

UNITED STATES GOVERNMENT  
*Memorandum*

G-0239/DI-8E

TO : Chief, Special Contracting and Procurement Branch, NPIC

DATE: 29 March 1971

FROM : DI-8

25X1

SUBJECT:  1540 Light Table

1. This Office is in receipt of the first of the forty-six subject equipments ordered through joint procurement action by NPIC. The DLA model light table is MLT 1540-4.
2. The light table does not perform as expected and is deficient relative to written specifications. A listing of deficiencies is attached as enclosure one. Cited specifications are attached as enclosure two.
3. This memorandum is to serve as formal notification that DI-8 must regrettably reject the  model 1540-4 light table as presently configured. The deficiencies are so severe as to have a detrimental effect on the accomplishment of the DI-8 mission.

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2 Enclosures a/s

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DI-8 Image Interpretation  
Equipment Officer

25X1

cc:

Declass review by NGA/DoD



GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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(This document indicates a relationship between NPIC and the originator, therefore, a CONFIDENTIAL classification is assigned)

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Deficiencies noted on  Model MLT 1540-4  
Serial Number

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1. Section 3.5.1\* of the Model 1540 Written Specifications identifies the various optical systems the table is to accommodate. Included is the  Dual Power Measuring Macroscopes, the primary mensuration device of the DI-8 interpreter. It is extremely difficult to use this instrument on the MLT 1540-4 light table and any measurements so derived are subject to gross error. The following deficiencies cause this lack of mensuration confidence:

a. The carriage does not have a positive "X-Y" lock. (Note: DIA paid an additional premium to have  provide a positive locking system, similar to that found on the  Model MIM-4 light table). When "locked" the carriage moves  $3/64$  of an inch in "Y" and  $5/64$  of an inch in "X" with less than two pounds pressure exerted. In comparison, the  locking system allows movements of only  $1/128$  on an inch in "X & Y" at four pounds pressure. It should be noted that this same carriage movement is evidenced on the Model MLT 1540-2 light tables already delivered. However, the manufacturer was able to meet the requirements as outlined in specification section 3.5.1.5 by placing two manual friction locking screws on the carriage. These friction locks are not applicable to the model MLT 1540-4 table due to the requirement that the carriage be electrically movable even when the locking system is engaged. For additional operating instructions see section 2.3.5 of the instruction manual,  Quotation Revision A-1611 enclosure 1, and section 3E of  MLT 1540 Program Requirements.

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b. When disengaging the carriage lock release button the carriage will move  $1/64$  of an inch before relocking. This occurs sporadically and at various points in the total "X-Y" travel range.

c. Engaging the "X-Y" lock release switch often causes the carriage to move as much as  $2/64$  of an inch.

d. When using the microscope it is often necessary to approach the target most deliberately. On the  MIM-4 table, a manual "X-Y" fine feed mechanism moves the carriage approximately .133 of an inch per knob-revolution. A mechanical fine feed on the  model 1540-4 was not deemed necessary as specification section 3.5.1.2 describes a motorized fine feed capable of driving the optical mount at speeds of 0 to 0.5 inches per second. This motorized fine feed does not meet requirements and is deficient in that it does not operate at the lower end of the stated range, does not maintain constant speed when operating at "slow" speed and jerks and delays before starting movement.

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\* Copies of all referenced documentation are attached as enclosure two.

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ENCLOSURE 1

e. The microstereoscope mount lacks the rigidity defined in specification section 3.5.1.3; therefore, when the operator touches the micrometer dial the cross-hair lines move across the target.

2. Protrusions above the lighted surface, such as the film drive mode select switch and several screw heads, remain despite provisions outlined in specification 3.5.1(b).

3. On the model MLT 1540-2, serial number one, the tilt control switch has a paddle handle making it readily identifiable by touch and easily differentiated from the nearby elevation switch. This is no longer true as both switches are quite similar on the model MLT 1540-4.

4. From discussions with personnel of the [redacted] Equipment Performance Branch and personal observation it is readily apparent that there is a general lack of manufacturer quality control. This situation results in delays at initial inspection and could be the cause of increased equipment failure during use.

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5. The 70 mm film guides while disengaged have scratched and snagged film.

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