

Approved For Release 2004/03/26 : CIA-RDP78B05703A000200010027-4

C O M P A R A T I V E A N A L Y S I S



25X1

1540 LIGHT TABLES

DECLASS REVIEW by NGA

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1 5 4 0 L I G H T T A B L E S

| | | | | |
|------|----------------------|----------------------------|---------|-----------------|
| STAT | <input type="text"/> | 1540 | Feb. 69 | (NPIC) |
| STAT | <input type="text"/> | | May 69 | In-House |
| STAT | <input type="text"/> | 1540 Competitive Contracts | Oct. 69 | Delivery Mar 70 |
| | | | Nov. 69 | |

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MAJOR DESIGN GOALS

1. Easy Film Loading
2. Improved Illumination
3. Improved Microstereoscope Mount
4. Improved Film Drive
5. Human Engineered

MET MOST OF THEM

TABLES NEED FURTHER IMPROVEMENT

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STAT

ADVANTAGES

Superior Film Drive * ✓

Quiet

Cooler * ✓

Light Source Dry

Lower Cost * ✓

DISADVANTAGES

Microstereoscope focusing mechanism *

Y-carriage drive *

Counterbalance System *

Bottom cover must be open in split

Minor irritations

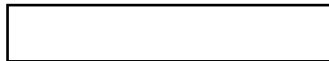
West Coast Firm (maintenance)

No company work history

Shading System

Faster Light Decay (data)

STAT



STAT

ADVANTAGES

- Superior microstereoscope mount & controls * ✓
- Operational displays
- Split light source
- Tilt system * ✓
- Known company work history
- Local maintenance

DISADVANTAGES

- Heat *
- Film tracking *
- Noisy
- Film transport *
- Microstereoscope Y-drive in Tilt
- Air bubbles
- Minor irritations
- Green oil/Liquid lamp *
- Higher cost *

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A P P R O A C H T O P R O B L E M

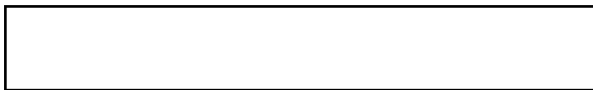
1. Meetings with Contractors
(IEG, ESD & RED)
2. Discussion and Critique of Problems
3. Response to Critique/Letter of Intent
 - A. Problem
 - B. Solution Rationale
 - C. Cost Impact
 - D. Delivery Impact

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STAT

| <u>Problems</u> | <u>Solution</u> | <u>Confidence</u> |
|----------------------|---|--|
| Scope mount | Redesign to modified <div style="border: 1px solid black; width: 100px; height: 15px; margin: 2px 0;"></div> mount, Spec. for Mod. 28 | Good -- but first attempt may surface "bugs". Should respond to good engineering |
| Counterbalance | Redesign to "positive" drive. Approach not well defined | Fair -- will improve, but question as to how much |
| Bridge Y-drive | Redesign to "positive" drive. Approach not well defined. | Fair to good -- Should improve but question is how much. |
| Location of Controls | Will relocate | Good. No problem. |
| TIME | - | Receive prototype 4 May. Will demonstrate changes on prototype as designs are completed. All changes by 30 June. |
| COST | - | No cost in prototype No change in quoted production costs |



STAT

| <u>Problems</u> | <u>Solution</u> | <u>Confidence</u> |
|-------------------------------------|--|--|
| 70 mm film tracking | Harder rollers | Will provide demonstration rollers, 2 weeks -- Fair |
| High temperature light surfaces | Replace pump thermostat | If stated solution is correct, confidence is good. |
| Air bubbles | Seal with solder rather than elastomer | Fair -- recurring problem with -- STAT |
| Green Oil | Periodic replacement probably necessary | Poor -- No good solution in sight |
| Noisy elevation | Slower speed, quieter motors | Some improvement probable |
| Film transport hunting and creeping | Relocate overheated solid state components | Questionable -- problem not in evidence at preacceptance. ** |
| Chatter in mount drive | Replace control with snap-action switches | Could be successful but could surface problem like "feel" |
| Slower low-speed film transport | Changing component values | Good -- not difficult |
| General noise and vibration | Wants feedback from ESD to identify | Noise -- fair Vibration -- poor |

TIME

Receive Prototype 4 May
Return 12 May

Probably 1 week late

COST

No cost in prototype
No change in quoted production costs

** has low confidence

STAT

PROBLEM CORRECTION DATES

STAT

PROTOTYPE MODIFIED

12 MAY

30 JUNE

FIRST PRODUCTION
UNIT

1 SEP

1 SEP

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ALTERNATIVES:

- | | | |
|-------------------|----------------------|------|
| 1. Order | <input type="text"/> | STAT |
| 2. Order | <input type="text"/> | STAT |
| 3. Combined Order | | |

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C O M B I N E D O R D E R

ADVANTAGES

1. Faster Delivery
2. Mate Table to Task
3. Maintain Competition

DISADVANTAGES

1. Increased Cost
2. Maintenance Problems (minor)

STAT

S C H E D U L I N G

| | | |
|------------------------------|--|---------|
| | <div style="border: 1px solid black; width: 250px; height: 30px;"></div> | |
| Lead Time | 15 wks. | 16 wks. |
| Production Data | 20 wks. | 20 wks. |
| 5th Unit | | 20 wks. |
| 10th Unit | 40/mo. | 7/wk. |
| Quantities by 1 January 1971 | 90 | 70 |
| (Contract 1 June 1970) | | |
| 1 April 1971 | 210 | 160 |

STAT

COSTS (200 units)

Fully motorized

Basic table