# Film-Tech

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## Helmar Systems Inc.

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### SERIES 8000

**REEL SUPPORT SYSTEM** 

**Installation Manual** 



## REEL SUPPORT ARMS/ PLATTER GUIDANCE SYSTEMS

FULLY ADJUSTABLE
BALL BEARINGS THROUGHOUT
STURDY SPINDLES
DELRIN BYPASS ROLLERS
EASY TO INSTALL
COMPETITIVELY PRICED



The Kelmar 8000 Series is a professional film delivery system that is competitively priced. It is available for both reel to reel and platter operation.

All rotating components ride on heavy duty ball bearings that are lubricated for life. The spindles are turned from solid steel and are fitted with hardened locking pawls. The arm mounts easily on all standard projectors and is furnished complete with a belt kit, mounting hardware, a set of Allen wrenches, and instructions.

#### RSA-8000-1

An upper and lower arm complete with 1/2" spindles, mounting hardware and belt kit.

#### RSA-8000-2

An upper and lower arm complete with 5/16" spindles, mounting hardware and belt kit.

#### PGS-8000-1

An upper and lower arm complete with 1/2" spindles, mounting hardware, belt kit, and two fully adjustable ball bearing film guidance roller assemblies.

#### PGS-8000-2

An upper and lower arm complete with 5/16" spindles, mounting hardware, belt kit, and two fully adjustable ball bearing film guidance roller assemblies.

PGS-830110 Film Guidance Hardware can be ordered separately for retrofitting to 8000 Series Arms.

#### AVAILABLE THROUGH YOUR LOCAL INDEPENDENT SUPPLY DEALER



284 Broadway, Huntington Station, New York 11746 (516) 692-6131

#### INSTALLATION INSTRUCTIONS

The Series 8000 Reel Support System has been designed to provide many years of continuous, trouble-free service. The ball bearing film guide roller assemblies, including the set of Allen wrenches and the mounting hardware, are packed in the small white box in the container.

#### Installing the Upper Arm

- 1. Please refer to the exploded parts drawing for the upper arm.
- Place the arm in position and hand tighten the upper mounting bracket (8) with the two 3/8" x 16 bolts and washers provided.
- 3. Set an empty reel, the largest that you will use, in place on the spindle. Postion the arm (2) so that adequate clearance is established and good film delivery is assured. Tighten bolt (17) securely and then apply full torque to set screw (18).
- 4. Take a length of film, ten feet or so, and wrap it on the reel hub, leaving 4 or 5 feet free.
- 5. Thread the film on the upper constant speed sprocket of the projector.
- 6. Now set the bypass roller assembly (29) in place, positioned so that the film passes through the top of the projector without any mechanical interference and engages the sprocket in a vertical plane.
- 7. View the reel, with the short length of film in place, from the front. Position the arm so that the film travels from the hub to the sprocket with equal clearance from each side of the reel.
- 8. Securely tighten all mounting and indexing hardware.

Installing the Lower Arm

- 1. The exploded parts drawing will be a handy reference in the following steps.
- 2. Make sure that the mounting surfaces on the lower side of the soundhead are free of dirt or foreign matter that might interfere with the lower arm mounting squarely.
- 3. Fasten the mounting plate (9), with the 5/16" x 18 bolts, to finger tight status.

- 4. Place the largest reel that you will use on the spindle. Lace a short length of film from the holdback sprocket in the soundhead and wrap it around the hub. Install the bypass roller assembly (29), providing adequate clearance between the film and all adjacent mechanical surfaces. Verify that a good wrap is established on the holdback sprocket.
- 5. Position arm (2) to ensure proper clearance for the reel relative to the pedestal or console, the front wall and all wiring devices. Apply substantial torque to the primary support screw (17) and the locking set screw (18).
- 6. See that the film is centered on the reel and that equal pressure has been established by the film on both sides of the last holdback sprocket. Now tighten the hardware supporting the lower mounting bracket (9).
- 7. Position the Rounthane belting over the drive pulley of the soundhead and the takeup clutch pulley. Mark the belt and cut it 3/4" shorter than the mark. Press the belt ends together on the connecting link and check its operation under load. If the belt runs with a belly in the return leg, remove an additional 1/2" at a time until it tracks smoothly.

In some situations, where the pitch is extreme, the use of a belt tightener roller assembly, Kelmar part number 720230-1, will prevent abrasion of the belt by the soundhead casting or related hardware.

