		1247830	CONTROL CENTER PICES ASSY 35 mm	2	-	-	-	-	
4	E	1148858-7	ROLLER ASSY 35 mm	1	-	-	-	-	
5									
6	E	1218099	BEARING	13	-	-	-	-	
7		2631-3530	POTENTIAL CONTACT	1	-	-	-	-	
8		1118501	COLLECTOR, FLANGED	3	-	-	-	-	
9		1119641	COLLECTOR, NON-FLANGED	2	-	-	-	-	
340	F	6016-0070	WASHER	6	-	-	-	-	

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ITEM NO.	PI CHG	DWG. NO.	PART NO.	DESCRIPTION / MANUFACTURER-P/N	1257701-1	1257701-3	1247830	1228073-1	1228073-3	COMPONENT DESIGNATION
341		1220441		BRACKET, ROLLER						
2		1223129		POST						
3		1220423		ROLLER AXEL						
4		1230440		CENTRAL CONNECTOR						
5		1118700		CONTROL POST						
6		1129063		SPRING, TORSION						
7		2253-0213		CONNECTOR WITH CRIMP PIN 5402-001						
9		5505-0607		PIN DOWEL 1/16 x 3/4						
9	C	5836-0019		SPACER						
250	E	1227982-1		SPACER-SHAFT 5836-0021						
1	E	1227982-3		SHAFT 5836-0020						
2	C	5822-A500		SPACER						
3	C	6016-0005		WASHER						
4										
5	E	1228073-1		TOP ROLLER BAR ASSY 35mm						
6	E	1228073-3		TOP ROLLER BAR ASSY 35/70mm						
7	E	1118210-5		BAR, ROLLER MTA						
8	E	1227664-1		KEEPER ROLLER ASSY						
9	C	1227664-3		KEEPER ROLLER ASSY						
360	E	1148858-7		ROLLER, ASSY						
1	E	1148858-9		ROLLER, ASSY						
2	E									
3										
4										
265										

JOB NO. PD661 SHEET 18 OF 25

SIZE CODE IDENT NO. A 33030 1207701

REV 6

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ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1247831	1228073-1	1228073-3	1148858-7	1148858-9	COMPONENT DESIGNATION
266		1148858-7	ROLLER N554 35 mm								
7		1148858-9	ROLLER N554 35/70 mm								
8		1137595	ROLLER N554								
9		1233871	ROLLER N554								
370		1228195-9	SHAFT								
1		1223195-7	SHAFT								
2	E	1218099	BEARING								
3		#832X38 LG.	SCREW, PHIL PAN HD								
4		#8	WASHER, FLAT								
5		#242	LOCTITE								
6		#1707	ADHESIVE, WELDON								
7	E	1253127	CONTROL CENTERPIECE N554 35/70	- 2							
8	E	1148858-9	ROLLER ASSY	- 2							
9		1233128	BASE, CONT. PIECE								
380		1223308	BRACKET, ROLLER								
1		2253-0213	CONNECTOR 4MM DIA								
2		1223127	POST								
3		1223196	ROLLER, CONTROL								
4	E										
5	E										
6		1233295	ALIGNMENT SENSING								
7		1223296	CLAMP								
8		5853-2726	SPRING								
9		1223236	COLLAR								
390	E										

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ITEM NO	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1247831	1228073-1	1228073-3	COMPONENT DESIGNATION
391		1223391	LIMIT SENSING ARM						
2			BEARINGS						
3		1213133-1	SHUNT, POT, EXT.						
4		1223181	MOUNT, BKG.						
5		1223182	GUIDE, POT						
6		1213192	PLATE, FILM BLOCK						
7		1227035							
8									
9		1223193	BASE, KENRING ARMOUNT						
400		1215259	SPACER, BKG.						
1		4580-0250	BEARING						
2		1233595	MOUNT, A.O. NISSY						
3		2631-3530	POTENTIOMETER, SERVO						
4	C	1223198	ROLLER, IDLER						
5	C	6000-0250	WASHER						
6	C	4570-0160	BEARING						
7									
8									
9									
A10									
1									
2									
3									
4									
A15									

