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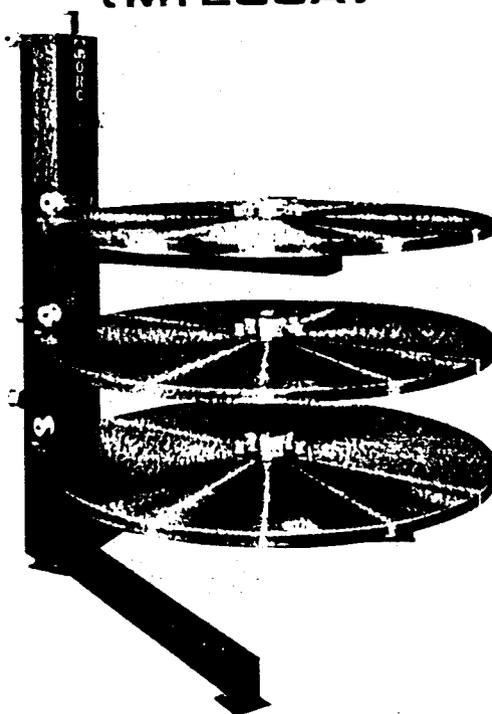
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OPERATION AND INSTALLATION MANUAL

**C.A.T. PLATTER SYSTEM
CP302
MAKE UP TABLES
(MT200A)**



Optical Radiation Corporation

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1.1 SCOPE

Provided in this manual are installation, operation, and maintenance instructions for the CP 302 C.A.T. Platter systems. When requesting information, always furnish model and serial numbers to Optical Radiation Corporation (ORC), Azusa, California, U.S.A.

1.2 GENERAL DESCRIPTION

The C.A.T. Platter systems are 35mm film transport systems capable of giving up to 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 5 hours). Using the make up table in conjunction with the platter system cuts program make up and breakdown 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 PLATTER AND MAKE UP TABLE SPECIFICATIONS

A standard 3 wire grounded outlet is required for both the platter and the make up table.

CP-302,	3-disc,	115 VAC, 60 Hz, 5 amps
(MT200A) Make-up Table		115 VAC, 60 Hz, 5 amps

