

|   |   |
|---|---|
| Look up film on IMDB either tech or DVD details for<br>aperature/Aspect Ratio<br>Sound<br>Length<br><br>Bring to Projection<br>Flashlight<br>Stickies | 2 <sup>nd</sup> or 3 <sup>rd</sup> Shows:<br>1. Check aperature/lens match<br>2. Check heads on<br>a. Countdown correct<br>3. Note sound level from previous show<br>4. For Matinees<br>a. Rewind to heads<br>b. Mark Heads #s<br>c. Write changeovers on paper & put in shipping can |
|---|---|

- I. **TURN ON POWER:** Turn on sound, circuit breaker, exhaust fan, and projector bulbs
- a. Sound button on 2 black towers
    - i. On buttons
      1. Left tower – bottom left white
        - a. On to the Right
        - b. Left tower has to be on for right tower to be on
        - c. Make sure 4 red lights are on
      2. Right Tower – Black button
        - a. On to the Right
        - b. For booth monitor, if sound is bad, switch Right knob (channels) for better sound

|  |  |
|--|--|
| <b>Film</b><br>Mono  | External 6 Channel   |
| <b>Film</b><br>Dolby (Analog)<br>A-Type<br>Older                         | User   |
| <b>Film</b><br>Dolby SR (Analog)<br>Better                               | <b>Upstairs Monitor</b><br>Non Sync 1<br>For playing before show music |
| <b>Film</b><br>Dolby Digital<br>(is grey in area between sprocket holes) | <b>Downstairs Sound</b><br>NonSync2                                    |

## b. Breaker Boxes:

| Left Breaker Box |  | Right Breaker Box |  |
|------------------|--|-------------------|--|
|                  |  |                   | 1-3: East (Evelyn's bulbs)   |
|                  |  |                   | 4: Projector Motors<br>--This also turns on bulb in area where load film |
|                  |  |                   |  |
|                  |  |                   |  |
|                  |  |                   |  |
|                  |  |                   |  |
|                  |  |                   | 10: West Wanda's Bulbs   |
| 11: Sound Tower  |  |                   | 11: West Wanda's Bulbs   |
| 12: Sound Tower  |  |                   | 12: West Wanda's Bulbs   |

- i. Right breaker box (turn on before bulb; turn off after bulb)
  1. 1-3 top right (East Evelyn's bulbs)
  2. 4 top right (Projector Motors)
  3. 3 bottom right (West Wanda's bulbs)
- ii. Left Breaker Box:
  1. #11 & 12: 2 Sound Towers (Should already be on)
- c. Exhaust fan switch behind #6 in film canisters
- d. **10 minutes before show:** Projector lamp switch "DC Power" on side of both projectors
  - i. Green "Ready" light on means fan's on

**II. CLEAN PROJECTORS**

- a. 50% isoprophol alcohol/50% water
- b. rollers
- c. spindles
- d. Gate
  - i. Remove 2 thumb screws & pull out plate
  - ii. Clean using alcohol/cloth/q-tips

**III. PREP REELS – BUILD REEL**

- a. If there are trailers on the film
  - i. Go through them to see if we are showing the films
    1. if not showing,
      - a. remove
      - b. save in trailers can
    2. if showing
      - a. decide whether or not to play them
- b. Determine whether heads out (beginning of reel) or tails out (end of reel)
  - i. Double check by looking at film

