

quick reference

Setup

- Turn power on (key on string in cupboard, switch is in-between projectors).
- Take off covers.
- Put arms up.
- Clean gates.
- Assemble, clean and insert lenses.
- Sort reel running order.
- Switch lights to projection room control

Loading

1. Put full reel on front arm, film hangs down on right hand side (front-most).
2. Put empty *matching* reel on back arm.
3. Make sure the switch is on **load**.
4. Press load lever (2) down, it will click into place.
5. Put dial on (3).
6. Hold end of film in hole at (4), press **roll**, let film feed through until it comes out under empty reel, then **stop**.
7. Thread film through gap in reel and wind up a little.
8. Press **roll** and take up some of the film and then **stop**. If (2) doesn't pop up, give the back reel a tug.
9. Turn dial to (5) if there's time to do a visual check on screen to adjust focus, or (3) if another reel is running.
10. Press **roll**; **stop** it when it counts down to 1 on screen (or 3 out the back of the projector).

Running film

1. Kill cinema lights
2. Switch to **run**.
3. Press **roll**, then **show** on projector 1.
4. Check focus and cinema sound

Reel change

1. At the end of the reel 1 there should be a watermark in the top right hand corner of the screen (a dot or circle), then seven seconds later, another one.
 2. When you see the second dot, press **roll** and **show** on projector 2.
 3. Press **stop** on projector 1.
 4. Toggle run/load switch
 5. There will be some film left on reel 1, set switch to **load**, dial to (3), and press **roll**. Press **stop** when all the film has gone through the projector.
- (If you don't see a watermark, don't worry; just change the reel when the action stops.)

End

1. Press **stop**.
2. Roll film, as for reel change.

Pack up

- Rewind films if that is required (rarely). Do not rewind National Film Library films.
- Take out lens, put arms down, put cover on, power off (at key-switch).
- Switch lights to cinema control.
- Lock up.

projecting guide

Notes on the projector's controls

Control Dial

The projector's control dial is used to set the mode of operation of the projector and consists of (clockwise from most counter-clockwise setting):

- **REVERSE with light** (project in reverse!) (*never do this as reverse may damage the film's sprocket holes, sent you blind or bring the wrath of the Gods upon you etc etc...*)
- **REVERSE without light** (*never do this as reverse may damage the film's sprocket holes, cause tidal waves, shorten your life and accelerate deforestation in Guatemala. Well, okay, you could use this if you miss the beginning few seconds of a film when loading it. Shhhh!*)
- **STOP** (control pointing up).
- **FORWARD without light** (film feeding mode used for loading and unloading). Marked with the number '3' on the projector.
- **FORWARD with medium level light**,
- **FORWARD with maximum light** (normal projecting). Marked with the number '5' on the projector.

Control Panel

The control panel is used to start and stop power to the projectors as well as turn cinema audio on or off. It's the main control for starting and stopping projection and film feeding.

The '**start**' button provides power to the projector and the '**stop**' button cuts the power instantly. The '**show**' button activates sound in the cinema. '**Douse**' and other functions do nothing.

Load/Run switch.

A white toggle switch located on the left side of each wooden projector stand.

Projection room preparation

!! Do not leave the projection room unattended while film is being shown.

Someone should check the cinema speaker is centred under the projection screen and plugged in as sometimes it's been moved and disconnected.

- 1 **Cabinet needs opening.** Designated “front of house” usually does this.

Union building stewards do **not** have the cabinet key.

- 2 **Cinema lighting controls.** Turn on **Cinema Lighting Override Switch** (right side of projection room) and make sure all lights in the cinema are **on**.

Note: The exit sign switch is non-functional – exit lights are always on. It is a legal requirement that all exit signs are lit.

- 3 **Turn on main projector power** with key in cabinet. The main power key-switch is between the projectors on the wall.

- 4 **Turn on upward facing spotlight** next to right projector for ambient light.

For extra lighting there is a torch - batteries nearly-flat by tradition - magnetically clamped to the inside of cabinet door. Return it there when finished with it. Replace batteries regularly (yeah, right!).

Projector preparation

Sometimes the projectors are turned off at their power switches. If the control panels are lit but the projectors do not operate, check this. The power cord goes in the left side of the projector and the power rocker on/off switch is next to this.

Two audio leads should be plugged in the projector’s rear. The multi-pinned rectangular plug should not be used. (Note: The rectangular plug is “remote control” and is no longer used.)