		D x W x H in feet
CP-302,	3-disc,	= 5½ x 4½ x 6
MT 200A		2 x 1½ x 5

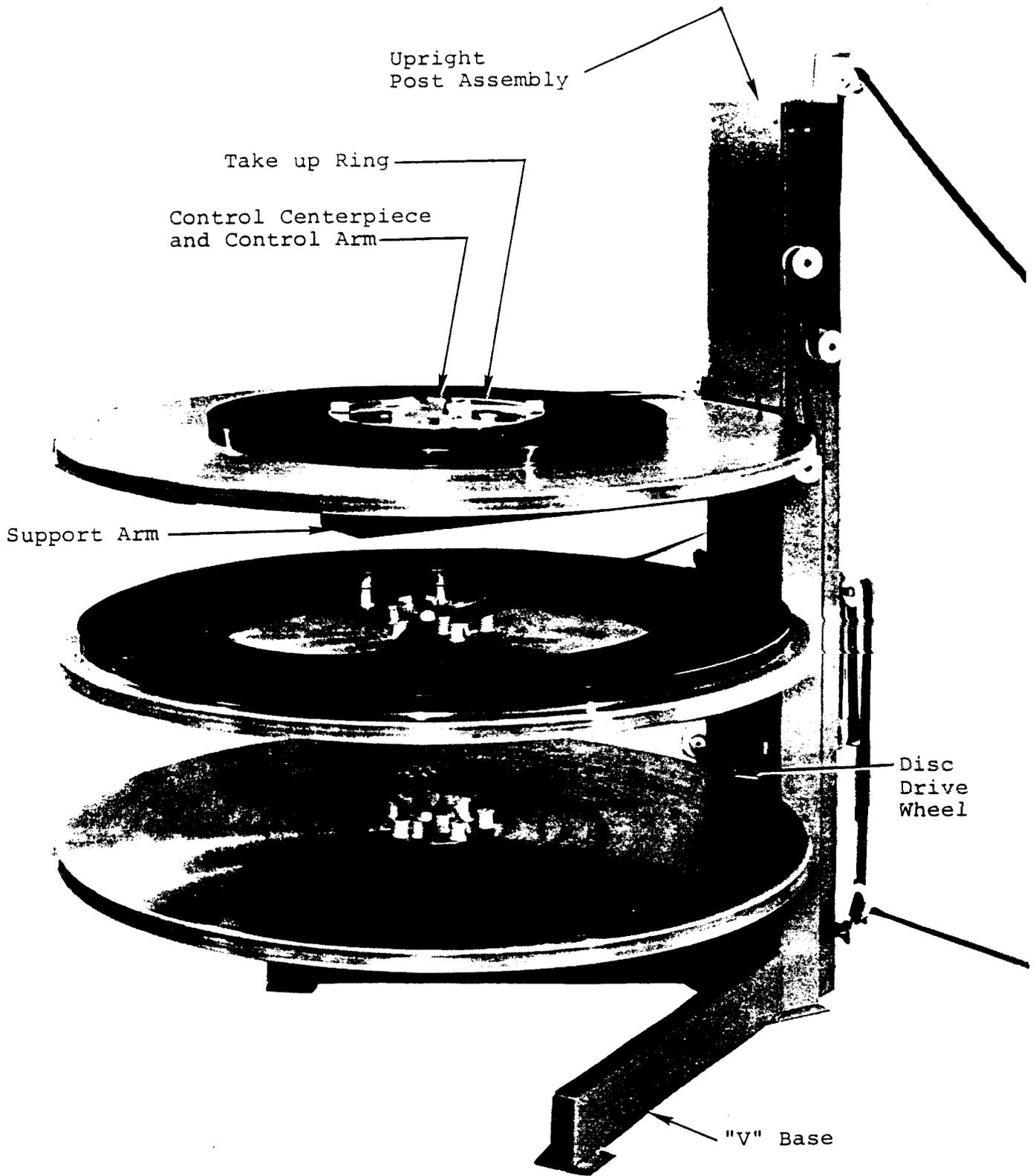


FIGURE 1-1A PLATTER SYSTEM

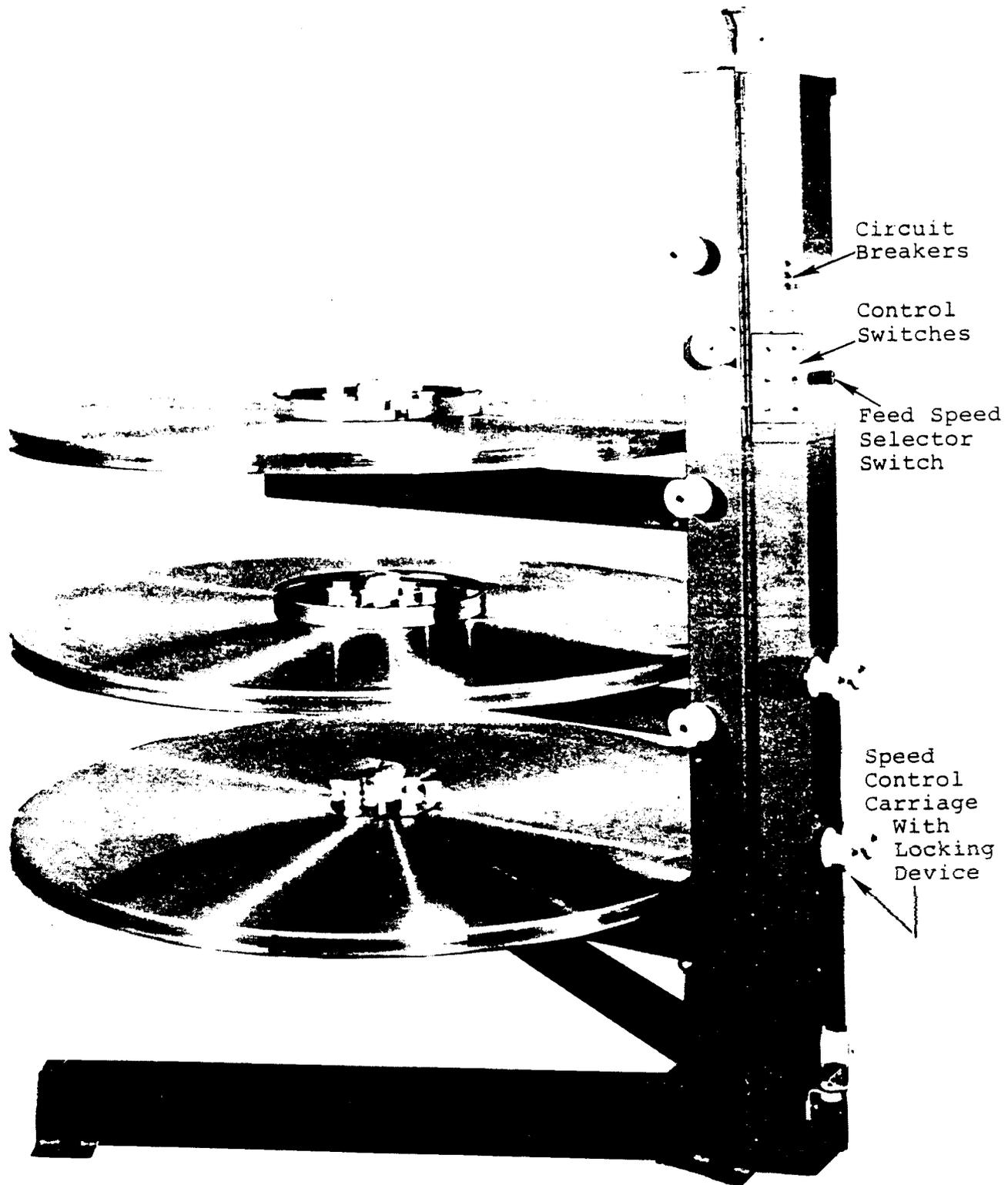


FIGURE 1-1B PLATTER SYSTEM

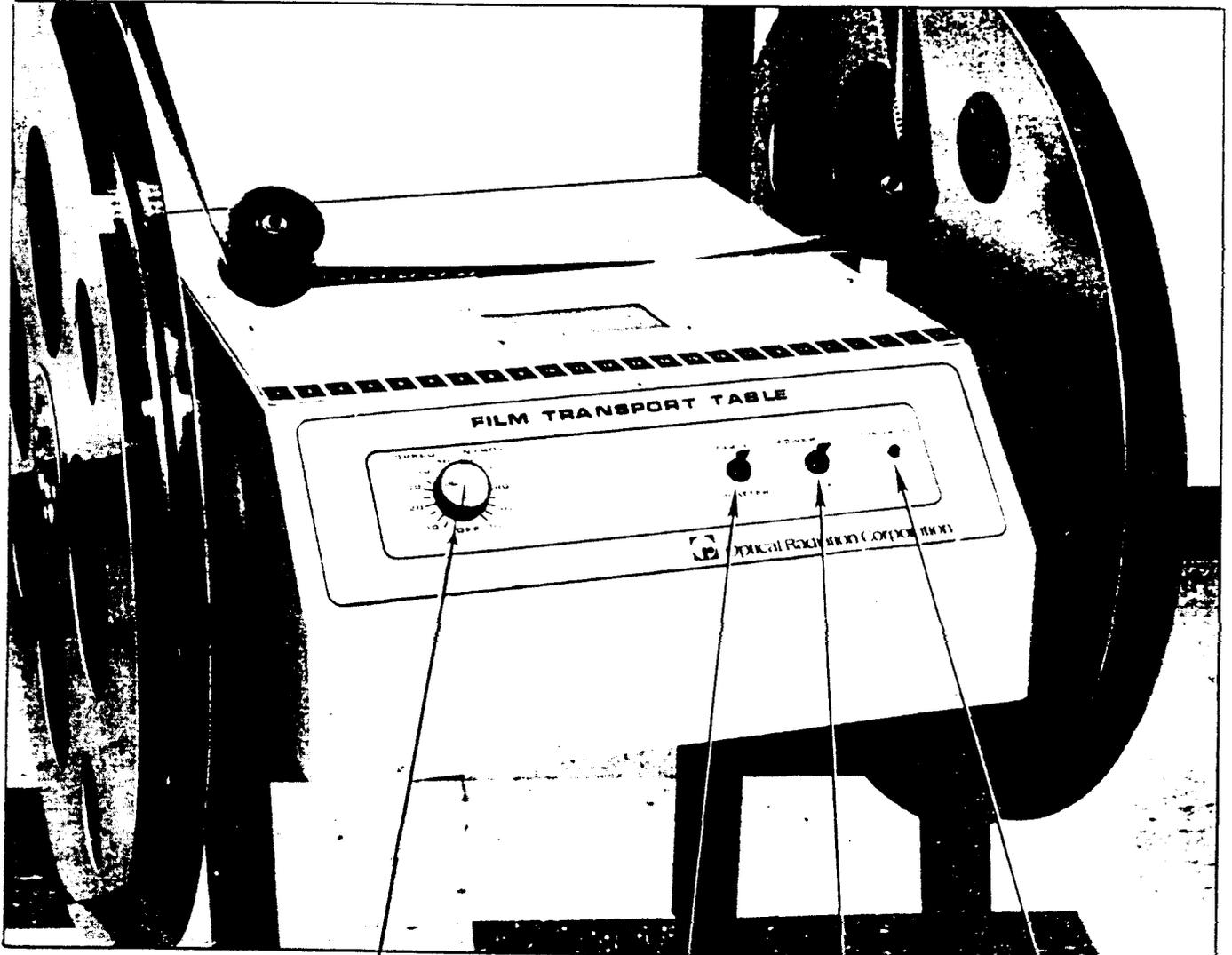


MOTOR AND MOUNT

FIGURE 1-1C
1-5

D113324

5/78



CONTROLS SPEED OF
PLATTER OR TABLE

SELECTOR SWITCH

POWER
SWITCH

CIRCUIT
BREAKER

Figure 1-2A. MAKE-UP TABLE CONTROL

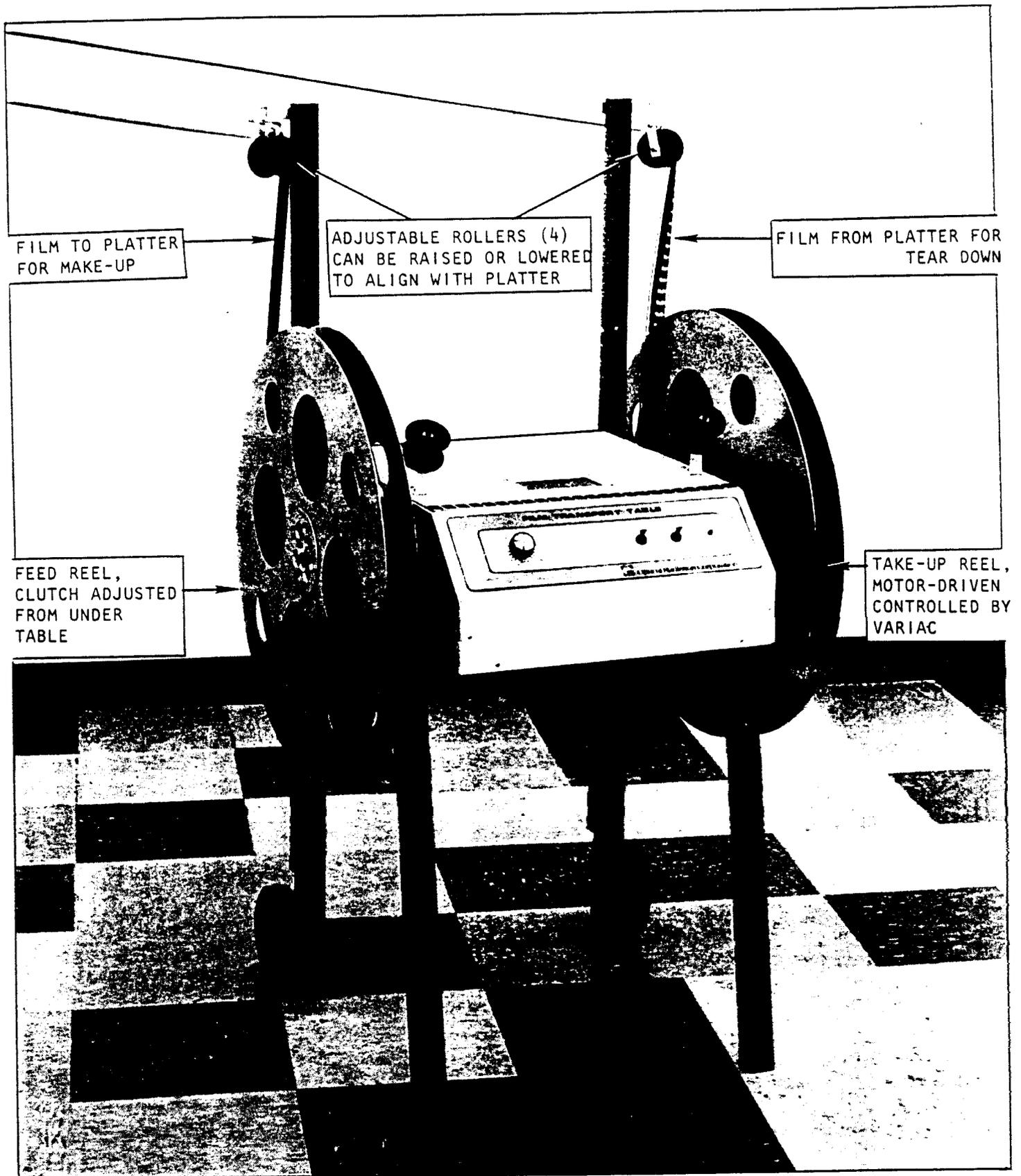


Figure 1-2B. MAKE-UP TABLE SHOWING FILM ROUTING TO PLATTER

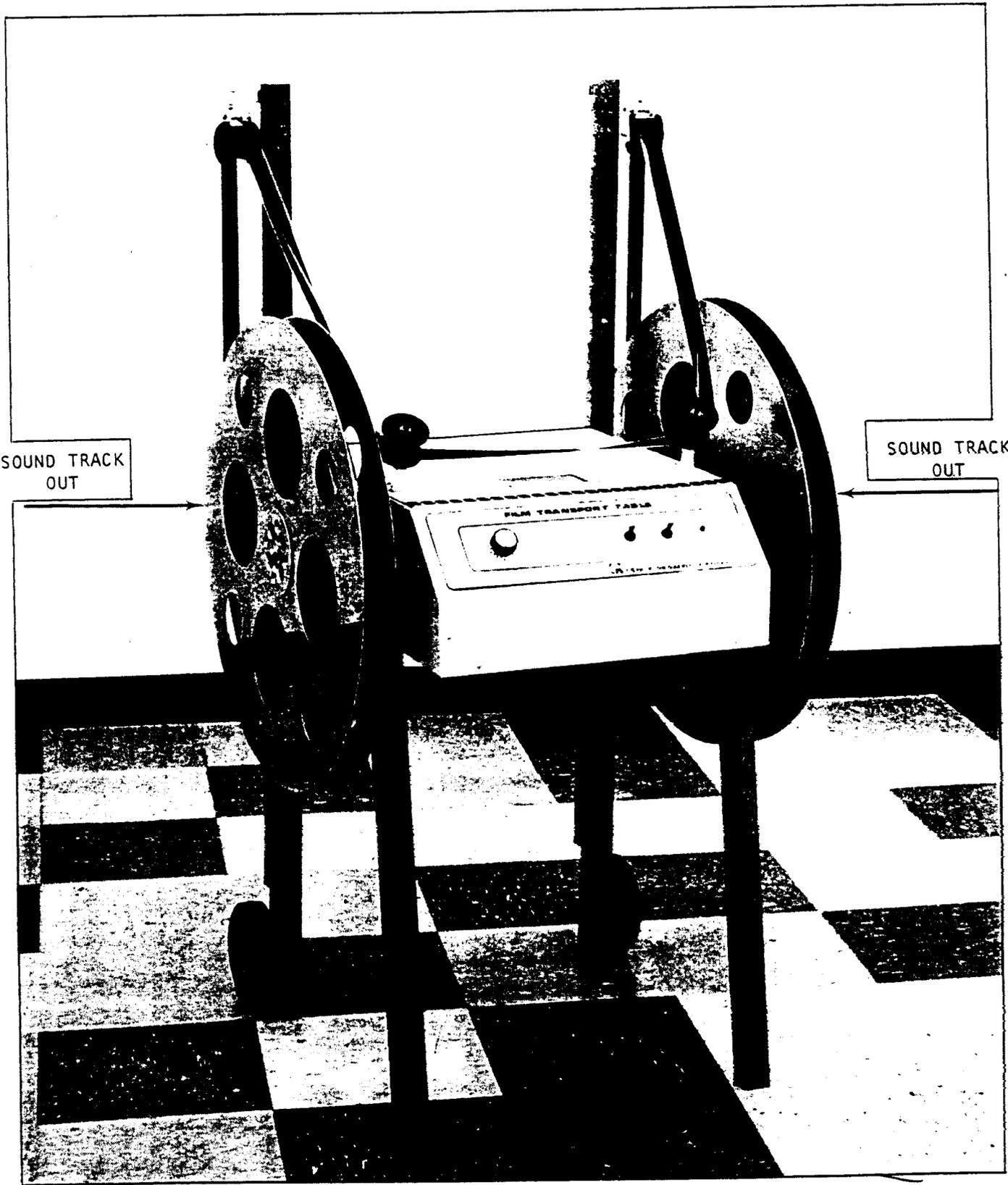


Figure 1-2C. MAKE-UP TABLE SHOWING FILM ROUTED FOR INSPECTION

SECTION 2 - 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

2.4.1 Before attempting to make any connections or service to the system, make certain all power is disconnected from main power line.