1. **Heads Out**
  - a. Soundtrack toward you
  - b. Heads toward head
  - c. Image is reversed
2. **Tails out**
  - a. Soundtrack toward you
  - b. Image bottom toward tails
  - c. Image is obverse
- c. Place reels in order
- d. Turn on light box
- e. Load on rewind table, using our reels while cleaning
  - i. Push reel all the way on, engaging slot, otherwise may come flying off
  - ii. Left reel head comes from underneath to over on right reel
  - iii. Sound toward you (Heads & tails out)
  - iv. Can use tape at head of reel to attach to take-up reel
  - v. Hand load a few turns
  - vi. Make sure toggle set to wind forward (vs neutral or reverse)
  - vii. Make sure speed wheel at 0
  - viii. Turn on by pushing button
  - ix. Slowly turn wheel to comfortable forward speed
- f. Measures
  - i. 24 frames/SECOND - DOTS
    1. Head: 8-2 new SMPTE Universal Leader
    2. Tail: 2 changeover dots measured in seconds
  - ii. 16 frames/FEET
    1. 11-3 Academy Leader countdown in feet
  - iii. 4 sprocket holes/frame
- g. Make sure of count down:
  - i. 8 – 2 (New SMPTE “Universal” Leader
    1. Measured in seconds (i.e. 24 frames/second)
  - ii. 11–3 “Academy Leader” (common on older prints)
    1. Measured in feet (i.e. 16 frames/foot)
    2. 8 feet = 144 frames (8 x 16)/24 = 6 seconds
  - iii. If #8 is not in correct position, place tape on \_\_\_\_\_ side so faces you when loading
- h. Make sure head to film splice is 4 sprockets holes (full frame)
  - i. If there are any splices between countdown and first image, want to make sure no splice has cut out PART OF A FRAME which will result in the image starting OUT OF FRAME
  - ii. Use lengths of film taped to light box to measure/compare to
    1. at least #3 if no other splices
