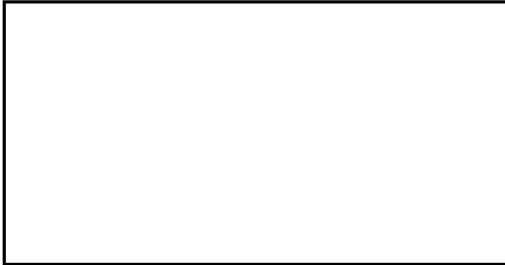


Post Office Box 6645  
Southwest Station  
Washington, D. C. 20045

24 JUL 1967

NPIC  
FILE 99711-3

REGISTERED



X1

Continued:

Reference is made to the subject contract, as amended, entered into with your corporation as of 29 June 1964, for design and fabrication of contact printers.

By this amendment it is hereby mutually agreed that the said contract shall be further amended as follows:

1. The clause entitled "SCOPE OF WORK:" is amended to include the Training Program set forth in the Contractor's letter proposal, dated April 20, 1967, Ref: 645/ALL-22, said letter proposal being incorporated herein by reference and made a part of this contract.
2. The clause entitled "PERIOD OF PERFORMANCE:" is amended to extend the time limit for completion of work to 30 June 1967.
3. The cost overruns requested in the Contractor's letter proposal are approved.

It is specifically understood and agreed that the foregoing is applicable to Printer No. 1 only. The "Stop Work" order of 13 October 1965 stopping all work on Printer No. 2 remains in effect pending further instructions from the Contracting Officer.

The estimated cost of performance of this contract is increased by:



X1

DATE  
This material is the property of the Central Intelligence Agency and is loaned to your agency. It and its contents are not to be distributed outside your agency.

4438

[Redacted]

[Redacted]

[Redacted]

The following RO Rating has been assigned to this contract:

RO Rating: *A7*  
Contract Number: [Redacted]  
Contract Title: [Redacted]  
Contract No. [Redacted]  
Contract Date: [Redacted]  
Contract Location: [Redacted]

All other terms and conditions of the said contract shall be and remain the same.

Please indicate your acceptance of the foregoing by signing this letter and the enclosed two copies thereof. Retain one copy for your records and return the signed original and remaining one copy to the undersigned at the earliest practicable date.

Very truly yours,

[Redacted]  
Contracting Officer

ACKNOWLEDGED AND ACCEPTED  
THIS        DAY OF        1967

[Redacted]

BY \_\_\_\_\_

TITLE \_\_\_\_\_

Approved For Release 2005/06/23 : CIA-RDP78B04770A001600020001-3  
REQUESTED PROCUREMENT DIVISION FOR SERVICES  
(other than property or building maintenance and repairs)

INSTRUCTIONS: (1) As appropriate, refer to Contract, Task Order, Proposal Numbers and attach any proposals, specifications or justifications. (2) Obtain approval or concurrence as appropriate. (3) Include in the narrative portion amplification of particular security requirements and any delivery or consignee instructions.

REQUEST NO. 58-9502-67, Amend. 1	DATE OF REQUEST 8 May 1967	PROCUREMENT DIV. ASSIGNMENT	DATE RECD IN PD.
TYPE OF SERVICE REQUESTED		REQUESTING OFFICE NYTC	APPROVING OFFICER
RESEARCH/DEV. (1) (2) (3)	OTHER SPECIFY (2) (3)	CONTACT OFFICER	TELEPHONE
GRANT (1) (2) (3)		I CERTIFY THAT FUNDS, ESTIMATED AMOUNT OF _____ ARE AVAILABLE. CHARGE TO FAN 17-1-2127	
REPAIR (3)		SIGNATURE OF BUDGET OFFICER	DATE
MAINTENANCE (3)			MAY 1967
MODIFICATION (1) (2) (3)			
VERIFIY CODE	0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 APPLIES	SIGNATURE	DATE
REPAIR OR MAINTENANCE SERVICE HAS BEEN SATISFACTORILY COMPLETED			
MATERIAL LOCATED OR SERVICES TO BE PERFORMED AT			

NARRATIVE DESCRIPTION OF SERVICES REQUESTED

Additional funding to modify and complete Printer No. 1, Contact Duplicating and Reseau Printer, being made under

X1 [Redacted]

X1 [Redacted]

*Conrad*  
~~Accommodation Procurement.~~

U.S. GOVERNMENT  
NON PROPRIETARY CHECK

PRELIMINARY ACCEPTANCE TEST REPORT

Introduction: On July 5, 6, 7th, 1967, the preliminary Acceptance Tests were performed on the Contact

Duplicating and Reseau Printer [ ] The Test

25X1

Plan of September 22, 1966 was used as a guide.