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 When installing the power source to the system, be certain that a ground wire is connected.

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 wire 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

SECTION 3 - 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 and make up tables are shipped assembled except for the attachment of the "V" shaped base, and the placement of the discs and control centerpieces on the support arms.

NOTE

Each disc and control centerpiece is marked so that it can be positioned on the proper support arm. These are not interchangeable and must be used as marked.

The platter system may be located on either side of the projection system, but it is recommended that it is placed on the film access side for operator convenience (see Figure 3-1).

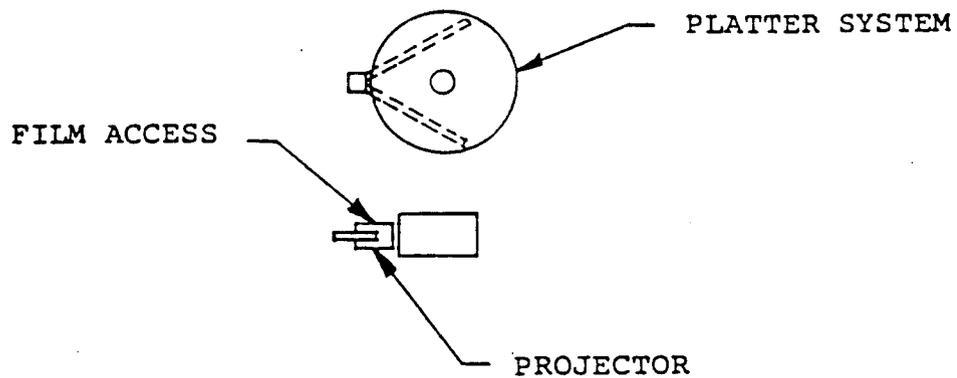


FIGURE 3-1

Attach the base to the upright post assembly as shown in Figure 1-1 with four 3/8-16 x 3/4 hex head screws, and lock washers.

Move the post and support arm assembly into position. Check the end of each support arm and make sure the spacer is mounted on the disc center post (see Figure 3-2).

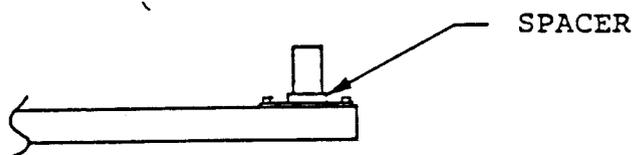


FIGURE 3-2

Verify that the pin connector is accessible, but folded back inside the disc center post, to ensure that the connector or wires will not be damaged when placing the disc on the post.

Locate the markings on the discs. Select the bottom disc and place on support arm. The hub of the disc should rest on spacer shown in Figure 3-2 when properly in place. After disc is in place, pull connector out of the center post. Select the proper control centerpiece and plug the centerpiece to the connector in the post. Push both connectors back into the post. Fasten the centerpiece in place as shown in Figure 3-3 with three 8-32 x 1/2 flat head screws.

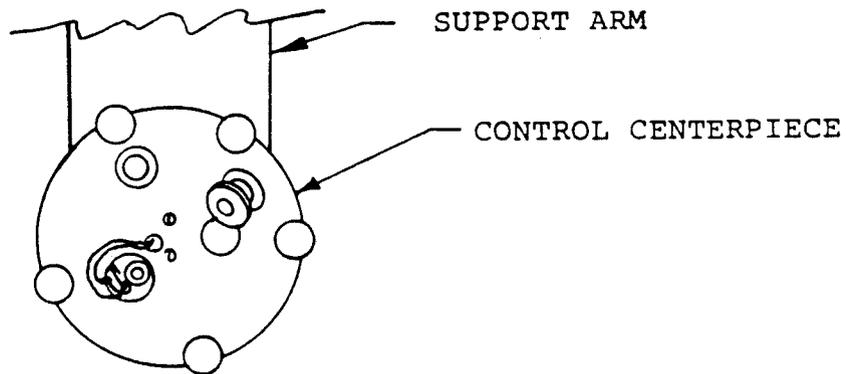


FIGURE 3-3

Place control arm in position, inserting the eccentric post in the center of the control arm hub into the bearing in the point mounting post (see Figure 3-4).

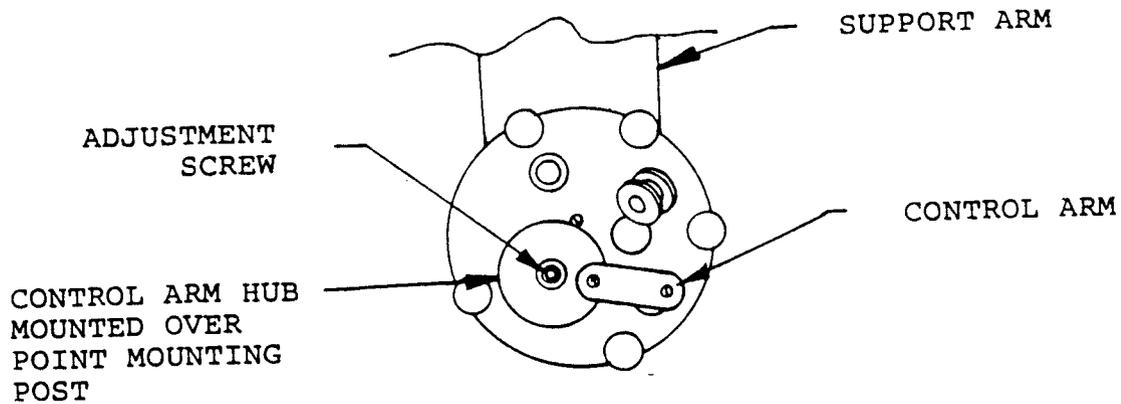


FIGURE 3-4

The bottom surfaces of the control arm assembly will be approximately 1/8 inch from the control centerpiece assembly plate when it is properly seated, and it should rotate freely within the limits of the adjacent rollers.

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

3.3 DISC CONTROL ARM ADJUSTMENT

Turn the switches on the control panel to the center (off) and run positions. Check that disc drive wheel is engaged with the edge of the disc.

Plug the system into power source. Position the movable dual roller bar (located on the rear of the upright column) over the two screws closest to the sides of the vertical slot.

Push the hinged plate between the rollers forward to rest on the screw heads so that carriage is held in that position.

Turn the switch on the panel for the disc to be adjusted to the "feed out" position. The disc should rotate with the control arm in the most clockwise position and stop in the most counterclockwise position. The points should actuate in the middle of the control arm swing. To adjust control arm, turn the adjustment screw (socket head cap screw in center of control arm hub) in the opposite direction to desired arm adjustment until points activate in the middle (between both rollers) of the control arm swing (see Figure 3-4).

3.4 Install the infeed post roller with cad plated Allen head screws, and 1/2" spacer on the upright post assembly, as shown in Figure 1-1A.

3.4.1 Install the four (4) film rollers with black Allen head bolts and brass washer on the upright post assembly.

The film guidance rollers supplied are to be mounted to the upper and lower magazines of the projector (see Figure 3-5).

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 the first hole through the magazine and roller mounting bar. Insert hardware and secure in place. Repeat this procedure for the bottom magazine.

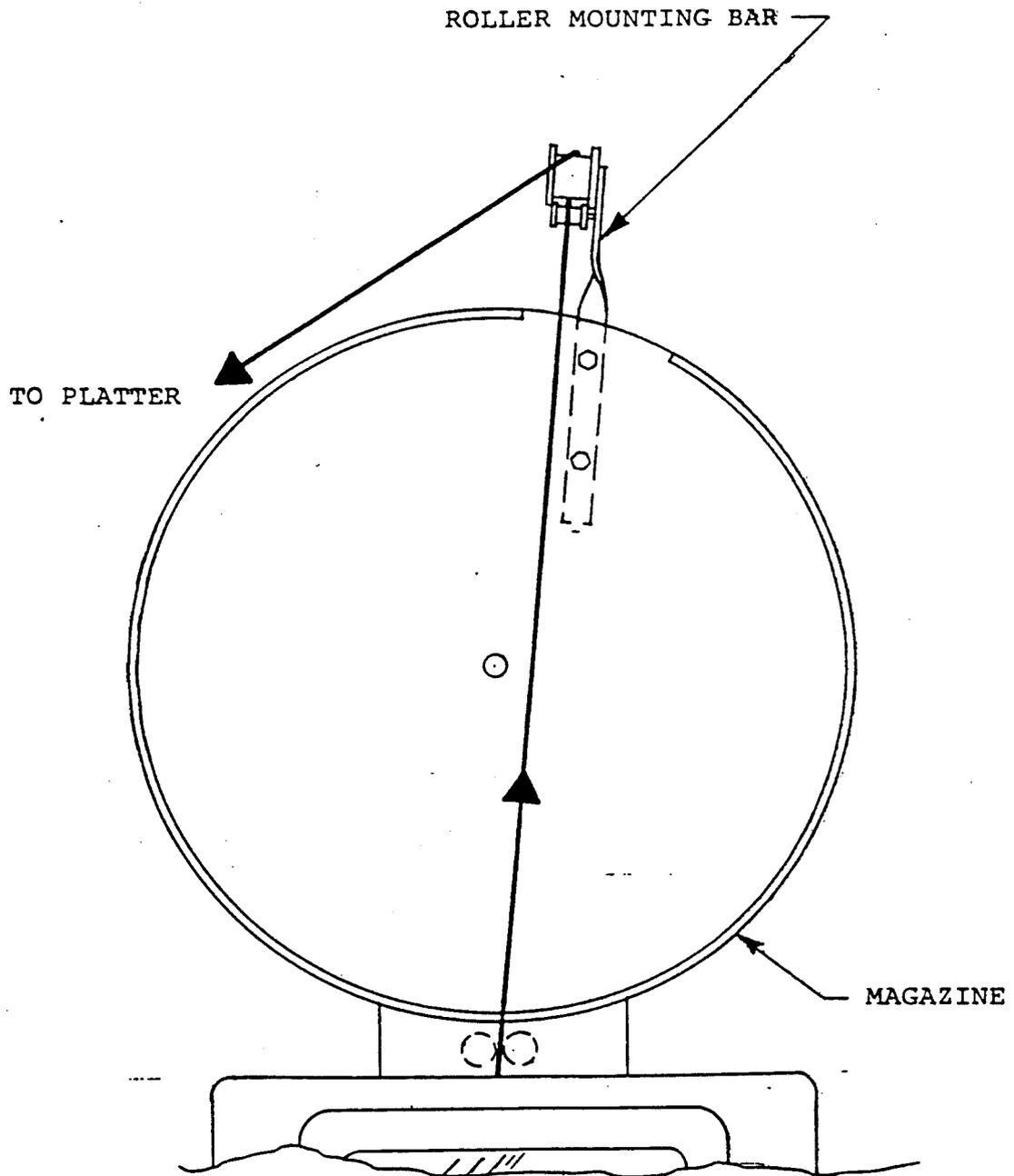


FIGURE 3-5
FILM GUIDANCE ROLLER INSTALLATION

3.6 ADDENDUM to D113324

3.6.0 Feed Speed Selector Switch

This switch allows operation with wide differences between the feed and take up diameters (which sometimes occurs when adding or deleting features to an existing show) while maintaining the smooth film feed desired during normal operation.

