

24 September 1970

Acceptance Test Procedures

1. Carefully inspect table for external damage.
 - a) Note defects found.
2. Check that plastic cover is not damaged.
3. Mark off table surfaces with china markers to show restricted area.

4. Connect table to regulated 117 VAC, 25 amp power source.
5. Turn lights on to max intensity, both sides. (3000 ft. l.)
" " " " min. " " " " (200 ft. l.)
 - a) Record time turned on.
6. Operate the elevating mechanism.
 - a) Note max and min distance from floor. (40 max, 22 min)
7. Check operation of manual hand elevation for smoothness of operation.
8. Check film rollers for smoothness of operation and surface.
9. Check that teflon coating on bottom cover is in place and smoothly applied.
10. Check that wheel locks operate properly, both for rotation and rolling.
11. Mount two 1000 ft rolls of 70mm film on table, dual web configuration, emulsion up.
 - a) Note time to rewind completely, both rolls at same time, in opposite directions.
 - b) Note tracking characteristics.
 - c) Note effect on stationary web when other moves and stops rapidly.Check both webs.
 - d) Measure min speed on front roll only.
12. ^{a) Measure spacing between two webs (0.50 ± 0.05")} Mount two 1000 ft rolls of 70mm film on table, dual web configuration, emulsion down.

- a) Note time to rewind completely, both rolls at same time, in opposite directions.
- b) Note tracking characteristics.
- c) Note effect of stationary roll when other moves and stops rapidly.

Check both webs.

X { 13. Mount two rolls of 6.6" (1000') on table, emulsion up, dual web configuration.

- a) Note time to completely rewind.

Place vibration graticle on table.

- b) Note evidence of self induced vibration with the films at null.

14. Mount two rolls 5" film (1000') on table, split vertical mode, emulsion up and emulsion down.

- a) Operate to insure split vertical capability.

15. Mount 1000' roll 9 $\frac{1}{2}$ " film, emulsion up.

- a) Note time to completely rewind. (3 min.)
- b) Operate take-up mechanism. Note max capability.
- c) Scan slowly with loop take up. Note tracking problems.
- d) Start and stop rapidly from full speed (No loop). Note slack loops

or excessive tension, if any.

16. Operate tilt mechanism.

- a) Note that full tilt provides 15 \pm 1 \circ slope.
- b) Note that horizontal table is level \pm 1 \circ .

17. Operate carriage motion system with table horizontal, and weight of optics on carriage.

Set friction locks.

- a) Note force required to move carriage with locks set.

Release friction locks.

- b) Check operation of adjustable stops, "x" direction.
- c) Check that "Y" motion cover full depth of the formats.
- d) Note max speed, x direction.
- e) Note min speed, x direction.
- f) Note max speed, y direction.
- g) Note min speed, y direction.
- h) Check force required to move carriage manually with motors powered.
- i) Note force required to move carriage with motors disengaged x and y direction.

18. Operate carriage motion system with table tilted, and weight of optics on carriage.

- a) Note max speed, x direction. (*0.5 in/sec*)
- b) Note min speed, x direction.
- c) Note max speed, y direction. (*0.5 in/sec*)
- d) Note min speed, y direction.
- e) Note force required to move carriage manually with motors powered, x and y directions.
- f) Check operation of "fail-safe" system for Y-direction movement.

19. Mount dial indicator on optics holder with weight of optics attached.

- a) Note turns/inch ratio for fine and coarse movement.
- b) Note smoothness of operation from action of indicator.

20. Check parallelism of optics carriage to format surfaces with dial indicator.

- a) Note maximum deviation. (*within 0.015*)

21. Check collimation of pod to both format surfaces. This must be done with weight of Zoom 240R with 28 Rhomboids on carriage.

- a) Note collimation deviation, if any.

22. Check illumination on left format surface.

- a) Note time. Check that 30 minutes minimum have elapsed since (5. a).
- b) Note max illumination at format center.