JOB NO RD 661 SIZE CODE IDENT NO **A** 33030 REV **G**
 SHEET 20 OF 25 1207701



Optical Radiation Corporation

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 OR MECHANICAL, INCLUDING
 PHOTOCOPYING, RECORDING,
 OR BY ANY INFORMATION
 STORAGE AND RETRIEVAL
 SYSTEM, WITHOUT THE
 WRITTEN PERMISSION OF
 OPTICAL RADIATION CORPORATION

ITEM NO	PI CHG	DWG. NO	PART NO	DESCRIPTION	MANUFACTURER PN	SIZE	CODE IDENT NO	COMPONENT DESIGNATION
416	F	1238078-1		ADJUSTABLE TOP ROLLER ASSY.	35 MM	8"	1257701-1	
417	F	1238078-3		"	"	8"	1257701-3	
418	F	1238078-5		"	"	10"		
419	F	1238078-7		"	"	10"		
420	F	1238078-9		"	"	12"		
421	F	1238078-11		"	"	12"		
422	F	1238078-13		"	"	14"		
423	F	1238078-15		"	"	14"		
424								
425	F	1238167-1		DOUBLE-ADJ. TOP ROLLER ASSY.	35 MM	8"		TOP ROLLER OPTIONS
426	F	1238167-3		"	"	8"		
427	F	1238167-5		"	"	10"		
428	F	1238167-7		"	"	10"		
429	F	1238167-9		"	"	12"		
430	F	1238167-11		"	"	12"		
431	F	1238167-13		"	"	14"		
432	F	1238167-15		"	"	14"		TOP ROLLER OPTIONS
433								
434								
435								
436								
437								
438								
439								
440								

JOB NO. PD661 SHEET 21 OF 25

SIZE **A** CODE IDENT NO **33030** REV. **6**

1207701

Optical Radiation Corporation

ORC FORM NO. 74/4 147

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ITEM NO	PI CHG	DWG. NO.	PART NO.	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-3	1228074-1	1228074-3	COMPONENT DESIGNATION
491	F	1228074-1		ADJUSTABLE ROLLER ASSY. 35 MM			REF.		USED ON
492									1238078-1
493									1238078-5
494									1238078-9
495									1238078-13
496									1238167-1
497									1238167-5
498									1238167-9
499									1238167-13
500	F	1228074-3		ADJUSTABLE ROLLER ASSY 35/70 MM			REF.		USED ON
501									1238078-3
502									1238078-7
503									1238078-11
504									1238078-15
505									1238167-3
506									1238167-7
507									1238167-11
508									1238167-15
509	F	1137595		ROLLER HALF 35 MM			2	-	
510	F	1233871		ROLLER HALF 35/70 MM			-	2	
511	F	1227664-1		KEEPER ROLLER ASSY 35 MM			1	-	SEE SHEET 14
512	F	1227664-3		KEEPER ROLLER ASSY 35/70 MM			-	1	SEE SHEET 14
513	F	1227684-1		BRACKET, BI-ANGLE, 35 MM			1	-	
514	F	1227684-3		BRACKET, BI-ANGLE, 35/70 MM			-	1	
515	F	1228071		CLIP, SWIVEL			1	1	

JOB NO. PD661 SHEET 24 OF 25

SIZE CODE IDENT NO. A 33030

REF. 1207701

RC FORM NO. 74/4-147

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 ALL REVISIONS SHALL BE MADE BY THE ORIGINAL DESIGNER OR HIS AUTHORIZED REPRESENTATIVE. NO REVISIONS SHALL BE MADE BY ANY OTHER PERSON WITHOUT THE WRITTEN CONSENT OF OPTICAL RADIATION CORPORATION.

