

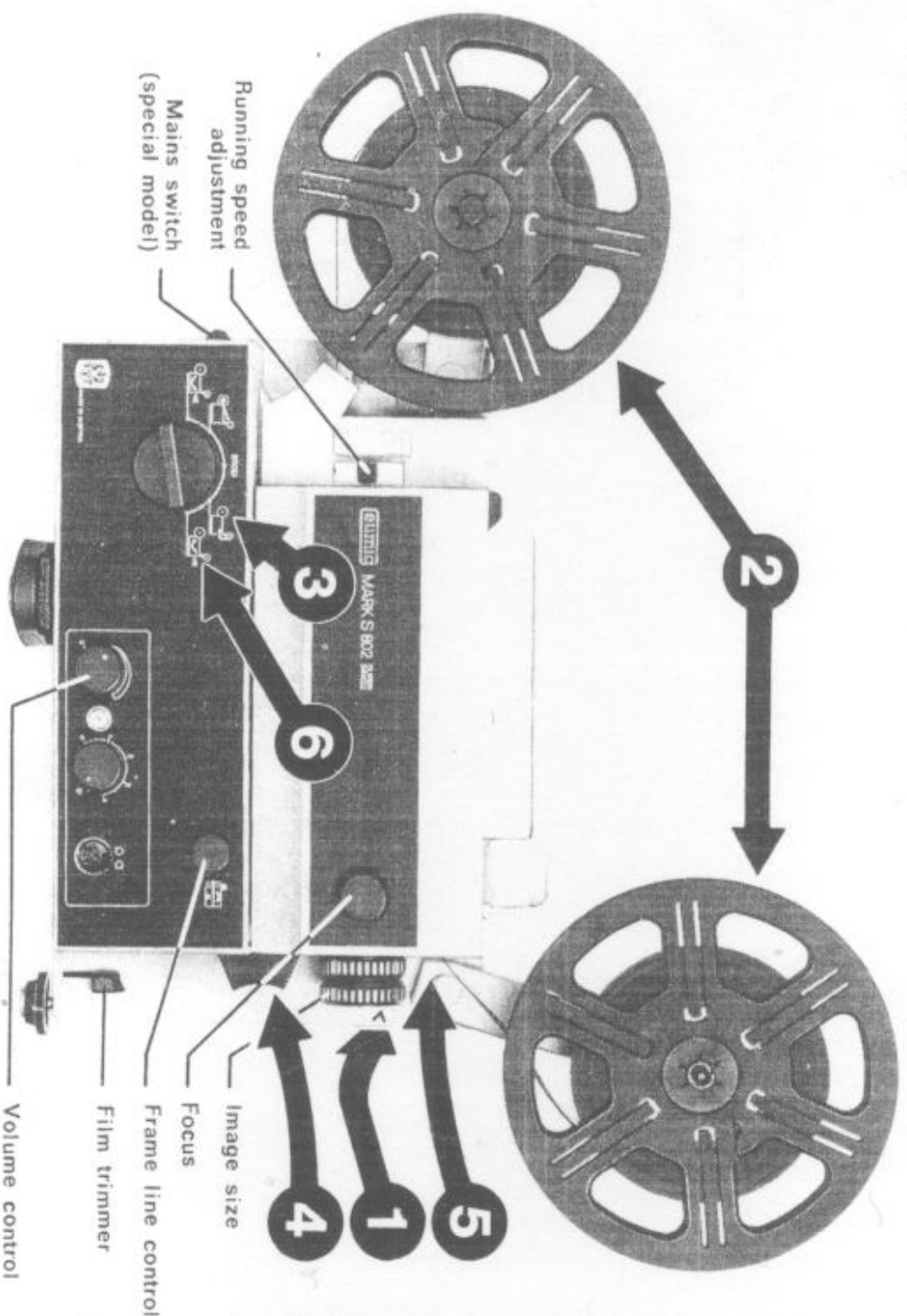
eumig

MARK S 802

SUPER-8/SINGLE-8 SOUND PROJECTOR

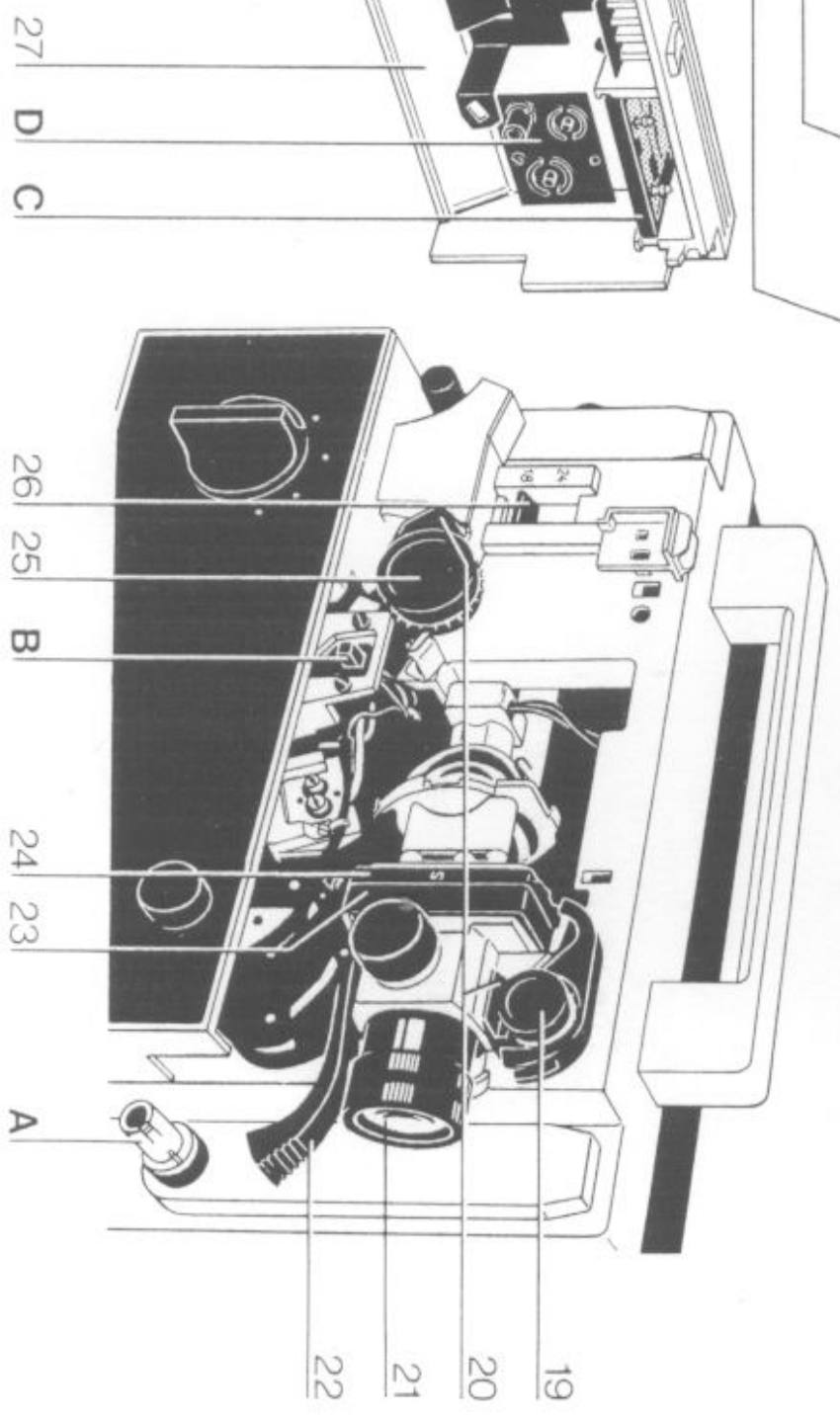