Government personnel in attendance were [ ]

25X1

25X1

Tests Demonstrated:

1. Resolving Power. Using a Government furnished target containing nine images of high contrast and over 400 lpm, a number of prints were made at locations selected by the program monitors. Nine target positions were printed covering top, middle, and bottom positions on the left, center, and right of the platen. Exposures were made on SO-267 film and processed in D-19 developer. Five readings were taken of each target position. Out of a total of 44 separate targets and readings, 39 showed resolution of over 300 lpm, with the remaining 5 readings showing 256 lpm or better. Overall average of 44 readings was 335 lpm.

* 8-4	* 8-3	* 8-4
8-4	8-3	8-3
8-4	8-3	8-4
8-4	8-3	8-3
8-4	8-4	8-3
* 8-4	* 8-1	* 8-3
8-4	8-2	8-4
8-3	8-3	8-3
8-3	8-2	8-3
8-4		8-4
* 8-4	* 8-3	* 8-4
8-3	8-3	8-4
8-3	8-4	8-4
8-3	8-2	8-4
8-3	8-2	8-4

(1) 8-1 256 lpm

(4) 8-2 287

(19) 8-3 322

(20) 8-4 362

44 readings

$$\frac{14762}{44} = 335.5 \text{ lpm}$$

2. Pre-View and Punch Station Alignment and Reseau Operation. To demonstrate punching and alignment accuracy, Reseau prints were positioned and punched to simulate imagery with fiducials and frame edges. Following the punching operation, the samples were then placed on the Reseau grid platen and printed. On all four sample prints, the central Reseau line was superimposed on the grid line near the top of the platen. On two of the four prints, there was about a two line width divergence of the black line and clear line near the bottom of the platen. It was also demonstrated that multiple prints could be made of a punched Reseau print without change in grid position. A number of additional sample punches were made and measured on the microscope. Readings were taken from slot-to-line and hole-to-line to determine parallelity. Generally, the majority of readings were within specifications.
  
3. Reseau Line Print-Out thru Various Densities.  
Samples of Reseau Lines printed thru various densities were displayed. A Reseau print was made thru four Neutral Density filters ranging from 0.4 to 1.9. A Reseau print was also made thru a typical aerial negative encompassing a broad range of densities from

.05 to 2.2. Measurements of Reseau line width were made on a microscope and averaged 15 microns in width.

4. Raw Stock Metering. To determine accuracy of Raw Stock Metering, a series of 30 exposures was made of a N. D. Filter on 70mm 228R film. An advance increment of  $31\frac{1}{2}$ " was used for a 30" image. A 10ft. section of film was processed and showed consistent spacing with an error of  $\pm 1/16$ ". The remainder of the roll was given to the Government monitors for processing. A second test was run using a  $13\frac{1}{2}$ " advance for a 12" frame. Approximately 20 exposures were made and seven frames processed for measurement. Spacing of frames was consistently  $1\frac{1}{2}$ " with a deviation of  $\pm 1/16$ ". The remainder of the roll was given to the Government monitors for processing.

Note: During the Raw Stock Metering Tests, a Platen Latch failure was noted. The front right platen latch was not engaging properly and the inflation cycle could not proceed. Temporary repairs were made to continue the Test Plan.

5. Frame Edge Detection and Film Metering System.

With the lower drawer open and a roll of processed negatives in the gate, the Film Metering System and Frame Edge Detection were satisfactorily demonstrated on both positives and negatives with a variety of frame lengths. Activation of the FDS photocells was also demonstrated using clear leader.

6. Automatic Print Cycle. To demonstrate Film Metering,

Frame Edge Detection, Raw Stock Metering, and Automatic Exposure Control in one combined test, a series of 40-50 exposures was made of 70mm frames of 10" length. A section of approximately 10 ft. was cut off and processed which showed satisfactory results from all systems. The remainder was given to the Government monitors for processing.

7. Film Damage. A separate test was not conducted for film damage. However, the sample sections processed during tests #4 and #6 were examined for scratches and none were found.

8. Printing Rate. A separate test was not conducted for print rate. Cycling rates will vary with film speed and input density.



9. Interlocks and Controls. It was noted during testing that controls, timers, and print selector were functioning, and that interlock warning signals were operational.
10. Film Fog Test. Due to recent installation of a new light seal on the lower drawer, the fog test was not conducted. Previous tests run on the machine in Salem and Washington proved satisfactory. Final tests will be conducted after adjustment of the new light seal.
11. Mask Alignment. Mylar masks are being furnished to the Government ready for cutting of desired frame sizes.

#### MISCELLANEOUS

A number of print samples were displayed which showed the improved latitude and capability of the revised Automatic Exposure Control System. Typical aerial negatives and a broad range of N. D. filters were printed to show density compression and contrast enhancement. Whereas exposure control problems were previously evident with images of 1.7 or greater density, the latitude has now been increased to meet specifications.

Following completion of the Preliminary Acceptance Tests, permanent repairs were made on the right front platen latch. After 13,000 recorded cycles on the Printer, it was found that the air cylinder operating the platen latch was contaminated and binding. It was also found that the latching mechanism had developed a mechanical interference. Corrections have been made and the Printer is now operational.