3.6.1 "Normal Feed"

This position is used for normal platter operation where the feed and take up diameters are equal. In this mode the drive to the feed platter switches to either a slightly higher or slightly lower value than the take up platter depending on the position of the feed control arm. This gives an extremely smooth film feed with the reliability of a simple on-off feed control mechanism.

3.6.2 "Fast Feed"

This switch position is used when the feed diameter is much smaller than the take up diameter. This occurs, for example, when adding an additional length of film (from the third platter) to the end of an existing show. This mode is accomplished by decreasing the take up speed with respect to the feed speed to allow up to a 1 to 3 ratio between the feed and take up diameters.

3.6.3 "Slow Feed"

This mode is used when the feed diameter is much larger than the take up. This occurs for example, when splitting a double feature loaded on one platter to two separate platters. Operation is similar to that in "Normal" except that when the feed control arm is in the advanced position the feed drives go to zero, allowing a feed to take up diameter ratio as large as necessary.

 Optical Radiation Corporation	SIZE A	CODE IDENT NO. 33030	DOC. NO. D113324 ADDENDUM	
	SCALE	REV	SHEET 1 OF 2	

3.7 Make Up Table Installation

3.7.1 Refer to figures 1-2A and 1-2C for the following procedure.

3.7.2 Install the two (2) rollers for routing film for inspection and their brackets on top of the make up table - using the four (4) 8/32 x 1/2 Phillips pan head screws, and four (4) #8 spring washers already installed. See figure 1-2A.

 Optical Radiation Corporation	SIZE A	CODE IDENT NO. 33030	DOC. NO. D113324 ADDENDUM	
	SCALE	REV	SHEET 2	OF 2

4.1 MAKE UP

4.1.1 With Make Up Table

Put both switches on the table in the off position and set the film speed control at zero. Plug in the power cord. Plug the connector on the retractable cord located on the underside of the make up table into the connector located on the base of the upright column below the speed control mechanism rollers. Put the switch on the panel of the platter system corresponding to the disc selected into the make up position. Check that the disc drive wheel is engaged. Put the switches on the table in the "power on" and in the "platter" position. The inspection light will come on. The speed of the disc is now controlled by the film speed control on the table.

Install the take up ring on the disc by pushing pins on ring into holes in disc. Fasten the film head leader to the take up ring with sound track up and wind in a counterclockwise direction. Adjust the roller on the make up table for optimum alignment with the disc using the adjustable roller on the table. Adjust film speed control to desired speed and transfer film from reel to disc. Continue splicing the reels together until the program is complete. Put the switch on the control panel in the off position.

Put all of the make up-off-run switches in the center (off) position. Speed control carriage in position with hinged leaf in position on the upright column. Remove the take up ring from the center of the program to be presented and transfer it to the disc selected for take up. It is suggested that the program be run back and forth between the top and bottom disc.

Thread the film from the center of the program through the top roller on the upright column. (see Figures 4-1 through 4-4). Put the switches for the disc with the program in the run and feed out positions.

The disc will now feed off the film if a pulling pressure is applied. Pull off enough film to thread the projector and the platter system back to the take up ring. Fasten the film to the take up ring sound track up and in a counter-clockwise direction. Manually rotate the disc to take out the slack in the film. Put the switches for the disc selected in the run and take up positions. The program is now ready for presentation.

4.3 BREAK DOWN

4.3.1 With Table

Put both switches on the table in the "off" position and set the film speed control at zero. Disengage the drive wheel of the disc with the program to be broken down. Place take up reel on the right spindle of the table. Thread film through table rollers and onto reel in a clockwise direction with the sound track out. Put the switches on the table in the "power on" and in the "table" position. The speed of the take up reel is now controlled by the film speed control.

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, FILM WILL BREAK.

4.3.2 Without Table

Disengage the drive wheel of the disc with the program to be broken down. The disc is now free turning and the film can be transferred back to the reels.