    2. to load # (either 7 or 8) if other splices
- i. Clean, gripping firmly between flat thumb/fingers (unless archival print, see below)
  - i. Touch metal to prevent shock
  - ii. About half-speed to clean

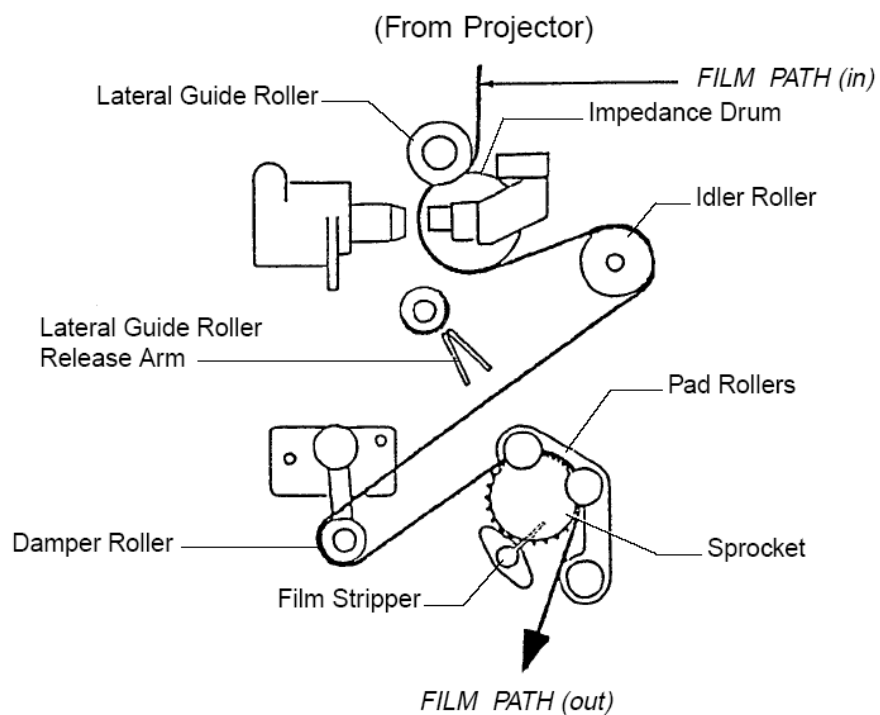
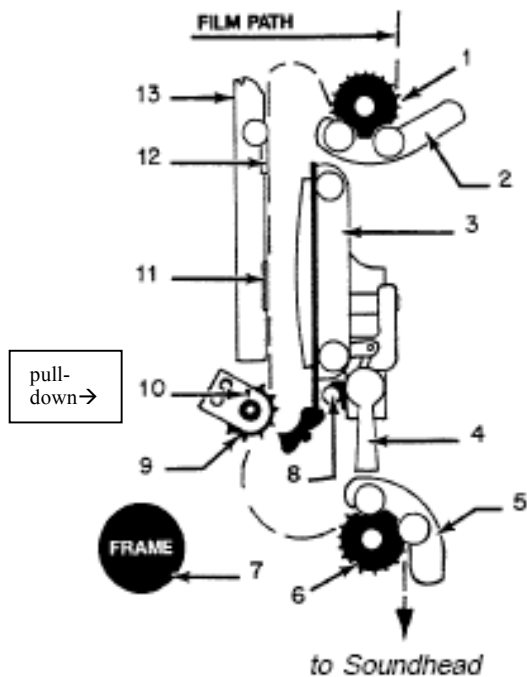
- iii. Check EVERY splice while cleaning
  - 1. Twist splices at top/bottom to make sure secure
  - 2. Cut out any frames with rips across frame
  - 3. Unscrew black knob on splicer to replace tape
  - 4. Clear tape (for splices) in drawer marked “tape”??
  - 5. Retape – both sides
- iv. Make sure sound is consistently toward you across any splices
- v. Ripped Sprocket Holes
- vi. Remove any loose tape (other than leader) b/c don’t want tape going through projector
- vii. Clean all the way through
- j. Find 2 sets of “changeover” dots 7 seconds apart (24 frames/SECOND)
  - i. Dots are opposite soundtrack
  - ii. Load reel with full reel on left
  - iii. Find 2<sup>nd</sup> set of dots at end of film
    - 1. Should be 1 sec (24 frames) from 2<sup>nd</sup> set to end of film
  - iv. Count back 7 seconds from 2<sup>nd</sup> second of dots to find 1<sup>st</sup> set of dots
    - 1. If less or more than 7 seconds note on board
  - v. Describe on board above the image and dialog (if any) at 1<sup>st</sup> changeover dots
  - vi. Describe last image of film so know when to turn off project/close curtain
- k. Rewind to head (if film came heads first and cleaned to tail) & put head tape back on
  - i. Put full reel on left and repeat above procedures
  - ii. Put tape on head for taping to rewind reel
  - iii. Use auto-stop roller (smaller white spool on right side) over film which detects end of film
- l. Place prepped reels in appropriate numbered case below rewind table