ITEM NO.	PI CHG	DWG NO / PART NO	DESCRIPTION / MANUFACTURER PN	1257701-1	1257701-2	1228074-1	1228074-3	COMPONENT DESIGNATION
516	F	1213195-9	SHAFT 35 MM					
517	F	1213195-7	SHAFT 35/70 MM					
518	F	1218099	BEARING					
519	F	6010-0014	WASHER, BELLEVILLE					
520	F	56AC-0207	SCREW, SHOULDER, 1/4 X 1/4 X 10-24					
521	F	5416-0060	NUT, REVERSIBLE LOCK (*10-24 STL.)					
522	F	#8	WASHER, LOCK INT. TTH.					
523	F	8-32 X 3/8 L6.	SCREW, PHILL. PAN HD.					
524	F	WELDON 1707	ADHESIVE					
525								
526								
527								
528								
529								
530								
531								
532								
533								
534								
535								
536								
537								
538								
539								
540								

JOB NO. PD 661
 SHEET 25 OF 25

SIZE A CODE IDENT NO 33030 RFV 6

1207701

Optical Radiation Corporation

ORC FORM NO. 74/4-147

REV. C

DWG. NO. 124 7786

SH. NO. 2 OF 10

TITLE

MAKE-UP TABLE ASSY. FINAL

TABULATION CLARIFICATION

PART NUMBER	CONFIGURATION DESCRIPTION
1247786 -1	MAKE-UP TABLE ASSEMBLY. 35 MM
1247786 -3	" " " " 35/70 MM



TITLE: **MAKE-UP TABLE ASSY, FINAL** DWG. NO. **1247786** REV. **C** SH. NO. **4 OF 10**

PARTS LIST

ISSUED BY		DATE	COPY TO PUR. DATE	REL. FROM STOCK DATE	JOB QTY.		JOB NO.		QTY ISS'D	QTY B/O	UNIT COST	EXTENDED COST
ITEM	PL	IDENTIFICATION NO.	DESCRIPTION	TAB	REMARKS	PRE BILL	PO REQ	UNIT QTY	QTY ISS'D	QTY B/O	UNIT COST	EXTENDED COST
1	X	1237845-	UPPER ADJ ROLLER ASSY	X				1				
2												
3												
4		1247695-1	MAKE-UP TABLE POST					1				
5		1247694-1	MAKE-UP TABLE BASE					1				
6		1247872-1	WIRE HARNESS					1				
7	X	1227870-1	CABLE ASSY.					1				
8		1227792-1	ROLLER BAR POST					1				
9		6075-0010	WHEELS 2 Z 102 DAYTON					2				
10		1248165-1	MOTOR MOUNT					1				
11	X	1/4-20 X .625 LG.	SCREW, HEX HD.					3				
12		1/4-20 X .75 LG.	SCREW, HEX HD.					8				
13		10-32 X .50 LG.	SCREW, HEX SOC. HD. CAP					2				
14		10-32 X 1.25 LG	SCREW, PHIL. PAN HD					2				
15		1/4 I.D.	WASHER, FLAT					10				
16		1/4 I.D.	WASHER, INTERNAL STAR LOCK					11				
17	X	1247609-3	MAKE-UP TABLE COVER					1				
18		1/2 I.D. 1.00 O.D	WASHER, FLAT					6				
19		1/4 - 20	NUT, HEX					10				
20		2635-3103	POTENTIOMETER		POT-5 #6			1				
1	X	1237876-1	M.U.T CHASSIS SILKSCREEN					1				
2		1228160-1	MAIN SHAFT					1				
3		5000-0020	COLLAR SHAFT					1				
4		4052-0840	DRIVE, MOTOR					1				

ORC FORM NO. 8-219 TOTAL COST



TITLE

MAKE-UP TABLE ASSY.

DWG. NO.

1247786

REV.

C

SH. NO.

5 OF 10

PARTS LIST

ISSUED BY		DATE	COPY TO PUR. DATE		REL. FROM STOCK DATE		JOB QTY.		JOB NO.		EXTENDED COST	
ITEM	PL	IDENTIFICATION NO.	DESCRIPTION	TAB	REMARKS	PRE BILL	PO REQ	UNIT QTY	QTY ISS'D	QTY B/O	UNIT COST	EXTENDED COST
25		5325-0020	MNOB					1				
26		5325-0190	MNOB					1				
27		2474-0121	GROUNDING BAR W/ LABEL					1				
28		5236-0004	STRAIN RELIEF					1				
29												
30		2767-4101	BRIDGE RECTIFIER		BR-1			1				
1		4596-0019	BRONZE PILLON BRACKET					2				
2		2957-1130	SWITCH		S7			1				
3		2966-0016	SWITCH, ROTARY		S9			1				
4		1228001- <input type="checkbox"/>	ID PLATE (SIN)	X				1				
5		2960-4100	NUT FACE					2				
6												
7		10-32 X .375 LG.	SCREW, PHIL PAN HD.					4				
8		#10	WASHER, INTERNAL STAR LOCK					10				
9		10-32	NUT SEAT					4				
40		5/16-18	NUT, HEX					4				
41		5/16-18 X 2.75	BOLT, A.D. HD. SQ NECK CARRIAGE					2				
2												
3		5706-0211	WING HD. SCREW 1/4-20 X .75 LG					2				
4		3062-1250	TERMINAL BLOCK		TB-1			1				
5		4-40 X .375 LG.	SCREW, PHIL PAN H.D.					4				
6		4-40	NUT, ESNA					2				
7		10-32 X .625 LG.	SCREW, PHIL PAN HD.					1				
8		10-32	NUT, KEP					5				