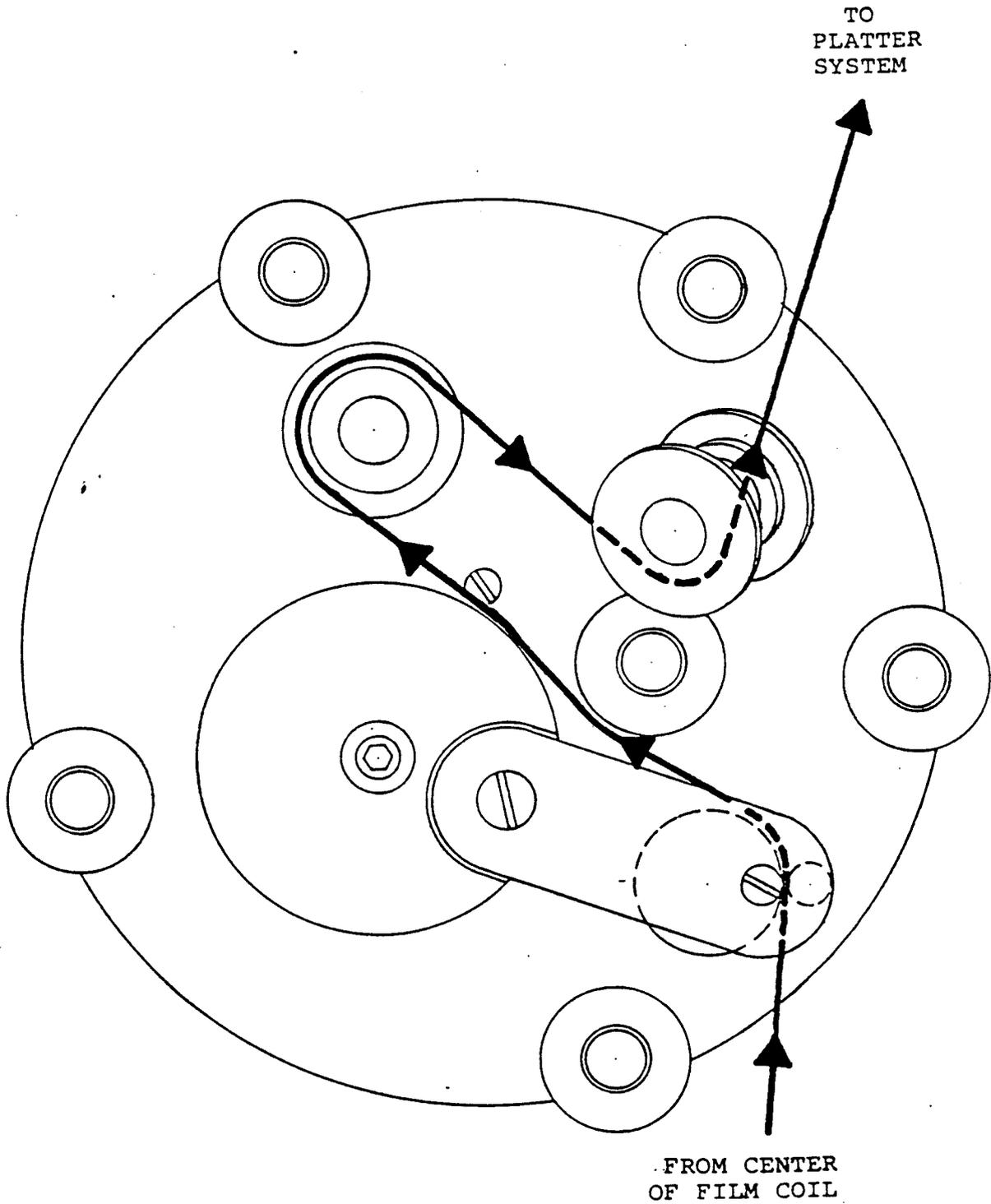


FIGURE 4-1. THREADING DIAGRAM - CONTROL CENTERPIECE

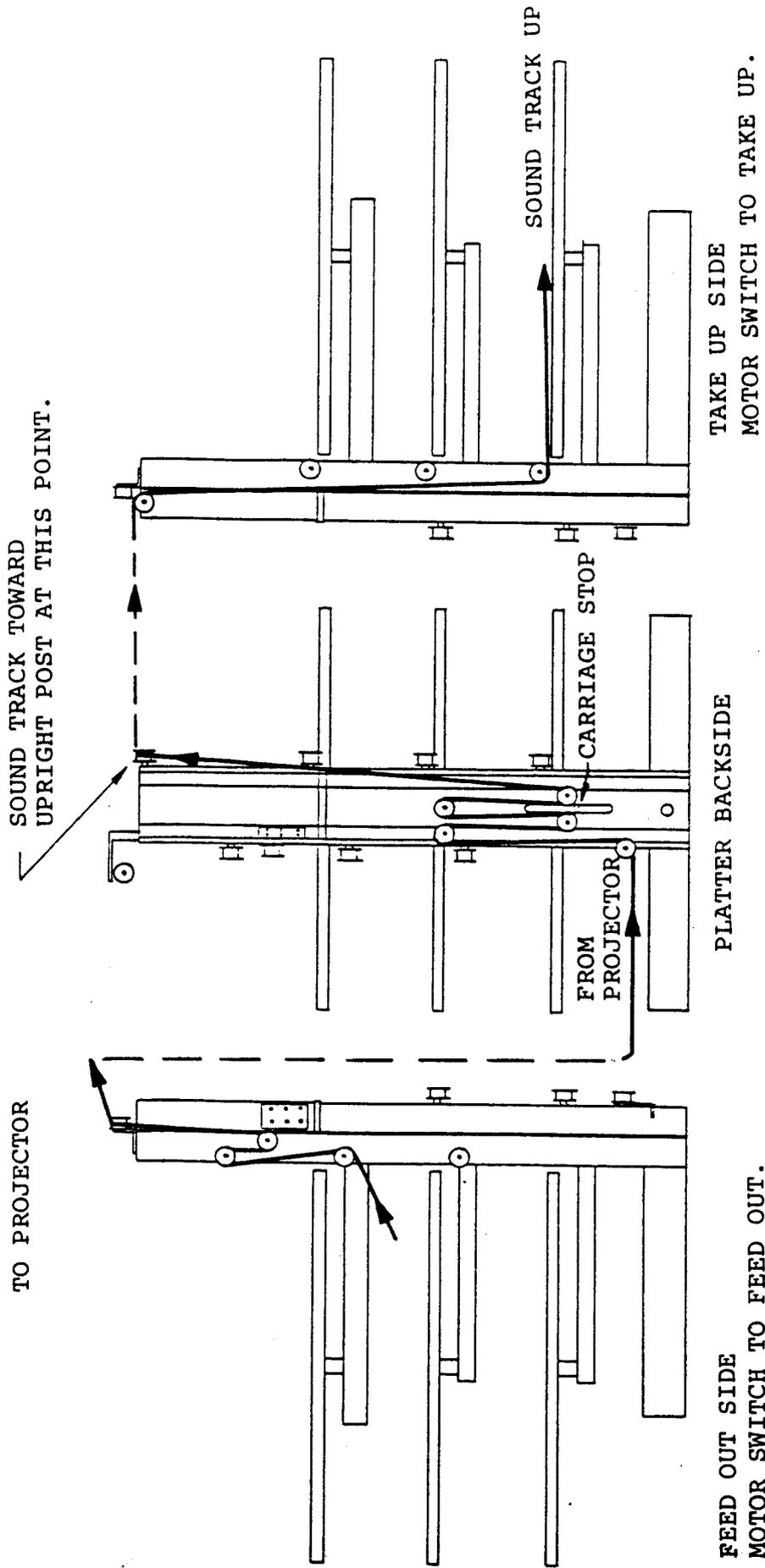


FIGURE 4-2
 THREADING DIAGRAM
 CENTER DISC. TO BOTTOM DISC.

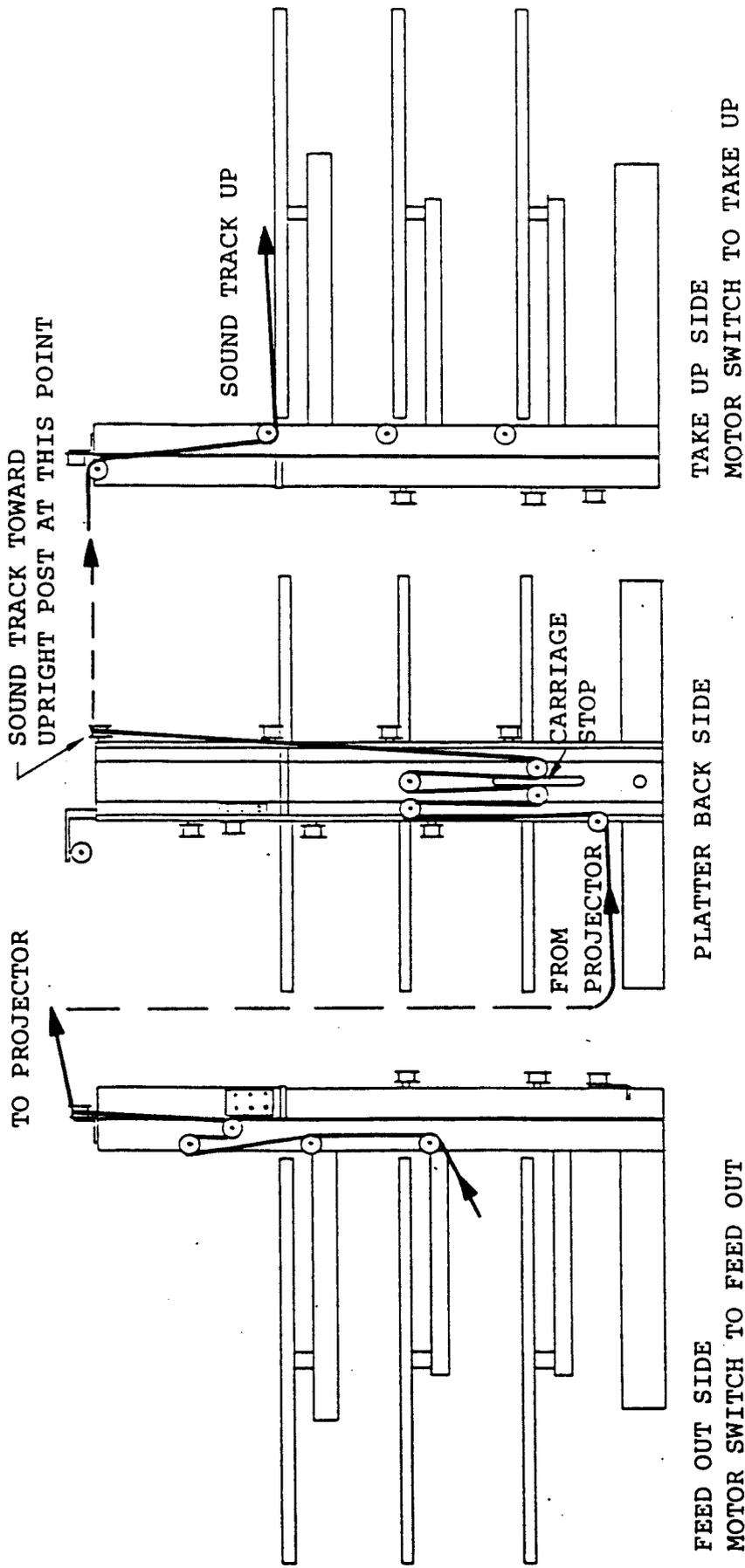


FIGURE 4-3
 THREADING DIAGRAM
 BOTTOM DISC TO TOP DISC.

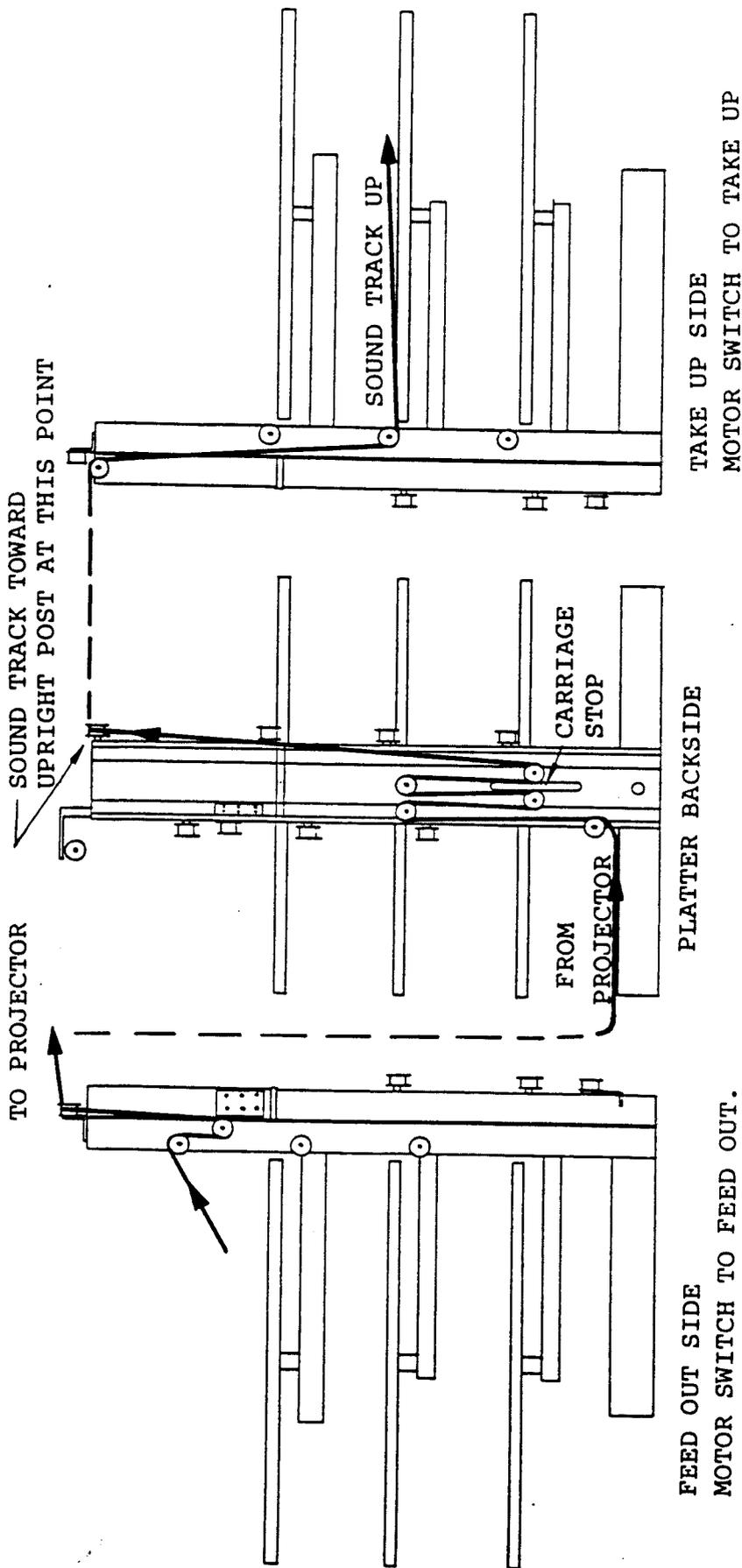


FIGURE 4-4
 THREADING DIAGRAM
 TOP DISC TO CENTER DISC

SECTION 5 - 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 an automotive wax to painted and disc surfaces will aid in the protection and cleaning of the system.

The control centerpiece, control arm and rollers should be checked after each showing and wiped down or cleaned as necessary 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 ball 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 auto-transformers. Replace as necessary. See Spare Parts List Section 5.3.

5.2 TROUBLESHOOTING

PLATTER

<u>Sympton</u>	<u>Probable Cause</u>
1. Lamps over discs do not light.	1.1 No power at power source. 1.2 Bulbs burned out.
2. Disc does not rotate when speed control carriage is moved.	2.1 Switch on drive motor in off position. 2.2 Drive wheel not in contact with disc. 2.3 Fuse in auto transformer blown. 2.4 Drive motor brushes worn out. 2.5 Brushes in auto transformer worn out. 2.6 Run/make-up switch in make-up position.
3. Film does not feed out or take up properly.	3.1 Readout control arm. 3.2 Points faulty. 3.3 Control arm not rotating freely. 3.4 System is not threaded properly. 3.5 Speed control carriage and linkage not moving freely. 3.6 Drive motor switch not in proper position
4. Film overruns on feedout.	4.1 Points in control arm hub not breaking properly. 4.2 System not threaded properly. 4.3 Switch in take-up position.