#### Adjustment and Lubrication

Final tuning of the arms will result in system performance free from film damage or accelerated wear on sprockets. Refer to Figures 1, 2 and 3, while carrying out the following steps.

Thread the projector with a full reel of film. Start the projector and carefully check the film path at both the upper and lower constant speed sprockets. The mounting holes for the upper and lower arms are oversized to provide clearance for lateral and rotational adjustment. The film should enter and leave the projector squarely with respect to the sprocket, while maintaining a clear and balanced profile on the feed or takeup reels.

Clutch pressures should not be excessive. Set the upper tension so that a full reel of film will rotate smoothly and without bounce. Heavy drag on the upper clutch will encourage stress on the film and the upper sprocket assembly, as the reel of film becomes smaller.

When using large diameter takeup reels, they must be of the "floating hub" design. Check all reels to verify that the hubs are free. A small quantity of pure silicone spray lubricant between the hub and the reel flanges will help. Takeup clutch adjustment should be just enough to ensure uniform and consistent wrap of the film on a full reel. Excessive pressure will encourage undercutting of the holdback sprocket and introduce undesirable deformation and abrasion of the film.

All rotating components ride on pre-lubricated ball bearings and will provide many years of service without maintenance. The felt clutch disks have been given an initial lubrication at the factory with SAE 40 non-detergent oil. It is suggested that the clutches be cleaned and examined periodically. When lubrication is required, the use of a heavy non-detergent oil is suggested. Do not over oil.

Rounthane belts should be cleaned periodically with a clean towel.

#### 8000 SERIES ARMS PARTS LIST

INDEX	PART NO.	PART NAME		
1	8202241	Clutch Pressure Plate		
2	8202242	Arm		
3	8202243	Upper Arm Clutch Face Plate		
4	8202244	Felt Clutch Disk		
5	8202233-1.	Upper Shaft Assembly, c/w Flange, 1/2"		
	8202233-2	Upper Shaft Assembly, c/w Flange, 5/16"		
	8202233-3	Lower Shaft Assembly, c/w Flange, 1/2"		
	8202233-4	Lower Shaft Assembly, c/w Flange, 5/16"		
	8202236-1	Upper Shaft Sub Assembly, less Flange, 1/2"		
	8202236-2	Upper Shaft Sub Assembly, less Flange, 5/16"		
	8202236-3	Lower Shaft Sub Assembly, less Flange, 1/2"		
	8202236-4	Lower Shaft Sub Assembly, less Flange, 5/16"		
6	8202247	Shaft Flange, 1/2" or 5/16"		
7	8202248	Spindle Bearing Housing		
8	8202251	Upper Arm Mounting Bracket		
9	8202250	Lower Arm Mounting Bracket		
10	8202252	Arm Connecting Block		
13	720368	Spindle Bearing		
15	720452	Spring, Clutch Pressure		
16	720451	Nut, Clutch Pressure		
17	720460	Screw, Main Arm Supporting		
18	720354	Screw, Arm Locking		
19	720459	Screw, 10-32 Button Head		
20	720357	Screw, Flange Retaining		
23	720419	Pin, Clutch Pressure Plate Driving		
24	720339	Key, 5/16" Drive		
25	720361	Roll Pin, Clutch Face Plate		
26	720407	Truarc Clip, 1/4"		
27	720342	Roll Pin, 1/2" Drive Flange		
28	8202257	Bearing Spacer, Lower Spindle		
29	720536	Film Bypass Roller Assembly		
31	8202240	Pulley, Lower Clutch		





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### PGS-830110 ASSEMBLY PARTS LIST

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INDEX	PART NO.	PART NAME
.1	720364	Nut, Jam
2	7302061	Stud, Mounting
3	8202402	Clamp, Positioning
4	720387	Screw, Locking, Clamp
5	8202403	Link
6	8202405	Plate, Film Keeper
7	720457	Connector, Threaded
8	7302068-1	Shaft, Film Guidance Roller
9	720455	Screw, Shaft, Keeper Roller
10.	7302068-2	Shaft, Film Keeper Roller
11	7302069	Roller, Film Keeper
12 .	8202404	Extension
13	720461	Bearing, Ball
14	720369	Roller, Film Guidance
15	720350	Ring, Retaining, External
16		Base, Mounting, Wall





FIG.3