- 1 **Take off speaker/dust shield and extend reel arms.**
- 2 **Clean Gate.** Open the *gate/lamp access panel* and open up the gate. Dust the gate assembly with a lint free cloth and check for sticky residue (often from masking-tape glue on the leader of the film). Use solvent (usually meths), located in the cabinet, if needed. Blow dust, crud, fluff, hair lint free cloth lint, etc from gate. Shut gate and access panel.
- 3 **Select lenses and insert.** There are four kinds of lenses and two different adapter rings for combining them.
 - **Standard** base. (largish lens)
 - **Magnifier/reducer.** (small)
 - **Zoom** lens base. (big lens with zoom control)
 - **Cinemascope** lens. (very bulky with focus fine-tuning control)

There are only *two* useful combinations (taking into consideration that the standard and zoom base lenses perform the same function). They are:

- **Normal film:** use either *standard* lens with *magnifier* screwed on to its end via an adapter ring or use the *zoom* lens (no *magnifier* needed with *zoom* lens)
- **Cinemascope film (aka Anamorphic):** *standard* lens without *magnifier* (or use the *zoom* lens) with *cinemascope* lens screwed on the end via an adapter ring.

Before inserting lens assembly into the projector, dust components with lint free cloth and polish away fingerprints, etc. Use solvent if needed. Insert into the front of the hinged gate assembly (well, there's only one place the sucker will fit). Use focus control to wind the lens in whilst pushing gently (wind in about ½ way).

Note: Cinemascope lenses

Not often required; it should be indicted with the film. The usual lenses need to have the front bits unscrewed and the Cinemascope lenses attached as above.

They are much heavier than the normal ones and may go out of focus easily keep an eye on it. Make sure the original lenses are put back together properly!

Note: B&W shorts and silent movies

On the side of the projector next to the power plug there is a speed switch (not to be confused with the voltage selector or the power switch!).

It should almost always be set to '24' (frames per second) unless the film is completely silent.

A completely silent film has sprocket holes on both sides and should be screened at '18' instead.

(Speed can be switched whilst screening if it's obviously wrong.)

The **volume** will need to be turned right down in order to avoid loud static and crackling noises.

4 **Running order.** Check and sort the reels by their running order.

Put 1st reel on one projector, 2nd reel on 2nd projector.

Once one reel has finished, prepare the next reel to be shown on the idle projector. Repeat until all reels have been shown or the projectionist dies.

Showing the film

Loading.

1 **Initial settings.** Switch projectors to '**load**' and **STOP**.

2 **Reels.** Mount the reel to be shown on the front (right) reel arm and a matching empty take-up reel on the rear (left).

Note: The film should hang away from the projector with sprocket holes on the outside (ie right side, ie towards projectionist, ie away from projector).

3 **Check film leading end.** Trim the leading end of the film if necessary at point '1' on the front of the projector. Trim away torn, crooked, or badly bent ends.

4 **Autoload lever.** Push down the **autoload lever** (marked '2' on the body of the projector).

5 **Insert film** at point '4'.

6 Cue film.

6.1 Set the dial to **FORWARD without light**

6.2 Press the '**roll**' button on the control panel and gently push the film in until it is caught. Wait until enough film is through to feed into second reel then press '**stop**' on the control panel.

!! *Keep an eye on the film at this stage; If it gets caught, press '**stop**' and see if you can spot a problem — maybe due to the **autoload lever** not being down, damaged film or just the projector's personality showing through. Put it onto **REWIND without light (dial)** if necessary to get the film out, repair if necessary and try again.*

7 **Secure film end.** Hook film into the take-up reel.

8 **Reset autoload lever and ensure film is securely caught by the take-up reel.** Press '**roll**' again to wind it on a few seconds further and hit '**stop**'.

!! *Check the **autoload lever** has sprung back.* If not, give the take-up reel more tension with your hand until it does.

Smaller lighter reels are less likely to pull the **autoload lever** back by themselves; big ones are more likely to.

If the **autoload lever** has not flicked back the image will be flickery unwatchable nonsense. Don't confuse this with an 'experimental montage' short film, many of which look like flickery unwatchable nonsense anyway.

9 **Cue through countdown.** Press '**roll**' again and watch the film as it passes through, counting down from 10 to 3. When you see the number 3 coming from the rear of the projector, press the '**stop**' button.

Hint: If you have time to pre-check before screening, use **FORWARD with light** (dial) instead and roughly focus the image using the countdown.

Note: it is normal for some shorts have very long headers or blank film before they start. Keep going until you get to the countdown or the short begins.