Set right format to minimum.

- c) Note deviation from previous max.

Return right format to maximum.

Set illumination at left center to 3000 fl.

- d) Note minimum illumination over entire surface.
- e) Note minimum illumination in restricted area.

Set illumination at minimum.

- f) Note reading at format center.

Set right illumination at minimum.

- g) Note deviation from previous minimum.

Return illumination, both sides, to max.

23. Check illumination on right format surface.

- a) Note time. Check that 30 minutes minimum have elapsed since (5. a).
- b) Note maximum illumination at format center.

Set left format to minimum.

- c) Note deviation from previous maximum.

Return left to max.

Set illumination at center of format to 3000 fl.

- d) Note minimum illumination over entire surface.
- e) Note minimum illumination in restricted area.

Set illumination at minimum.

- f) Note reading at format center.

Set left illumination at minimum.

- g) Note deviation from previous minimum.

24. a) Note difference between 22(b) and 23(b).

25. Observe light sources for evidence of flicker.

- a) Set both at max. Report flicker, if any.
- b) Set both at minimum. Report flicker, if any.

26. Operate film masking system. Insure that lights extinguish in proper order.

- a) Note deviation from normal.

20% TESTS

(1) Place 9.5" film of 2.0 density on the front film station. Place temperature probes under the film at the center of the covered area on both formats. Extinguish those tubes which are not illuminating the film. Check temperature every 30 minutes until it stabilizes.

- a) After stabilization of temperature, note elapsed time from start of test. Note temperature and light intensity at center of covered area for each format. *100° F max or 30° over ambient*

(2) Turn light sources on and allow to stabilize. Use Gamma Model 3000 Spectroradiometer to measure spectral distribution. Make plot on w-y recorder, and also note 10mm band width and Mercury lines for computer calculation.

ILLEGIB

(3) With loudness analyzer, operate the table with light sources on and 6.6" dual webs running at max speed. Hold and plot on x-y records.

EGIB

✓ 27. of table (62 x 31)
61 3/4 x 31 1/4

✓ 28. Measure size of illuminated areas ($15 \pm \frac{1}{2} \times 20 \pm \frac{1}{2}$)

✓ 29. Measure distance between two adjacent illuminated areas (in mm) $1 \frac{3}{8}$

EGIB

30. radian certification.

✓ 31. Check secondary emergency crank for film and elevation

EGIB

✓ 32. light source enclosure (5 1/2 max)

W/d
8 Sep 72
BWT

COLLIMATION OF 1540 LIGHT TABLE

1. Level both viewing glass assemblies to same height as the trim strip in front and rear of glass. This can be accomplished by placing a straight edge across trim strips and using existing leveling screws raise or lower the glass as needed.
2. Attach a dial indicator to the microstereoscope mount and check parallelism between the mount and both viewing glasses. This should be within .015" across entire table top. If within tolerance go to step three(3). If not, proceed as follows:
 - a. Loosen the seven (7) mounting screws that hold the X bearing slide.
 - b. Move microstereoscope mount (with dial indicator attached) to extreme right side of table and set indicator to zero.
 - c. Tighten first screw and move to second. Move bearing slide in or out as required to bring indicator to zero. Repeat same for the remaining screws.
3. Remove dial indicator and install Autocollimator in microstereoscope mount.
4. Loosen the three (3) screws on top of the microstereoscope mount.
5. Move microstereoscope mount so autocollimator is in center of left viewing glass. Looking in autocollimator adjust mount by using the three (3) set screws recessed in bottom of mount to bring to tolerance. (+10 min. of arc in X and Y.) Adjust as close to zero as possible. Move

microstereoscope mount to right side and check collimation. If out, balance the adjustments between right and left side to bring into tolerance.

6. Tighten screws on top of mount. Recheck collimation. CAUTION - Tighten only enough to hold ring tight. If tightened too tight it will put collimation out of tolerance.
7. Remove collimator from mount.