TABLE

<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 or in table position. 1.5 Cord not securely inserted in platter system.
2. Inspection light not operating.	2.1 C/B in table tripped. 2.2 Bulb burned out. 2.3 No power to table.
3. Make-up table spindle does not rotate.	3.1 C/B in table tripped. 3.2 No power at power source. 3.3 Defective speed control. 3.4 Switch off or in platter position. 3.5 Motor brushes defective.

SPARE PARTS LIST

PLATTER

1. Disc light bulbs.
2. Fuse 12 amp 12AB.
3. 2" dia. roller with bearings.
4. Take up ring.
5. Control centerpiece assembly.
6. Disc drive motor.
7. Speed control auto-transformer.

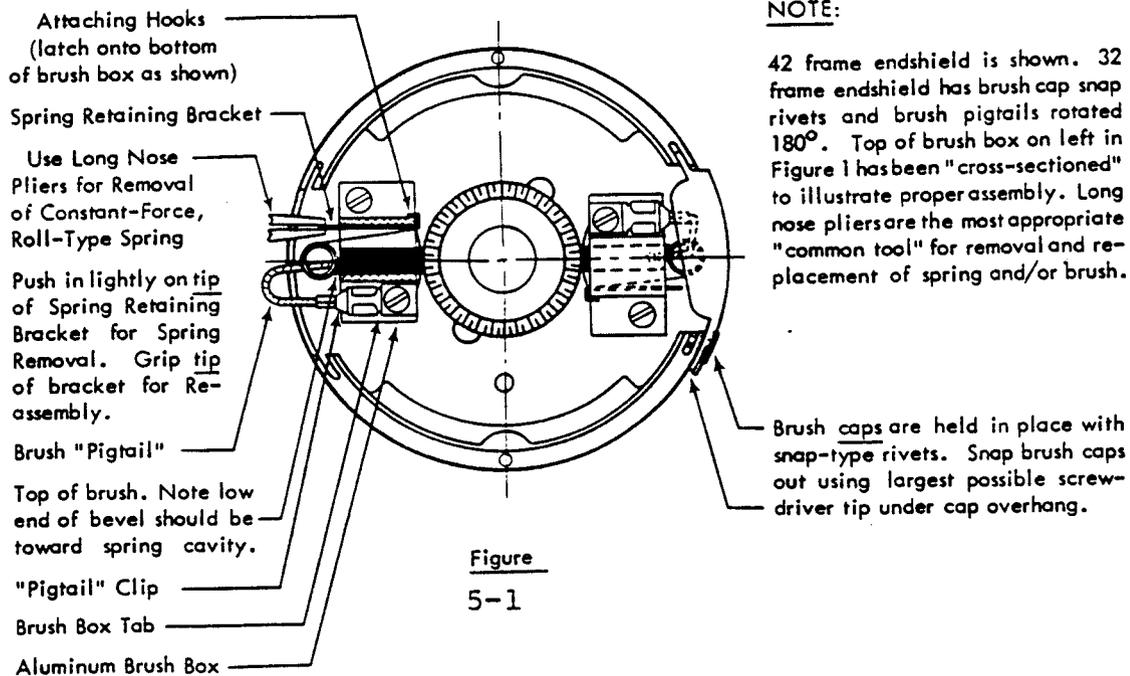
MAKE-UP TABLE

1. Inspection light bulb.
2. 1/2" spindle.
3. 5/16" spindle.
4. Reel retaining safety pin.
5. Reel drive pin.

WARNING

ARMATURE BRUSHES ARE NOT AT GROUND POTENTIAL.
DISCONNECT THE DRIVE FROM 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 to determine an appropriate inspection schedule for each specific application.



5.4.1 BRUSH REMOVAL

Refer to Figure 5-1. Brush caps are held in place with snap-type rivets. Snap brush caps out using largest possible screwdriver tip under cap overhang. Brushes are retained by constant-force, roll-type springs. To remove springs, press inward on the end of

the spring retaining bracket using the tip of a pair of long nose pliers or other appropriate tool. Springs should "pop" out. If they don't, they can be removed by pulling outward on the spring retaining bracket with a pair of long nose pliers. Brushes can now be removed by pulling them out of the brush boxes by their "pigtailed." It is not necessary to remove the brush pigtail clip from its connection to the brush box tab for brush inspection.

5.4.2 BRUSH INSPECTION AND CLEANING

Brushes should be replaced before they are less than .250 inch (7mm) in length. Carbon dust accumulation should be removed periodically. If the endshield has been removed from the drive, a clean, dry, non-linting cloth can be used for cleaning. Do not use solvents as they may damage the non-metallic endshield.

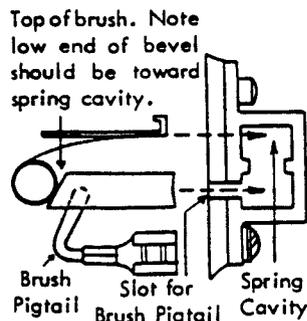


Figure
5-2

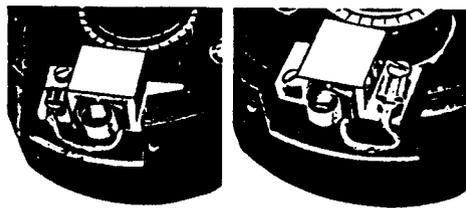
5.4.3 REASSEMBLY OF BRUSHES

If brushes require replacement, complete removal of the existing brushes may be accomplished by disconnecting their brush pigtail clips from the brush box tabs. A pair of long nose pliers is recommended to perform this operation. Assemble the clips of the new brushes in the same manner. Complete reassembly of new or existing brushes as follows:

There is a slot in the base of each brush box. Refer to Figure 5-2. Brush pigtailed come already attached to one side of each brush. Position and insert each brush so that the pigtail of the brush aligns with the slot in the brush box. The brush pigtail must be capable of moving freely in the slot.

5.4.4 REASSEMBLY OF BRUSH SPRINGS

Correct replacement of brush springs is critical to assure optimum drive performance. Refer to Figure 5-1. Grasp the tip of the spring retaining bracket such that the roll-type spring will be on the "brush side" of the brush box and resting on the brush when the brush spring is brought up to the brush box. Push the retaining bracket slowly into its slot while letting its two attaching hooks slide on the wall of the brush box. Stop, but do not release the retaining bracket when its hooks slip around the edge of the brush box. While still grasping the retaining bracket with the pliers, slowly bring the bracket back out of the brush box until the hooks latch around the edge of the brush box as shown in Figure 5-1. Release the pliers. If the retaining bracket is properly seated it will be lying flat against the brush box wall. If it is "cocked" to one side, it is improperly seated -- release the spring (See "Brush Removal") and reassemble it again. As a final check, apply slight pressure on the retaining bracket in the direction away from the brush with the tip of the pliers -- not "popping" out indicates proper latching of the hooks.



a) 32 Frame

b) 42 Frame

Figure
5-3

Position the pigtail of each brush as shown in Figure 5-3 so that the pigtail will "feed" into the brush box slot as the brush wears down. The pigtail should be formed to rest against the non-metallic endshield as shown in Figure 5-3. It must not come in contact with any metallic surfaces other than the brush box.

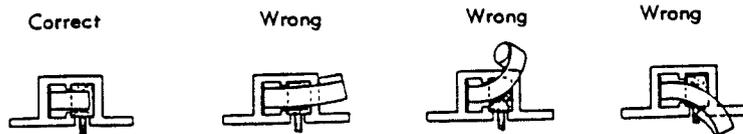


Figure 5-4

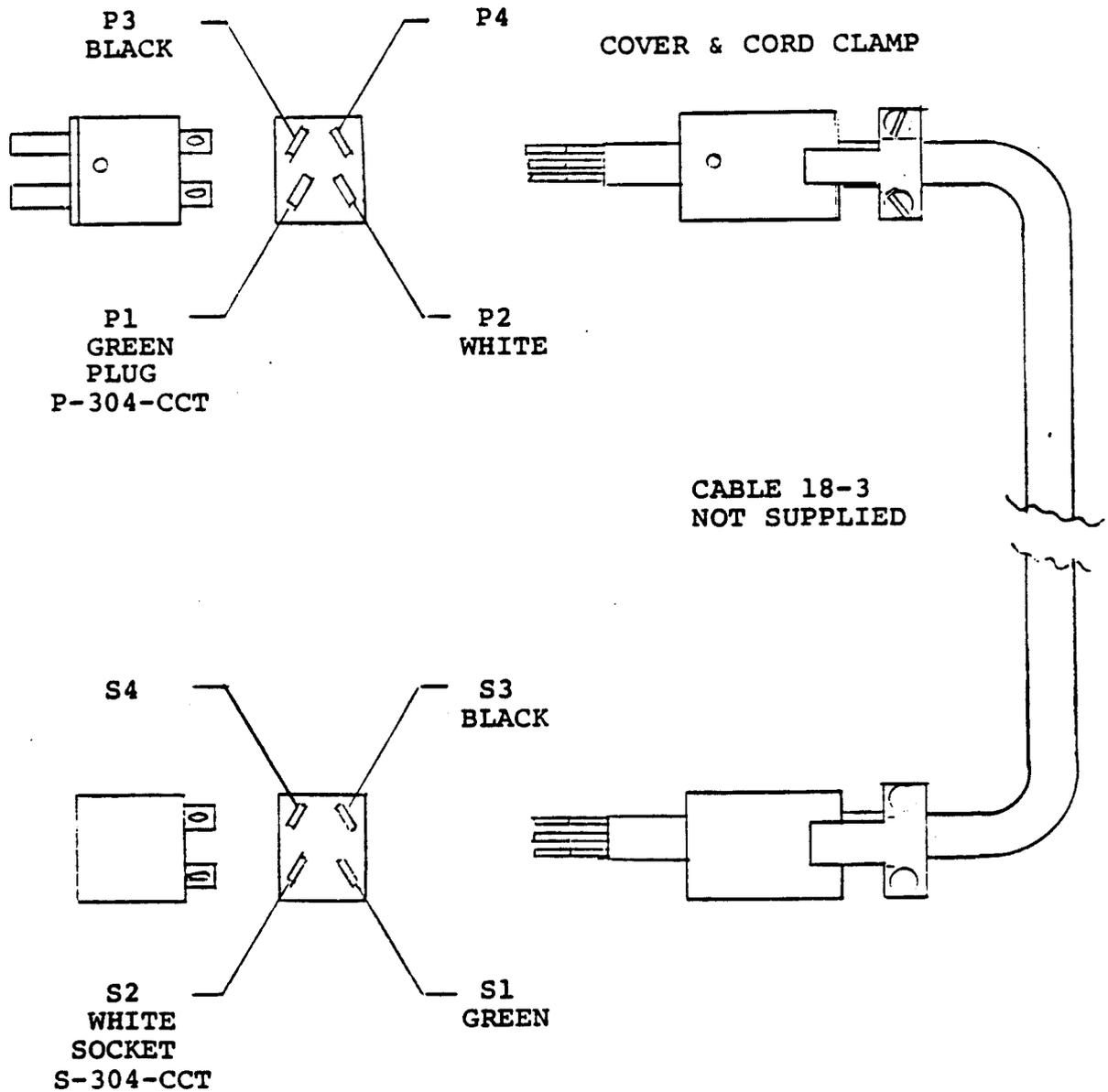
Important -- Make certain that the roll-type springs are positioned directly on the brushes. Refer to Figures 5-1 and 5-4.