10 Sound settings prep. Set the **volume** thumb-dial to between 6 and 7, and set the treble control to +1 and bass to -1 or -2.

Project

1 **Lights!** Use the **Cinema Lights Override Panel** to turn off the lights in the cinema. Turn off the projection room light when starting the film.

2 **Dial.** Select **FORWARD with light** (marked point '5')

3 **Side switch.** Select '**run**' on side switch.

4 **Go:** Press both '**roll**' and '**show**' on the control panel. The '**show**' button must be lit.

5 **Check the focus.** Check the focus and adjust.

Remember to monitor focus throughout the screening as vibration can make it drift.

6 **Check the volume** in the cinema - *through the Rainbow Room window is best.* Keep watching

and adjust the focus if necessary. Run about like a headless chicken at this point checking everything.

If there's no sound, see section "Troubleshooting" below.

Changeover

Watch the reel as film nears the end. Watch for the watermarks known as 'cigar burns'. There should be two about seven seconds apart in the top right corner, though there may be one or none.

At the second mark, hit **'roll'** then **'show'** on the second projector, then hit **'stop'** on the first projector. Toggle both **Load/Run** switches on the sides of the projector stands. Check the focus and volume as above.

Perfect synchronisation is very hard and a second or so between reels is fine. Alternatively, feel free to strive for perfection – a reel change no one notices!

Un-load

Switch the first projector to **'load'** (white switch) and '3' (dial). Press **'roll'** to feed last of the film through, press **'stop'**. Load another reel or pack up.

A note on rewinding

Usually films should not be rewound. If it is required, *do not* rewind the film through the mechanism.

Move the rear arm of the projector up into 'second position' and feed the end of the film straight back onto the first reel.

Switch the dial to **REVERSE without light** and press **'roll.'**

On top of the projector are two buttons. The one with the circle with an arrow curling around it is the fast rewind button. Press it once rewinding had begun (it will be negated when the dial is switched forward again). Rewinding can also be done on the elbow-grease-powered benchtop model (it's simpler for one thing).

Troubleshooting

If there's a serious problem, press 'stop'!

Film may catch and melt if the film gets jammed in the case of mechanical failure or damaged sprocket holes or whatever. This will make pretty patterns on the screen but is not good. Switch to **'load'** and '3' (**FORWARD without light**) to feed the film through. Melted, scrunched, torn or otherwise damaged film can be cut out and the ends joined with the *splicer tool*. It has its own mini guillotine. Line up the holes and tape both sides. Return any large sections of cut film to the supplier and write what happened on the form that comes with the film.

If suddenly there is no picture but the film is still running happily, it's probable that a globe has gone. They are easily replaced without removing the film or lens. Open the cover and release the holding

wire (just behind the gates/lens), then unplug the globe from its socket. Replacements are in a box in the cabinet.

Warbling sound (tremolo)

- If you're at the beginning, try taking it all out and reloading.
- If you're in mid-reel, check to see if film is smoothly wrapped around the ½ inch wide chrome barrel located towards the front of the projector just before the film goes into the audio-light box. If it's loose and flapping...
 - 1 Stop the film.
 - 2 Open the gate/lamp access cover.
 - 3 Find the lower sprocket drive cog (the 2nd big chrome barrel with back latches on it's top and bottom – the lower one is the cog that drags the film through after the gate mechanism) and unlatch (push down) the lower black plastic retaining latch.
 - 4 Tease the film over a sprocket hole or two so that it's properly tensioned around the barrel at the front.
 - 5 Close the black plastic retaining latch and the gate/lamp access cover... and try it again.

Of course, it's likely it's simply a dodgy reel or damaged sprocket holes, in which case there's probably not a lot you can do.

No sound

Sound in projection room, none in cinema

- Cinema speaker not plugged in.
- **'Show'** button not pressed (lit).

No sound anywhere

- **Volume** control set too low.
- Audio leads to the projector aren't in or aren't in properly.
- Sound bulb blown. Indicated by no red light on the sound box assembly during normal projecting. This box is located towards the front of projector below the lens. To replace:
 - 1 Stop film!
 - 2 Open box by undoing the retaining screw.
 - 3 Replace the bulb – remove by twisting bayonet connection.

Squeaks, scrapes and other reel-noise: there's always some, and usually it's not a problem, though watch for warped reels. If the film is really scraping and pulling on the mechanism a lot or not winding onto the reel properly, manual guidance may be necessary.