#### IV. **PREP PROJECTORS**

- a. Flag Down on Start Projector
- b. Wanda (west)
- c. Evelyn (East)
- d. Correct aperture and lens
  - i. Aperture inserted with bump toward screen
  - ii. Loosen thumb screw to release lens collar
  - iii. Pull lens out by collar (do not touch lens surface)
  - iv. Replace with correct lens and aperture
  - v. Retighten thumb screw

#### V. **LOAD REELS:** (Check 8 Locks) & 2 LOOPS

- a. Load Reels 3 (on 1<sup>st</sup> projector) and 2 (on 2<sup>nd</sup> projector).
  - i. So if there’s not much time, reel 1 will be ready and can rewind 2 and then 3



- b. Load upper reel with
  - i. film coming out toward the projector (away from screen)
  - ii. sound toward you
  - iii. Image: heads down (image is upside down)
  - iv. **LOCK #1: Lock down top** reel on spindle
  - v. film goes between two rollers above 2 boxes
  - vi. Use their reels if in good condition as takeup reel (so don't have to do 2 rewinds to get back on their reels for shipping)
  - vii. Pull film leader to about #11 on countdown, then load to 8
- c. Neutralizing the Geneva
  - i. \*\*Set "frame" knob to middle (this gives some play if frame not flush with vertical)
    - 1. Do this only before Test Reel. Once test reels set, do not move this knob except to adjust once start film projection.
  - ii. Manually turn forward several rotations until smaller wheel ("catch knob"?) turns at least ¼ turn and stops
  - iii. Geneva is made w/ 2 fan blades opposite each other and 2 open areas opposite each other forming 4 quadrants (2 closed—blade; 2 open). Move flywheel back and forth until the open area is adjacent to the gate.
  - iv. Can also play with the film placement by moving up or down 1 sprocket hole, but generally the film is a little above the gate.
  - v. Recheck by hand turning flywheel and see that image "settles" exactly w/i the gate
- d. Film Gate
  - i. Knob numbered 1-5 adjusts gate distance (leave at 1 unless problems)
  - ii. Open with large lever toward screen
  - iii. set frame by wrapping film around sprocket at bottom and pull film at top so that it is horizontally and vertically squared with the frame
  - iv. Frame line on film a little higher than top of gate
  - v. Image is in frame if looking through lens, can see diamond
  - vi. Make sure film covers both vertical "gates" (wheels)
  - vii. **LOCK #2: (Film gate)** Close with small lever toward projector
  - viii. **Lock #3:** make sure film is properly on sprocket holes underneath gate apparatus
- e. Upper Sprocket above Film Gate
  - i. 1<sup>st</sup> loop just beyond sprocket til not hitting top just above grey "arm"
    - 1. there are 2 loops which MUST be there to take up slack of variation of film being pulled through so quickly
    - 2. top loop is there also so film goes pretty much vertically into the gate
  - ii. **LOCK #4: (above gate)** Lock down sprocket pad roller
  - iii. Check sprocket holes
- f. Lower one below gate
  - i. 2<sup>nd</sup> loop (Marilyn Monroe: should be the size of her boob) just between this sprocket and next one at bottom of top box

1. Run finger outside loop to make sure finger width between loop and housing
2. Run finger inside loop to make sure film doesn't touch housing near outer top
- ii. **LOCK #5: (just at bottom of first box)** Lock down sprocket pad rollers
- iii. Check sprocket holes
- g. Sprocket at bottom of top housing box
- h. Through sound head
  - i. **LOCK#6: (Sound head)** Lock down sprocket pad rollers
- i. up and through rollers and guides
- j. 4<sup>th</sup> sprocket hole
  - i. pull tension so roller aligns w/ "UL"
  - ii. **LOCK #7: (past the "UL")** Lock down sprocket pad rollers
  - iii. Check sprockets
  - iv. Pull film up above sound head to check for correct tension
- k. Load film on to take-up reel
  - i. Whose reel to use:
    1. Theirs
    2. Unless in such bad shape, then use ours
  - ii. Load film toward screen
  - iii. **LOCK #8:** Lock down take-up reel
- l. Once loaded manually move film forward using geneva to make sure
  - i. 2 loops look good
  - ii. No bad scraping sounds
- m. **Turn on motor at switch and forward to about #8 w/in the gate**

#### VI. Checking Other Person's Load

- a. 7 Locks
- b. Framing in gate
  - i. How know they turned Geneva first?
- c. Count down #8

#### VII. TEST REELS: (about 40 minutes before show, as some SC's let people in 30 minutes before film)

MASKING: SOUND LEVEL: FOCUS: CHANGEOVER COINCIDENCE

- a. Use reels #3 & #2
- b. Open Curtain (top Button)
- c. Turn on film sound (Dolby SR better than A)
- d. Masking–Aspect Ratio

| <u>Side Masking &amp; Presets</u>   | <u>Lower Masking</u> | <u>Upper Masking</u> |
|---|----------------------|----------------------|
| 1:37 ←  |                      |                      |
| 1:66 →  | Raise                | Raise                |
| <u>1:85</u>   |                      |                      |
| 2:35  | Lower                | Lower                |
| 16 mm   | Stop                 | Stop                 |
| Toggle Switch:<br>Toggle to middle position,<br>then use right hand buttons<br>on Side Masking for<br>custom side masking |                      |                      |

- i. Press correct “Side Masking Button”
  - ii. Set toggle button to accompanying ratio for “Top Masking”
- e. Turn down house lights
- f. Turn down booth lights
- g. Select proper film sound on sound tower
- h. Check
  - i. Frame Rate if film is before circa late 1920s and Silent
  - ii. Framing
  - iii. Image focus
  - iv. Sound level
    1. Dolby Digital (>1993) Failure Rate: >6, 7, fail
      - a. Pull down deck on right tower
      - b. If it fails, switch to Dolby SR
      - c. Fails b/c as film gets older the soundtrack deteriorates
  - v. That changeover works
  - vi. Changeover coincidence
    1. Images match in changeover
    2. Changeover flag is up on projector that light is shining through
  - vii. Turn off projector motor
  - viii. Raise dower
- i. Close Curtain (Middle Button)
- j. Turn up House Lights
- k. Rewind test reels and reload
  - i. Top reel on right spindle of rewind table
  - ii. Take up reel on left spindle of rewind table