ORG FORM NO. 8-219

TOTAL COST



TITLE: **MAKE-UP TABLE ASSY.** DWG. NO. **1247786** REV. **C** SH. NO. **6 OF 10**

PARTS LIST

ISSUED BY		DATE	COPY TO PUR. DATE	REL. FROM STOCK DATE	JOB QTY.		JOB NO.					
ITEM	PL	IDENTIFICATION NO.	DESCRIPTION	TAB	REMARKS	PRE BILL	PO REQ	UNIT QTY	QTY ISS'D	QTY B/O	UNIT COST	EXTENDED COST
49												
50	X	1237844	LOWER ADJ ROLLER ASSY.	X				1				
1												
2		1238164-1	BEARING CARRIER					1				
3		10-32x.50 LG.	SCREW, PHIL PAN HD.					4				
4												
5		1227789-1	ROLLER BAR					2				
6		4910-0010	CAP					2				
7		3506-0017	MULTI PURPOSE GRIP					1				
8		1227821-1	HANDLE BAR					1				
9		5206-0014	PULLEY, TIMING					1				
60		4606-0007	BELT, TIMING					1				
1		1227986-1	HANDLE BRACKET (RIGHT)					1				
2		1227986-2	HANDLE BRACKET (LEFT)					1				
3		1128141-	REEL PIN .50 DIA.	X				1				
4												
5		1128142-1	" " .312 DIA.	X								
6		5516-0023	PIN, CLEVIS					2				
7		5504-0950	PIN, COTTER					2				
8												
9												
70		1228087	LABEL, BREAKDOWN INSTR.					1				
1												
2												

ORG FORM NO. 5-219 TOTAL COST



TITLE **MAKE-UP TABLE ASSY.**

DWG. NO. **1247786**

REV. **C** SH. NO. **7 OF 10**

PARTS LIST

ISSUED BY		DATE	COPY TO PUR. DATE		REL. FROM STOCK DATE		JOB QTY.		JOB NO.		QTY		UNIT		QTY		UNIT		EXTENDED	
ITEM	PL	IDENTIFICATION NO.	DESCRIPTION	TAB	REMARKS	PRE BILL	PO REQ	UNIT QTY	QTY ISS'D	QTY B/O	UNIT COST	QTY	UNIT COST	EXTENDED COST						
73	X	1227664	KEEPER ROLLER ASSY.	X				1												
74																				
5																				
6																				
7		8-32	NUT, KEP					1												
8																				
9																				
80		2966-0019	SWITCH DP DT		S-10			1												
1		2231-1012	CONNECTOR, EDGE		EC-4			1												
2		#8	WASHER INT STAR LOCK					2												
3																				
4																				
5																				
6																				
7		8-32 X .25 LG.	SCREW, SET					1												
8		10-32 X .25 LG.	" "					3												
9		1128139-1	REEL DRIVE DISC					1												
90		1128270-1	" " PIN					1												
1		8-32 X .625 LG.	SCREW PHIL PAN HD.					2												
2		1227877-1	CORD HOLDER					1												
3		8-32 X .625 LG.	SCREW, PHIL PAN HD.					1												
4																				
5																				
6																				

TOTAL COST



TITLE

MAKE-UP TABLE ASSY.

DWG. NO.

1247786

REV.