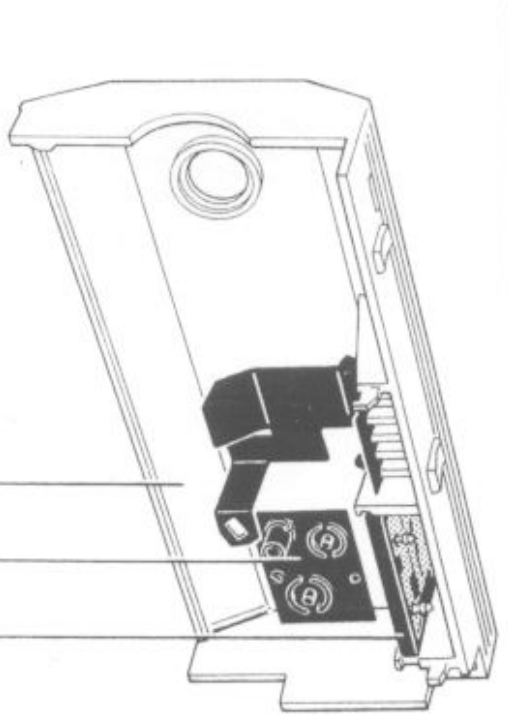
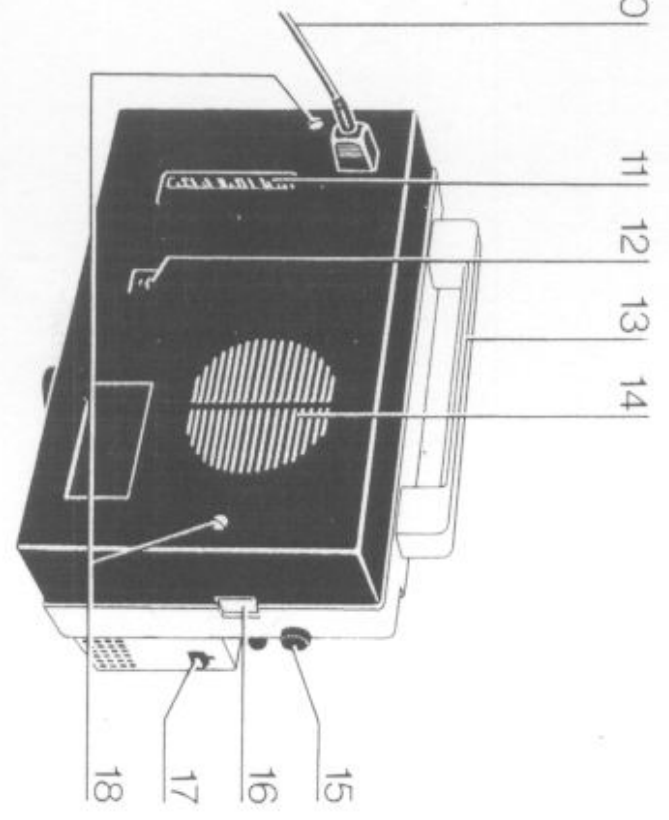
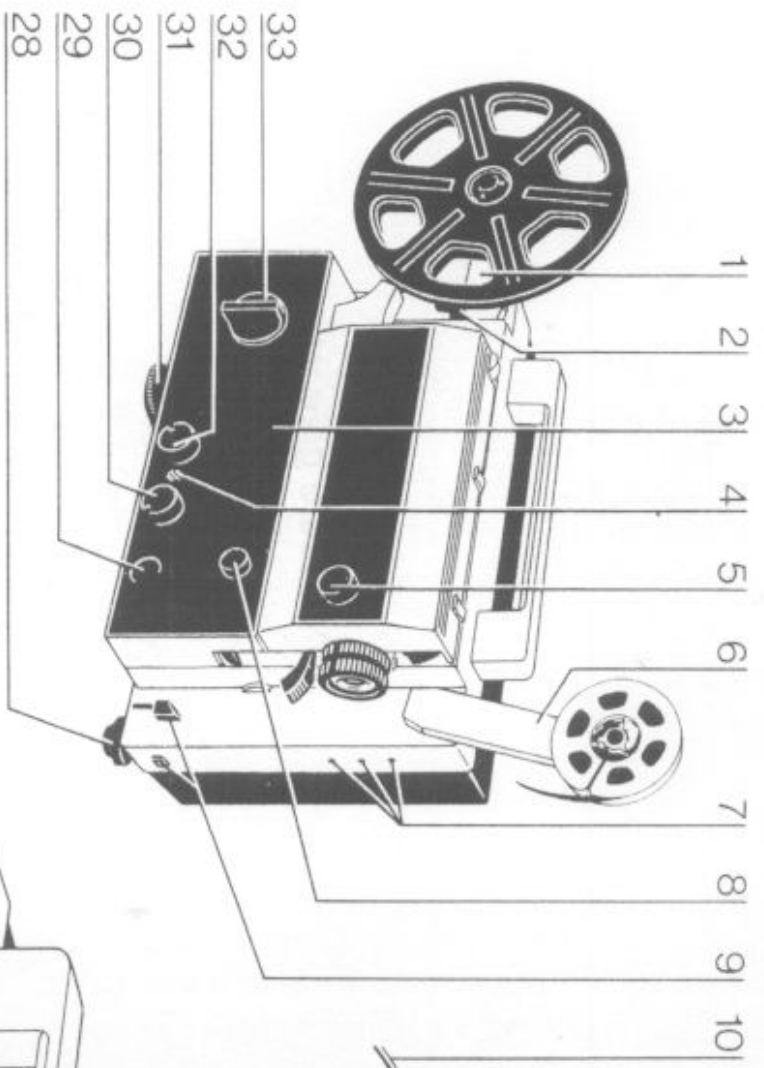
MARK S 802D