## VIII. TRAILERS

- a. Leave on (back/front) lights for trailer
- b. Load trailer on Evelyn
- c. Switch to first reel on Wanda

## IX. START FILM



- a. Booth Lights off 5 minutes before show
- b. Changeover Flag **DOWN** on start projector (so don't hear rough film through running through projector)
- c. As Show Captain walks toward front
  - i. Lower BACK lights (middle slide) half way down
  - ii. SOUND
    - 1. Slowly turn volume down
    - 2. Switch to correct movie source
    - 3. Correct Sound Level
    - 4. Left top knob is sound level for booth monitor
- d. As show captain walks off,
  - i. CURTAIN/IMAGE (Count off 5 seconds (8ft = 5 seconds))

|   |   |
|---|---|
| C | Open <b>curtain</b> —8 seconds to open  |
| L | L: lower master <b>lights</b> slowly all the way (left slider) <ul style="list-style-type: none"> <li>1. (Once lights down,               <ul style="list-style-type: none"> <li>a. lower middle &amp; right levers, then</li> <li>b. raise left (master) one in prep for end of show)</li> </ul> </li> </ul> |
| M | (Changeover flag <b>DOWN</b> ): Turn on projector <b>Motor</b> (5 seconds to image)   |
| D | Raise <b>dowser</b>   |
| P | Changeover <b>Pedal</b>   |

- e. Reframe if necessary (wheel behind threading housing)
  - i. Clockwise – raises image
  - ii. Counter-clockwise – lowers image
- f. Focus – just below lens
  - i. If warbly sound, could be sound gate not closed

## X. CHANGEOVER/CROSS

- a. Do the math:
  - i. tail = 8 seconds (dots are measured in (24 frames/) seconds)
  - ii. Head = countdown 8 [depending on leader] (measured in (16 frames/) feet = 5.3 seconds (16 \* 8 = 128/24=5.3 seconds))
- b. 1<sup>st</sup> dots (8 seconds before end of reel)
  - i. Yell “DOTS!!!”
  - ii. Changeover flag is up on projector that light is shining through
  - iii. Flip switch to turn on projector motor
  - iv. Flip dowser lever down (this opens dowser and so it is no longer between the film and the lamp)
- c. 2<sup>nd</sup> dots (7 seconds later)
  - i. Hit pedal firmly to changeover (this shifts the changeover dowser which opens the dowser in the projector being crossed to (i.e. the one you're sitting next to, flipping the power on, opening the dowser, and pressing the pedal) and closes the one in the projector changing from)
- d. Let film run through projector (just finished) til end

- i. Turn off projector motor
    - ii. Raise dower lever
    - iii. Remove reel
  - e. Load next reel & thread
  - f. Finished reels
    - i. No additional weekend show:
      - 1. Leave on their take-up reels (i.e. shipping reels)
      - 2. Tape reel so doesn't unravel
    - ii. Additional weekend show
      - 1. Rewind to heads on shipping reels
      - 2. Mark changeovers & sound type/level on paper and leave in shipping box for next screening
  - g. Replace finished reel in shipping box in order

## **XI. END OF FILM**

- a. IMAGE/CURTAIN/LIGHTS
  - i. As credits roll, raise Back lights half-way (by raising Middle slide) (so still can see screen)
  - ii. At end of credits:
    - 1. Hit pedal
    - 2. close curtain
    - 3. Slowly raise house lights
- b. LAST PROJECTOR
  - i. Lift dower lever
  - ii. Turn off projector once film runs out
  - iii. Open sound clamps
    - 1. Warps drum if locked down
- c. Turn off projector lamps
- d. Turn off fan
- e. Turn off 3 circuit breakers
- f. Take film to outer office