5.4.5 REASSEMBLY OF BRUSH CAPS

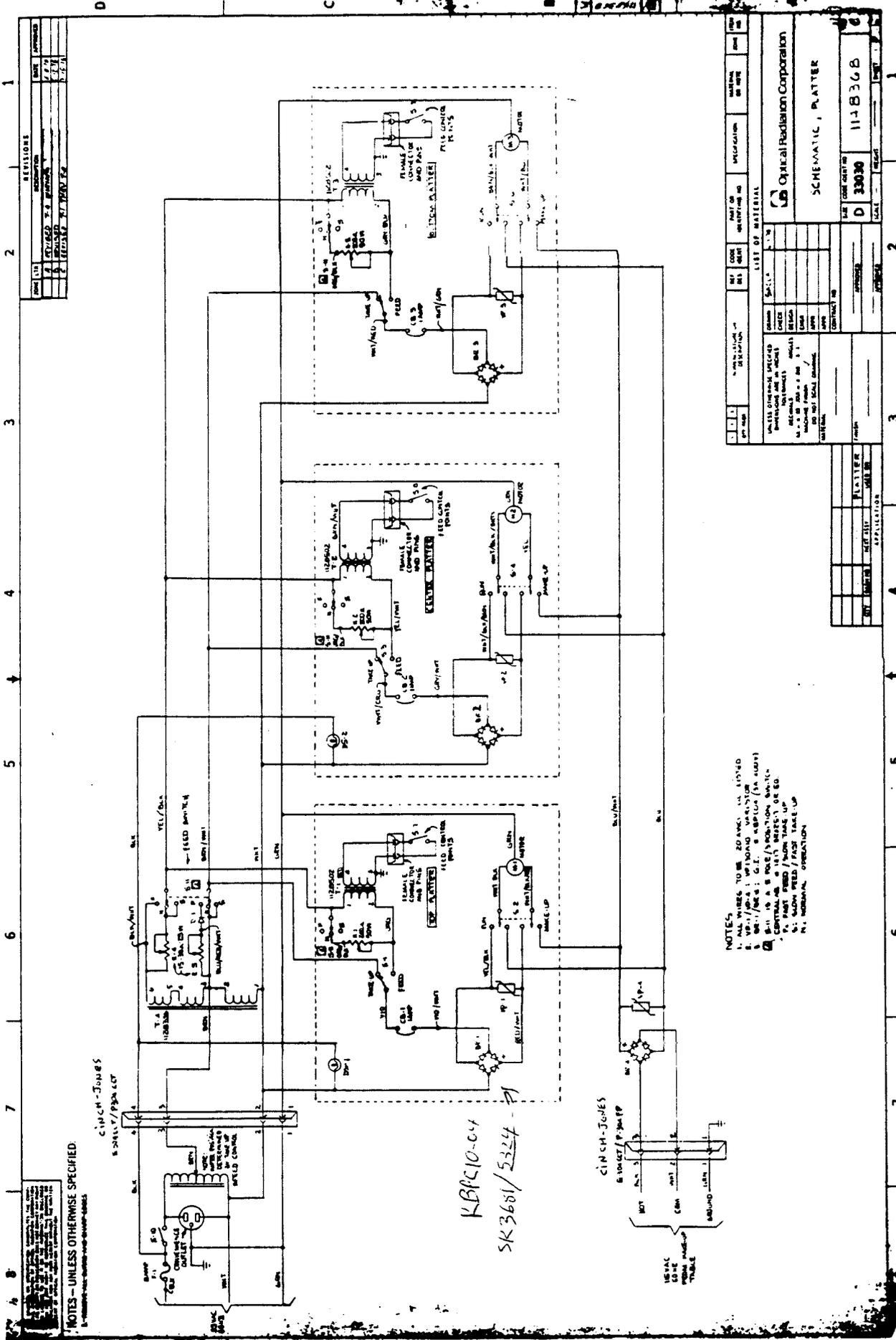
Insert the end of the brush cap opposite of the snap rivet into the endshield slot. Aline the snap rivet with its hole in the endshield and snap it into place by applying a moderate amount of pressure with one's thumb or a blunt object.

CAUTION

MAKE CERTAIN THAT THE GROUND WIRE IS SECURELY RECONNECTED TO THE GROUND TERMINAL IF REMOVED. RECONNECT THE DRIVE TO THE POWER SOURCE, AND TEST FOR PROPER OPERATION. NEW BRUSHES MAY BE SEATED BY RUNNING THE MOTOR OR GEARMOTOR IN AT NO LOAD. PROPER SEATING IS REQUIRED FOR LOWEST BRUSH NOISE LEVEL.



This interconnecting cable from one platter system to a make-up table or to another platter system may be assembled as required. Plug and socket are supplied with each system. Power cord to be furnished by the user. Connections are solder type. Pin 4 is not used.



REV	DATE	APPROVED
1	11/15/54	J. H. H.
2	11/15/54	J. H. H.
3	11/15/54	J. H. H.

NO.	DESCRIPTION	QTY.	UNIT
1	RELAY	1	EA.
2	SWITCH	1	EA.
3	LAMP	1	EA.
4	MOTOR	1	EA.
5	PLATTER	1	EA.

NO.	DESCRIPTION	QTY.	UNIT
1	RELAY	1	EA.
2	SWITCH	1	EA.
3	LAMP	1	EA.
4	MOTOR	1	EA.
5	PLATTER	1	EA.

NO.	DESCRIPTION	QTY.	UNIT
1	RELAY	1	EA.
2	SWITCH	1	EA.
3	LAMP	1	EA.
4	MOTOR	1	EA.
5	PLATTER	1	EA.

NOTES - UNLESS OTHERWISE SPECIFIED:
 1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 3. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 4. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 5. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

CINCH-JONES
 S-3681/P3681P

KBR10-04
 SK3681/5224

CINCH-JONES
 S-3681/P3681P

RELAY

SWITCH

LAMP

MOTOR

PLATTER

RELAY

SWITCH

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SWITCH

1. REMOVE ALL BURNS AND SHARP EDGES

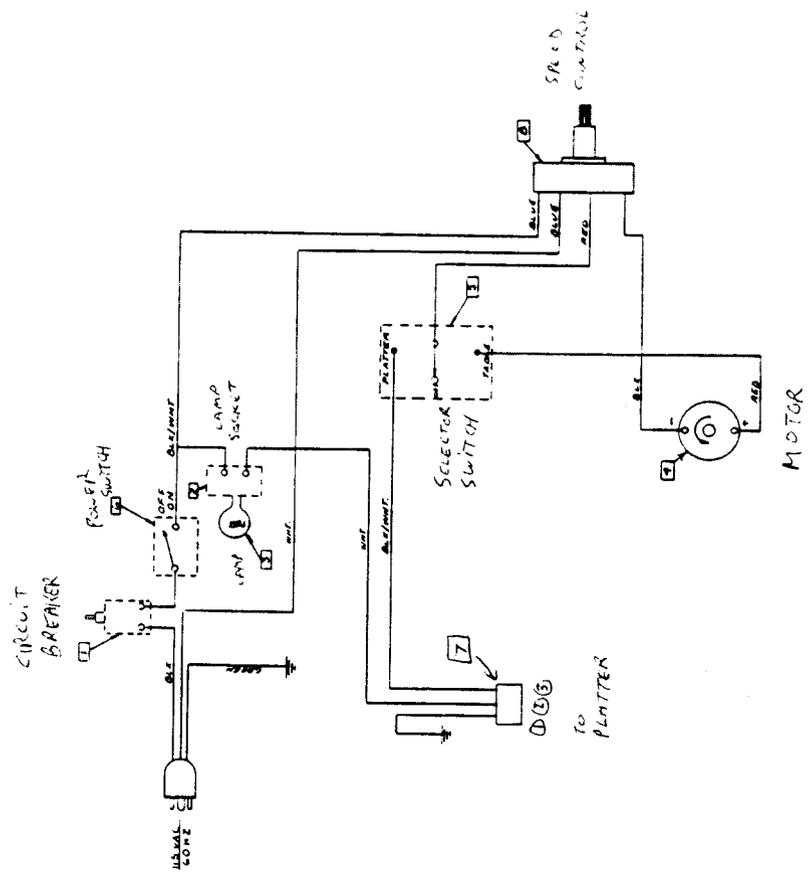
NOTES - UNLESS OTHERWISE SPECIFIED:

D113324

5-10

12-78

ELECTRIC DIAGRAM



QTY	DESCRIPTION	REF. CODE	DATE	REVISION	DATE	BY
1	WIRE NUTS					
1	SPEED CONTROL					
1	PLUG					
1	SWITCH, ON/OFF					
1	D.C. MOTOR					
1	LIGHT BULB, 15W					
1	CERAMIC SOCKET					
1	CIRCUIT BREAKER					