SOUND PROJECTOR FOR ALL 8 MM GAUGES



Instructions in brief

- 1 Connect the projector to the mains supply. First check the correct voltage and frequency.
- 2 Swing up the reel arms. Place the reel with Super-8 or Single-8 film (see page 6 for Standard-8) on the front reel arm. Put the universal reel supplied on the rear arm. Switch on the mains switch (where fitted).
- 3 Move the rotary selector switch to the threading position.
- 4 Press down the threading key.
- 5 Feed the film into the slot. Keep the threading key depressed until the film runs onto the take-up reel.
- 6 Turn the selector switch to forward projection.



- 1** Rear reel arm
- 2** Catch of reel arm
- 3** Sound unit cover
- 4** Securing screw of sound unit cover
- 5** Focusing knob
- 6** Front reel arm
- 7** Locating holes for daylight monitor (accessory)
- 8** Frame line adjustment
- 9** Film trimmer
- 10** Mains supply lead
- 11** Supply voltage adjustment
- 12** External speaker outlet
- 13** Carrying handle
- 14** Loudspeaker
- 15** Milled inching knob
- 16** Recording key
- 17** Mains switch (on special model)

- 18** Screws of back cover
- 19** Small type "S" sprocket
- 20** Sprocket guard
- 21** Lens
- 22** Automatic threading key
- 23** Film pressure pad
- 24** Type "S" film track
- 25** Large type "S" sprocket
- 26** Running speed adjustment
- 27** Lamphouse cover
- 28** Elevation control
- 29** Audio, radio and microphone input
- 30** Mixing control
- 31** Levelling control
- 32** Volume control
- 33** Rotary selector switch

- A** Type "S" sleeve for take-up shaft
- B** Sound changeover switch for changing gauges
- C** Alternative film track for Standard-8 film, fitted in lamphouse cover
- D** Storage panel for Super-8 sprockets and for type "S" take-up shaft sleeve

Accessories supplied with projector

1	Microphone	908.111/2
1	Fuse	
1	Mains supply lead	
1	Universal AS 18 film reel (can be used as automatic take-up reel and storage reel)	790.0320/5
1	Instruction manual	
1	Guarantee card	
1	Film reel with Super-8 film	790.0364/3

Putting on a show and building a sound track with the Eumig Mark S 802 Mark S 802 D sound projector

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Before connecting to the mains supply . . .

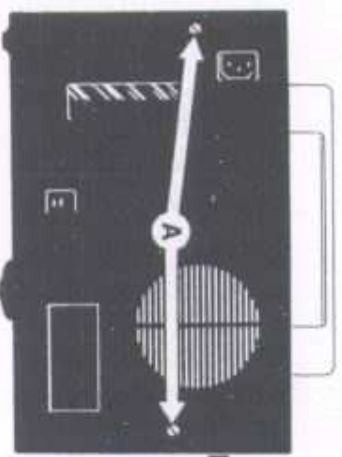
... there are a few points which are vitally important for correct projector operation:

The **voltage** and **frequency** of your projector must match the data indicated on your mains supply meter.

a) Voltage

If the mains voltage does not match that set on the projector, unscrew the securing screws **A**, remove the back, pull off the red plug **B** to the left and attach it to the correct terminal.

Some supply systems are liable to carry temporary overvoltages which can lead to premature projection lamp failure. Where this arises, adjust the projector to the next higher voltage setting (e.g. 230 volts instead of 220 volts). This also extends the burning life of the lamp while slightly reducing the light output.