0

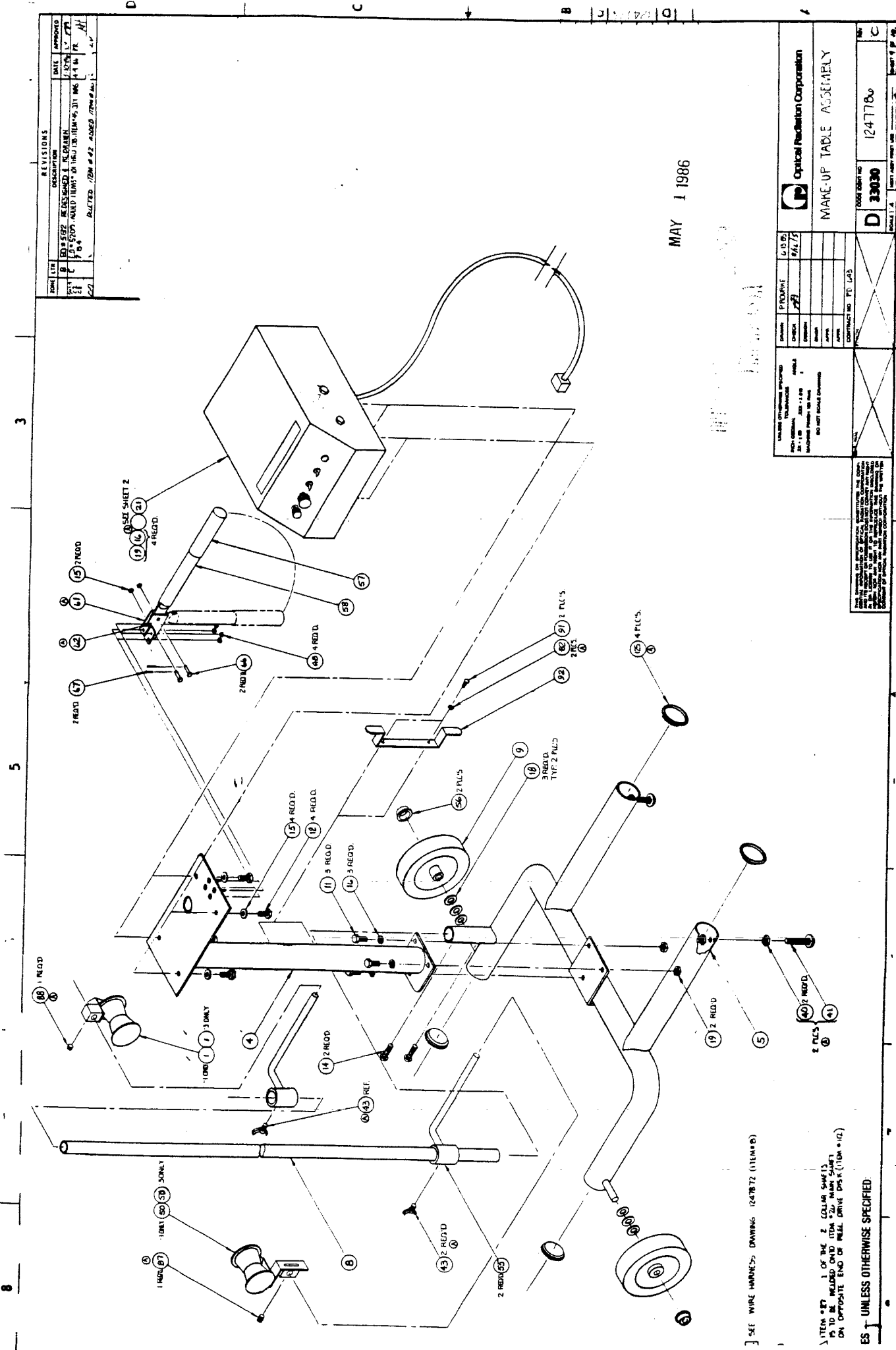
SH. NO.