LIST OF MATERIAL

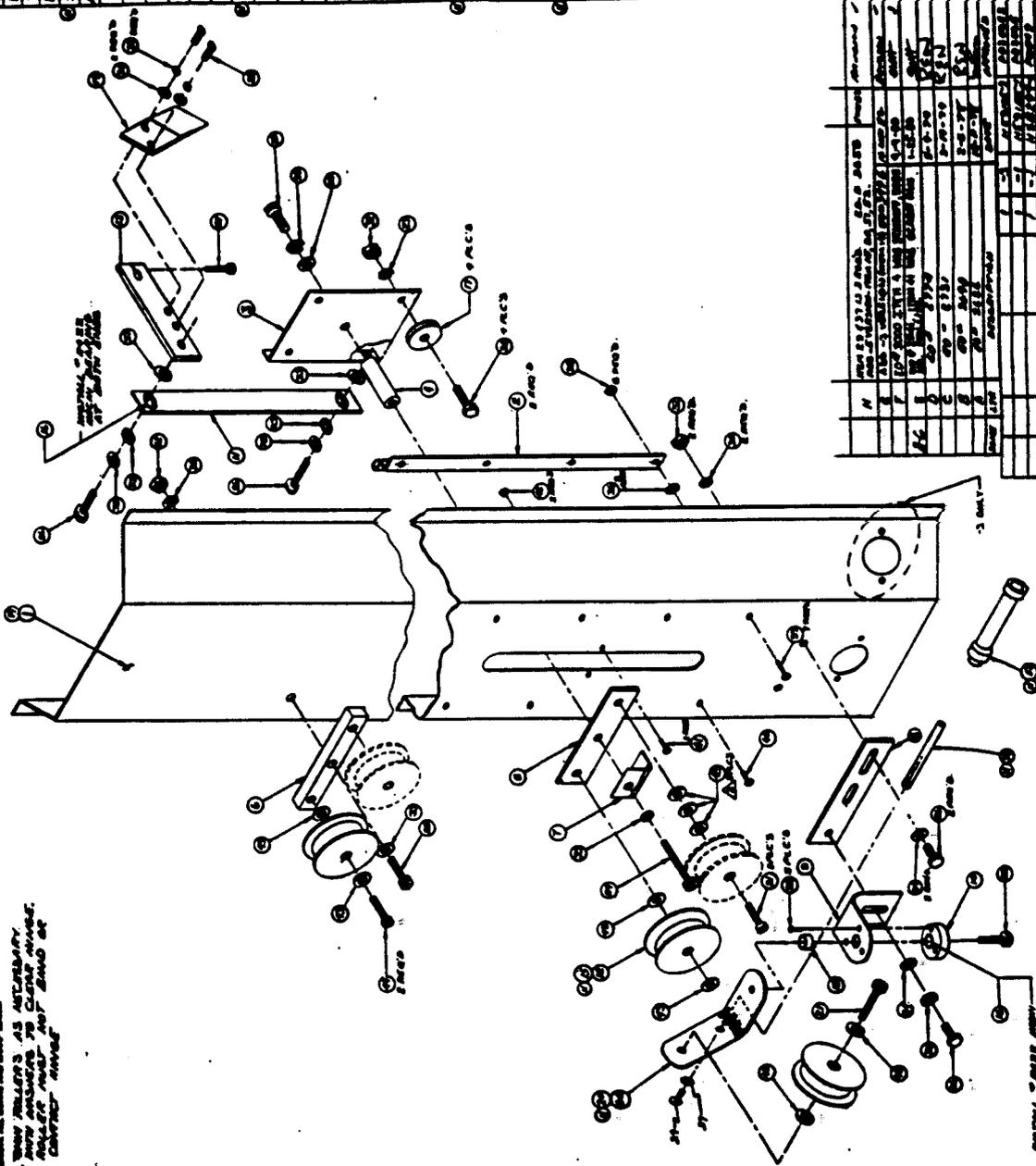
QTY	DESCRIPTION	REF. CODE	DATE	REVISION	DATE	BY
1	WIRE NUTS					
1	SPEED CONTROL					
1	PLUG					
1	SWITCH, ON/OFF					
1	D.C. MOTOR					
1	LIGHT BULB, 15W					
1	CERAMIC SOCKET					
1	CIRCUIT BREAKER					

Optical Radiation Corporation
 ELECTRICAL DIAGRAM
 MAKE-UP - 984E
 D 33000 1198287

REV	DATE	BY	APP'D
1	11/28/78	PO SPO	
2	12/7/78	NET REF	
3			
4			

1. UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS ARE IN INCHES
 DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS
 DIMENSIONS IN BRACKETS ARE IN METERS
 DIMENSIONS IN SQUARE BRACKETS ARE IN FEET

NOTES - UNLESS OTHERWISE SPECIFIED:
 1. DIMENSIONS ALL DIMS AND TOLERANCES
 2. DIMENSIONS AS SHOWN
 3. DIMENSIONS AS SHOWN
 4. DIMENSIONS AS SHOWN
 5. DIMENSIONS AS SHOWN
 6. DIMENSIONS AS SHOWN
 7. DIMENSIONS AS SHOWN
 8. DIMENSIONS AS SHOWN
 9. DIMENSIONS AS SHOWN
 10. DIMENSIONS AS SHOWN



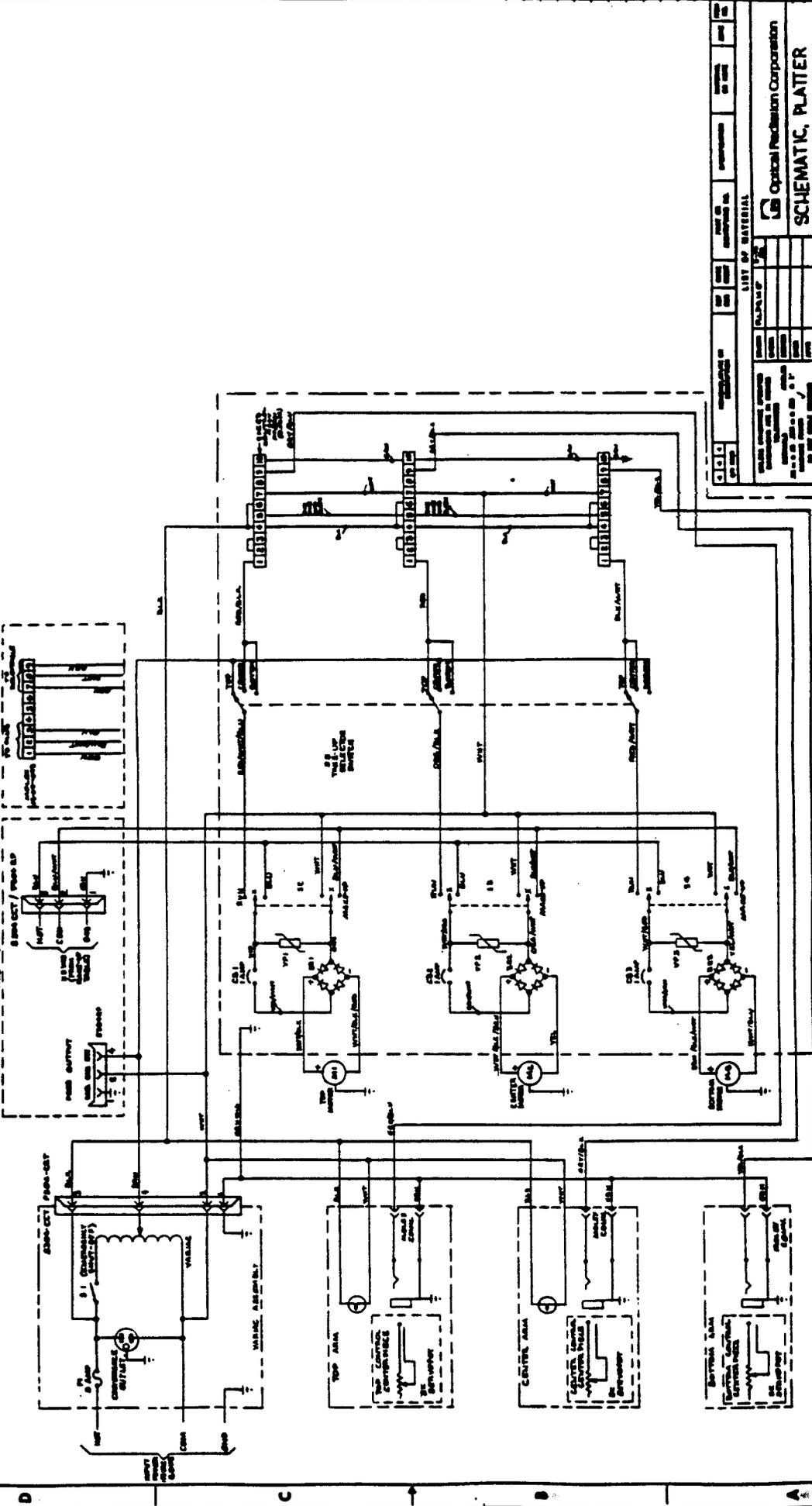
QTY	DESCRIPTION	REF. DESG	UNIT	ASSEMBLY
1	SCREW, PAN	111	111	111
1	SCREW, PAN	112	112	112
1	SCREW, PAN	113	113	113
1	SCREW, PAN	114	114	114
1	SCREW, PAN	115	115	115
1	SCREW, PAN	116	116	116
1	SCREW, PAN	117	117	117
1	SCREW, PAN	118	118	118
1	SCREW, PAN	119	119	119
1	SCREW, PAN	120	120	120
1	SCREW, PAN	121	121	121
1	SCREW, PAN	122	122	122
1	SCREW, PAN	123	123	123
1	SCREW, PAN	124	124	124
1	SCREW, PAN	125	125	125
1	SCREW, PAN	126	126	126
1	SCREW, PAN	127	127	127
1	SCREW, PAN	128	128	128
1	SCREW, PAN	129	129	129
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1	SCREW, PAN	139	139	139
1	SCREW, PAN	140	140	140
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1	SCREW, PAN	142	142	142
1	SCREW, PAN	143	143	143
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1	SCREW, PAN	145	145	145
1	SCREW, PAN	146	146	146
1	SCREW, PAN	147	147	147
1	SCREW, PAN	148	148	148
1	SCREW, PAN	149	149	149
1	SCREW, PAN	150	150	150
1	SCREW, PAN	151	151	151
1	SCREW, PAN	152	152	152
1	SCREW, PAN	153	153	153
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1	SCREW, PAN	164	164	164
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1	SCREW, PAN	169	169	169
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1	SCREW, PAN	174	174	174
1	SCREW, PAN	175	175	175
1	SCREW, PAN	176	176	176
1	SCREW, PAN	177	177	177
1	SCREW, PAN	178	178	178
1	SCREW, PAN	179	179	179
1	SCREW, PAN	180	180	180
1	SCREW, PAN	181	181	181
1	SCREW, PAN	182	182	182
1	SCREW, PAN	183	183	183
1	SCREW, PAN	184	184	184
1	SCREW, PAN	185	185	185
1	SCREW, PAN	186	186	186
1	SCREW, PAN	187	187	187
1	SCREW, PAN	188	188	188
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1	SCREW, PAN	190	190	190
1	SCREW, PAN	191	191	191
1	SCREW, PAN	192	192	192
1	SCREW, PAN	193	193	193
1	SCREW, PAN	194	194	194
1	SCREW, PAN	195	195	195
1	SCREW, PAN	196	196	196
1	SCREW, PAN	197	197	197
1	SCREW, PAN	198	198	198
1	SCREW, PAN	199	199	199
1	SCREW, PAN	200	200	200

Optical Radiation Corporation
**SPEED CONTROL
 PANEL ASSY.**
 D 10000 1193056

1 2 3 4 5 6 7 8

REV	DATE	BY	CHKD
1	12/22/51	J. J. ...	J. J. ...
2	1/15/52	J. J. ...	J. J. ...

NOTES - UNLESS OTHERWISE SPECIFIED:
 1. MATERIAL ALL STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.



LIST OF MATERIAL		DATE	BY
ITEM	QUANTITY	DATE	BY
1	1		
2	1		
3	1		
4	1		
5	1		
6	1		
7	1		
8	1		

Optical Precision Corporation
 SCHEMATIC, PLATER
 MULTIPLE FEED CONTROL
 D 3000 1242451