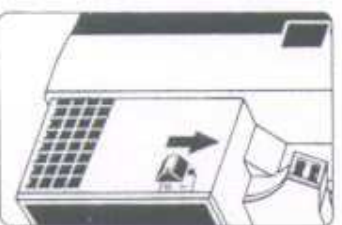
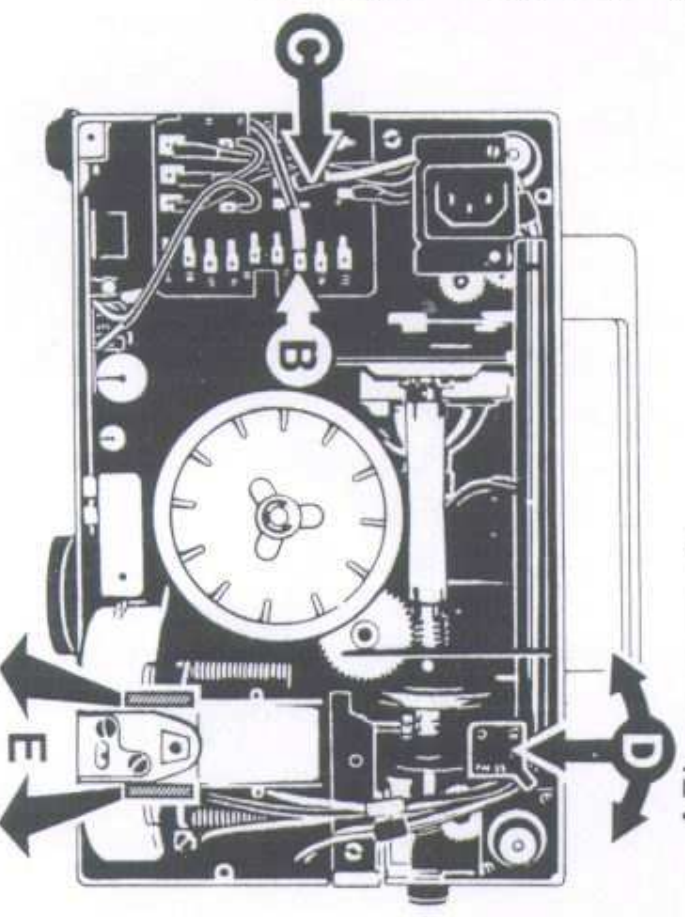
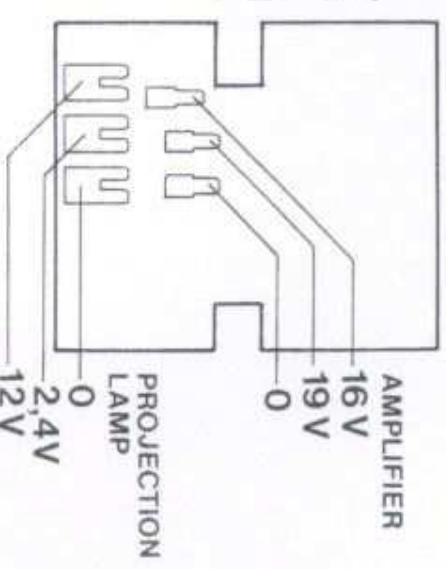


b) Frequency

The frequency setting can be changed only on special versions of the projector. To do this, pull off the blue plug **C** and attach it to the correct terminal. Move the lever **D** to the top right so that the appropriate frequency indication appears horizontal.

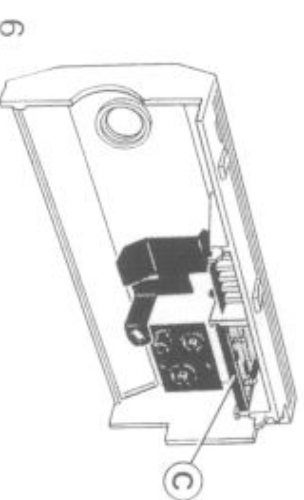
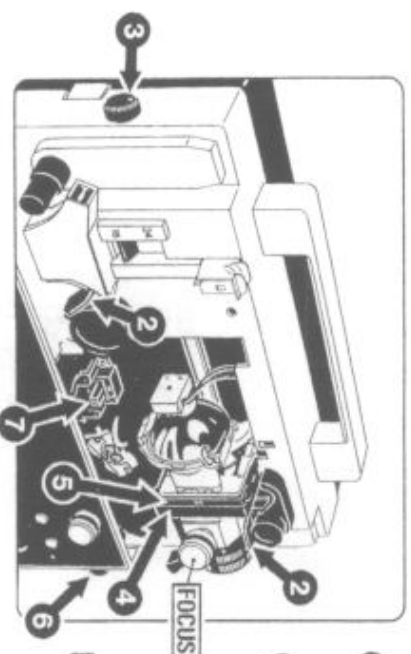
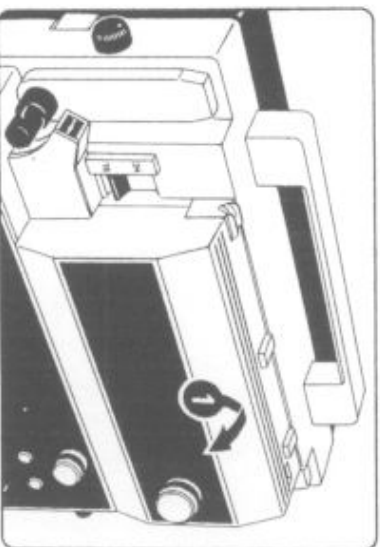
The transport lock. For safety in transport, the motor is secured in its central position by two retaining wedges (**E**). Before you first connect the projector to the mains supply, remove these wedges (unless your photo dealers has already done this for you).

Note: Certain special models of the projector are equipped with a mains switch at the left of the body. This is interlocked with the rotary selector switch. You can operate the mains switch only when the selector switch is in the "stop" position **D**.



Changing the film gauge

Normally EUMIG multi-gauge projectors are supplied set for projecting Super-8 film. They are however easily converted to projecting Standard-8 film. Proceed as follows:



1 Remove the lamphouse cover.

2 Open the sprocket guards, pull off the type "S" Super-8 sprockets and close both sprocket guards.

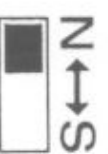
3 Turn the milled inching knob to bring the white dot to the top. (This retracts the claw to protect it against damage.)

4 Move the lens fully forward with the focusing knob, press the film pressure pad and film track together towards the lens and pull out. The same film pressure pad is used for all 8 mm. film gauges.

5 Replace the film track by the alternative track **C** in the lamphouse. Push the film track and film pressure pad together fully into the projector and then press to the left to engage the guide pins.

6 Fit the adapter sleeve over the reel shaft when projecting Super-8 and Single-8 film.

7 Switch over the sound changeover switch when changing gauges.



= Standard-8



= Super-8 and Single-8

Replace the lamphouse cover.

When replacing the Super-8 sprockets, please make sure that they engage properly.