## **XII. TROUBLESHOOTING**

- a. Reel starts out of frame
  - i. Did you turn the Geneva?
  - ii. How was your framing in the gate
  - iii. Where is the frame knob in relation to its 2 extremes
  - iv. Was the leader spliced on with fewer than correct number of sprocket holes per image?
  - v. Doubtful, but could be bearings in intermittent
- b. No heads
  - i. Use heads from trailers (making sure to note which trailer took them from)
- c. Trailers
  - i. Start trailer on Evelyn
  - ii. Start Reel 1 on Wanda
- d. Variable Speed—16 & 35 mm

- i. Pre 1928 should indicate #frames/second on film itself
  - ii. Pad located on side of projector
  - iii. Use knob on right (not keypad) to adjust #frames/second
- e. Take up reel film spillage/film break
  - i. Try to get film back on to take-up reel without stopping show
  - ii. Can stop take up reel (though it will be spinning)
  - iii. Tape film to take-up reel
  - iv. Make sure film not caught on anything
  - v. Let reel itself in
  - vi. Once reel has played, rewind to break and splice, cleaning as you go
  - vii. Splice break(s)
- f. Bathroom break
  - i. Make sure office light is off (red light at top of stairs off)
  - ii. Close door quietly
  - iii. Turn off office light before re-enter booth
- g. 2 woman changeover
  - i. 1 at each projector
    - 1. Coming from projector
- h. If film burns
- i. No Changeover dots
  - i. Device with scratch pen is in drawer marked "Tape"??
  - ii. Only works on emulsion side
    - 1. Tails out – emulsion side facing you
    - 2. Heads out – emulsion side facing down
  - iii. Dots are opposite soundtrack
- j. Film comes on core only
  - i. Use split reel
    - 1. Try never to pick up a core
      - a. Figure out which way film is coming off the core
      - b. Have core in box bottom or top to
      - c. Unscrew our one and only split reel
      - d. Note one side says must be facing out (so when on rewind table, it doesn't unscrew)
      - e. Use split reel side with center, place into core
      - f. Turn box over
      - g. Place reel other half on & screw on tight
      - h. Place core in that reel's box to remind to take back our core
      - i. Put their one on our core reel & rewind onto
      - j. Take our core reel off
- k. Film comes on broken reel
  - i. Put reel on rewind table with broken side in so film can't fly off)
  - ii. Top to top if need be
  - iii. Wind slowly onto new reel
  - iv. If need to rewind, can put twist in when rewinding
  - v. As long as soundtrack is toward you, it's all good
- l. Projector lamp not on

- i. Check that circuit breaker switch on
  - ii. Check that fan on (safety feature doesn't allow lamp to turn on w/o fan on)
- m. No sound (and purple squiggles?? (i.e. soundtrack) on image)
  - i. Film loaded with soundtrack positioned correctly?
    - 1. Quick remedy is to load top to top (like 16mm)
    - 2. If you notice only once film is running, re-thread, putting a twist in the film after the take-off reel and before loading
- n. Image okay, but sound muffled
  - i. Is the sound gate closed?
- o. "Ghosting" on Subtitles
  - i. Adjust knob on top of projector
  - ii. If not work, e-mail tech
- p. Building "Floating Core Reels" (16 mm and RARELY 35 mm)
  - i. Splice using YELLOW zebra tape
    - 1. so can find splices when rebuilding reel
      - a. thin for 16 mm
      - b. thicker for 35 mm
  - ii. 1<sup>st</sup> reel
    - 1. Don't cut off header (need to thread projector)
    - 2. Cut tail off, leaving 1 image frame on tail
    - 3. Roll up and mark Tail/Head
      - a. Film Name
      - b. T or H
      - c. Reel #
    - 4. Use this as take-up reel:
      - a. Put piece of tape on side of large reel where film fills up the reel (so can find easier when breaking down platter).
  - iii. Middle Reels (not Last)
    - 1. Cut off head and tail
  - iv. Breakdown
    - 1. As rewinding, once near side tape mark, slow down rewinding film and feel for splice
    - 2. Resplice heads and tails using CLEAR tape