8 OF 10

PARTS LIST

ISSUED BY		DATE	COPY TO PUR. DATE		REL. FROM STOCK DATE	JOB QTY.		JOB NO.				
ITEM	PL	IDENTIFICATION NO.	DESCRIPTION	TAB	REMARKS	PRE BILL	PO REQ	UNIT QTY	QTY ISS'D	QTY B/O	UNIT COST	EXTENDED COST
97												
98												
99		14850-0371	PLUG, BUTTON					1				
100		4856-0006	PLUG, BUTTON					4				
01	X	1148951-1	ASSY. P.C. BOARD					1				
02		5822-6211	SPACER, 1/4 HEX BRASS 5/8 LG. 6:32 THRD					1				
03		6-32 X .375	SCREW, PHILL PAN HD.					4				
04		#6	WASHER, INT. STAR LOCK					4				
05		2231-1010	RECEPTACLE, P.C.B.					1				
06		4-40	NUT, KEP					2				
07		1228248-1	BRACKET					1				
08												
09												
110												
111												
112		1228159-1	COUNTER SHAFT					1				
113		1228150-1	DRIVE MOTOR CLAMPING PLATE					1				
114		5509-5717	PIN, SAFETY					1				
115		5508-1205	PIN, ROLL .125" X .500 LG.					2				
116		1228192-1	PULLEY, TIMING					1				
117		4606-0006	BELT TIMING					1				
118		4576-0009	BEARING, FLANGED					2				
119		10-32 X .25 LG.	SUREN PHIL PAN HD					2				
120		59000-0010	COLLAR, SHAFT					2				

TOTAL COST



MAY 1 1986

REVISIONS		DATE	APPROVED
1	REVISED TO INCLUDE...	1/10/85	[Signature]
2	REVISED TO INCLUDE...	1/10/85	[Signature]
3	REVISED TO INCLUDE...	1/10/85	[Signature]
4	REVISED TO INCLUDE...	1/10/85	[Signature]
5	REVISED TO INCLUDE...	1/10/85	[Signature]

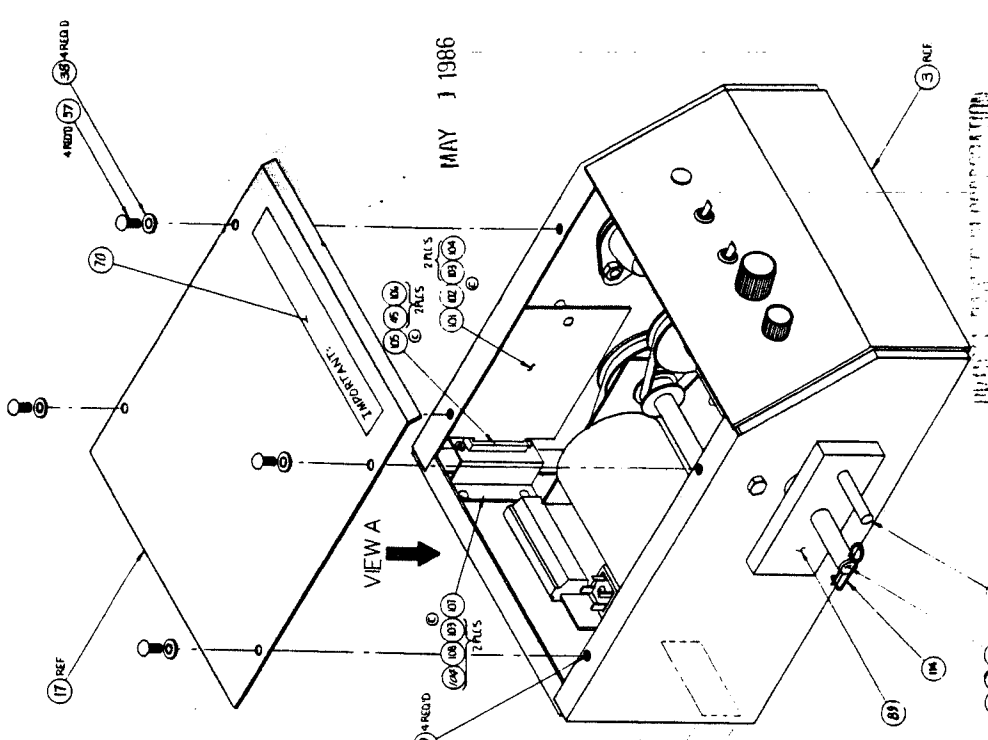
PROJECT	PROJ. NO.	DATE	REV.
MAKE-UP TABLE ASSEMBLY	124778		
DESIGNED BY	DATE	REV.	
DRAWN BY	DATE	REV.	
CHECKED BY	DATE	REV.	
APPROVED BY	DATE	REV.	
CONTRACT NO.	FE 1243		