Film pressure pad for all 8 mm. gauges:

718.1450/4

Alternative components for Standard-8 projection:

Film track 718.1461/9

Alternative parts for Super-8 and Single-8

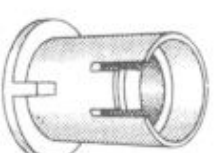
projection:

Large type "S" film sprocket 718.1175/8

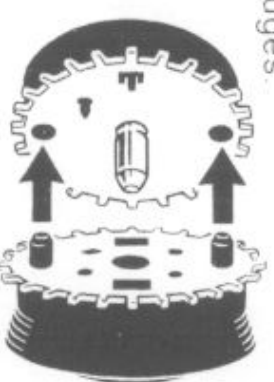
Small type "S" film sprocket 718.1189/8

Type "S" film track 718.1471/1

Type "S" sleeve for reel shaft 725.5710/2



Type "S" sleeve
for reel shaft



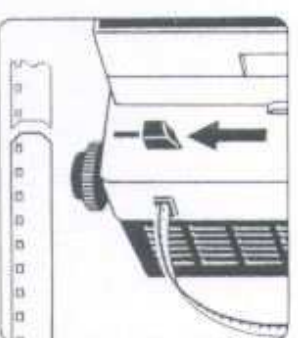
Automatic threading

The film threads itself automatically through to the take-up reel core. An ingenious system automatically sets the correct picture/sound separation (18 frames for Super-8 and Single-8, 56 frames for Standard-8).

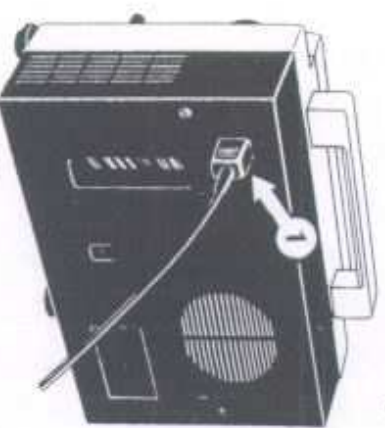
A few points are however important for perfect operation of the automatic threading system: The sprocket guards must be closed, all splices must be perfect and the film should have a leader about 50 cm. (20 inches) long. The end of this leader should be curved slightly inwards (clockwise as seen from the reel side of the projector), cleanly trimmed and — specially important — free from creases.

Use the film trimmer built into the projector. Push about 3 cm. (a little over 1 inch) of the film into the slot at the side and press the key. The cut should not run through a perforation hole. You can easily avoid this if you push in Standard-8 films in such a way that a perforation hole is in line with the edge of the slot. Push in Super-8 film so that the edge of the slot is between two perforation holes.

Fully depress the threading key. Feed in the film only with the selector switch set to "threading".





Silent and sound projection



- 1 Connecting the projector to the mains supply (or switching on the mains switch where fitted) immediately starts preheating the lamp for maximum operating life.
- 2 Erect the reel arms and mount the reels. The full reel goes on the front arm, the empty one on the rear arm. **When you look towards the screen from behind the projector, the film perforations must be at the right — i.e. towards you as you thread the film from the side.**


- 3 When using a 180 metre (600 foot) reel, for instance the universal AS 21 reel, raise the catch and swing the reel arm to its central engagement point. Fully swing up the arm if necessary to clear the milled inching knob.

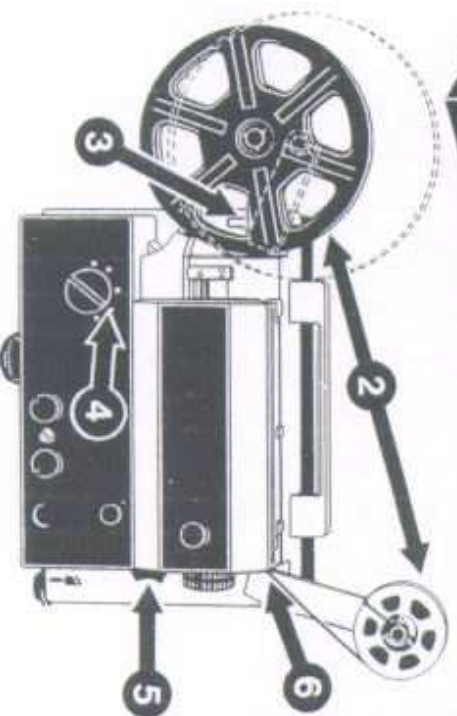
- 4 Move the selector switch to "threading" . Do not thread with the selector switch in the "forward projection"  position.

- 5 Depress the threading key to close the film channel.

- 6 Then feed the film leader into the sprocket.

Important: Keep the threading key depressed until the film runs onto the take-up reel.

7. Turn the selector switch to "forward projection" .





Important: When running the projector do not obstruct the air stream emerging from the ventilation slots.

If due to perforation damage or other causes the image appears unsteady or the projector rattles (or both), briefly depress the threading key during projection. If this does not help, switch briefly from forward to reverse projection or vice versa.

Films vary appreciably in their handling characteristics, specially with thin film bases. If such films should fail to engage in the take-up reel, guide the film leader onto the reel core by hand.

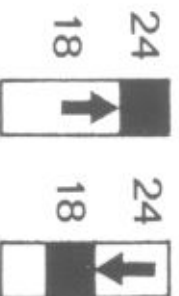
Once the film is threaded and the projector running:

- 1 Adjust the projected image size by turning the zooming ring.
- 2 Focus the image sharply by turning the fine focusing knob.
- 3 Adjust the frame line control if parts of two frames appear on the screen with the frame line between them.
- 4 Adjust the elevation control.
- 5 Level the projector.
- 6 For reverse projection turn the selector switch to "reverse" ; the film now runs backwards. When you change the running direction, the frame line may need readjustment.
- 7 Rapid rewind: After the film has run through, attach the end directly to the front reel over the top of the projector and turn the main switch to "rewind" .