ADDENDUM

Film Fog Test

On July 12, 1967, after adjustment of the replacement light seal on the lower drawer, a film fog test was performed. A 30" section of 9½" wide 228R film was placed on the platen, the machine closed, and room lights turned on for one minute. The section was then processed in duPont 16D for 3 minutes. An unexposed film sample was similarly processed. Densichron readings of both samples showed 0.04 base fog with no measurable fog due to exposure within the Printer. (Note: du Pont Handbook indicates .05 base fog on 228R with 3 minute processing in 16D.)

## TEST PLAN

The following tests describe methods and procedures to be used to determine conformance with the performance requirements of the purchase description for the Contact Duplicating and Reseau Printer and the Pre View and Punch Station.

1. Resolving Power (Spec. Ref. 2.7 and 3.11)  
Load the Printer with Type S0-267 duplicating film under appropriate safe-light conditions. Insert over the clear platen with emulsion side up, a 6" x 9" format of six resolution targets of at least 400 lpm. With the Exposure Factor Control set for an exposure value which optimizes resolution characteristics, and the duplicate film advance set for a 30" advance, make one exposure in each of five positions covering the length of the platen in 6" increments and process under controlled conditions. The lowest of the vertical and horizontal readings shall be utilized, and an average of the observers' readings recorded. Fifty per cent or more of all readings shall be over 300 lpm. for acceptability.
2. Punch Station Alignment and Reseau System Operation  
(Spec. Ref. 3.4.2 and 3.4.3)  
Utilizing special grid-line test films on stable-base film, locate and punch the round and slotted holes in each of the provided locations on the Pre View and Punch Station. The resulting punching error shall be less than  $\pm 5\mu$  ( $\pm 0.0002$  inches) when measured from the center of each perforation to the referenced grid line.

Each of the three test films will then be located on the printer, with the reseau grid in place, and printed such that the output print ( on stable lease film, such as 4427) will demonstrate that the total error resulting from alignment, punching and placement in the printer shall not exceed  $\pm 5\mu$ .

3. Reseau Line Print-out (Ref. Spec. 3.4.2)  
The Printer shall demonstrate capability for exposing a Reseau Grid onto the duplicating film with an output line width of 12 to 15 microns when projected through a negative having a broad range of densities, with a film thickness of approximately 7 mils. Line widths are to be measured by microscope or comparator at ten discreet points.
4. Raw Stock Transport Test (Ref. Spec. 3.5 and 3.6)  
(Note: Film will be processed by Xerox)  
A minimum of 2 - 250 ft. rolls of 70 mm film (5427 or 8430) and 9½ inch wide film will be printed in the printer in the automatic mode. Clear leader may be used for input film, and the multiple print selector may be utilized. At least one roll shall be set for 15 inch advance, and one roll for 30 inch advance. The output processed film will show uniform frame spacing and repeatability for all exposed frames.
5. Film Damage (Ref. Spec. 3.6)  
Utilizing approximately ten feet of clean, unexposed 9½" wide film, mark off three areas at random of approximately 9" x 9". Visually examine the selected areas for scratches and delineate and record such imperfections.

Load the film sample onto the negative transport of the Printer with emulsion side up, and make a simulated series of 30" long exposures in the Manual Mode (since there are no frame-edges) with corresponding advance of duplicating film. Upon reaching the end of the film sample, remove the ten foot length and visually re-examine the delineated areas to determine the extent of any damage to the original film incurred during Printer operation.

For the purpose of this test, an objectionable scratch shall be defined as a single scratch or rupture of the base or emulsion which extends for more than two feet of film or a scratch which appears periodically at the same point of every simulated frame for more than two feet of film.

6. Printing Rate (Ref. Spec. 3.12)  
The Printer shall demonstrate capability for duplicating negatives of 9" x 30" format at the rate of at least six per minute.  
  
Load the Printer under appropriate safe-light conditions with Type #8430 film in the 9½ inch width. Insert over the clear platen a format of three 9" x 9" typical aerial negatives which have been approved as being representative. With the Exposure Factor Control set for Normal, and the Duplicating Film Advance set for 30", make a series of prints and time the total operation for one minute.
7. Interlocks and Controls (Ref. Spec. 3.10.1, 3.10.2)  
Satisfactory operation of all control panel functions will be adequately demonstrated.
8. Film Fog Test (Ref. Spec. 3.4.3)  
Process a 30" length of duplicating film which has been allowed to remain on the platen for one minute without an exposure cycle, but with room lights on and the Printer closed. After processing, measure density above base fog and compare to an unexposed sample of film processed simultaneously.
9. Mask Alignment and Hold-Down (Ref. Spec. 3.5)  
The Printer shall demonstrate capability to accommodate formats in all provided mask sizes. There shall be no tearing or slipping of masks during normal handling and operation.
10. Workmanship (Ref. Spec. 4.3)  
The Printer will be examined in the contractor's plant to determine conformance with the requirements of the purchase description.