Optical Radiation Corporation
 MAKE-UP TABLE ASSEMBLY
 D 33030 124778
 DRAWING NO. 124778
 SHEET 1 OF 1

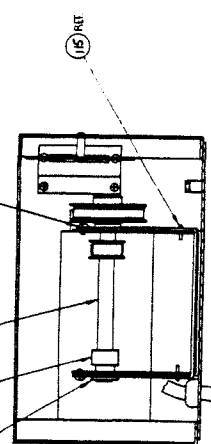
SEE WIRE MARKING DRAWING 124778 (11EM#8)
 ITEM # 27 OF THE 2 COLLAR SHAPES
 IS TO BE INCLUDED ON THE DRIVE PAK (10M#12)
 ON OPPOSITE END OF PULL DRIVE PAK (10M#12)
 UNLESS OTHERWISE SPECIFIED

REV	DATE	APPROVED	DESCRIPTION

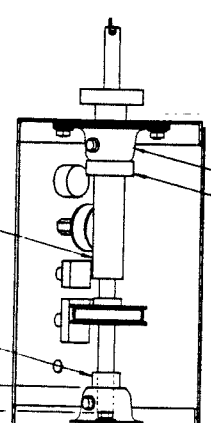
MAY 1 1986



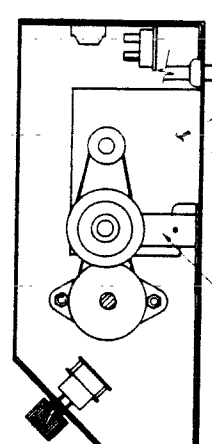
VIEW A



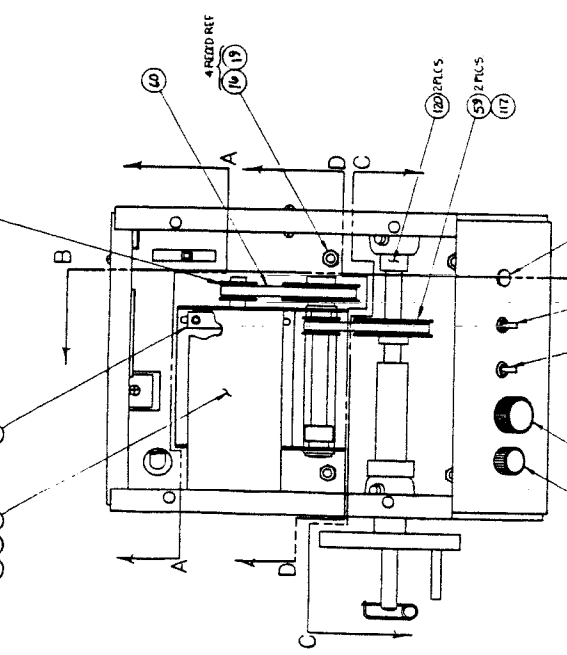
SECTION D-D
ROTATED 60°



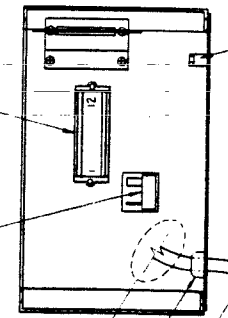
SECTION C-C
ROTATED 60°



SECTION B-B



VIEW A



SECTION A-A

DESIGN	PAULINE	221-8
CHECK		
APPROVE		
DATE		
SCALE		
CONTRACT NO.	PD 443	
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS DIMENSIONS IN PARENTHESIS ARE TO BE USED ONLY WHEN SPECIFIED DIMENSIONS TO BE USED ONLY WHEN SPECIFIED		

Optical Radiation Corporation
 MAKE-UP TABLE ASSEMBLY
 PAL 303

FORM NO. 100	1247786
REV	C

TES - UNLESS OTHERWISE SPECIFIED.