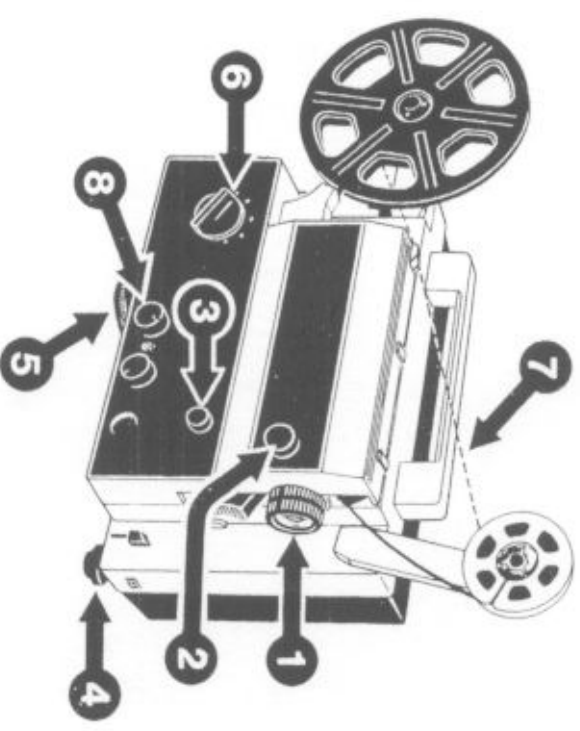
When projecting sound films turn the volume control  to the right to the required sound volume.

At the end of every show always turn the selector switch back to "stop" .

Changing the running speed



Important: Before changing the running speed always turn the selector switch to "stop" . Connect the projector to the mains supply. After switching from 24 to 18 fps. wait for about 1 minute before projection to allow the flywheel speed to stabilise.



Replacing the lamp (Disconnect the mains lead first)

Required lamp type: 12 volt, 100 watt, tungsten-halogen with diathermic reflector, order No. 931.004/6.

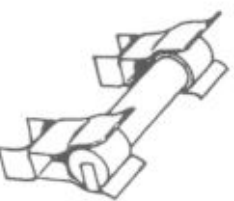
Not even the best lamp lasts for ever. If it fails, you can easily change it yourself:

1. Remove the lamphouse cover.
- 2 Press down the lamp retaining spring and disengage by swinging to the left, then remove the lamp.
- 3 Pull off the lamp plug from the rear. Take care not to move the coils on the sound changeover switch for film gauge switching.
4. When fitting the new lamp, never touch the bulb or inside of the reflector with bare fingers. If you touch them accidentally, clean with alcohol or methylated spirit. Plug the lamp into the lamp plug. Raise the retaining spring and insert the lamp in the lamp fitting. The centering lug of the lamp must engage the cut-out provided for it.
5. Press down the lamp retaining spring and push it to the right to engage it. Make sure that the sprung arm is in the correct position. Subsequent centering of the lamp is not necessary.
6. Replace the lamphouse cover.



Replacing the fuse (Disconnect the mains lead first)

The fuse rarely needs changing, but here is what you must know about it: The fuse protects the amplifier against over-loading, but does not protect the projector against damage if connected to the incorrect mains voltage. Remove the back cover: The fuse is then accessible at the left of the amplifier circuit board.



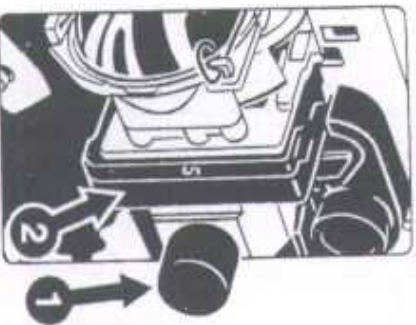
Cartridge fuse 5 x 20 mm; 1 amps, surge-resisting. Order No. 790.0305/9
For USA: Cartridge fuse 1 amps, Order No. 790.0306/0

Care of the projector and general hints

EUMIG sound projectors generally need no maintenance, as all moving parts are permanently lubricated. The only sensitive points are the film track and gate which collect dust and film debris. Remove this with a soft rag or a sable brush, or by scraping with a wooden stick if necessary. The film gate elements are easily removed for cleaning.

Turn the milled inching knob 15 – see page 2 – to bring the white dot to the top. This withdraws the claw to protect it against damage.

- 1 Move the lens fully forward by turning the focusing knob.
- 2 Push the film pressure pad and film track towards the lens and withdraw.



Important: The lens is fully removable on slightly pulling out the focusing knob and withdrawing the lens from the carrier tube. The lens can now also be cleaned. Before replacing, check that the engagement groove of the lens faces you (see illustration). Now pull out the focusing knob again, push the lens into the carrier tube and let it engage.



Film care

Various film preservatives are available from photo dealers; use them for periodic treatment of your films. The best way is to run the film through a soft cloth soaked with the cleaning agent. Films to be striped should only be cleaned with a soft and fluffless linen cloth dampened with surgical spirit.

Important notes for good sound quality with striped film:

As with any high quality sound recording and reproducing system, sound quality depends on the specifications of your recording unit and the condition of the striped film.

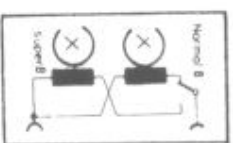
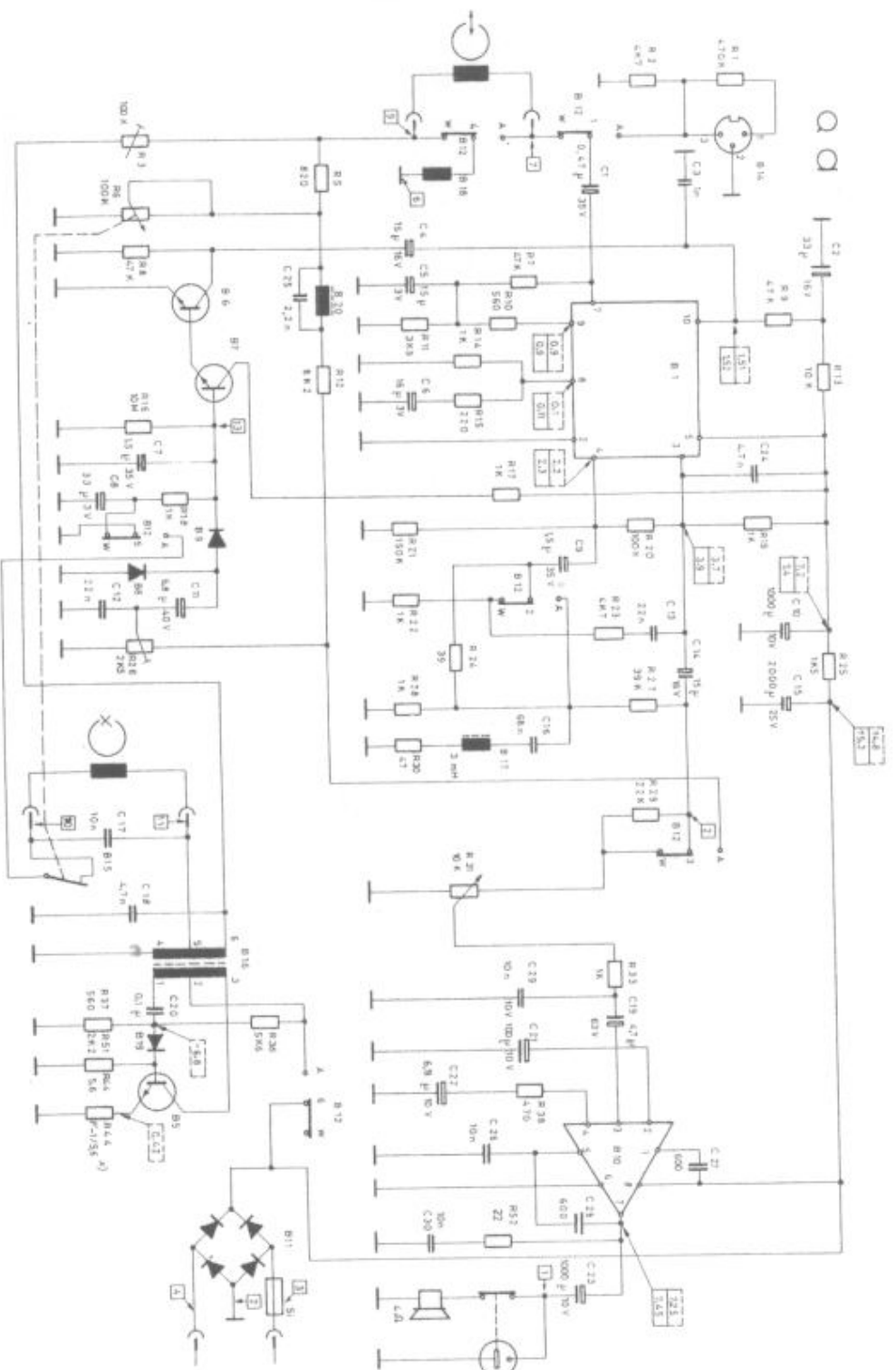
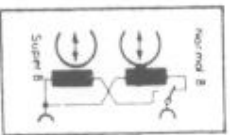
1. Check that splices are neat and preferably within the film thickness.
2. To avoid noise interference at splices edge stripe the film only after editing. Use a high quality stripe, for instance Agfa F5.
3. Do not use any antistatic agent before striping, as this can impair adhesion of the stripe.
4. Store films protected against dust, preferably in film cans with humidifier added.
5. In order to take maximum advantage of the possibilities of the projector you should use only high quality audio sources.
6. For playback connect an external speaker.

Sound section: Technical data

Microphone input:	0.3—10 mV into 4.7 k-ohms (terminals 2 and 3)
Phono/radio/tape input:	40 mV to 1.2 V into 470 k-ohms (terminals 1 and 2)
Signal-to-noise ratio:	40 dB
Amplifier output:	3 W music power 2.5 W RMS
Speaker:	4-inch speaker
Magnetic head:	Combined record/playback/erase head. Replaceable. Record and erase bias frequency, 50 kHz
Automatic level control:	Compensates recording-level variations up to 45 dB. Response time: 150 ms. Holding time as a function of input level, up to 50 sec
Picture/sound separation (standard):	Mark S 802 18 frames (standard) Mark S 802 D Automatically switches over to appropriate picture/sound separation (18 frames with Super-8 or 56 frames with standard-8)

Mark S 802

Mark S 802 D



- ☐ Spannungen bei AUFNAHME
Voltages at RECORDING
Tensions a la PRISE DE SON
- ☐ Spannungen bei WIEDERGABE
Voltages at PLAY-BACK
Tensions a la LECTURE
- ohne Signal gemessen gegen Masse
[2]. Instrument Ri = 100.000 Ohm/V
- measured to ground [2] with out signal
voltmeter Ri = 100.000 Ohm/Volt
- mesuré sur masse [2] sans signal
voltmètre Ri = 100.000 Ohm/Volt

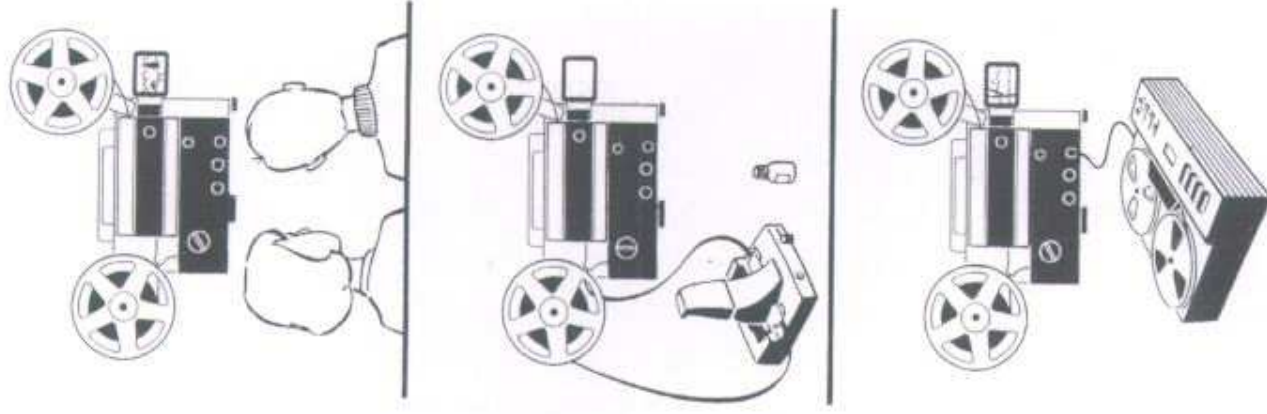
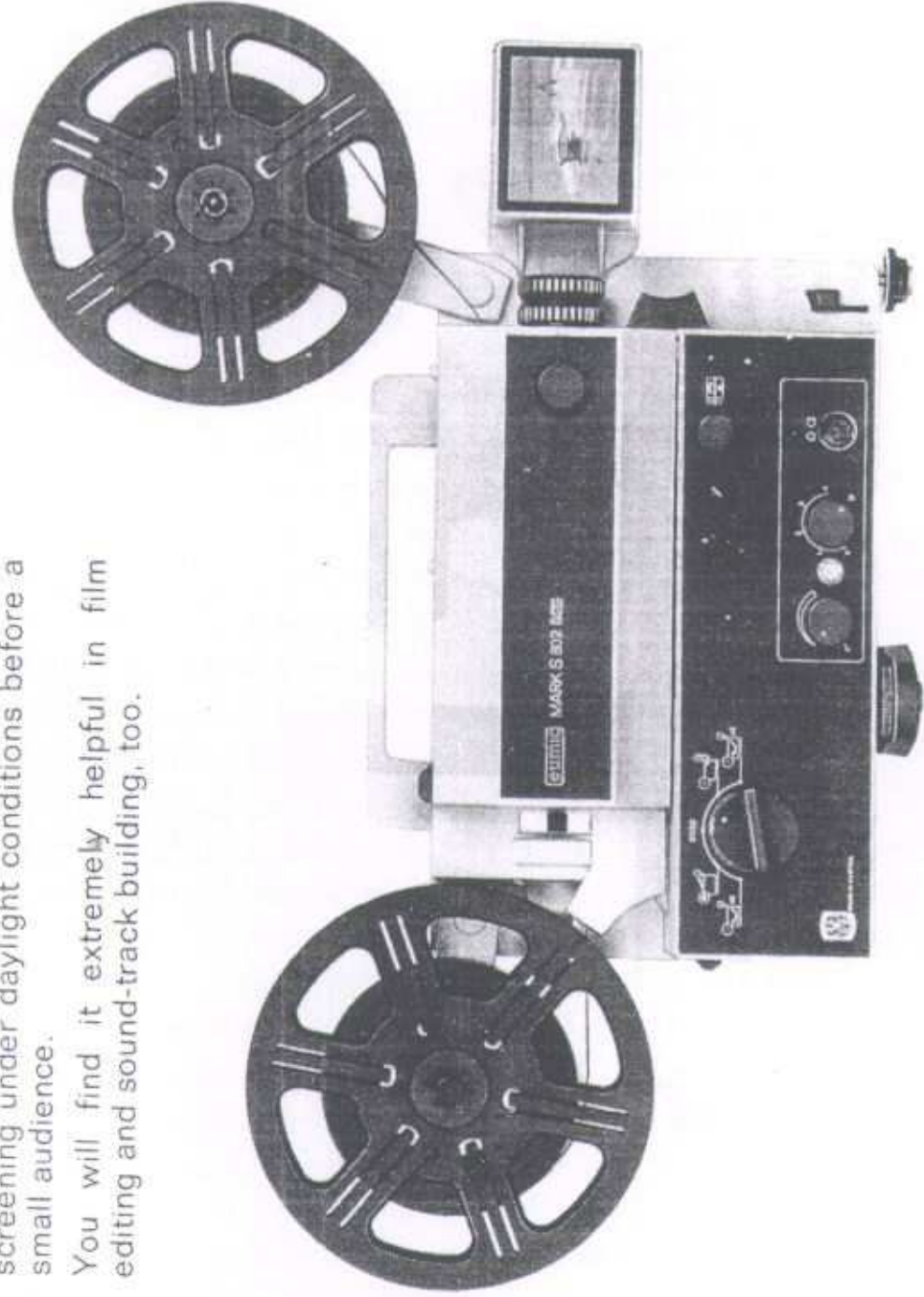
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Daylight Viewer (Eumig Ordering No. 790.0390/4)

The Daylight Viewer displays even in broad daylight a bright, high-contrast picture on a small ground-glass screen.

Just snap it on for a preview of your film or a screening under daylight conditions before a small audience.

You will find it extremely helpful in film editing and sound-track building, too.



Building a sound track in a nutshell

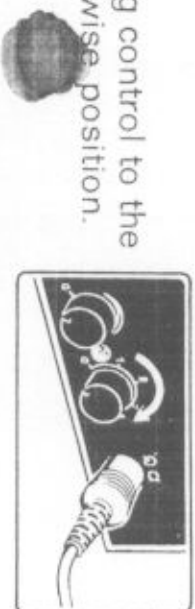
Plug in the projector and load it with magnetically striped film.

Recording music

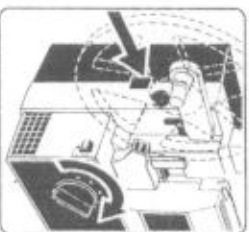
1 Connect the music source (a cassette recorder or record player, for instance) to the projector.



2 Turn the mixing control to the extreme clockwise position.



3 Press the red recording key and turn the selector switch all the way to "forward projection".



At the end of the music recording turn the selector switch to "stop".

After rewinding, the film is ready for mixing in the speech or for immediate screening with a music background.



Recording voice over music

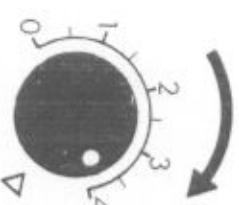
4 Plug the microphone into the projector and turn the mixing control counterclockwise to 0.



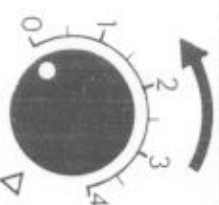
5 Press the red recording key and turn the selector switch all the way to "forward projection".



6 Before starting to speak, turn the mixing control clockwise. (With the knob in the 0 position, no voice is recorded and the music is not subdued.) Left half of scale = music is attenuated slightly. Right half of scale = music is attenuated greatly.



7 At the end of the voice-over, turn the mixing control back to the 0 position.



Repeat this fade-in/fade-out procedure whenever you introduce narration.